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IMPLEMENTATION PLAN FOR AREA 3A/4A

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

MARCH 2000

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

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LIST OF ACRONYMS AND ABBREVIATIONS

A/E	Architect/Engineer
A1PI	Area 1, Phase I
A1PII	Area 1, Phase II
A2PI	Area 2, Phase I
ACA	Amended Consent Agreement
ACD	Advanced Conceptual Design
ACGIH	American Conference of Governmental and Industrial Hygienists
ACHP	Advisory Council on Historic Preservation
ALARA	As Low As Reasonably Achievable
amsl	above mean sea level
APM	Area Project Manager
ARAR	applicable or relevant and appropriate requirement
ASCOC	area-specific constituent of concern
AWWT	Advanced Waste Water Treatment (Facility)
BAT	best available technology
BSL	Biodenitrification Surge Lagoon
CAM	Cost Account Manager
CDL	Certification Design Letter
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFC	Certified for Construction
CFR	Code of Federal Regulations
CM	Construction Manager
COC	constituent of concern
CRDL	contract-required detection limit
D&D	decontamination and dismantlement
dBA	decibels on A-weighted scale
DCE	dichloroethylene
DCN	Design Change Notice
DOE	U.S. Department of Energy
DQO	Data Quality Objectives
EC	environmental compliance
ECDC	Engineering/Construction Document Control
EPA	U.S. Environmental Protection Agency
ESH&TRM	Environmental Safety and Health Training and Requirements Matrix
FEMP	Fernald Environmental Management Project
FRL	final remediation level
FTL	Field Tracking Log
FTF	Fire Training Facility
GIS	Geographical Information System
GMA	Great Miami Aquifer
HPGe	high-purity germanium (detector)
HWMU	hazardous waste management unit

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IEMP	Integrated Environmental Monitoring Plan
IIMS	Integrated Information Management Systems
IRDP	Integrated Remedial Design Package
IROD	Interim Record of Decision
L/kg	Liters per kilogram
LGT	Lockwood Greene Technologies
LSP	Lime Sludge Ponds
ug/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
mg/L	milligrams per Liter
MTL	Material Tracking Location
MVS	Mining Visualization System
NCR	Nonconformance Report
NPDES	National Pollution Discharge Elimination System
NRRP	Natural Resource Restoration Plan
NRT	Natural Resource Trustee
OEPA	Ohio Environmental Protection Agency
OHPO	Ohio Historic Preservation Office
OMTA	OSDF Material Transfer Area
OSDF	On-Site Disposal Facility
OSHA	Occupational Safety and Health Administration
OU	operable unit
pCi/g	picoCuries per gram
PEP	Project Execution Plan
PG	Performance Grade
PID	photoionization detector
ppm	parts per million
PSP	Project Specific Plan
PWID	Project Waste Identification and Disposition
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
RCI	Request for Clarification of Information
RCRA	Resource Conservation and Recovery Act
RCT	radiological control technician
RD/RA	remedial design/remedial action
RFP	Request for Proposal
RI/FS	Remedial Investigation/Feasibility Study
RIMIA	Receiving and Incoming Materials Inspection Area
ROD	Record of Decision
RSS	Radiation Scanning System
RTRAK	Radiation Tracking System
RWP	Radiological Work Permit
S&H	Safety and Health

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SCQ	Sitewide CERCLA Quality Assurance Project Plan
SDFP	Soil and Disposal Facility Project
SEB	selection evaluation board
SED	Sitewide Environmental Database
SEP	Sitewide Excavation Plan
SMTA	special material transfer area
SP7	Soil Stockpile 7
SSC	systems, structures and components
SSR	Standard Startup Review
SWIFTS	Sitewide Waste Information Forecasting and Tracking System
SWPPP	Storm Water Pollution Prevention Plan
SWRB	Storm Water Retention Basin
TBC	to be considered criterion
TCE	trichloroethylene
TCLP	toxicity characteristic leaching procedure
UST	underground storage tank
VOC	volatile organic compound
WAC	waste acceptance criteria
WAO	Waste Acceptance Organization
WMF	Water Management Facility
yd^3	cubic yard

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EXECUTIVE SUMMARY

This Implementation Plan describes the remediation of soil, sediment, perched water, and at- and below-grade structures in Areas 3A and 4A (Area 3A/4A) at the Fernald Environmental Management Project. The surface and subsurface of Area 3A/4A are contaminated primarily with uranium, due to milling and foundry operations associated with the production of uranium metal between 1951 and 1989. Area 3A/4A covers approximately 48 acres in the eastern half of the former production area, which included many of the site's largest facilities. Most of these buildings have undergone decontamination and dismantlement (D&D), and the remaining D&D activities will be completed before initiating at- and below-grade remediation of Area 3A/4A. Area 3A remediation is scheduled to begin in 2001, with completion in 2003; Area 4A remediation is planned to begin in 2002, with completion in 2004.

This Implementation Plan addresses the remedial design/remedial action steps discussed in the Sitewide Excavation Plan (i.e., predesign investigations, remedial design, remedial action, precertification and interim grading activities), as they pertain to the remediation of at- and below-grade structures and soil in Area 3A/4A. Post-remediation certification and restoration will be addressed in future documents (e.g., the Certification Design Letter and Natural Resources Restoration Plan).

Remedial action in 3A/4A involves removing at- and below-grade structures associated with plants and warehouses, as well as excavating soil and debris contaminated with constituents of concern that exceed the final remediation levels (FRLs). The primary constituents of concern are radium-226, radium-228, thorium-228, thorium-232, and total uranium. Approximately 115,000 yd^3 of impacted soil will be excavated and transported to the On-Site Disposal Facility (OSDF) for disposal, along with an additional 169,000 yd^3 of below-FRL material that must be removed to establish safe slopes. Approximately 13,000 yd^3 of material is above the radiological OSDF waste acceptance criteria (WAC) for uranium and/or technetium-99, and this material will be excavated and transported to Stockpile 7 for future off-site disposal. There are approximately 1,200 yd^3 of above-WAC soil contaminated with tetrachloroethylene and dichloroethylene; and 600 yd^3 of material exceeding the toxicity characteristic limits for trichloroethylene, as established by the toxicity characteristic leaching procedure (TCLP). This material will be treated on site and the soil will then undergo additional TCLP testing to determine if it can be placed in the OSDF. Approximately 45,000 yd^3 of concrete and asphalt debris will be removed, sized to meet the physical WAC, and transported to the OSDF for disposal.

Control mechanisms and monitoring/inspection requirements will be established to minimize impacts to natural resources and the air, surface water, and groundwater pathways. Following excavation, contaminated materials will be transported to either the OSDF (including treated soil that passes TCLP testing) or staged for future off-site shipment to a permitted disposal facility.

The remedial action requirements shown on the construction drawings and described in the technical specifications were developed in accordance with the concepts described in this Implementation Plan, as guided by the OSDF WAC Attainment Plan and the Sitewide Excavation Plan. As the integrating document for the Integrated Remedial Design Package, the Implementation Plan provides a comprehensive description of planned remediation activities.

1.0 INTRODUCTION

This Implementation Plan describes the U.S. Department of Energy's (DOE's) proposed remediation of soil, sediment, and at- and below-grade structures and debris in Areas 3A and 4A (Area 3A/4A) at the Fernald Environmental Management Project (FEMP) in southwestern Ohio (Figure 1-1). It also addresses the management of surface water and perched groundwater that may be encountered during excavation. Area 3A/4A covers approximately 48 acres in the eastern half of the Former Production Area, which included many of the site's largest facilities. Most of these buildings have undergone decontamination and dismantlement (D&D), and remaining D&D activities will be conducted before final remediation of Area 3A/4A. The surface and subsurface of Area 3A/4A are contaminated, primarily with uranium, due to milling and foundry operations associated with the production of uranium metal between 1951 and 1989.

Remedial activities in Area 3A/4A are planned in accordance with the Operable Unit (OU) 3 Interim Record of Decision (IROD; DOE 1994) and Final Record of Decision (ROD; DOE 1996a), which address at- and below-grade structures, as well as the OU5 ROD (DOE 1996b), which addresses environmental media. Specific methods to accomplish the scope of work presented in this plan will be provided in the technical specifications and construction drawings as well as the construction contractor's Excavation Plan and Safe Work Plan. The contractor's plans will be reviewed and approved by the DOE and Fluor Fernald.

The FEMP has been divided into ten remediation areas (Figure 1-1) that are organized around the Remedial Investigation/Feasibility Study (RI/FS) OUs and off-site locations. Area 10 is not labeled on Figure 1-1, but it is comprised of all long-term access corridors (i.e., roads and well pads) that will be maintained until restoration of the Great Miami Aquifer (GMA) is complete. The FEMP Sitewide Sequencing Plan, included as Appendix B of the FEMP Sitewide Excavation Plan (SEP; DOE 1998a), provides a generic remediation schedule for each area. A remediation schedule for Area 3A/4A is provided in Section 6 of this Implementation Plan.

This Implementation Plan and the SEP satisfy the Amended Consent Agreement [ACA; U.S. Environmental Protection Agency (EPA) 1991] requirement for a remedial action (RA) work plan. In addition, this Implementation Plan and the associated remedial design (RD) (construction drawings and technical specifications) constitute the Integrated Remedial Design Package (IRDP), as

outlined in the OU5 Remedial Design Work Plan (DOE 1996c). The Implementation Plan is the integrating document for the IRDP, and it describes the planned remediation activities. Its purpose is to facilitate regulatory agency review of the RD and to summarize the scope of work necessary to procure equipment, supplies, and services to implement remediation. Activities described in this plan are being conducted in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and corrective action requirements of the Resource Conservation and Recovery Act (RCRA). The Implementation Plan conforms to the general model outline for IRDPs provided in Section 7 of the SEP.

As indicated in the Section 1.3.2 of the SEP, DOE will involve the public in the Area 3A/4A RD as follows:

- Upon completion of the final engineering design, and prior to implementing the action, DOE will prepare and distribute to the public a RD fact sheet, followed by a public briefing on the RD.

- DOE will publish a Notice of Availability of this Implementation Plan and other Area 3A/4A remedial documents in a local newspaper of general distribution when they are submitted to EPA.

These measures will be taken in accordance with provisions of the National Contingency Plan (40 CFR 300.435) and DOE policy as set forth in the FEMP Community Relations Plan (DOE 1995).

1.1 SCOPE AND GENERAL APPROACH OF THE IMPLEMENTATION PLAN

The Area 3A/4A Implementation Plan consists of the following sections:

- Section 1.0 - Introduction, which summarizes the purpose and scope of this Implementation Plan and describes programmatic strategies and requirements for implementation of this remedial action project.

- Section 2.0 - Predesign Investigations, which describes the constituents of concern (COCs) for Area 3A/4A, the surface and subsurface conditions, the nature and extent of contamination, and the anticipated excavation boundaries based on RI/FS data and other data collected to fill data gaps.

- Section 3.0 - Remedial Action Approach, which presents the work associated with site preparation, above-WAC and RCRA excavations, removal of at- and below-grade structures, general excavation to remove man-mad structures and contaminated soil, real-time monitoring of the excavation surface, management of waste streams in accordance with final disposition requirements, management of surface and perched

water in the excavation, and documentation that the soil in the area meets the final remediation levels (FRLs) for all COCs.

- Section 4.0 - Project-Specific Environmental Controls and Monitoring, which discusses environmental controls and associated monitoring established with respect to natural resources and air, surface water and groundwater pathways.

- Section 5.0 - Project-Specific Health and Safety, which summarizes project-specific health and safety requirements and procedures.

- Section 6.0 - Remedial Action Management Strategy, which discusses the strategy for managing remediation activities, project organization and responsibilities, waste management activities, data and records management, quality assurance/quality control (QA/QC), and integration of Area 3A/4A remediation with other FEMP projects.

- Appendix A – Design Criteria Package, which summarizes design criteria, applicable or relevant and appropriate requirements (ARARs) and to be considered (TBC) items.

- Appendix B – Surface Water Management Plan, which establishes baseline conditions and criteria for the management of surface water.

- Appendix C – Characterization Data, which tabulates all predesign characterization data used to develop the remedial design.

- Appendix D – Excavation Volumes, which summarizes the soil and debris volumes removed from Area 3A/4A by type (e.g., concrete, asphalt, above FRL, below FRL, etc.) and year of excavation.

- Appendix E – Geostatistical Modeling for Title II Excavation Design, which summarizes the methods and results for the three-dimensional model of subsurface uranium contamination.

The area-specific remedial design/remedial action (RD/RA) process at the FEMP is illustrated on Figure 1-1 of the SEP and involves the following steps:

- Predesign investigations
- Remedial design
- Remedial action
- Precertification of excavated areas
- Certification of excavated areas
- Postremedial action.

This Implementation Plan covers all of the steps except certification and postremedial action. As stated in the SEP, a Certification Design Letter (CDL) will be prepared and submitted to the regulatory agencies following completion of the precertification process. This will provide a summary of the area-specific remediation completed, results of the precertification activities, and design of the

certification sampling and analysis program. Following completion of certification activities and agency approval, interim restoration will be completed. Final restoration and postremedial action will follow interim restoration and be guided on a sitewide basis by the final version of the Natural Resource Restoration Plan (NRRP; DOE 1998b).

Predesign activities began in Area 3A/4A in January 1998 and will continue through completion of the Title II design, anticipated in November 2000. The sampling activities have been focused on material exceeding the On-Site Disposal Facility (OSDF) waste acceptance criteria (WAC) and RCRA soil within Area 3A. Above-WAC material is present at the Incinerator Pad (northeast of the Boiler Plant), the area east of the decontamination pad, the southeast corner of Plant 9, and several locations within and surrounding Plant 6 (Section 3.0). The above-WAC COCs are uranium, technetium-99, tetrachloroethylene (PCE), trichloroethylene (TCE), and dichloroethylene (DCE). RCRA soil (contaminated with TCE) is present north of the Maintenance Building (Building 12). Where possible, Area 3A/4A has been surveyed with real-time instruments to assess above-WAC radiological contamination associated with uranium. Soil surfaces below gravel, asphalt and concrete pads will be surveyed with the real-time instruments after the overlying material is removed to provide added assurance that above-WAC uranium contamination has not been missed by physical sampling activities.

The RD began in November 1998 and will continue through completion of the Certified for Construction (CFC) package in November 2000. RD activities include the advanced conceptual design (ACD) and Title I/II design. The Advanced Conceptual Design for the At- and Below-Grade Remediation of the Former Plant Area (DOE 1999a) is a planning document that outlines the basic remedial strategy and provides color plates showing the extent of uranium contamination in the Former Production Area. Title I/II design for Area 3A/4A began in May 1999, and the specifications and drawings submitted with this IRDP build upon the ACD framework.

The design-grade for excavation is depicted on the construction drawings and is based on:

- RI/FS data on the nature of COC concentrations in soil and perched groundwater
- Data collected during predesign investigations to delineate the extent of contamination for above-WAC, RCRA, and below-WAC zones
- Geostatistical modeling of uranium concentrations in soil, supplemented by predesign investigation data on other COCs (e.g., beryllium, thorium, PCE, TCE, DCE)

- Three-dimensional models of the at- and below-grade building structures (e.g., footers, basements, piers)

- Constructable 2:1 slopes that capture building structures and all COC contamination above the FRLs.

The final extent of excavation will be based on actual field conditions (e.g., slope stability in perched groundwater zones), radiological field survey measurements (i.e., real-time surveys), and physical sampling results. In particular, real-time surveys will be used to minimize the excavation volume of above-WAC uranium contamination (Section 3.4) and to evaluate the potential for reducing the volume of below-FRL soil that is hauled to the OSDF. A substantial volume of below-FRL soil is excavated to reach man-made structures and contamination (Table D-4, Appendix D). Significant design changes will be documented through the Design Change Notice (DCN) process.

Remediation of Area 3A/4A will be begin in 2001 (Area 3A) and continue through 2003 (completion of Area 4A). Initially, the contractor will be limited to site preparation activities. These activities include fencing the project boundary, isolating deenergized utilities that feed into the excavation area, constructing storm water controls, preparing the radiological check point and change-out facility, constructing the special materials transfer area (SMTA) and haul-road ramps, locating and setting up the office, break, and cool-down trailers, and other appropriate work.

Material excavated during site preparation activities may be used to build temporary structures (e.g., ramps, diversion dikes, etc) if the soil and debris meet the OSDF WAC. If material from the designated above-WAC and RCRA areas must be disturbed during site preparation activities, the contractor will be guided by the Fluor Fernald Construction Manager (CM) and Waste Acceptance Organization (WAO) to ensure proper handling, packaging, and disposition of these materials.

The excavation phase will follow site preparation and will consist of removal and disposition of impacted material, including any material stockpiled during the site preparation phase. Impacted material is defined as soil with above-FRL contamination or man-made materials. Additionally, all sediment collected in ditches and retention basins and on erosion control structures (e.g., silt fencing) will be considered impacted. Impacted material that meets the chemical, radiological, and physical WAC established for the OSDF will be hauled to the OSDF for disposal. Impacted material that does not meet the chemical/radiological WAC for the OSDF (e.g., the above-WAC areas identified in Area 3A/4A) will be treated (if needed) and sent to the OSDF (if treatment is successful and

radiological WAC is met) or shipped off site to a permitted commercial disposal facility. Impacted material that meets the chemical/radiological WAC, but not the physical WAC, will be size-reduced to achieve the WAC and delivered to the OSDF. The impacted material removed from the identified RCRA area in Area 3A will be treated on site and hauled to the OSDF, if treatment is successful. Items that are prohibited from disposal in the OSDF will be containerized and shipped off site to a permitted commercial disposal facility.

1.2 REMEDIATION AREA BACKGROUND AND DESCRIPTION

Area 3A/4A comprises approximately 48 acres of the Former Production Area and is bounded generally by First Street to the south, the Former Production Area boundary fences to the east and north, and B Street to the west (Figure 1-2). The Lime Sludge Ponds (LSPs) and the Fire Training Facility (FTF) were originally included within the scope of Area 3; however, the LSPs are now being addressed under a separate IRDP and the FTF is part of Area 6.

Former facilities located within Area 3A include the Boiler Plant, Building 12, Plant 9, Building 64 and Building 65. The Boiler Plant furnished steam for both process use and building heating. Vehicles used for plant operations were serviced in Building 12, which is tied to the TCE contamination north of the building. Plant 9 was used to machine uranium metal pieces and cast ingots larger than those produced in Plant 6. The southeast corner of Plant 9 is an above-WAC area for uranium and technetium-99. Building 64 served as the thorium warehouse and Building 65 housed magnesium metal and other materials used in the Plant 5 operations. Most recently, Building 65 served as the repackaging area for thorium materials removed from Building 64.

Former facilities located within Area 4A include Plant 4, Plant 5, Plant 6 and Plant 7. Plant 4 was used to convert uranium oxide into uranium tetrafluoride (green salt), an intermediate compound in the production of uranium metal. Uranium metal was produced in Plant 5, where the green salt was blended with magnesium, loaded into a furnace pot, and placed into the Rockwell reduction furnaces to initiate the reduction reaction. At Plant 6, the metal was heat-treated in a salt bath and extruded cylinders were drilled and/or machined to form the specified metal product. There are several areas within and surrounding Plant 6 that contain uranium and technetium-99 above OSDF WAC levels. Plant 7 was used to extract uranium from raw materials imported from Africa.

The at- and below-grade concrete slabs and foundations of the former facilities in Area 3A/4A will remain following D&D activities. Removal of these man-made structures and the contaminated soil is the primary scope of remediation activities within Area 3A/4A.

The surface of Area 3A/4A has been contaminated through deposition of airborne particles, product and waste spills, sump and piping leaks, contact with contaminated equipment and debris, and the movement of contaminated perched groundwater. The primary COCs for the area are total uranium, thorium-228, thorium-232, radium-226, and radium-228. Although technetium-99 is not a primary COC, there are known areas of technetium-99 contamination in Area 3A/4A that exceed the OSDF WAC. A complete discussion of Area 3A/4A COCs is presented in Section 2.0.

1.3 SUMMARY OF THE REGULATORY DRIVERS

Regulatory requirements, criteria and legal obligations are the drivers for FEMP remediation activities, and Section 1.3.1 of the SEP provides the overall discussion on FEMP regulatory drivers. A summary of regulatory drivers applicable to the remediation of Area 3A/4A is presented in the following paragraphs.

1.3.1 ARARs and TBCs

The subset of applicable or relevant and appropriate requirements (ARARs) and to be considered criteria (TBCs) that will guide remedial actions in Area 3A/4A are included in Appendix A.

1.3.2 Permits

The National Pollutant Discharge Elimination System (NPDES) permit (Permit No.1IO00004*FD), for storm water and wastewater discharges to Paddys Run and the Great Miami River, is the only permit that is pertinent to Area 3A/4A remediation. Storm water discharges from Area 3A/4A are sent to the storm water retention basins (SWRBs), which are covered under the NPDES permit through implementation of the sitewide Storm Water Pollution Prevention Plan (SWPPP, RM-0039). All surface and perched water is treated at the Advanced Wastewater Treatment (AWWT) Facility prior to off-site discharge, in accordance with protocols listed in Section 3.4.4. Thus, no modifications to the permit are required for Area 3A/4A remediation activities.

1.3.3 Natural Resource Trusteeship and Related Natural and Cultural Resource Regulations

Two mechanisms drive protection of natural resources during remediation: the Natural Resource Trusteeship process and compliance with pertinent federal and state regulations. Both of these mechanisms have been incorporated into Area 3A/4A remedial design.

A conceptual restoration design for Area 3A/4A has been presented to the Trustee Council as part of the NRRP. The proposed restoration, which consists of expanded prairie, upland woodlot, open water and wetland habitat, will be implemented after its review and approval by the Natural Resource Trustees (NRTs) and other stakeholders upon completion of other required remediation activities.

Regulatory drivers for the management of natural and cultural resources and associated surveys are grouped into three areas: threatened and endangered species protection, wetlands/floodplain protection, and the resolution of DOE's liability for injuries to natural resources.

1.3.3.1 Threatened and Endangered Species

Based on updated FEMP property surveys conducted in 1993-1994, DOE does not expect to encounter any federal- or state-listed threatened or endangered species or critical habitat in the areas to be addressed by the Area 3A/4A remediation project. Therefore, no additional threatened or endangered species surveys are planned for the area.

1.3.3.2 Wetlands/Floodplains

Jurisdictional wetlands and waters of the U.S. that are identified on the FEMP property are delineated in the 1993 FEMP Wetland Delineation Report (COE 1993), officially approved by the U.S. Army Corps of Engineers on August 19, 1993. Based on the overlay of the Area 3A/4A boundary on the 1993 FEMP Jurisdictional Wetland Delineation, no jurisdictional wetlands are located within Area 3A/4A.

Area 3A/4A is outside the 100-year floodplains of Paddys Run and the Great Miami River (DOE 1996b). Therefore, no floodplain impacts will result from remediation activities.

1.3.3.3 Resolution of DOE's Liability for Injuries to Natural Resources

The NRTs are working to resolve liability that DOE faces for injuries to natural resources under CERCLA. In 1986, the State of Ohio filed a claim against the DOE for injuries to natural resources.

The claim has been in stay while negotiations are proceeding toward resolution. The State of Ohio has designated Ohio Environmental Protection Agency (OEPA) as their trustee representative in matters involving natural resource injuries. The Fernald NRTs have jointly developed the NRRP and have tentatively agreed that DOE, through implementation of the plan, will resolve natural resource liability at the Fernald site, including the 1986 State of Ohio claim.

1.3.4 Cultural Resource Management

DOE, the Ohio Historic Preservation Office (OHPO), and the Advisory Council on Historic Preservation (ACHP) have entered into a "Programmatic Agreement Regarding Archaeological Investigations at the Fernald Environmental Management Project" (March 6, 1997), pursuant to 36 CFR Part 800.13. Remediation Area 3A/4A has been surveyed in accordance with this agreement and all potential historic properties discovered have undergone data recovery after consultation with the OHPO and the ACHP. No additional archaeological surveys are planned for Area 3A/4A. However, a contingency plan is in place to ensure that any additional cultural resources discovered during remediation activities are recognized and protected (Section 6.6.3).

1.4 COMPONENTS OF THE REMEDY

Area 3A/4A remediation activities address specific components of the selected remedies set forth in the OU3 and OU5 RODs for debris and environmental media, including soil, sediment, perched water, storm water and wastewater. These activities are coordinated closely with OSDF construction (an OU2 ROD remedy component) and D&D of above-grade structures (an OU3 IROD remedy component), which are being conducted under other FEMP RA plans. The following is a summary of OU3 and OU5 remedy components (in italics) that are particularly relevant to this plan and an indication of specific actions that will be taken in Area 3A/4A:

- OU3 IROD and ROD (DOE 1994, 1996a)
  - *Remove gross contamination from material in facilities and dismantle facilities.* Gross contamination will be detected by visual inspection and radiological monitoring during excavation activities. This was performed through the D&D activities of the former facilities, and will be continued through the removal of the remaining utilities, slabs, foundations, etc.
  - *Release materials (unrestricted/restricted release), as economically feasible, for recycling, reuse, or disposal.* At- and below-grade structures to be excavated generally will be processed (e.g., size reduced), if necessary, and dispositioned

in the OSDF. None of these materials is considered to be economically feasible for recycling or reuse.

- *Dispose of process residues, waste product materials, and process-related metals off site.* These materials will be managed in accordance with established protocols as described in Sections 3.5 and 6.5.

- *Treat materials to meet OSDF and/or off site disposal facility WAC.* Excavated materials that exceed OSDF chemical/radiological WAC will be handled as necessary by Fluor Fernald Waste Management Operations to meet the WAC of either the OSDF or an off site facility, depending on the material. Material handling and treatment are discussed in Sections 3.5 and 6.5.

- *Dispose of materials that exceed the OSDF WAC off site; dispose of remaining materials in the OSDF.* Material handling and treatment are discussed in Sections 3.5 and 6.5.

- *Establish administrative controls through deed restrictions and access controls.* Access controls will be maintained for Area 3A/4A during and following remediation activities.

• OU5 ROD (DOE 1996b)

- *Perform verification sampling to establish horizontal and vertical boundaries of excavation required to attain FRLs for soil and sediment.* Predesign investigations were performed to augment historical data and refine excavation limits, as discussed in Section 2.0.

- *Excavate contaminated soil and sediment as necessary to meet FRLs; use mitigation measures as necessary to minimize potential short-term impacts to human health and the environment.* Based on predesign investigations (Section 2.0), the material will be excavated as described in Section 3.0. Mitigation measures to minimize short term impacts will be taken with respect to natural and cultural resources (Sections 1.3.3 and 4.1), air pathway (Section 4.2), water pathways (Sections 4.3 and 4.4), and health and safety (Section 5.0).

- *Perform certification sampling following excavation of contaminated soil and sediment to demonstrate that FRLs have been attained.* Real-time scanning, sampling and analysis in the excavated areas to confirm that material with COC levels above FRLs has been removed. As discussed in Section 7.2 of the SEP, a CDL will detail the proposed certification activities. If results of the certification sampling and analysis indicate that above-FRL contamination remains, supplemental excavation and certification sampling and analysis will be performed. The certification program is discussed in Section 3.4 of the SEP.

- *Apply DOE's As Low As Reasonably Achievable (ALARA) principles by using hand-held instruments to support verification sampling and excavation processes and, to the extent economically practical and by using detection limits achievable with hand-held instruments, reduce the remediation level for on-property soil containing relatively nonleachable uranium from 80 parts per million (ppm) to 50 ppm.* Excavation limits were established using the uranium FRLs of 82 and 20 milligrams per kilogram (mg/kg) (Section 2.1.3). Precertification (Section 3.7) and certification activities will be conducted to ensure that FRLs are achieved.

- *Dispose of contaminated soil and sediment that meets the on-site WAC in the OSDF. Where possible, treat soil and sediment that exceeds the OSDF WAC to meet the WAC or treat, if necessary, and dispose of such soil at an off site facility.* All of the material in Area 3A/4A that is known to be above FRLs, and meets the OSDF WAC, will be placed in the OSDF. Other materials that do not meet the WAC for the OSDF will be handled so that they either meet the WAC of either the OSDF or an off site facility (includes possible chemical treatment or size reduction).

- *Excavate contaminated soil containing perched water that presents an unacceptable threat to the underlying aquifer through contaminant migration; dispose of this excavated soil in a manner consistent with methods indicated above for soil; treat the perched water and storm water collected during these excavation operations, as required (treatment in AWWT preceded, if necessary, by pretreatment to address any listed hazardous wastes).* Excavations will be pumped to collect and manage perched water appropriately. Water with volatile organic compounds (VOCs) will be routed to the biosurge lagoon for subsequent treatment in the AWWT Phase II system. Storm water will be collected and routed to the SWRB for treatment through the AWWT Phase I system.

- *Collect contaminated storm water, using the existing FEMP retention basin, as necessary to minimize discharge of contaminants to Paddys Run; dewater sludges from the basin and dispose of them in the OSDF or, if they exceed OSDF WAC, in an appropriate off-site facility. Collect and treat contaminated storm water and wastewater as necessary to attain FRLs in Paddys Run and the Great Miami River and mass-based limits for discharges to the Great Miami River.* Storm water will be pumped from excavations and routed to the SWRB for subsequent treatment through the AWWT Phase I system.

- *Continue to employ institutional controls, including access controls and monitoring, to ensure continued protectiveness.* Access to Area 3A/4A will be restricted using barriers, warning signs, and procedural controls for the duration of remedial activities. Similarly, monitoring will continue to be conducted in accordance with the Integrated Environmental Monitoring Plan (IEMP, DOE 1999b). Long-term institutional controls necessary to implement restoration goals under the site's selected remedy are presented in the NRRP.

- *Restore the site.* Restoration of Area 3A/4A will be conducted in a manner consistent with the NRRP, and will include select backfilling of the excavation, grading areas disturbed by excavation as necessary to restore positive drainage, and establishing interim vegetation cover to prevent erosion.

1.5 LESSONS LEARNED

A lessons learned program has been implemented to apply knowledge accumulated during successive remedial efforts conducted under the SEP. Lessons learned from past remedial activities in Area 1, Phase I (A1PI), Area 1, Phase II (A1PII), and Area 2, Phase I (A2PI) have been incorporated into the Area 3A/4A IRDP to ensure that remedial activities carried out under this plan meet all applicable requirements and achieve the highest quality level possible. Some of the most important lessons include:

- Establish a single project director that is responsible for the entire remedial effort in an area
- Obtain regulatory approval on Project Specific Plans (PSPs) prior to implementing the work
- Complete sampling and analysis activities before submitting IRDP (if possible), and include all data in the Implementation Plan
- Identify excavation depth and sample control points on figures
- Perform continuous visual observation of the excavation face to identify and segregate special material
- Design drawings and continuous visual observation of deep excavations will be used to identify the contact between the glacial overburden and GMA material
- *In situ* gamma spectroscopy will not be proposed as an analytical method for certification activities.

Because the general complexity of remedial activities varies from area to area, soil remediation approaches at the FEMP will continue to evolve with each successive remedial effort.

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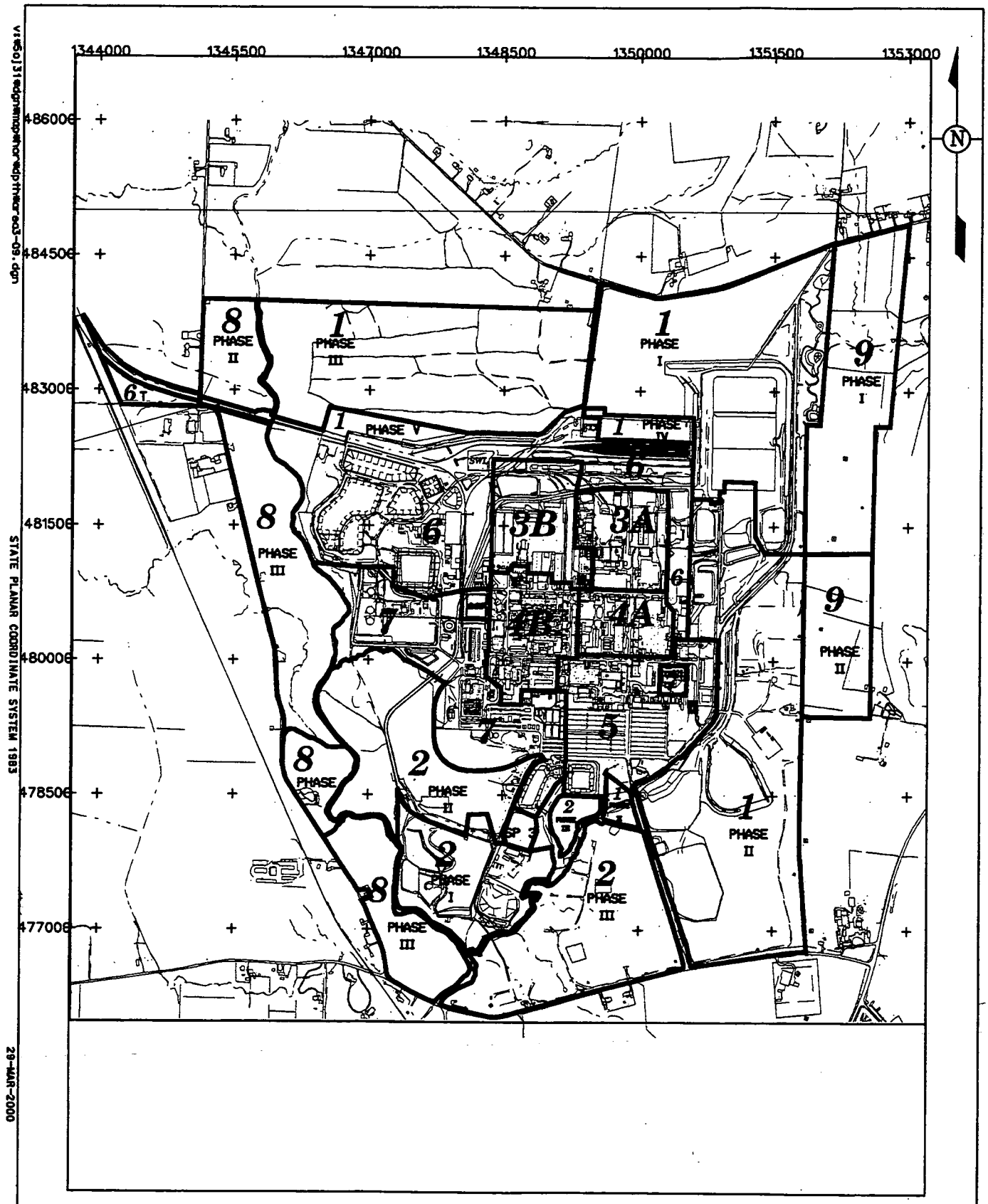


LEGEND:

AREA BOUNDARY

SCALE

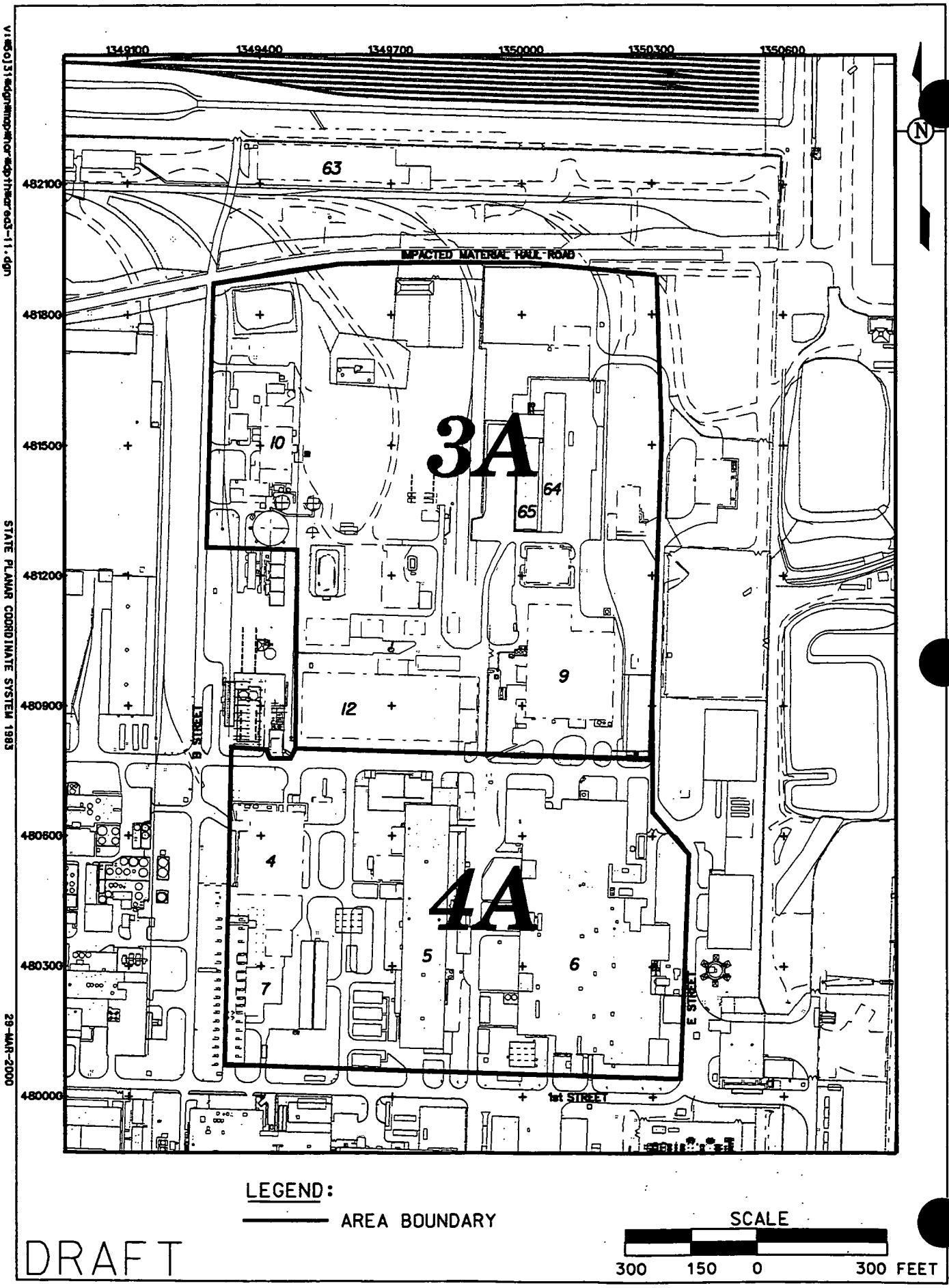
1500 750 0 1500 FEET

DRAFT

FIGURE 1-1. LOCATION OF FEMP AND REMEDIATION AREAS

STATE PLANAR COORDINATE SYSTEM 1983

29-MAR-2000



LEGEND:

AREA BOUNDARY

SCALE

300 150 0 300 FEET

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FIGURE 1-2. PRINCIPAL STRUCTURES IN AREAS 3A AND 4A

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Section 2

2.0 PREDESIGN INVESTIGATIONS AND CHARACTERIZATION DATA

2.1 SUMMARY OF THE RI/FS INVESTIGATION

Extensive soil sampling was performed at the FEMP in the late 1980s and early 1990s as part of the RI/FS to characterize the nature and extent of contamination resulting from decades of uranium-metal production. Figures 2-1 and 2-2 present RI/FS soil sampling locations in Areas 3A and 4A.

2.1.1 Preliminary Constituents of Concern

Based on results of the RI/FS investigation, the SEP presented a preliminary list of area-specific constituents of concern (ASCOCs) for Remediation Areas 3 and 4 (Table 2-1) and stated that a more thorough screening of area-specific COCs would be performed for each remediation area during the design phase. The additional COC screening for Area 3A/4A is discussed in Section 2.5.

2.1.2 On-Site Disposal Facility Waste Acceptance Criteria

The OSDF WAC were established in the OU2 and OU5 RODs (Table 2-2). Soil excavated from Area 3A/4A must meet these concentration-based WAC to be eligible for disposal in the OSDF. If soil exceeds the OSDF WAC, it will have to be segregated for off-site disposal or, for the special case of soil with above-WAC organic COCs, treatment on site or off site. The Area 3A/4A RI/FS data were compared to the OSDF WAC to identify areas that exceeded the OSDF WAC and would need to be segregated during excavation. The results of this comparison were studied to determine which areas required additional data to delineate the extent of the above-WAC contamination. Sampling performed to further delineate the above-WAC contamination is discussed in Section 2.3.

2.1.3 Final Remediation Levels for Soil

Like the OSDF WAC, the OU5 ROD established the FRLs for soil remediation (Table 2-3). FRLs are the cleanup goals for the FEMP site and are defined as the average concentration of a contaminant that can remain in the soil and be considered protective of human health and the environment. Remediation in Area 3A/4A will remove contaminated soil until the residual concentration of contaminants is at or below the respective FRL. There are two FRLs for total uranium – 82 mg/kg outside of the high-leachability areas and 20 mg/kg within the high-leachability areas (Figures 2-1 and 2-2 show the high-leachability boundaries). In addition, there is a goal of meeting 50 mg/kg for total uranium outside of the high-leachability areas that is driven by the ALARA philosophy. The

ALARA goal of 50 mg/kg will be reached if soil exceeding 50 mg/kg is within one lift thickness (i.e., 3 feet ± 1 foot) of soil exceeding the uranium FRL of 82 mg/kg.

A search of the RI/FS data was performed to identify all areas containing above-FRL concentrations for the preliminary COCs in Area 3A/4A (Table 2-1). Results from this search were used to establish the areas where additional data were needed to delineate the extent of above-FRL contamination. Sampling performed to further delineate the above-FRL contamination is discussed in Section 2.3.

2.1.4 Hazardous Waste Management Units

A hazardous waste management unit (HWMU) is defined as a contiguous area of land in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. There are 14 HWMUs at the FEMP that will be closed during site excavation under the RCRA/CERCLA integrated remedial response. HWMU No. 36 is a storage pad north of Plant 6 located in Area 3A/4A. It was designated a HWMU based on continued storage of post-production hazardous waste in excess of the 90-day storage limit. Additional detail on this HWMU is provided in Section 2.3.2.3.

2.1.5 Underground Storage Tanks

There are 13 underground storage tanks (USTs) at the FEMP that have been closed by removal or closed in place in accordance with RCRA requirements. Closure of a UST involves removing the UST's contents and residues, removing the tank structures and equipment, and removing contaminated soil from the UST excavation. Attainment of soil FRLs and completion of final closure will be demonstrated during soil excavation activities. Three USTs were located in Area 3A/4A; two have been removed (USTs No. 3 and 6), and one was closed in place (UST No. 14). UST No. 14 will be removed during excavation of the Plant 6 below-grade structures. Additional details on these USTs are provided in Section 2.3.2.3.

2.1.6 Identification of Potentially Characteristic Areas

Based on historical process knowledge and soil contaminant concentration levels identified through the OU5 RI/FS investigation, six geographic areas of the FEMP have a reasonable potential for containing RCRA characteristic waste that provides an opportunity for treatment. Three of these areas are located in Area 3A – the KC-2 Warehouse area, the Scrap Metal Pile area, and the area north of the Maintenance Building. The OU5 ROD stated that additional testing would be performed to determine

if the soil from these areas demonstrates a RCRA characteristic. For this reason, a predesign investigation of the potentially characteristic areas in Area 3A was undertaken. The results are summarized in Section 2.3.1.

2.2 SUMMARY OF SURFACE AND SUBSURFACE PHYSICAL CONDITIONS

Area 3A is approximately 28 acres, about 60 percent of which is covered with building pads, concrete pads, roadbeds, asphalt, and gravel. The remaining area is a mixture of soil and gravel that supports grass cover. Area 4A is approximately 20 acres of building pads, concrete pads, roadbeds, asphalt, and gravel, with about an acre of grass cover on the western side of Plant 6. The surface of Area 3A/4A slopes gently to the south from an elevation of 590 feet above mean sea level (amsl) in the northern part of Area 3A to 580 feet amsl in Area 4A. Surface water drains to the south and is captured by over 20 small catch basins that act as inlets to the storm sewer network, which drains to the SWRBs.

Subsurface conditions below the Former Production Area have been described in detail in the OU5 RI/FS documents and in a geotechnical investigation report (DOE 1998c). Briefly, the stratigraphic column under Area 3A/4A is generally fill, glacial deposits, sand and gravel deposits of the GMA, and carbonate bedrock. The discussion here is on the fill and glacial deposits, as these are the impacted materials being addressed by the soil remediation activities.

Fill is a mixture of the native deposits of clay, silt, sand and gravel that have been moved or mechanically placed to level areas for building pads and roadbeds. A large amount of gravel was imported into the area for construction of building pads and roadbeds. The fill thickness under Area 3A/4A is expected to vary from 0 to 5 feet and to contain mostly gravel. Approximately 80 percent of Area 3A/4A is expected to have some fill material.

Glacial deposits are comprised primarily of a carbonate clay matrix enclosing muddy stream deposits. The stream deposits are primarily silt and sand with minor gravel and are continuous along the channel traces (primarily northeast to southwest) but discontinuous over broad lateral areas. When present, most of the channel deposits lie between a basal gray clay and overlying brown clay. Approximately 30 to 40 percent of Area 3A/4A is underlain by the stream deposits. Most of the deposits are 5 to 7 feet thick and lie 5 to 12 feet below the surface in the northern section of Area 3A and 8 to 14 feet below the surface in the southern section of Area 3A. The channel deposits are not commonly

encountered below Area 4A, but when present they tend to be less than 2 feet thick and lie 11 to 13 feet below the surface. The brown clay directly overlies the gray clay where the stream deposits are absent.

Groundwater is generally present in the muddy stream deposits, and this water has been impacted by former production operations in Plants 6 and 9. Due to the drought condition in Summer 1999, groundwater was absent in most borings placed in the glacial deposits during implementation of the Area 3A/4A PSPs. In general, groundwater is expected to be present in the muddy stream deposits, and excavation slopes have been designed to account for the presence of saturated silt and sand deposits (Section 3.4.3). All encountered contaminated groundwater zones will be excavated with the impacted soil. Groundwater seeping into the excavations will be routed to the SWRB or the Biodenitrification Surge Lagoon (BSL) and then treated at the AWWT Facility to remove contaminants.

2.3 SUMMARY OF PREDESIGN INVESTIGATIONS

A number of predesign investigations have been completed to supplement RI/FS information on the nature and extent of contamination in Area 3A/4A. The specific goals included filling data gaps, confirming questionable analytical results, bounding above-WAC or above-FRL areas, investigating potentially characteristic areas, investigating high-leachability areas, confirming the location of surface above-WAC areas through real-time scanning, and minimizing uncertainty in the three-dimensional computer model of total uranium contamination. The following predesign investigations were completed to meet these goals:

- *PSP for The Area 3 Predesign Investigation of Plant 9 (DOE 1998d)* - Eight borings, varying in depth from 12 to 27.5 feet, were located within Plant 9 near areas with a high potential for migration of contamination to the soil beneath the building's concrete pad. Selection of these areas was based on the locations of sumps and/or drains, deep machinery/equipment, processes that used chemicals/materials in high concentrations or that had a high potential for spills or leaks, and physical cracks in the concrete pad or foundation. Based on historical processes in Plant 9, all borings were sampled for uranium, thorium, and technetium-99. Based on field screening, VOC samples were also collected from two borings.

- *PSP for Predesign Investigation Sampling in the Northeast Corner of Area 3 (DOE 1997)* - Twenty-two borings to depths of 12 to 24 feet were located in the northeast corner of Area 3A to investigate physical anomalies identified in aerial photographs and to supplement RI/FS data used to model excavation limits for material exceeding the total uranium WAC and FRL limits.

- *PSP for The Area 3 Predesign Investigation of Potentially Characteristic Areas (DOE 1998e)* - Eighty-nine borings were located in the vicinity of three potentially RCRA characteristic areas within Area 3A. Samples were collected with the primary purpose of identifying, and bounding if necessary, RCRA characteristic waste for lead in the Scrap Metal Pile and KC-2 Warehouse areas and for both lead and TCE in the Maintenance Building area. Samples from these borings were also analyzed for uranium and thorium, providing additional data for WAC and FRL characterization in those areas.

- *PSP for Area 3A/4A Surface Predesign Investigation (DOE 1999c)* - Twenty-five samples were collected as part of the Surface Predesign Investigation to bound areas of non-uranium contamination exceeding the OSDF WAC and to minimize uncertainty in the three-dimensional model of surface uranium contamination. Five samples were analyzed for 4-nitroaniline, five samples were analyzed for bis(2-chloroisopropyl)ether, and 15 samples were analyzed for total uranium.

- *PSP for Area 3A/4A Subsurface Predesign Investigation (DOE 1999d)* - Analysis of all RI/FS boring subsurface data in the Sitewide Environmental Database (SED), as well as data from prior predesign investigations, identified three subsurface locations exceeding the OSDF WAC for total uranium and three locations exceeding both the total uranium and technetium-99 WAC. Another seven subsurface locations exceeding FRL limits for one or more non-uranium constituents (beryllium, arsenic, thorium-228, thorium-232, aroclor-1254, aroclor-1260, benzo(a)pyrene, 1,1-DCE) were identified at depths below the excavation bounds for above-FRL uranium contamination or subsurface structural components. Examination of the same data was used to determine if gaps in total uranium characterization existed within the two Area 3A/4A high-leachability areas established in the OU5 ROD.

  Based on this data, 99 borings at depths from 4 to 28 feet were scheduled within Area 3A/4A with the following objectives: 1) define the extent of subsurface contamination exceeding the WAC for the OSDF; 2) bound non-uranium contamination that is above the FRL and drives remediation beyond the extent of uranium contamination; 3) verify and/or redefine the high leachability areas; 4) fill data gaps to reduce the kriging uncertainty in the three-dimensional total uranium contamination computer model.

  Nine of the original 99 borings had to be postponed due to lack of access to those areas within Plant 6. Access is expected following partial D&D of Plant 6 in early to mid-2001. An additional 88 boring were completed under variances to this PSP to conduct further characterization in areas where the initially scheduled borings failed to vertically or laterally bound above-WAC or above-FRL constituents.

  Work continues under this PSP to confirm the projected northern boundary of the above-FRL Aroclor contamination north of the Maintenance Building and the projected western boundary of above-FRL 1,2-DCE and beryllium contamination west of the Incinerator Pad. Additional borings are also scheduled to confirm the projected depth of above-WAC uranium contamination in north central Plant 6, the projected eastern boundary of above-WAC technetium-99 contamination east of Plant 6, and the projected depth of above-FRL organics in the Incinerator Pad area.

The sampling and analysis performed under each of these investigations is summarized and discussed in Sections 2.3.1 through 2.3.3. Predesign Sampling in the Northeast Corner of Area 3 and Predesign Investigation of Plant 9 are discussed under the surface and subsurface PSPs. Analytical results from the predesign investigations are included in Appendix C.

2.3.1 Potentially Characteristic Areas

The field work and laboratory analyses were performed under the PSP for Area 3 Pre-Design Investigation of Potentially Characteristic Areas (DOE 1998e). As determined in the OU5 ROD, the northeast quadrant of the Former Production Area contained three areas with potentially RCRA characteristic soil that had to be investigated: the KC-2 Warehouse area, the area north of the Maintenance Building, and the Scrap Metal Pile area (Figure 2-3). These areas were defined based on RI/FS data indicating the presence of contamination levels in excess of the 20 times TCLP regulatory level and the presence of a sufficient soil volume that presented an opportunity for cost-effective treatment. To determine if the areas were characteristic, samples were collected and analyzed for TCE TCLP, lead TCLP, and total lead. Uranium and thorium analyses were also completed on most samples, and those results are considered in the discussion of surface and subsurface contamination (Sections 2.3.2 and 2.3.3).

2.3.1.1 KC-2 Warehouse Area

The KC-2 Warehouse was located in the northern part of Area 3A (north of the Impacted Material Haul Road) and was used to store RCRA hazardous waste. Four surface samples collected during the RI/FS investigation identified potentially characteristic lead concentrations south of the KC-2 Warehouse pad (i.e., lead concentrations that exceeded 20 times the allowable TCLP concentration). The source of this contamination is not known, but is thought to originate with fuel spills.

Based on this information, TCLP lead analyses were conducted at each of the original RI/FS sample locations, and 21 total lead analyses were conducted around the KC-2 Warehouse pad (Figure 2-4). All TCLP lead results were below the TCLP regulatory limit of 5 milligrams per liter (mg/L), and all total lead results were below the 20-times rule concentration - except sample KC04. This sample had a single total lead result (147 mg/kg) above the 20-times rule concentration of 100 mg/kg. Therefore, one additional sample from location KC04 was analyzed for TCLP lead and the result was below the TCLP regulatory limit.

Because there were no TCLP results above the lead regulatory limit, and no remaining locations with lead concentrations above the 20-times rule concentration (Appendix C), the KC-2 Warehouse area has been removed from the list of potentially characteristic areas.

2.3.1.2 Scrap Metal Pile Area

The Scrap Metal Pile Area is located in the northeast corner of Area 3A, and past operations here involved the reconditioning of drums and storage of scrap metal. Four surface samples collected during the RI/FS investigation identified potentially characteristic lead concentrations in different areas of the Scrap Metal Pile Area. The lead contamination in the area is believed to have originated from lead paint that was removed from drums and other scrap metal.

Based on this information, TCLP lead analyses were conducted at each of the four original RI/FS sample locations. Three additional bounding TCLP lead samples were collected at the RI/FS point (SMA-6) south of the decontamination pad because the total lead (569 mg/kg) identified at this location was significantly higher than the other three sample points (128 mg/kg, 123 mg/kg, 162 mg/kg). (Figure 2-5). In addition, 39 total lead analyses were conducted and seven total lead results were above the 20-times rule concentration, which indicates the potential for hazardous waste. TCLP lead samples were collected from each of these locations and the results were below the TCLP regulatory limit.

Because there are no TCLP results above the lead TCLP regulatory limit, and no remaining locations with lead concentrations above the 20-times rule concentration (Appendix C), the Scrap Metal Pile area has been removed from the list of potentially characteristic areas.

2.3.1.3 Maintenance Building Area

The Maintenance Building is located near the center of the Former Production Area. RI/FS sampling indicated that there were elevated levels of lead and TCE in the area behind the building. This contamination most likely originated from solvent spills during routine maintenance operations. The RI/FS data indicated two distinct areas of contamination – one boring behind the center of the building had potentially characteristic levels of lead, and two borings behind the western portion of the building had potentially characteristic levels of lead and TCE.

Based on this information, nine borings were completed to collect 8 TCLP lead, 40 TCLP TCE, and 11 total lead samples (Figure 2-6). More TCLP TCE samples were collected than lead samples

because the TCE contamination impacted a larger volume of soil. In addition, because volatile organic compound analysis cannot be performed on archive samples (due to short sample holding times), samples were only analyzed for TCLP TCE instead of using total TCE results to guide TCLP analysis, as was done in the lead contamination areas. All TCLP lead results were below the TCLP regulatory limit and all total lead results were below the 20-times rule concentration. Four out of the five borings conducted for TCLP TCE analysis showed results above the TCLP regulatory limit of 0.5 mg/L, ranging from 0.52 mg/L to 1.8 mg/L (Table 2-4). Following the completion of these nine borings, the area was not bounded at depth and was bounded laterally only to the east.

Because this area was confirmed as containing characteristic hazardous waste, 13 additional borings were collected in an attempt to bound the TCE contamination (Appendix C). One hundred and forty-five samples were collected for TCLP TCE analysis, and four of the samples were above the TCLP regulatory limit (Table 2-4); but the contamination has been bounded both laterally and at depth. The bounding borings for this contamination are identified on Figure 2-7.

All of the TCLP lead and total lead results from the Maintenance Building area indicate that lead-contaminated soil above the regulatory limits is absent in this area. Therefore, lead has been eliminated as a potentially characteristic constituent of concern for the area.

2.3.2 Surface Investigation

The top 2 feet of existing soil and gravel cover (approximately 25 percent of Area 3A/4A) will be removed regardless of the contamination level. Therefore, surface predesign sampling focused on identifying soil within this area that exceeded the OSDF WAC so that it could be segregated for off-site disposal. A search of the SED identified total uranium, 4-nitroaniline, and bis(2-chloroisopropyl)ether as the COCs present in the exposed surface soil (0 to 1 foot depth) at concentrations meeting or exceeding the OSDF WAC. Real-time scanning and the collection of physical samples were used to bound the surface contamination.

2.3.2.1 Real-Time Scanning

Real-time scanning, using the Radiation Tracking System (RTRAK), Radiation Scanning System (RSS), and high-purity germanium (HPGe) detectors, was performed on all accessible soil and gravel cover in Area 3A/4A (Figure 2-8). Scanning in the former Coal Pile area was completed under the Real Time Instrumentation Measurement Program's WAC Attainment scanning in Miscellaneous Areas

(DOE 1999e). The remaining real-time scanning was completed under the Area 3A/4A Surface Predesign Investigation (DOE 1999c).

Based on the real-time scanning results, uranium above-WAC areas were initially identified in the northeast corner of Area 3A and to the north and east of the Incinerator Pad. Initial real-time scanning results indicated above-WAC levels of surface uranium contamination in the area east of the 4B Warehouse. However, this scanning was accomplished with the mobile sodium-iodide (NaI) detector system, utilizing a single gamma energy level, and the source of these results was suspected to be "shine" from the material stored in the 4B Warehouse. The area was rescanned using the tripod mounted HPGe system, which uses multiple gamma energy levels and is less susceptible to the effects of energy sources outside its field of view. Rescanning results confirmed that uranium surface contamination in this area is below-WAC. This is reflected on Figure 2-8 as green circles (below-WAC HPGe scans) encompassing the red area (above-WAC NaI scans) east of the 4B Warehouse.

2.3.2.2 Physical Sampling

Surface predesign samples within Area 3A/4A were collected under four separate PSPs:

- Predesign Investigation Sampling in the Northeast Corner of Area 3
- Area 3 Predesign Investigation of Potentially Characteristic Areas
- Area 3A/4A Surface Predesign Investigation
- Area 3A/4A Subsurface Predesign Investigation.

All predesign surface sample locations and the investigated RI/FS sample locations are shown on Figure 2-9. All above-WAC results identified in this discussion are listed in Table 2-5.

Extent of Contamination

The RI/FS data identified three surface samples exceeding the OSDF WAC for total uranium that were not accessible to real-time scanning (Figure 2-9). The first area is located between Stockpile 1 and the Decontamination Pad at a depth of 0.5 to 1.0 feet (Zone 1-320). Four borings (12467 through 12470) were conducted in this area to confirm and bound the above-WAC RI/FS result (2270 mg/kg) at the sampling point (Figure 2-9). The results of the predesign sampling were well below the OSDF WAC for total uranium (the highest concentration was 79.3 mg/kg). Therefore, this area is not identified as an above-WAC area.

The second area is located under concrete southeast of Plant 9 (1568). Four borings (12510 through 12513) were conducted to bound the above-WAC RI/FS result at Boring 1568 (Figure 2-9, Table 2-5). Additional above-WAC surface contamination was found in Boring 12513, so three additional borings (12607 through 12609) were completed to bound the contamination. Boring 12608 was also found to contain above-WAC concentrations of uranium and technetium-99, so three additional borings (12641 through 12643) were completed to bound the surface extent of above-WAC uranium. Results for technetium-99 analyses are incomplete, but bounding is expected due to the co-location of uranium and technetium-99.

The third area is located east of Plant 6 (1145). Three borings (12523, 12526, and 12528) were conducted to bound the above-WAC RI/FS result at Boring 1145 (Figure 2-9, Table 2-5). Above-WAC total uranium concentrations were not found in those borings. However, four additional borings (12610 through 12613) were completed to bound non-uranium contamination in the area, and Boring 12612 had an above-WAC concentration of total uranium at the surface. Due to building obstructions, further bounding of this contaminant area is possible only to the east. Additional bounding in that direction is currently scheduled as a variance under the Subsurface Predesign Investigation PSP. Bounding in other directions will be possible only after D&D of Plant 6.

In addition, a new above-WAC uranium sample was identified on the soil surface adjacent to the Incinerator Pad. This contamination was bounded by real-time scanning (Figure 2-10). Seven samples were then collected around the perimeter of the Incinerator Pad, and results indicate total uranium concentrations greater than the OSDF WAC (Table 2-5). All of these borings are bounded by physical samples and/or real-time scanning results.

Ten surface samples (Borings 12454 through 12463) were collected to confirm and bound the above-WAC 4-nitroaniline and bis(2-chloroisopropyl)ether contamination identified during the RI/FS sampling (Figure 2-9). Sampling for 4-nitroaniline was completed in the area of the former Coal Pile around RI/FS Boring 11198, and sampling for bis(2-chloroisopropyl)ether was completed south of the KC-2 Warehouse around RI/FS Boring KC2-2.

Because current analytical methods do not yield reliable detection levels at the OSDF WAC limit for 4-nitroaniline and bis(2-chloroisopropyl)ether, the current EPA contract laboratory program contract required detection limits (CRDLs) of 830 micrograms per kilogram (ug/kg) for 4-nitroaniline and

330 ug/kg for bis(2-chloroisopropyl)ether were used as the WAC attainment values when evaluating the results of these samples. The two constituents were not detected in any of the ten samples, and all detection limits were at the CRDL values. Therefore, neither of these areas is identified as being above the OSDF WAC.

Boring 12526, located east of Plant 6, identified above-WAC technetium-99 activity [336 picoCuries per gram (pCi/g)] directly under the concrete. Because this contamination is near subsurface above-WAC concentrations of technetium-99, it will be discussed in Section 2.3.3.

Surface samples collected during the predesign investigation did not identify above-WAC contamination in the northeast corner of Area 3A. However, real-time scanning and RI/FS samples indicated that above-WAC contamination is present. Therefore, the extent of above-WAC contamination in this area (Figure 2-11) is based on the RI/FS and real-time data.

2.3.2.3 Location of HWMUs and USTs

As stated in Sections 2.1.4 and 2.1.5, there are three USTs and one HWMU located in Area 3A/4A. Under the PSP for Area 3A/4A Surface Predesign Investigation (DOE 1999c), two of the three UST footprints and the HWMU were established through field surveying (Figure 2-12). The third UST lies under Plant 6 and cannot be surveyed at this time. The surveyed footprints will be the starting points for sampling activities that will demonstrate attainment of FRLs for the HWMU and UST constituents of concern (Table 2-6).

The Storage Pad North of Plant 6 was designated HWMU No. 36 based upon continued storage of hazardous waste after production in excess of the 90-day storage limit. The Storage Pad is a flat concrete pad, 8 feet wide and 40 feet long, bordered by a 6-inch concrete curb to the east, a concrete driveway to the west, Plant 6 to the south, and Second Street to the north. The waste stored on this pad included wet filter cake and oily sludge, both of which were from the wastewater treatment system at Plant 6. Lead and 1,1,1-trichloroethane are the COCs for HWMU No. 36.

UST No. 3 was located northeast of Building 24B, the Railroad Engine House. It contained diesel fuel and had a volume of 12,500 gallons. UST No. 3 was removed in 1990, and samples collected at that time indicate that above-FRL soil was excavated during the removal action. The COCs for this UST are benzene, ethylbenzene, toluene, xylene, barium, lead, and mercury.

UST No. 6 was located approximately 1 foot north of the Maintenance Building (Building 12) at the northwest corner. The tank held up to 1,000 gallons of gasoline and was removed in 1990. Samples collected after removal of the UST indicate that above-FRL soil was excavated during the removal action. The COCs for this UST are acetone, benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-DCE, ethylbenzene, methyl chloride, methyl ethyl ketone, PCE, toluene, 1,1,1-trichloroethane, TCE, xylene, arsenic, cadmium, chromium, lead, mercury, and selenium.

UST No. 14 is located in the former scrap melting area in the eastern portion of Plant 6. The tank held up to 3,000 gallons of water-soluble machining oil and was closed in place in 1995. The tank will be removed during excavation and the footprint of the affected area will be established at that time. UST No. 14 has only one COC, methanol, which does not have a corresponding FRL. The approximate location of UST No. 14 is shown on Figure 2-12.

2.3.3 Subsurface Investigation

Subsurface samples are defined as soil samples collected at a depth of greater than 1 foot. Subsurface predesign samples within Area 3A/4A were collected under four separate PSPs:

- Predesign Investigation Sampling in the Northeast Corner of Area 3
- Area 3 Predesign Investigation of Potentially Characteristic Areas
- Area 3 Predesign Investigation of Plant 9
- Area 3A/4A Subsurface Predesign Investigation.

All above-WAC and above-FRL analytical results discussed in the following summary are listed in Tables 2-5 and 2-7. Figures 2-13 and 2-14 show all predesign boring locations for subsurface sampling in Area 3A/4A. Some boring locations fall outside the current Area 3A/4A boundary because they were positioned prior to an adjustment of the boundary. These locations now lie within Area 6 and are included for information only. Associated sampling data will be used for remediation of Area 6. One hundred and seventy-eight borings and hundreds of associated analyses (Appendix C) have been completed under the Subsurface Predesign Investigation PSP. Additionally, borings under further variances to the PSP will continue, as discussed in the following sections.

2.3.3.1 Extent of Above-WAC Contamination

A search of the SED data identified subsurface locations with above-WAC uranium and technetium-99 contamination inside or adjacent to Plant 6 and Plant 9. Additionally, above-WAC uranium and VOC

contamination were identified during predesign sampling activities at the southeast corner of Plant 9 and the Incinerator Pad (uranium) and east of Plant 6 and the Incinerator Pad (VOCs). Each above-WAC area is discussed in detail below. Analytical results for all above-WAC samples collected during the predesign investigation are listed in Table 2-5.

Incinerator Pad Area

This area consists of a concrete pad, approximately 90 feet by 50 feet, which supported a solid waste incinerator (i.e., the graphite burner) on its northeast quadrant and a liquid waste incinerator (i.e., the oil burner) on its southeast quadrant. The graphite burner was used to incinerate approximately 30,000 pounds of uranium-contaminated graphite crucibles per year between 1965 and 1979. The resultant ash from the burner was processed for uranium recovery. The oil burner was used to burn variable amounts of vehicle oil, solvents, cutting oils, and extracts from 1962 through 1979.

Seven excavation zones, based on above-WAC and above-FRL results at varying depths, have been delineated under and around the Incinerator Pad area. A plan view of these zones is presented on Figure 2-15 and an associated cross-section (A to A′) of the different zones and nearby borings is illustrated on Figure 2-16. Bounding borings displayed on Figure 2-16 do not always appear exactly in line with the excavation zone boundaries because some of them have been projected onto the cross section plane.

The above-WAC uranium contamination identified by physical samples and real-time scanning north and east of the Incinerator Pad was discussed in Section 2.3.2.

In the course of conducting borings near the northwest corner of the Incinerator Pad to investigate possible above-FRL contamination, analytical results from Boring 12595 indicated above-WAC uranium contamination at 3 to 3.5 feet, which is vertically bounded by samples 1 foot above and below (Figure 2-15). This area is laterally bounded approximately 10 feet to the north, east, south, and west by Borings 12596, 12544, 12594, and 12671.

While conducting predesign Borings 12546-12550 to confirm/bound above-FRL levels of beryllium near the southwest corner of the Incinerator Pad at RI/FS Boring 1577 (Figure 2-15), field screening of the sample cores indicated the possible presence of high-level uranium contamination near the surface at Boring 12547. Samples were collected and above-WAC uranium was confirmed at 0 to 0.5 feet and

bounded at a depth of 3 feet. Lateral bounding of this area is based on below-WAC uranium results at Borings 12630, 12634, 12688, 12679, 12598 and 12689.

While conducting predesign Borings 12546-12550, routine field screening of the sample cores detected the possible presence of VOCs. Samples were collected at Borings 12547 and 12549, analyzed for VOCs, and laboratory results indicated PCE at above-WAC concentrations to a depth of 7 feet.

Because RI/FS data and other predesign analytical results around the northwest corner of the Incinerator Pad indicated volatile contamination at above-FRL levels, 18 additional predesign borings (12620-12637) were completed. A matrix grid pattern was used to better characterize the area under and around the entire concrete pad, focusing on a 5-foot deep sump near the center of the pad as a likely source for the subsurface contamination. Further above-WAC levels of PCE and DCE were detected at Borings 12629 and 12630. To more precisely define the above-WAC PCE and DCE zones, as well as to further bound above-FRL contamination, another 24 borings 12666-12683, 12687-12693) were conducted both on and around the Incinerator Pad. Above-WAC levels of PCE and DCE were identified at Borings 12688, 12690, 12691 and 12693. Based on analysis of the sample results from these borings, two above-WAC DCE and PCE excavation zones have been identified.

A shallow PCE and DCE contamination zone, to a depth of 1.5 feet below the concrete pad, is located around above-WAC levels of PCE and DCE Boring 12691, above-WAC PCE at Boring 12690 and above-WAC 1,2-DCE to a depth of 1 foot at Boring 12629 (Table 2-5). The above-WAC contamination is vertically bound at a depth of 1.5 feet. The area is laterally bound by Borings 12681, 12624, 12692, 12689, and 12680 (Figure 2-15).

A second above-WAC PCE and DCE contamination area has been identified below and beyond the first, at a depth of 6 to 13.5 feet. Above-WAC levels of PCE and DCE within this area include PCE at Boring 12647, 12688, and 12693, PCE and DCE at Boring 12630, and PCE at Boring 12549 (Table 2-5). This above-WAC area is bounded at a depth of 13.5 feet and is laterally bound by Borings 12681, 12624, 12625, 12626, 12682, 12631, 12683, 12635, 12634, 12678, 12677, 12676, 12679 and 12680 (Figure 2-15).

Southeast Plant 9 Area

Based on above-WAC levels of uranium and technetium-99, two excavation zones have been identified in the southeastern Plant 9 area. A plan view of these areas is presented on Figure 2-17 and an associated cross-section (B to B′) through both areas and nearby borings is illustrated on Figure 2-18. Bounding borings displayed on Figure 2-18 do not always appear exactly in line with the excavation zone boundaries because of their projection onto the cross section plane. The southern above-WAC zone is discussed in Section 2.3.2.2 as part of the surface contamination.

Boring 12390 was located within Plant 9 at the extreme southeast corner to investigate potential leakage associated with a floor drain. Analytical results indicate above-WAC technetium-99 contamination to a depth of approximately 2.5 feet and above-WAC uranium to approximately 6.8 feet below the concrete floor. Based on this information, additional borings were placed to bound the contamination. Because excessive sloughing of soil from the top of Boring 12390 to deeper sections of the boring was observed during drilling, Boring 12507 was located next to Boring 12390 (within 1 foot) to verify the above-WAC uranium and technetium-99 results. Samples were collected every foot to a depth of 10 feet and analytical results confirm above-WAC uranium and technetium-99 contamination below the concrete (Table 2-5); however, the above-WAC uranium contamination of 6.5 feet was not verified. Because Boring 12507 was completed using the dual-tube sampling method which minimizes sloughing, the results from that boring will be used in lieu of the suspect results from Boring 12390. Borings 12505, 12506, 12508 and 12509 bound the above-WAC uranium contamination. However, further above-WAC technetium-99 contamination was identified to a depth of 5 feet to the east and 6.5 feet to the south. Six additional borings (12601-12606) were added and further above-WAC contamination was detected in Boring 12601 to a depth of 4.5 feet. Borings 12638 and 12639 were then completed to bound the above-WAC technetium-99 contamination to the north and east of Boring 12601 (Figure 2-17).

Boring 12602 was placed 1 foot east of Plant 9 to bound technetium-99 contamination, and above-WAC uranium contamination was found in the top 6 inches of soil. This location was laterally bounded by Borings 12639, 12640, 12508, and 12603. Although technically categorized as surface contamination (i.e., within the top foot of soil), this small area is expected to be excavated and handled as part of the Southeast Plant 9 area because of its proximity to the previously discussed subsurface above-WAC contamination.

North Central Plant 6

RI/FS Boring 1404 indicated subsurface above-WAC uranium contamination at a depth of 1.5 feet without vertical bounding. The contamination area is laterally bounded approximately 10 feet to the northeast by RI/FS Boring 1140 (Figure 2-19). Predesign Borings 12519, 12520 and 12521 laterally bound the contamination 10 feet to the northwest, southwest and southeast. Vertical bounding of the area was projected at 4.5 feet, based on uranium levels of less than one-fourth the uranium WAC at the lateral bounding borings. Another predesign boring will be placed at the location of Boring 1404 to confirm vertical bounding at the projected depth. This activity is scheduled as a variance to the Subsurface Predesign PSP and is expected to be completed in Summer 2000.

East Plant 6

A plan view of the above-WAC uranium, technetium-99, and volatile organic contamination zone and related boring locations is shown on Figure 2-19. An associated cross-section (C to C′) with nearby borings is illustrated on Figure 2-20. Bounding borings displayed on Figure 2-20 do not always appear exactly in line with the excavation zone boundaries because of their projection onto the cross section plane.

RI/FS Boring 1145, located approximately 15 feet outside the eastern side of Plant 6, indicated above-WAC uranium contamination at 0.5 to 1 feet below a concrete pad. RI/FS Boring 1144, located approximately 5 feet inside the eastern wall of Plant 6, detected above-WAC technetium-99 contamination at a depth of 1.5 to 2 feet below the concrete floor. Predesign Borings 12523, 12526, and 12528 were located approximately 25 feet northeast, east and southeast, with the joint purpose of investigating subsurface technetium-99 contamination detected at Boring 1144 and above-WAC uranium contamination detected at Boring 1145 (Figure 2-19).

Field screening of Boring 12523 indicated the presence of VOCs. A sample for VOC analysis was collected at a depth of 4 to 4.5 feet and analytical results show above-WAC PCE. Predesign Boring 12613 was completed beside Boring 12523 and sample analysis confirmed the above-WAC level at 4.5 feet. Because the same boring detected above-WAC uranium contamination at 4 to 5.5 feet, above-WAC PCE contamination will be excavated with the surrounding uranium contamination (Figure 2-19). Borings 12523, 12526, 12528 and 12613 vertically bounded the above-WAC uranium at 5.5 feet deep, with lateral bounding to the east and south. Borings 12610, 12611 and 12612 provided lateral bounding to the east for above-WAC PCE and above-WAC uranium. Above-WAC uranium

was detected in Boring 12612 at a depth of 0 to 0.5 feet below the concrete and above-WAC technetium-99 was detected at 9 to 9.5 feet.

Due to the current inability of boring equipment to access this area of Plant 6, nearby predesign borings could be located only to the east, outside the building. The current excavation boundary to the east is projected at 10 feet east of Boring 12612, based on the similar distance required to bound technetium-99 and uranium to the north (Boring 12611). A bounding boring to the east is scheduled as a variance to the Subsurface Predesign PSP and will be completed in Summer 2000.

Bounding of the east Plant 6 above-WAC contamination to the north, west and south will not be possible until Spring 2001, due to the presence of equipment and building obstructions. The nearest RI/FS bounding borings (Figure 2-19) for technetium-99 and uranium are Borings 1611, 1148, 1143, 1142 and 2109. Borings 1148 and 1611 also bound for the PCE contamination to the south. Following D&D of the above-grade portions of Plant 6, additional characterization data will be collected to redefine the above-WAC areas. Revised areas will be submitted to the EPA and OEPA for concurrence prior to excavation.

South Plant 6

Data from RI/FS Boring 1162 indicated above-WAC uranium contamination to a depth of 5.5 feet (Table 2-5). RI/FS Borings 1413 and 1415 provided lateral bounding to the northwest and southwest, respectively (Figure 2-19). Predesign Boring 12530 provided lateral bounding to approximately 12 feet to the southeast. Predesign Boring 12529 was conducted approximately 20 feet to the northeast and indicated above-WAC uranium contamination to 5.5 feet. Current projected excavation boundaries are based on bounding distances to the north and east (RI/FS Borings 1161 and 1163), although additional predesign borings will be required to bound the contamination after structural obstructions are removed in Spring 2001 to attempt to reduce the boundaries of this area.

Northeast Plant 6

RI/FS Boring 1139 (Figure 2-19) indicated above-WAC uranium to a depth of 5.5 feet and technetium-99 to a depth of 0 to 0.5 feet below the concrete floor (Table 2-5), with vertical bounding at 10 feet. Due to the inability of boring equipment to access this area of Plant 6, further definition of the uranium contamination at this location will be done in Spring 2001. Current projected boundaries for this area are based on Plant 6 structural features. The nearest RI/FS bounding borings (Figure 2-19)

for both technetium-99 and uranium are Borings 1326, 1142 and 2388. Borings 1117, 12495 and 1116 provide bounding for uranium only.

2.3.3.2 Extent of Above-FRL Contamination

Subsurface excavation limits are primarily based on a three-dimensional computer model of uranium contamination and the removal of man-made structures. Data on non-uranium COCs are used to adjust the excavation limit when a non-uranium FRL lies deeper than the uranium FRL. Figures 2-21 through 2-25 illustrate the extent of contamination and the excavation profiles required to remove the contamination and man-made structures. The deepest contamination zones within Area 3A are in the southeast Plant 9 area (Section Lines A-A′ and B-B′, Figure 2-22), the Decontamination Pad area north of Buildings 64/65 (Section Line I-I′, Figure 2-25), and in the Incinerator Pad area northeast of the Boiler Plant (Section Line H-H′, Figure 2-25). The deepest contamination zones within Area 4A lie under Plant 6 (Section Lines A-A′ and B-B′, Figure 2-22 and Section Line F-F′, Figure 2-24). Excavation in the high-leachability zones is driven by the uranium FRL of 20 mg/kg.

A review of SED data identified seven locations in Area 3A/4A where above-FRL non-uranium contamination is present at depths greater than the uranium contamination. Confirmatory and bounding borings were completed at all seven locations. Above-FRL levels of contamination were confirmed at three of the locations. In addition, above-FRL VOC contamination was identified in the eastern Plant 6 area while conducting predesign borings to investigate above-WAC uranium and technetium-99 contamination in that area. All above-FRL analytical results discussed below are listed in Table 2-7.

North of Maintenance Building

RI/FS Boring 1597 indicated an above-FRL concentration of aroclor-1254 contamination at a depth of 2 to 2.5 feet (Table 2-7). A confirmatory boring (12556) was completed at the location of the RI/FS boring, surrounded by four bounding borings (12557-12560, Figure 2-26). Samples at all five locations were collected every foot to a depth of 5.5 feet, with above-FRL contamination in all borings except Boring 12557. Additional bounding Borings 12659, 12661 and 12665 were completed to a depth of 10 feet. An above-FRL level of aroclor-1254 was identified at Boring 12659 at a depth of 2 to 2.5 feet. Boring 12660 was completed beside Boring 12556 to a depth of 10 feet and above-FRL contamination was vertically bounded at a depth of 5.5 feet.

RI/FS Boring 1595 indicated above-FRL concentrations of aroclor-1254 to a depth of 10 feet. Predesign confirmatory Boring 12655 and bounding Borings 12656 through 12658 were completed to a depth of 13 feet at this location with no detection of above-FRL aroclor-1254.

RI/FS Boring 1308 indicated an unbounded above-FRL aroclor-1254 concentration at a depth of 0.5 to 1 foot. Predesign Borings 12662C through 12664 were completed to a depth of 10 feet around this location. An above-FRL level of aroclor-1254 was identified at Boring 12662C at a depth of 4 to 6.5 feet.

Additional borings to complete lateral bounding outside Borings 12659 and 12662C are scheduled under a forthcoming variance to the Subsurface Predesign Investigation PSP. The projected northern boundary of this above-FRL contamination area is covered by concrete, under which above-FRL contamination is unlikely. This assumption is based on the confirmed absence of above-FRL contamination under concrete along the southern boundary. The western and southern boundaries are based on predesign Borings 12657, 12656, 12665 and 12664. The eastern boundary extends approximately 20 feet east of above-FRL Boring 12662 to encompass a small swale leading to a nearby surface water catchment basin.

North of Maintenance Building Warehouse

RI/FS Boring 1584 indicated an above-FRL concentration of benzo(a)pyrene contamination at a depth of 2 to 2.5 feet. A confirmatory boring (12551) was completed at the location of the RI/FS boring, surrounded by four bounding borings (12552-12555, Figure 2-13). Samples at all five locations were collected every foot to a depth of 5.5 feet with no above-FRL contamination detected. Based on these data (Appendix C), no excavation for benzo(a)pyrene contamination will be required at this location.

East of Stockpile 4

RI/FS Boring 11087 indicated an above-FRL concentration of beryllium contamination at a depth of 9 to 9.5 feet. A confirmatory boring (12536) was completed at the location of the RI/FS boring, surrounded by four bounding borings (12537-12540, Figure 2-13). Samples at all five locations were collected every foot to a depth of 12.5 feet, with no above-FRL contamination detected. Based on these data, no excavation for beryllium contamination will be required at this location.

Incinerator Pad Area

RI/FS Boring 1577 indicated an above-FRL level of beryllium contamination at a depth of 4 to 4.5 feet (Table 2-7). A confirmatory boring (12549) was completed at the location of the RI/FS boring, surrounded by four bounding borings (12546-12548 and 12550, Figure 2-15). Samples at all five locations were collected every foot from 3 to 7.5 feet deep. Above-FRL levels of beryllium were detected at Borings 12549 and 12548, both vertically bounded at 4 feet deep, and at Boring 12546, vertically bounded at 5 feet deep. Three additional bounding borings (12598-12600) to 7.5 feet deep were completed northwest, west and southwest of Boring 12546. Boring 12598 detected above-FRL beryllium at 4 to 4.5 feet deep. Two additional predesign borings (12673 and 12674) were completed west of Boring 12598 to a depth of 8.5 feet for beryllium sampling. An above-FRL level of beryllium at a depth of 4 to 4.5 feet was identified at Boring 12673 and an above-FRL level of beryllium at a depth of 0 to 0.5 feet was identified at Boring 12674. Both locations are within the current excavation bounds for above-FRL uranium in this area. The shallow level of contamination at Boring 12674 will be removed by the planned 2-foot-deep excavation of Area 3A/4A soil that is currently uncovered by concrete of asphalt pads and roadways. To ensure excavation of the above-FRL beryllium at Boring 12673, the eastern boundary of the above non-uranium FRL excavation zone in this area was extended 10 feet west of this boring.

RI/FS Boring 1578 detected above-FRL levels of arsenic, 1,1-DCE, and aroclor-1260 at depths of 4 to 4.5 feet. A confirmatory boring (12541) was completed at the location of the RI/FS boring, surrounded by four bounding borings (12542-12545, Figure 2-15). Samples at all five locations were collected every foot from 3 to 7.5 feet. All five borings detected above-FRL levels of 1,2-DCE, without vertical bounding. In addition, above-FRL levels of aroclor-1254 were detected to 5.5 feet deep in Boring 12543. No arsenic, aroclor-1260, or 1,1-DCE was found at above-FRL levels.

Nine additional bounding borings (12589-12597) were completed to a depth of 10.5 feet to bound the extent of vertical and lateral contamination of the three above-FRL constituents identified in the initial five borings. Boring 12697 was located next to Boring 12541 and was surrounded by the remaining eight borings. Data from these additional borings vertically bounded the 1,2-DCE at 8.5 deep but provided lateral bounding only to the north. Boring 12593 also detected above-FRL aroclor-1254 at 6 to 6.5 feet deep although above-FRL VOCs down to 8.5 feet deep, at the same location will control the required excavation depth.

Eighteen additional predesign borings were positioned in a matrix pattern to further characterize the area under and around the Incinerator Pad (Figure 2-15). In addition to detecting above-WAC levels of DCE and PCE in the southwest area of the pad, above-FRL levels of PCE and DCE were detected under most of the concrete pad and 10 feet off the northern edge of the pad. Three borings on the pad also detected above-FRL levels of beryllium (12629-12631), but deeper above-FRL VOC contamination at all three locations will control excavation depth. Above-FRL VOC contamination under the pad was not vertically bounded at a depth of 13 feet.

An additional 24 borings (12666-1283 and 12687-12693), most to a depth of 16 feet, were completed on or around the Incinerator Pad for further delineation and separation of the multi-COC above-FRL and above-WAC zones. After bounding the five above-WAC zones (Section 2.3.3.1), two discrete above-FRL zones have been identified. A plan view of these zones is presented on Figure 2-15 and a cross section (A-A′) across the various zones is presented on Figure 2-16.

One above-FRL contamination zone extends from the surface (or bottom of overlying above-WAC zones) to a depth of 10.5 feet. This zone is bounded to the north, east and south by predesign Borings 12666-12670, 12622, 12623, 12628, 12633-12637, and 12675-12678. The western boundary is projected based on the previously discussed above-FRL beryllium contamination at Boring 12673, as well as an above-FRL level of 1,2-DCE identified at a depth of 6 to 6.5 feet at Boring 12671. This contamination is deeper than the above-FRL uranium excavation depth at this location. An additional predesign boring located west of Boring 12671 is scheduled under a forthcoming variance to the Subsurface Predesign PSP to confirm the currently projected above-FRL non-uranium excavation boundary in that area.

A second, deeper, above-FRL contamination zone has been identified beneath the deepest above-WAC excavation zone. This above-FRL area extends from a depth of 13.5 feet to a projected depth of 18 feet. Above-FRL contaminants in this zone include 1,2-DCE and PCE bounded at a depth of 15.5 feet at Boring 12693 and an above-FRL level of PCE unbounded vertically at a depth of 16 feet at Boring 12689. An additional predesign boring located at Boring 12689 is scheduled under a forthcoming variance to the Subsurface Predesign PSP to confirm the currently projected bounding depth of 18 feet for this above-FRL zone. The upper boundary is based on the bottom of the overlying above-WAC zone at 13.5 feet. This area is bounded to the north, east and south by Borings 12624-12626, 12682, 12631, 12683 and 12688. Deep bounding to the west (16 feet) is based

on Borings 12679 and 12681, as well as bounding of overlying above-FRL contamination at a depth of 1 foot at Boring 12690.

Northeast Corner

RI/FS Boring 1281 indicated an above-FRL concentration of thorium-228 and thorium-232 at a depth of 6 to 6.5 feet. A confirmatory boring (12531) was completed at the location of the RI/FS boring, surrounded by four bounding borings (12532-12535, Figure 2-13). Samples at all five locations were collected every foot to a depth of 9.5 feet with no above-FRL contamination detected. Based on these data (Appendix C), no excavation for thorium contamination will be required at this location.

Central Plant 6

RI/FS Boring 1607 identified above-FRL thorium-228 contamination at a depth of 5 to 5.5 feet in the central area of Plant 6 (Figure 2-19). Five predesign confirmation/bounding borings (12566-12570) were completed to a depth of 8.5 feet at this location. No above-FRL thorium-228 was detected. Based on these data (Appendix C), no excavation for thorium-228 contamination will be required at this location.

East Plant 6

Above-FRL concentrations of 1,1-DCE, 1,2-DCE and PCE were detected while conducting a predesign investigation of above-WAC contamination (technetium-99, uranium and PCE) in the eastern area of Plant 6. Predesign Boring 12613 identified above-FRL DCE and PCE to a depth of 8.5 feet below the concrete (Figure 2-19). Boring 12610 identified above-FRL PCE to a depth of 6.5 feet and Boring 12612 identified above-FRL 1,1-DCE to a depth of 8.5 feet (Table 2-7). Due to building obstructions, further bounding of these contaminant areas is possible only to the east and will be part of the effort to establish the eastern above-WAC contamination boundary currently scheduled under a forthcoming variance to the Subsurface Predesign PSP. Bounding in other directions will not be possible until Spring 2001, following partial D&D of Plant 6.

Because of the close proximity of above-FRL contamination to the above-WAC uranium, technetium-99, and PCE contamination, a single excavation area has been created that encompasses both above-WAC and above-FRL contamination. If later predesign borings provide data indicating discrete above-WAC and above-FRL contamination areas, corresponding separate excavation zones will be designed.

2.4 HIGH-LEACHABILITY ZONES

The OU5 FS Report identified two zones in Area 3A/4A with the potential to contain uranium contamination that is susceptible to leaching (Figures 2-27 and 2-28). Soil in these high-leachability zones must be remediated to the uranium FRL of 20 mg/kg, rather than 82 mg/kg. Thirty-three borings were placed in the two high-leachability zones to identify soil horizons were uranium concentrations fell between 20 and 82 mg/kg. This range of uranium contamination was investigated to determine if leachable forms of uranium were present over this concentration interval and, if not, could soil remediation be driven by the 82 mg/kg uranium FRL rather than the 20 mg/kg FRL.

Seven of the 33 borings yielded eight samples that met the concentration criteria, and the remaining borings yielded no soil samples with uranium concentrations between 20 and 82 mg/kg. Details on the number of samples taken at each boring location are provided in the Area 3A/4A Subsurface Investigation PSP. The eight samples were submitted to the University of Cincinnati to perform the two-step batch leach test described in Attachment F.2.I of the OU5 FS Report. Two soil samples containing uranium in excess of the 82 mg/kg FRL were also selected for the batch tests to compare the leachability of samples below and above the 82 mg/kg FRL.

Results for the batch tests are summarized in Table 2-8. The leaching coefficients for the two-step test are all below the 325 liters per kilogram (L/kg) coefficient established for low-leach zones outside of the production area (Attachment F.2.I, OU5 FS). This observation, and the elevated K_e values, indicates that uranium is present in a leachable form in these areas. Therefore, soil will be excavated down to the uranium FRL of 20 mg/kg in the high-leachability zones within Area 3A/4A.

2.5 IDENTIFICATION OF AREA-SPECIFIC CONSTITUENTS OF CONCERN

Section 2.1.6 identified the preliminary list of COCs for Area 3A/4A, which was based on the results of sampling and analysis performed during the RI/FS investigation. Based on the results of predesign sampling and analysis, Table 2-9 presents the revised list of COCs that will be used for Area 3A/4A. The list of primary COCs has remained the same, some of the secondary COCs have been eliminated, and 1,2-DCE has been added due to predesign data collected in the Incinerator Pad area. The COCs were chosen based on the following two criteria:

- The constituent is widespread in Area 3A/4A and is commonly found at above-FRL concentrations (i.e., the primary COCs); or

- The constituent is present at above-FRL concentrations at depths that drive the design excavation contours in those areas.

2.6 ANTICIPATED EXCAVATION BOUNDARIES

Excavation boundaries for Area 3A/4A are established based on the following information:

- Above-FRL uranium contamination contours generated by the three-dimensional computer model

- Above-WAC and non-uranium above-FRL areas which are manually established based on real-time scanning results and bounding physical sampling results

- Location of building foundations, support structures, and utilities

- Constructability and safe-slope configurations necessary to effectively excavate the material.

All of this information is combined to form a complete picture of the volume of material that should be excavated from Area 3A/4A. Excavation volumes for soil and debris are provided in Appendix D. Additional details on the above-WAC, RCRA, and above-FRL excavation boundaries are provided below.

2.6.1 Above-WAC Material

The excavation boundaries of the above-WAC areas discussed in Sections 2.5 and 2.6 were established based on physical sampling and real-time scanning results. Figures 2-15 through 2-20 display the lateral and vertical extent of each above-WAC area. The size, depth, and approximate volume of each area are listed in Table 2-10. Excavation details are discussed in Section 3.4.1.

2.6.2 Characteristic Material

The characteristic area behind the Maintenance Building is shown on Figure 2-7. The approximate volume of characteristic soil that will be excavated from this area is 600 yd^3. Excavation details are discussed in Section 3.4.1.

2.6.3 Above-FRL Material

The amount of excavation necessary to capture all above-FRL soil and man-made structures is determined in two different ways. The first is through the fitting of safe slopes to the building structures and the above-FRL total uranium contamination (as determined by the three dimensional computer model – Appendix E). The second method is used for above-WAC, RCRA and other non-uranium contamination areas. This method involves manually plotting the location of the contamination, drawing an excavation shape around the contamination, establishing the depths of excavation and fitting safe slopes to the indicated depths. The fitted safe slopes correspond to the design excavation depths, which are illustrated on Figures 2-21 through 2-25.

To verify that above-FRL soil has been captured by the excavation profiles shown on Figures 2-21 through 2-25, the depth of each above-FRL sample result was compared to the design excavation depth at the same location. If the sample depth was deeper than the excavation depth, the excavation contours were adjusted to capture the additional above-FRL material. The results of these comparisons have been graphically represented for each Area 3A/4A COC (Figures 2-29 through 2-41). When reading these graphs, note that depths are plotted relative to msl (i.e., 580 is deeper than 590) and the diagonal line corresponds to a slope of 1:1 to represent the ideal case where the excavation and sample depth are equal. Above-FRL sample points that fall below the line are captured by the designed excavation (i.e., the sample depth is shallower than the excavation depth at that location). Above-FRL sample points that fall above the line are not captured by the designed excavation (i.e., the sample depth is deeper than the excavation depth at that location). The following subsections will address any samples that fall into the latter category.

2.6.3.1 Uranium Contamination

The above-FRL uranium contamination was separated into results from within and outside the two high-leachability areas, and a distinction was also made among contamination at the different uranium action levels (20, 50, 82, and 1030 mg/kg). Figure 2-29 illustrates the results outside the high-leachability areas where the 82 mg/kg FRL applies. The only sample results that will remain following excavation are between 50 mg/kg (the ALARA goal range) and 82 mg/kg. In accordance with the design criteria for Area 3A/4A, these samples are captured only if they are within one excavation lift of contamination that is above the uranium FRL of 82 mg/kg. The samples shown left of the line in Figure 2-29 are not within one excavation lift of a uranium concentration of 82 mg/kg or greater.

Figure 2-30 illustrates the samples inside the high-leachability areas where the uranium FRL of 20 mg/kg applies. There are two samples above 20 mg/kg that are not currently captured by the designed excavation. One sample (54123) has a concentration of 21 mg/kg and is located to the west of Plant 9 at a depth of 15 to 15.5 feet below the surface. The excavation depth at that location is approximately 6 feet below the surface. Due to the fact that the sample is only 1 mg/kg above the FRL and that the excavation would have to be extended approximately 10 feet into below-FRL soil, the designed excavation depth does not capture that sample point. The second sample (51363) has a concentration of 25 mg/kg and was inadvertently missed when the designed excavation depth was established. The designed excavation depth will be modified to capture this sample point.

2.6.3.2 Non-Uranium Contamination

Figures 2-31 through 2-41 compare the sample results to the designed excavation depths for each non-uranium COC. All sample points are captured by the designed excavation except for one aroclor-1254 sample (056745), which is located less than 1 foot below the designed excavation depth. This discrepancy is due to a more recent surface topography being used to establish the excavation depth. The designed excavation depth will be modified to capture this sample point.

TABLE 2-1
PRELIMINARY AREA-SPECIFIC CONSTITUENTS OF CONCERN

Primary COCs	Secondary COCs
Radium-226	Aroclor-1254
Radium-228	Aroclor-1260
Thorium-228	Arsenic
Thorium-232	Benzo(a)anthracene
Total Uranium	Benzo(a)pyrene
	Benzo(b)fluoranthene
	Beryllium
	Bromodichloromethane
	Cesium-137
	Dibenzo(a,h)anthracene
	1,1-Dichloroethene
	Dieldrin
	Fluoride
	Indeno(1,2,3-cd)pyrene
	Lead
	Plutonium-238
	Strontium-90
	Technetium-99
	Tetrachloroethene
	Thorium-230
	Trichloroethene

TABLE 2-2
ON-SITE DISPOSAL FACILITY WASTE ACCEPTANCE CRITERIA

WAC Constituent	Maximum Concentration
Neptunium-237	3.12×10^{9} pCi/g
Strontium-90	5.67×10^{10} pCi/g
Technetium-99	29.1 pCi/g
Total Uranium	1030 mg/kg
Alpha-chlordane	2.89 mg/kg
Bis(2-chloroisopropyl)ether	2.44×10^{-2} mg/kg
Bromodichloromethane	9.03×10^{-1} mg/kg
Carbazole	7.27×10^{4} mg/kg
Chloroethane	3.92×10^{5} mg/kg
1,1-Dichloroethene	11.4 mg/kg
1,2-Dichloroethene	11.4 mg/kg
4-Nitroaniline	4.42×10^{-2} mg/kg
Tetrachloroethene	128 mg/kg
Toxaphene	1.06×10^{5} mg/kg
Trichloroethene	128 mg/kg
Vinyl chloride	1.51 mg/kg
Boron	1.04×10^{3} mg/kg
Mercury	5.66×10^{4} mg/kg

TABLE 2-3
SOIL FINAL REMEDIATION LEVELS

Constituent	Final Remediation Level
Radionuclides	
Cesium-137	1.4 pCi/g
Plutonium-238	78 pCi/g
Radium-226	1.7 pCi/g
Radium-228	1.8 pCi/g
Strontium-90	14 pCi/g
Technetium-99	30 pCi/g
Thorium-228	1.7 pCi/g
Thorium-230	280 pCi/g
Thorium-232	1.5 pCi/g
Uranium, Total (outside a high-leachability area)	82 mg/kg
Uranium, Total (inside a high-leachability area)	20 mg/kg
Inorganics	
Arsenic	12 mg/kg
Beryllium	1.5 mg/kg
Fluoride	78,000 mg/kg
Lead	400 mg/kg
Organics	
Aroclor-1254	0.13 mg/kg
Aroclor-1260	0.13 mg/kg
Benzo(a)anthracene	20 mg/kg
Benzo(a)pyrene	2 mg/kg
Benzo(b)fluoranthene	20 mg/kg
Bromodichloromethane	4 mg/kg
Dibenzo(a,h)anthracene	2 mg/kg
1,1-Dichloroethene	0.41 mg/kg
Dieldrin	0.015 mg/kg
Indeno(1,2,3-cd)pyrene	20 mg/kg
Tetrachloroethene	3.6 mg/kg
Trichloroethene	25 mg/kg

TABLE 2-4
MAINTENANCE BUILDING CHARACTERISTIC AREA
DATA SUMMARY FOR TRICHLOROETHENE

Boring	Depth (feet)	TCLP Result	TCLP Limit
A3-MB01	5-5.5	1.1 mg/L	0.5 mg/L
A3-MB01	6-6.5	1.6 mg/L	0.5 mg/L
A3-MB01	7-7.5	0.53 mg/L	0.5 mg/L
A3-MB02	6-6.5	1.6 mg/L	0.5 mg/L
A3-MB03	5-5.5	1.5 mg/L	0.5 mg/L
A3-MB03	6-6.5	1.8 mg/L	0.5 mg/L
A3-MB03	7-7.5	1.8 mg/L	0.5 mg/L
A3-MB05	2-2.5	1.1 mg/L	0.5 mg/L
A3-MB05	3-3.5	1.8 mg/L	0.5 mg/L
A3-MB05	5-5.5	0.86 mg/L	0.5 mg/L
A3-MB05	7-7.5	0.52 mg/L	0.5 mg/L
A3-MB11	8.5-9	0.65 mg/L	0.5 mg/L
A3-MB14	3.5-4	1.8 mg/L	0.5 mg/L
A3-MB14	4.5-5	3.5 mg/L	0.5 mg/L
A3-MB14	5.5-6	5.3 mg/L	0.5 mg/L
A3-MB16	3.5-4	0.65 mg/L	0.5 mg/L
A3-MB17	4.5-5	1.8 mg/L	0.5 mg/L
A3-MB17	5.5-6	3.5 mg/L	0.5 mg/L
A3-MB17	6.5-7	2.0 mg/L	0.5 mg/L
A3-MB17	7.5-8	1.3 mg/L	0.5 mg/L

TABLE 2-5
ABOVE-WAC DATA SUMMARY

Boring ID	Depth (feet)	Analyte	Above-WAC Value	WAC Limit
East of Stockpile 1				
Zone 1-320 (RI/FS)	0.5-1	Total Uranium	2270 mg/kg	1030 mg/kg
Incinerator Pad Area				
12476	0-1	Total Uranium	5150 mg/kg	1030 mg/kg
12542	0-0.5	Total Uranium	1250 mg/kg	1030 mg/kg
12544	0-0.5	Total Uranium	4870 mg/kg	1030 mg/kg
12545	0-0.5	Total Uranium	8860 mg/kg	1030 mg/kg
12547	0-0.5	Total Uranium	4380 mg/kg	1030 mg/kg
	6.5-7	Tetrachloroethene	1100 mg/kg	128 mg/kg
12549	5.5-6	Tetrachloroethene	240 mg/kg	128 mg/kg
12595	3-3.5	Total Uranium	1700 mg/kg	1030 mg/kg
12596	0-0.5	Total Uranium	1250 mg/kg	1030 mg/kg
12628	0-0.5	Total Uranium	1570 mg/kg	1030 mg/kg
12629	0.5-1	1,2-Dichloroethene	17.99 mg/kg	11.4 mg/kg
12630	9.5-10	Tetrachloroethene	168 mg/kg	128 mg/kg
	9.5-10	1,1-Dichloroethene	23.9 mg/kg	11.4 mg/kg
12688	5.5-6	Tetrachloroethene	350 mg/kg	128 mg/kg
	7-7.5	Tetrachloroethene	370 mg/kg	128 mg/kg
12690	0-0.5	1,2-Dichloroethene	15 mg/kg	11.4 mg/kg
12691	0-0.5	1,2-Dichloroethene	77 mg/kg	11.4 mg/kg
	0-0.5	Tetrachloroethene	200 mg/kg	128 mg/kg
12693	11.5-12	Tetrachloroethene	180 mg/kg	128 mg/kg
Southeast Plant 9 Area				
12507	0.5-1	Total Uranium	28600 mg/kg	1030 mg/kg
	1-1.5	Total Uranium	76400 mg/kg	1030 mg/kg
	1-1.5	Technetium-99	660 pCi/g	29.1 pCi/g
	1.5-2	Total Uranium	1250 mg/kg	1030 mg/kg
12508	2-2.5	Technetium-99	55 pCi/g	29.1 pCi/g
	3-3.5	Technetium-99	1000 pCi/g	29.1 pCi/g
	4-4.5	Technetium-99	310 pCi/g	29.1 pCi/g
12509	6-6.5	Technetium-99	254 pCi/g	29.1 pCi/g
12601	4-4.5	Technetium-99	76 pCi/g	29.1 pCi/g
12602	0-0.5	Total Uranium	1710 mg/kg	1030 mg/kg
South of Plant 9				
1568 (RI/FS)	1-1.5	Total Uranium	3504 mg/kg	1030 mg/kg
12513	0-0.5	Total Uranium	2460 mg/kg	1030 mg/kg
12608	0-0.5	Total Uranium	2590 mg/kg	1030 mg/kg
	0-0.5	Technetium-99	37 pCi/g	29.1 pCi/g

TABLE 2-5
ABOVE-WAC DATA SUMMARY
(continued)

Boring ID	Depth (feet)	Analyte	Above-WAC Value	WAC Limit
North Central Plant 6 Area				
1404 (RI/FS)	1-1.5	Total Uranium	6897 mg/kg	1030 mg/kg
East Plant 6 Area				
1144 (RI/FS)	1.5-2	Technetium-99	37.9 pCi/g	29.1 pCi/g
1145 (RI/FS)	0.5-1	Total Uranium	1416 mg/kg	1030 mg/kg
12523	4.5-5	Tetrachloroethene	380 mg/kg	128 mg/kg
12526	0-0.5	Technetium-99	210 pCi/g	29.1 pCi/g
	3-3.5	Technetium-99	35 pCi/g	29.1 pCi/g
12528	1-1.5	Technetium-99	65 pCi/g	29.1 pCi/g
12612	0-0.5	Total Uranium	1220 mg/kg	1030 mg/kg
	9-9.5	Technetium-99	59 pCi/g	29.1 pCi/g
12613	4-4.5	Total Uranium	1410 mg/kg	1030 mg/kg
	4-4.5	Tetrachloroethene	143 mg/kg	128 mg/kg
	5-5.5	Total Uranium	1120 mg/kg	1030 mg/kg
South Plant 6 Area				
1162 (RI/FS)	1-1.5	Total Uranium	8059 mg/kg	1030 mg/kg
	2-2.5	Total Uranium	16879 mg/kg	1030 mg/kg
	5-5.5	Total Uranium	4763 mg/kg	1030 mg/kg
12529	0-0.5	Total Uranium	9340 mg/kg	1030 mg/kg
	0.5-1	Total Uranium	82000 mg/kg	1030 mg/kg
	1-1.5	Total Uranium	125000 mg/kg	1030 mg/kg
	1.5-2	Total Uranium	4990 mg/kg	1030 mg/kg
	2-2.5	Total Uranium	7640 mg/kg	1030 mg/kg
	3-3.5	Total Uranium	1330 mg/kg	1030 mg/kg
	5-5.5	Total Uranium	1330 mg/kg	1030 mg/kg
Northeast Plant 6 Area				
1139 (RI/FS)	0-0.5	Total Uranium	39180	1030 mg/kg
	0-0.5	Technetium-99	210 pCi/g	29.1 pCi/g
	3-3.5	Total Uranium	39100	1030 mg/kg
	5-5.5	Total Uranium	1278	1030 mg/kg

TABLE 2-6
SOIL FINAL REMEDIATION LEVELS FOR HWMUs AND USTs

Constituent of Concern	Final Remediation Level
HWMU No. 36	
Lead	400 mg/kg
1,1,1-Trichloroethane	none
UST No. 3	
Benzene	850 mg/kg
Ethylbenzene	5100 mg/kg
Toluene	100,000 mg/kg
Xylene	920,000 mg/kg
Barium	68000 mg/kg
Lead	400 mg/kg
Mercury	7.5 mg/kg
UST No. 6	
Acetone	43000 mg/kg
Benzene	850 mg/kg
Carbon Tetrachloride	2.1 mg/kg
1,2-Dichloroethane	none
1,1-Dichloroethene	0.41 mg/kg
Ethylbenzene	5100 mg/kg
Methyl Chloride	none
Methyl Ethyl Ketone (aka 2-Butanone)	none
Tetrachloroethene	3.6 mg/kg
Toluene	100,000 mg/kg
1,1,1-Trichloroethane	none
Trichloroethene	25 mg/kg
Xylene	920,000 mg/kg
Arsenic	12 mg/kg
Cadmium	82 mg/kg
Chromium	300 mg/kg
Lead	400 mg/kg
Mercury	7.5 mg/kg
Selenium	5400 mg/kg
UST No. 14	
Methanol	none

TABLE 2-7
NON-URANIUM ABOVE-FRL DATA SUMMARY

Boring ID	Depth (feet)	Analyte	Above-FRL Value	FRL Limit
North Maintenance Building Area				
1308 (IR/FS)	0.5-1	Aroclor-1254	1700 ug/kg	130 ug/kg
1595 (RI/FS)	4-4.5	Aroclor-1254	1200 ug/kg	130 ug/kg
	9.5-10	Aroclor-1254	500 ug/kg	130 ug/kg
1597 (RI/FS)	2-2.5	Aroclor-1254	240 ug/kg	130 ug/kg
12556	1-1.5	Aroclor-1254	530 ug/kg	130 ug/kg
	2-2.5	Aroclor-1254	1700 ug/kg	130 ug/kg
	3-3.5	Aroclor-1254	440 ug/kg	130 ug/kg
	5-5.5	Aroclor-1254	1300 ug/kg	130 ug/kg
12558	1-1.5	Aroclor-1254	370 ug/kg	130 ug/kg
12559	1-1.5	Aroclor-1254	380 ug/kg	130 ug/kg
	2-2.5	Aroclor-1254	740 ug/kg	130 ug/kg
	3-3.5	Aroclor-1254	1400 ug/kg	130 ug/kg
	4-4.5	Aroclor-1254	170 ug/kg	130 ug/kg
12560	2-2.5	Aroclor-1254	700 ug/kg	130 ug/kg
12659	2-2.5	Aroclor-1254	150 ug/kg	130 ug/kg
12662C	4-4.5	Aroclor-1254	490 ug/kg	130 ug/kg
	6-6.5	Aroclor-1254	2100 ug/kg	130 ug/kg
East Plant 6 Area				
12523	4.5-5	1,2-Dichloroethene	860 ug/kg	160 ug/kg
12610	5-5.5	Tetrachloroethene	7700 ug/kg	3600 ug/kg
	6-6.5	Tetrachloroethene	6840 ug/kg	3600 ug/kg
12612	8-8.5	1,1-Dichloroethene	485 ug/kg	410 ug/kg
12613	1-1.5	Tetrachloroethene	21100 ug/kg	3600 ug/kg
	2-2.5	Tetrachloroethene	49400 ug/kg	3600 ug/kg
	3-3.5	Tetrachloroethene	17400 ug/kg	3600 ug/kg
	4-4.5	1,2-Dichloroethene	453 ug/kg	160 ug/kg
	4.5-5	1,2-Dichloroethene	453 ug/kg	160 ug/kg
	5-5.5	Thorium-232	1.515 pCi/g	1.5 pCi/g
	5-5.5	1,2-Dichloroethene	320 ug/kg	160 ug/kg
	5-5.5	Tetrachloroethene	26100 ug/kg	3600 ug/kg
	6-6.5	1,2-Dichloroethene	210 ug/kg	160 ug/kg
	6-6.5	Tetrachloroethene	30200 ug/kg	3600 ug/kg
	7.5-8	1,2-Dichloroethene	504 ug/kg	160 ug/kg
	7.5-8	Tetrachloroethene	49400 ug/kg	3600 ug/kg
	8.5-9	1,2-Dichloroethene	651 ug/kg	160 ug/kg
	8.5-9	Tetrachloroethene	9670 ug/kg	3600 ug/kg

TABLE 2-7
NON-URANIUM ABOVE-FRL DATA SUMMARY
(continued)

Boring ID	Depth (feet)	Analyte	Above-FRL Value	FRL Limit
Incinerator Pad Area				
1577 (RI/FS)	4-4.5	Beryllium	2.2 mg/kg	1.5 mg/kg
1578 (RI/FS)	4-4.5	Aroclor-1260	210 ug/kg	130 ug/kg
		Arsenic	15 mg/kg	12 mg/kg
		1,1-Dichloroethene	460 ug/kg	410 ug/kg
12541	5-5.5	1,2-Dichloroethene	330 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	360 ug/kg	160 ug/kg
12542	4-4.5	1,2-Dichloroethene	210 ug/kg	160 ug/kg
	5-5.5	1,2-Dichloroethene	560 ug/kg	160 ug/kg
	6-6.5	1,2-Dichloroethene	420 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	330 ug/kg	160 ug/kg
12543	4-4.5	1,2-Dichloroethene	270 ug/kg	160 ug/kg
	4-4.5	Aroclor-1254	480 ug/kg	130 ug/kg
	5-5.5	Aroclor-1254	330 ug/kg	130 ug/kg
	5-5.5	1,2-Dichloroethene	680 ug/kg	160 ug/kg
	6-6.5	1,2-Dichloroethene	580 ug/kg	160 ug/kg
12544	4-4.5	1,2-Dichloroethene	160 ug/kg	160 ug/kg
	5-5.5	1,2-Dichloroethene	320 ug/kg	160 ug/kg
	6-6.5	1,2-Dichloroethene	290 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	340 ug/kg	160 ug/kg
12545	0-0.5	Thorium-232	1.78 pCi/g	1.5 pCi/g
	6-6.5	1,2-Dichloroethene	200 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	740 ug/kg	160 ug/kg
12546	3-3.5	Beryllium	3.04 mg/kg	1.5 mg/kg
	4-4.5	Beryllium	2.11 mg/kg	1.5 mg/kg
12547	6.5-7	1,1-Dichloroethene	3500 ug/kg	410 ug/kg
	6.5-7	1,2-Dichloroethene	270 ug/kg	160 ug/kg
12548	3-3.5	Beryllium	2.13 mg/kg	1.5 mg/kg
12549	3-3.5	Beryllium	1.86 mg/kg	1.5 mg/kg
12590	4-4.5	1,2-Dichloroethene	160 ug/kg	160 ug/kg
	6-6.5	1,2-Dichloroethene	200 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	260 ug/kg	160 ug/kg
	8-8.5	1,2-Dichloroethene	290 ug/kg	160 ug/kg
12591	7-7.5	1,2-Dichloroethene	170 ug/kg	160 ug/kg
12592	7-7.5	1,2-Dichloroethene	310 ug/kg	160 ug/kg
	8-8.5	1,2-Dichloroethene	390 ug/kg	160 ug/kg
12593	3-3.5	Aroclor-1254	170 ug/kg	130 ug/kg
	6-6.5	Aroclor-1254	310 ug/kg	130 ug/kg
	7-7.5	1,2-Dichloroethene	290 ug/kg	160 ug/kg
	8-8.5	1,2-Dichloroethene	340 ug/kg	160 ug/kg
12594	7-7.5	1,2-Dichloroethene	930 ug.kg	160 ug/kg
	8-8.5	1,2-Dichloroethene	250 ug/kg	160 ug/kg

TABLE 2-7
NON-URANIUM ABOVE-FRL DATA SUMMARY
(continued)

Boring ID	Depth (feet)	Analyte	Above-FRL Value	FRL Limit
Incinerator Pad Area (cont.)				
12595	3-3.5	1,2-Dichloroethene	280 ug/kg	160 ug/kg
	4-4.5	1,2-Dichloroethene	300 ug/kg	160 ug/kg
	5-5.5	1,2-Dichloroethene	490 ug/kg	160 ug/kg
	6-6.5	1,2-Dichloroethene	550 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	700 ug/kg	160 ug/kg
12596	4-4.5	Tetrachloroethene	5800 ug/kg	3600 ug/kg
	5-5.5	1,2-Dichloroethene	180 ug/kg	160 ug/kg
12597	3-3.5	1,2-Dichloroethene	190 ug/kg	160 ug/kg
	5-5.5	1,2-Dichloroethene	230 ug/kg	160 ug/kg
	6-6.5	1,2-Dichloroethene	270 ug/kg	160 ug/kg
	7-7.5	1,2-Dichloroethene	460 ug/kg	160 ug/kg
12598	4-4.5	Beryllium	1.73 mg/kg	1.5 mg/kg
12620	6.5-7	1,2-Dichloroethene	395 ug/kg	160 ug/kg
12621	6.5-7	1,2-Dichloroethene	319 ug/kg	160 ug/kg
12624	6.5-7	1,2-Dichloroethene	348 ug/kg	160 ug/kg
12625	6.5-7	1,1-Dichloroethene	500 ug/kg	410 ug/kg
	6.5-7	1,2-Dichloroethene	696 ug/kg	160 ug/kg
12626	6.5-7	1,2-Dichloroethene	717 ug/kg	160 ug/kg
	9.5-10	1,2-Dichloroethene	546 ug/kg	160 ug/kg
12629	0.5-1	Tetrachloroethene	12800 ug/kg	3600 ug/kg
	1.5-2	1,2-Dichloroethene	1610 ug/kg	160 ug/kg
	3-3.5	Beryllium	1.79 mg/kg	1.5 mg/kg
	3.5-4	1,2-Dichloroethene	613 ug/kg	160 ug/kg
	6.5-7	Tetrachloroethene	22500 ug/kg	3600 ug/kg
12630	3-3.5	Beryllium	1.86 mg/kg	1.5 mg/kg
	6.5-7	1,2-Dichloroethene	164 ug/kg	160 ug/kg
	9.5-10	1,2-Dichloroethene	337 ug/kg	160 ug/kg
	9.5-10	Trichloroethene	61600 ug/kg	25000 ug/kg
	10-10.5	1,1-Dichloroethene	7740 ug/kg	410 ug/kg
	10-10.5	Tetrachloroethene	109000 ug/kg	3600 ug/kg
	10-10.5	Trichloroethene	46400 ug/kg	25000 ug/kg
	12-12.5	1,1-Dichloroethene	502 ug/kg	410 ug/kg
	12-12.5	Tetrachloroethene	22100 ug/kg	3600 ug/kg
	12.5-13	Tetrachloroethene	14300 ug/kg	3600 ug/kg
12631	3-3.5	Beryllium	1.62 mg/kg	1.5 mg/kg
	6.5-7	1,2-Dichloroethene	233 ug/kg	160 ug/kg
	9.5-10	1,2-Dichloroethene	164 ug/kg	160 ug/kg
12632	0.5-1	1,2-Dichloroethene	482 ug/kg	160 ug/kg
	0.5-1	Beryllium	1.6 mg/kg	1.5 mg/kg
	6.5-7	1,2-Dichloroethene	321 ug/kg	160 ug/kg

TABLE 2-7
NON-URANIUM ABOVE-FRL DATA SUMMARY
(continued)

Boring ID	Depth (feet)	Analyte	Above-FRL Value	FRL Limit
Incinerator Pad Area (cont.)				
12671	6-6.5	1,2-Dichloroethene	230 ug/kg	160 ug/kg
12673	4-4.5	Beryllium	1.58 mg/kg	1.5 mg/kg
12674	0-0.5	Beryllium	2.09 mg/kg	1.5 mg/kg
12681	7.5-8	1,2-Dichloroethene	300 ug/kg	160 ug/kg
12687	13-13.5	Tetrachloroethene	67000 ug/kg	3600 ug/kg
12688	3.5-4	Tetrachloroethene	13000 ug/kg	3600 ug/kg
	5.5-6	Tetrachloroethene	110000 ug/kg	3600 ug/kg
	5.5-6	1,1-Dichloroethene	870 ug/kg	410 ug/kg
12689	0-0.5	1,2-Dichloroethene	350 ug/kg	160 ug/kg
	2-2.5	1,2-Dichloroethene	800 ug/kg	160 ug/kg
	3.5-4	Tetrachloroethene	5000 ug/kg	3600 ug/kg
	5.5-6	1,2-Dichloroethene	770 ug/kg	160 ug/kg
	7.5-8	Tetrachloroethene	25000 ug/kg	3600 ug/kg
	15.5-16	Tetrachloroethene	16000 ug/kg	3600 ug/kg
12690	0-0.5	Tetrachloroethene	20000 ug/kg	3600 ug/kg
12691	0-0.5	Trichloroethene	79000 ug/kg	25000 ug/kg
	0-0.5	1,1-Dichloroethene	3800 ug/kg	410 ug/kg
	2-2.5	1,2-Dichloroethene	440 ug/kg	160 ug/kg
12692	0-0.5	1,2-Dichloroethene	360 ug/kg	160 ug/kg
	2-2.5	1,2-Dichloroethene	680 ug/kg	160 ug/kg
	3.5-4	1,2-Dichloroethene	1200 ug/kg	160 ug/kg
	3.5-4	Tetrachloroethene	19000 ug/kg	3600 ug/kg
12693	3.5-4	1,2-Dichloroethene	480 ug/kg	160 ug/kg
	5.5-6	1,2-Dichloroethene	810 ug/kg	160 ug/kg
	5.5-6	Tetrachloroethene	4900 ug/kg	3600 ug/kg
	7.5-8	1,2-Dichloroethene	2800 ug/kg	160 ug/kg
	7.5-8	Tetrachloroethene	7300 ug/kg	3600 ug/kg
	7.5-8	1,1-Dichloroethene	1000 ug/kg	410 ug/kg
	9-9.5	Tetrachloroethene	20000 ug/kg	3600 ug/kg
	9-9.5	1,1-Dichloroethene	9000 ug/kg	410 ug/kg
	9-9.5	Trichloroethene	40000 ug/kg	25000 ug/kg
	9.5-10	Tetrachloroethene	15000 ug/kg	3600 ug/kg
	13.5-14	Tetrachloroethene	74000 ug/kg	3600 ug/kg
	13.5-14	1,2-Dichloroethene	1700 ug/kg	160 ug/kg

TABLE 2-7
NON-URANIUM ABOVE-FRL DATA SUMMARY
(continued)

Boring ID	Depth (feet)	Analyte	Above-FRL Value	FRL Limit
South Plant 6 Area				
12529	2.5-3	Thorium-232	5.08 pCi/g	1.5 pCi/g
East of Stockpile 4				
11087 (RI/FS)	9-9.5	Beryllium	2.9 mg/kg	1.5 mg/kg
Northeast Corner				
1281 (RI/FS)	6-6.5	Thorium-228	2.55 pCi/g	1.7 pCi/g
Northeast of Maintenance Building Warehouse				
1584 (RI/FS)	2-2.5	Benzo(a)pyrene	3400 ug/kg	2000 ug/kg
Central Plant 6 Area				
1607 (RI/FS)	5-5.5	Thorium-228	2.04 pCi/g	1.7 pCi/g

TABLE 2-8
RESULTS FOR THE TWO-STEP BATCH LEACH TEST

Boring	Sample Depth Feet	Uranium mg/kg	K_{L1}[a] L/kg	K_{L2}[b] L/kg	K_e[c] percent
12472	0 – 1	37.1	31	1.4	28
12473	6 – 7	172	95	38	46
12474	0 – 1	38.9	28	1.8	31
12475[d]	0 – 1	50.0	30	3.6	34
12480	0 – 1	60.4	24	2.0	36
12484[d]	0 - 1	48.6	30	7.1	43
12496	0 - 1	57.3	27	4.7	40
12496	0 - 4	49.5	29	4.5	37
12499	2 - 3	115	56	21	46
12499	19 - 20	21.4	19	4.6	51

[a] Leaching coefficient from the first leach interval ((soil [U]-background)/Cycle 1 water [U])
[b] Leaching coefficient from the second leach interval ((soil [U]-background-first leach)/Cycle 2 water [U])
[c] Extractable uranium in the soil sample
[d] Soil samples combined and run as duplicates

TABLE 2-9
AREA 3A/4A REVISED LIST OF AREA-SPECIFIC CONSTITUENTS OF CONCERN

Primary COCs	Secondary COCs
Radium-226	Aroclor-1254
Radium-228	Beryllium
Thorium-228	1,1-Dichloroethene
Thorium-232	1,2-Dichloroethene
Total Uranium	Technetium-99
	Tetrachloroethene
	Trichloroethene

TABLE 2-10
NOMINAL SIZE AND VOLUME OF AREA 3A/4A ABOVE-WAC AREAS

Location	Contaminant	Size	Depth	Volume of Material
Area 3A				
Northeast Corner - South of Haul Road	Uranium	61300 ft^2	2 feet	4540 yd^3
Southeast Corner Plant 9	Uranium and Tc-99	2020 ft^2	7 feet	524 yd^3
Between Plant 9 and Plant 6	Uranium and Tc-99	862 ft^2	1 feet	32 yd^3
Incinerator Pad - Northwest Upper Corner	Uranium	451 ft^2	4 feet	67 yd^3
Incinerator Pad - Southwest Upper Corner	Uranium	342 ft^2	3 feet	38 yd^3
Incinerator Pad - Shallow Above-WAC Organic Area	Organics	1120 ft^2	2 feet	83 yd^3
Incinerator Pad - Deep Above-WAC Organic Area	Organics	3760 ft^2	6 feet down to 14 feet = 8 feet	1110 yd^3
Incinerator Pad - North and East	Uranium	5240 ft^2	4 feet	776 yd^3
Area 4A				
Northeast Plant 6	Uranium and Tc-99	21600 ft^2	6 feet	4800 yd^3
North Central Plant 6	Uranium	400 ft^2	5 feet	74 yd^3
South Plant 6	Uranium	892 ft^2	5.5 feet	182 yd^3
East Plant 6	Uranium, Tc-99, Organics	4130 ft^2	10.5 feet	1610 yd^3

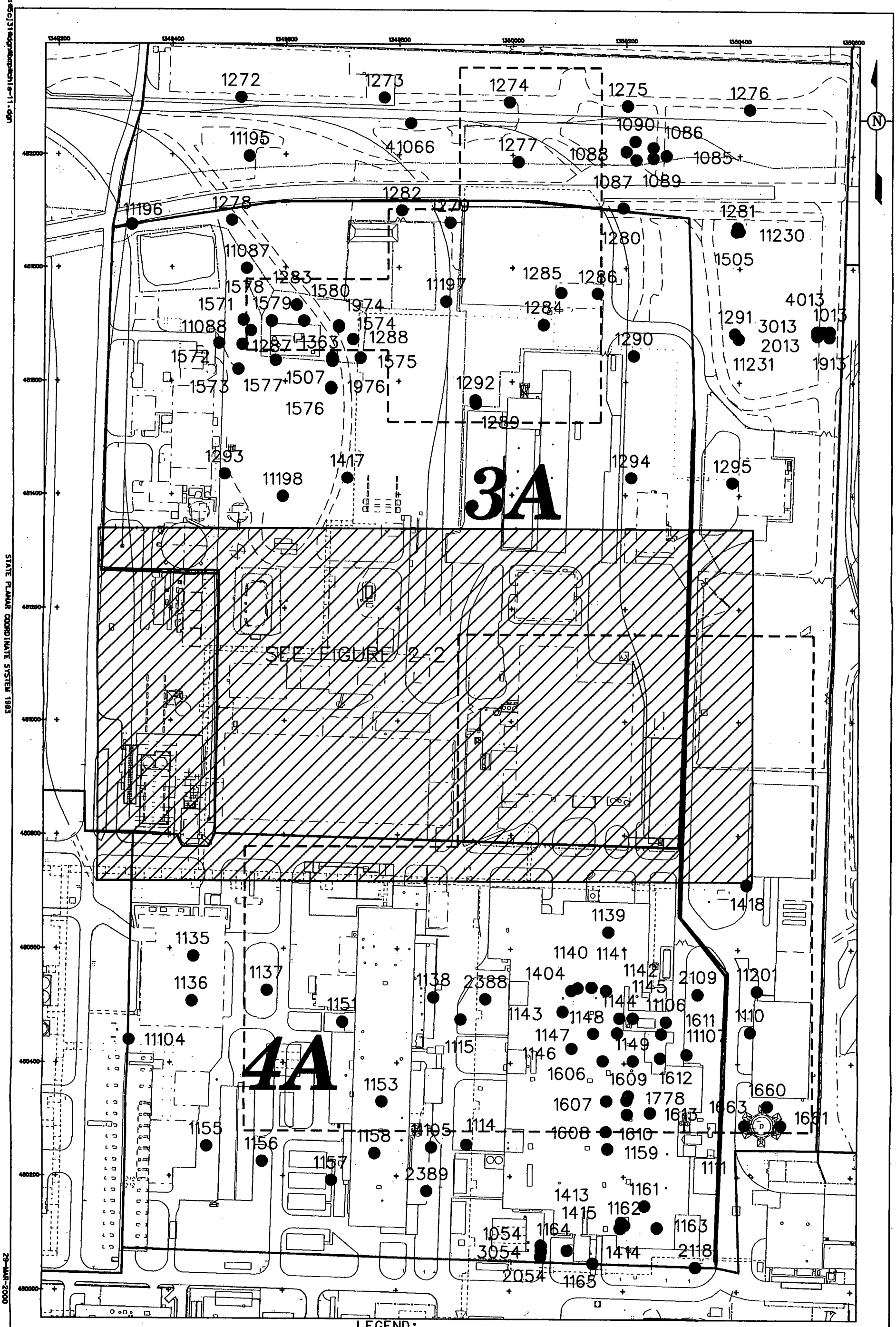
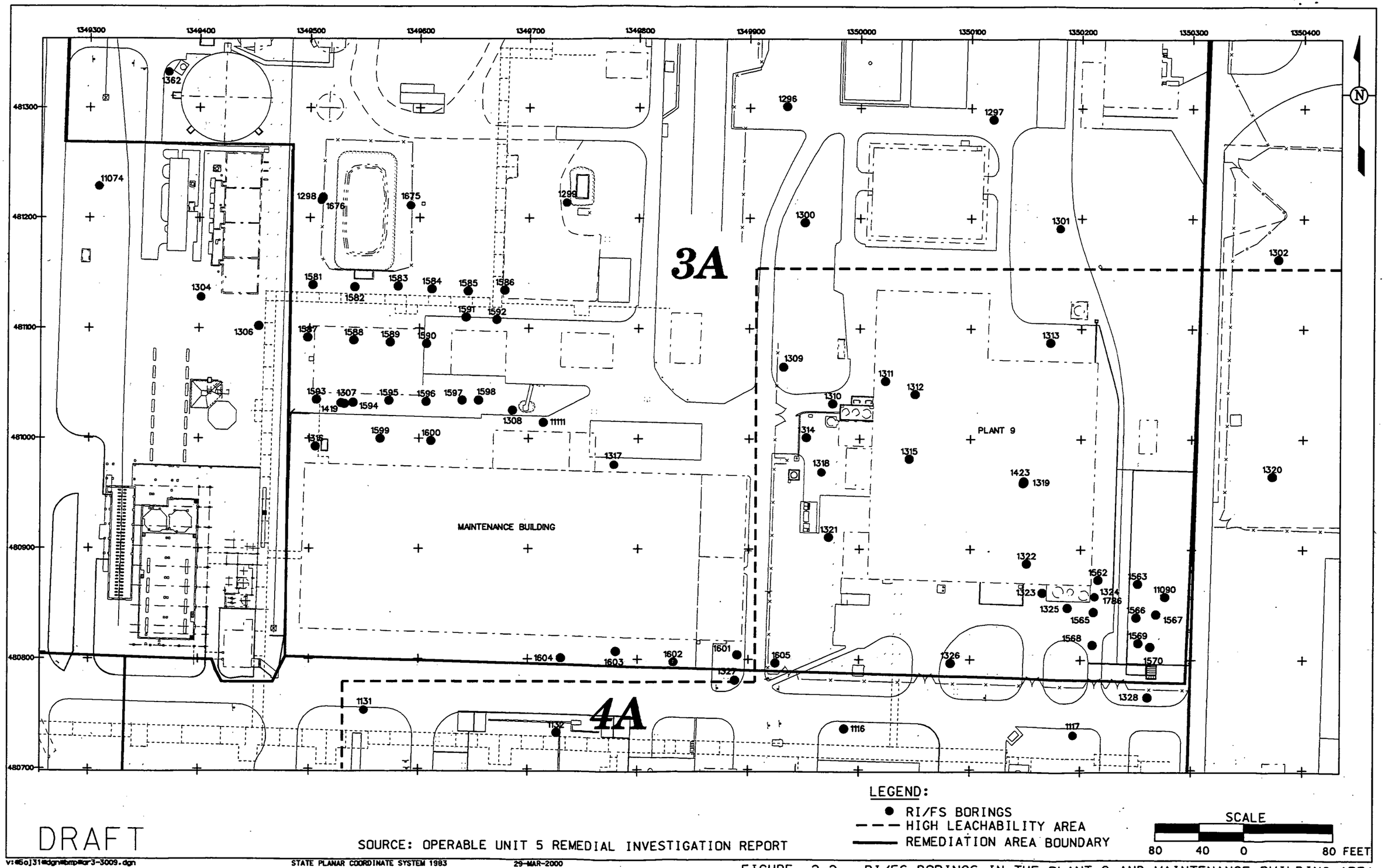


FIGURE 2-1. RI/FS BORINGS IN AREA 3A/4A



LEGEND:

- ● RI/FS BORINGS
- — — — HIGH LEACHABILITY AREA
- ——— REMEDIATION AREA BOUNDARY

SCALE

80 40 0 80 FEET

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SOURCE: OPERABLE UNIT 5 REMEDIAL INVESTIGATION REPORT

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FIGURE 2-2. RI/FS BORINGS IN THE PLANT 9 AND MAINTENANCE BUILDING AREA

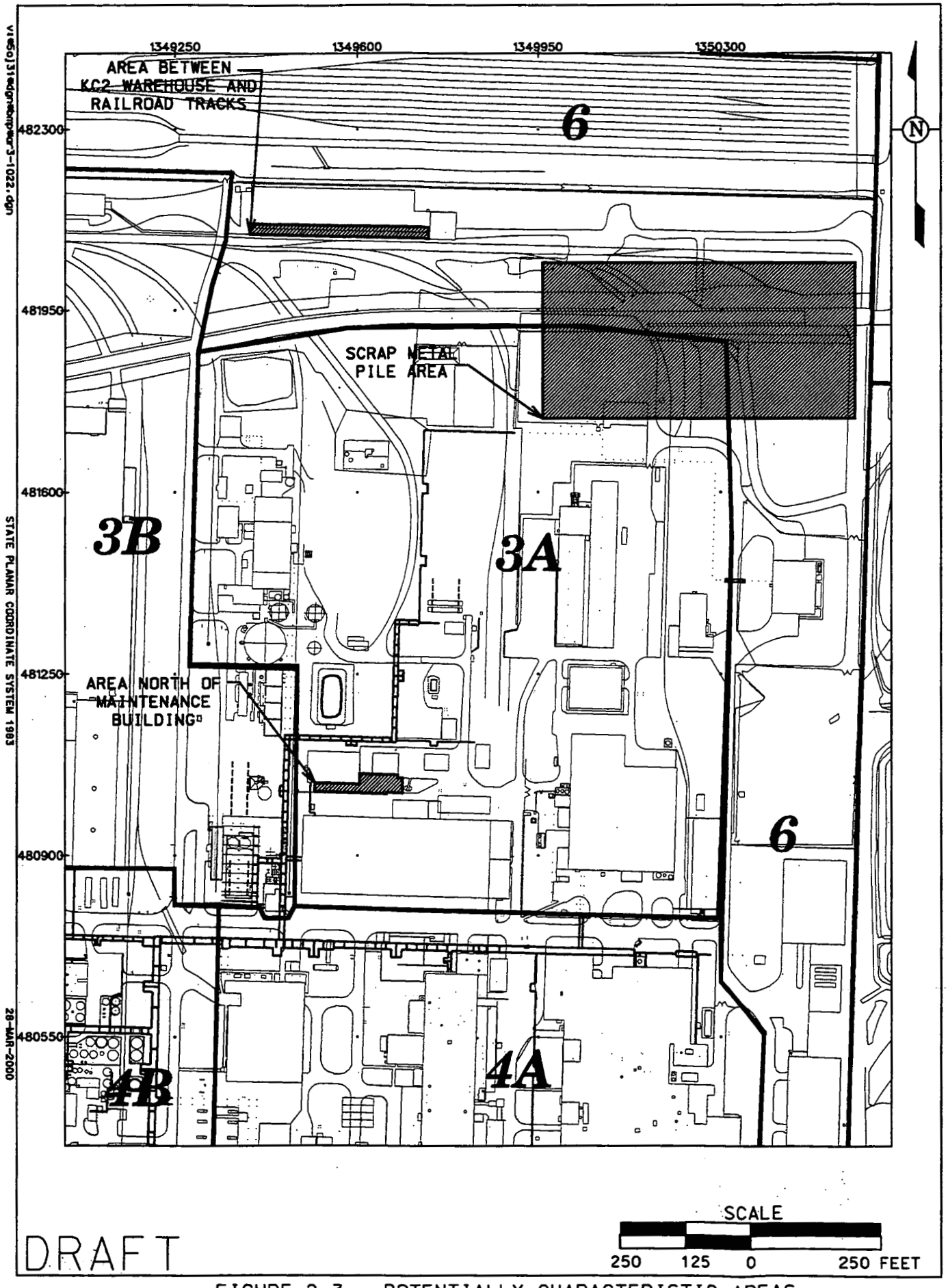

FIGURE 2-3. POTENTIALLY CHARACTERISTIC AREAS

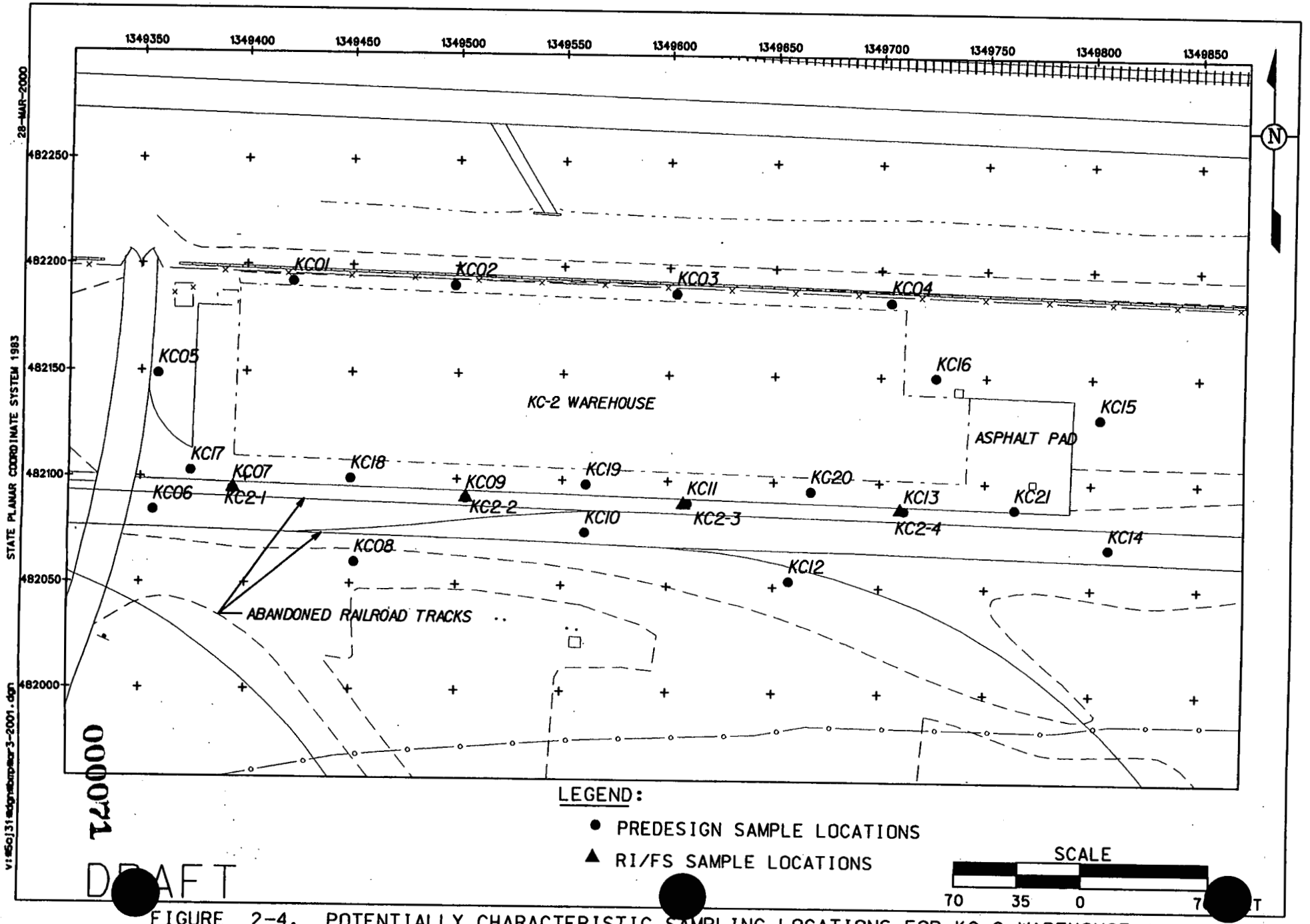

FIGURE 2-4. POTENTIALLY CHARACTERISTIC SAMPLING LOCATIONS FOR KC-2 WAREHOUSE AREA

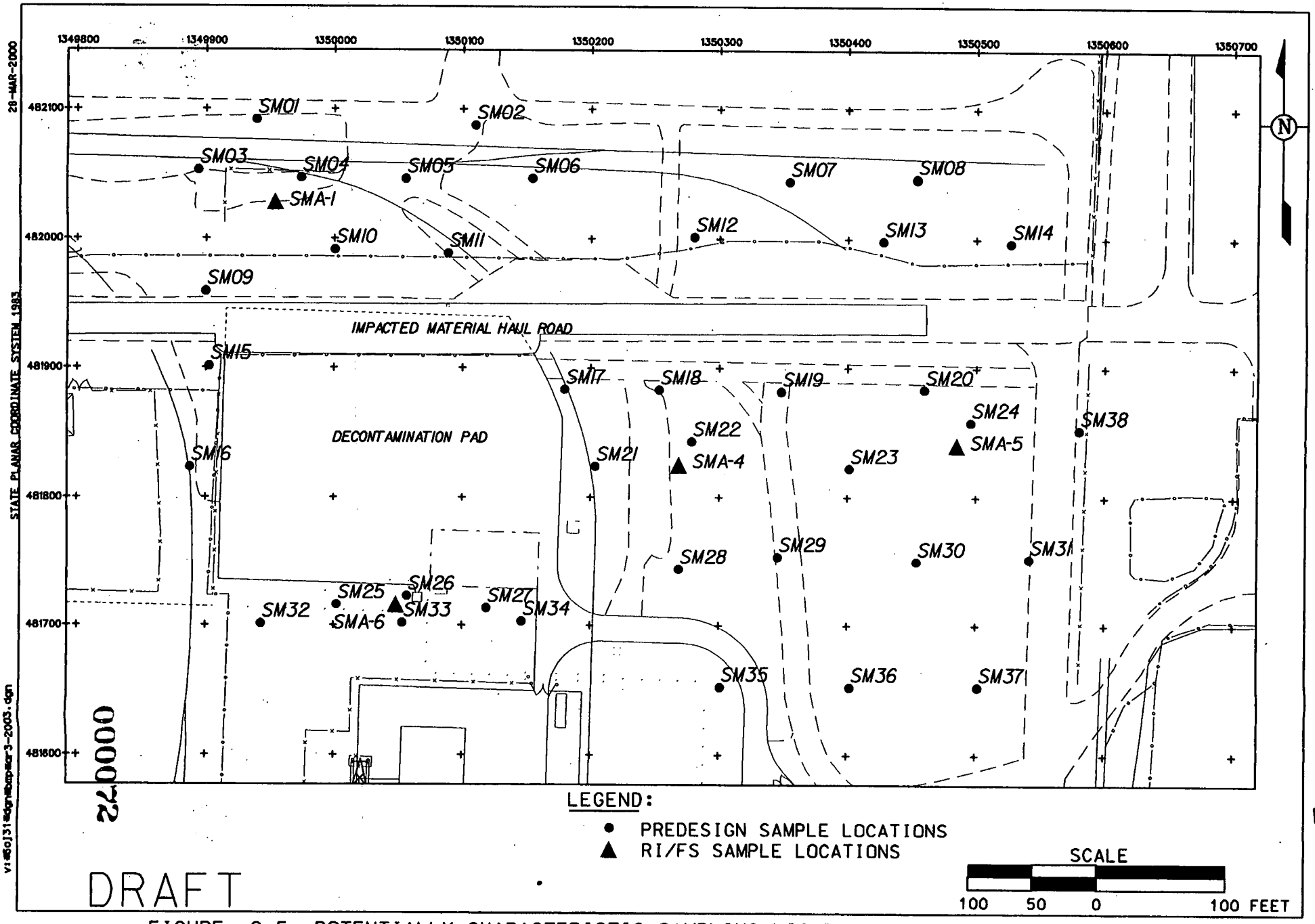

FIGURE 2-5. POTENTIALLY CHARACTERISTIC SAMPLING LOCATIONS FOR SCRAP METAL PILE AREA

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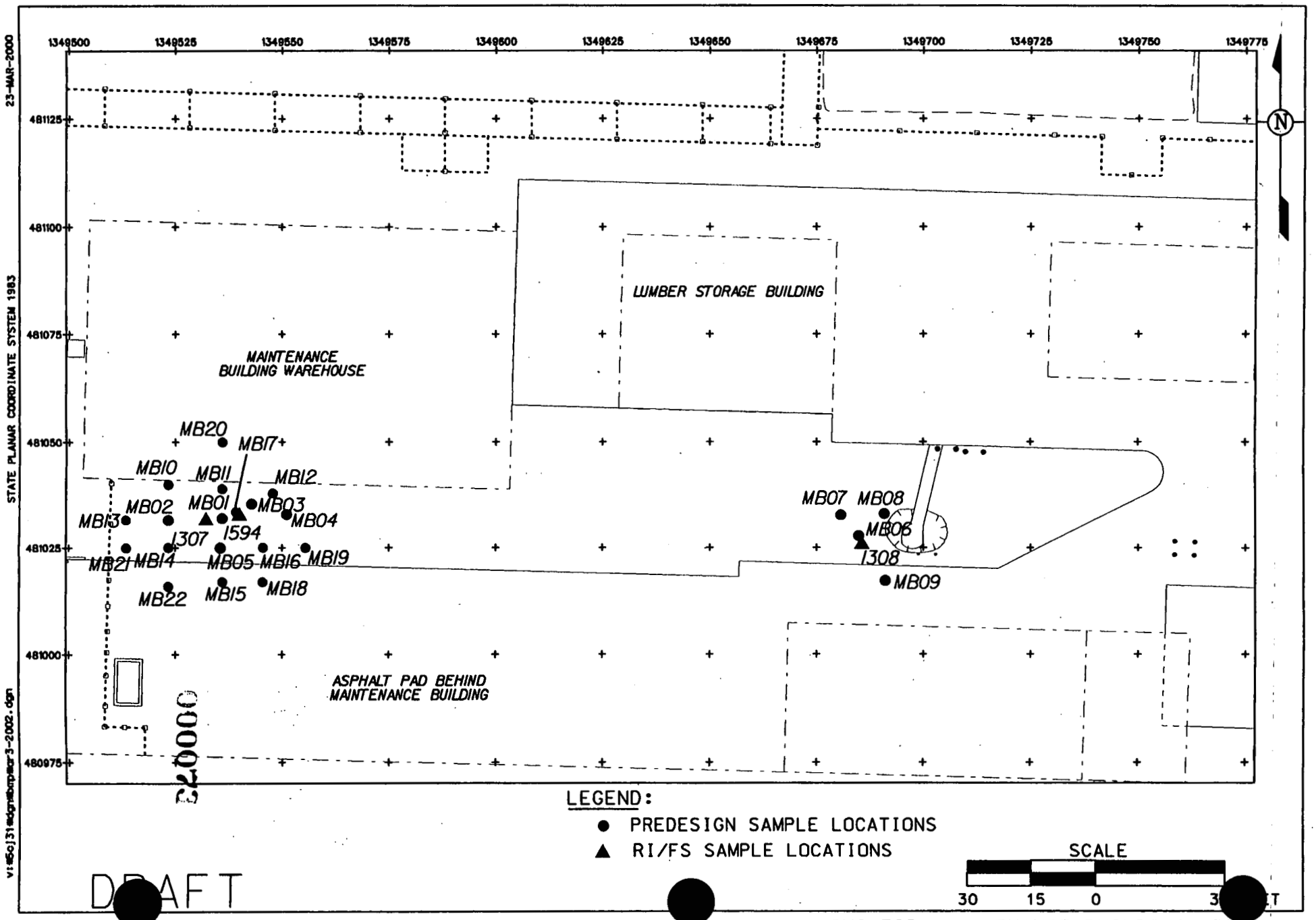

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FIGURE 2-6. POTENTIALLY CHARACTERISTIC SAMPLING LOCATIONS FOR MAINTENANCE BUILDING AREA

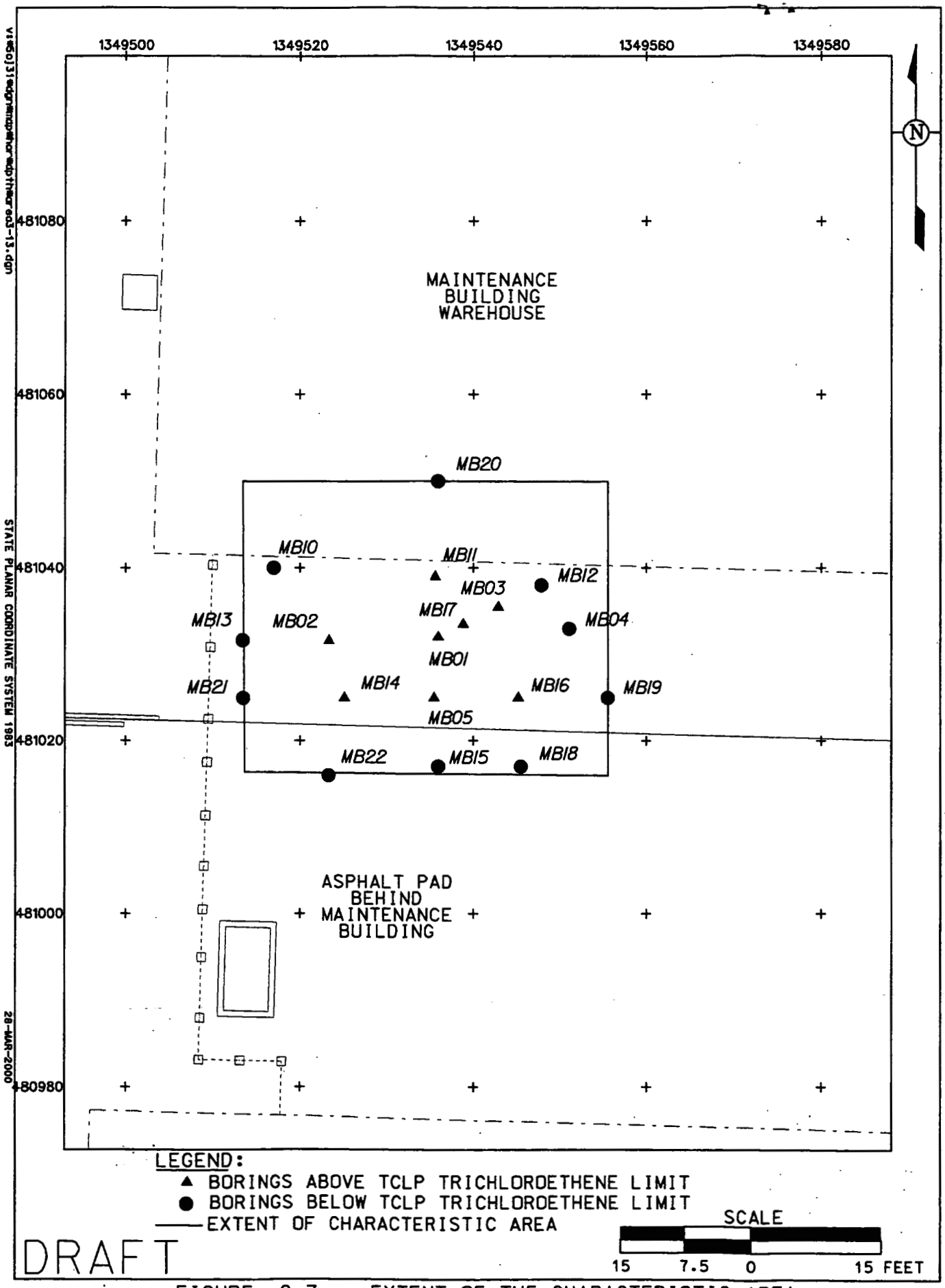

FIGURE 2-7. EXTENT OF THE CHARACTERISTIC AREA BEHIND THE MAINTENANCE BUILDING

Figure 2-8 Area 3A/4A Real Time Scanning Results

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Moisture corrected Total Uranium
HPGE scans & RSS batch numbers 260,261,267, 292,293,311-314,377,378,502-505,&507-510
RTRAK batch numbers752-754,755,756,760
Field of View to scale
Measurement Dates between 3/30/99 and 11/17/99

N

ppm Total Uranium
- -102.81 to 100.00
- 100.00 to 400.00
- 400.00 to 721.00
- 721.00 to 928.00
- 928.00 to 10000.00

RTIMP DWG Title: A3A/4A-PD-TU-1PT-MC
Project #: 20200-PSP-0004
Project Name: Area 3A/4A surface predesign inv.
Prepared By: David Allen
File: A3A4A_PD_TU_1PT_MC.srf
Date Prepared: 12/2/99

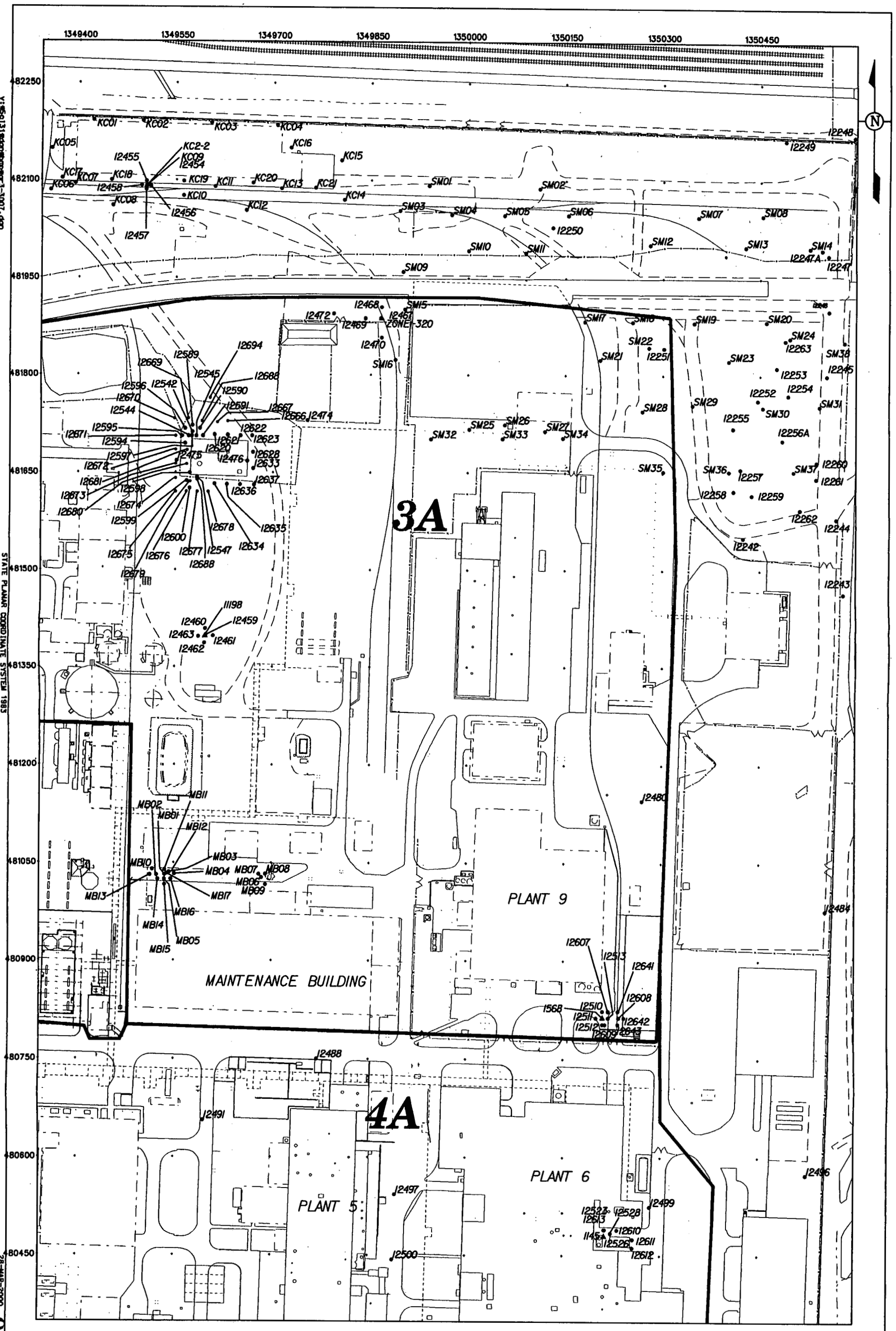

FIGURE 2-9. PREDESIGN SURFACE SAMPLE LOCATIONS

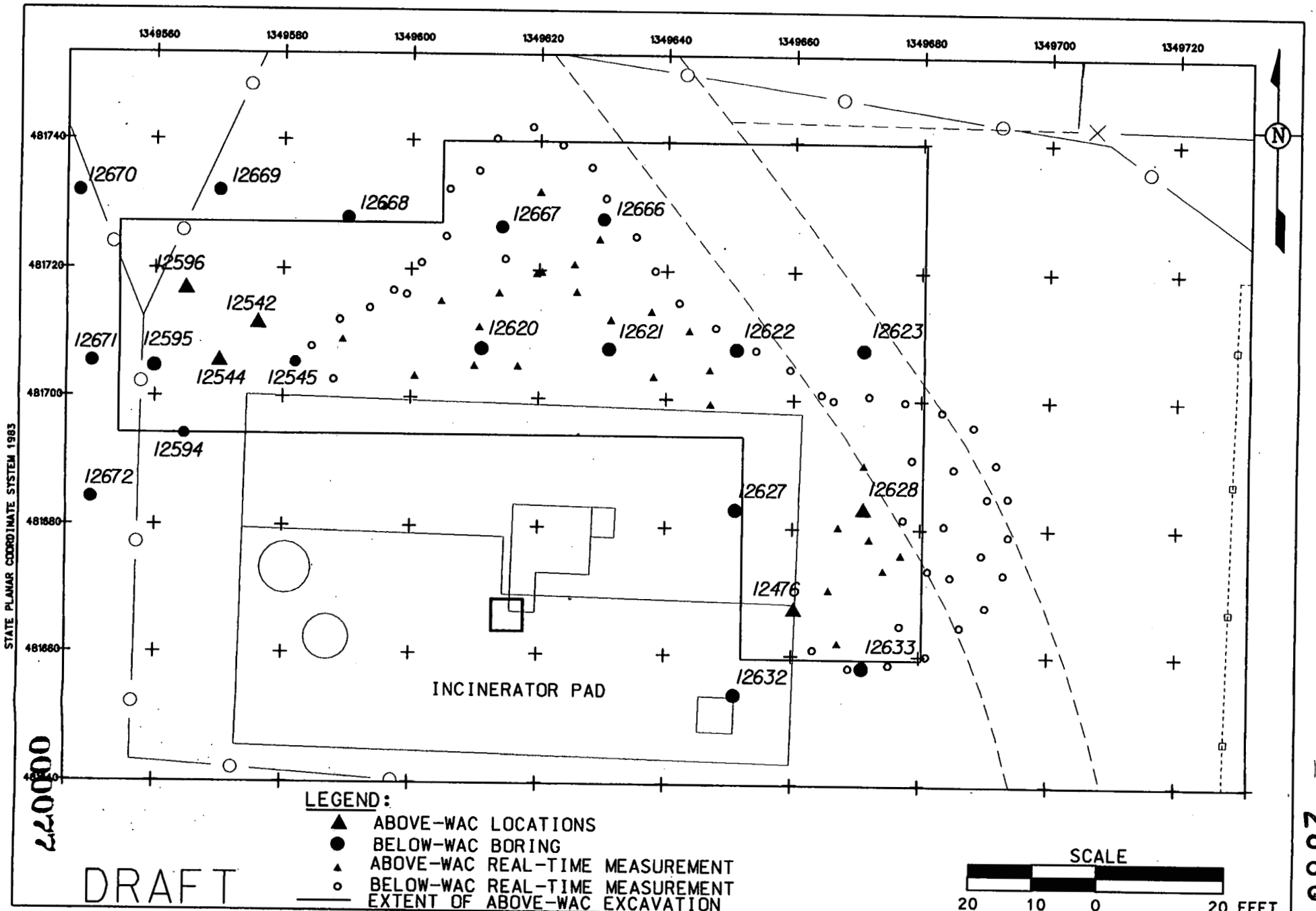

FIGURE 2-10. EXTENT OF SURFACE ABOVE-WAC EXCAVATION AT INCINERATOR PAD

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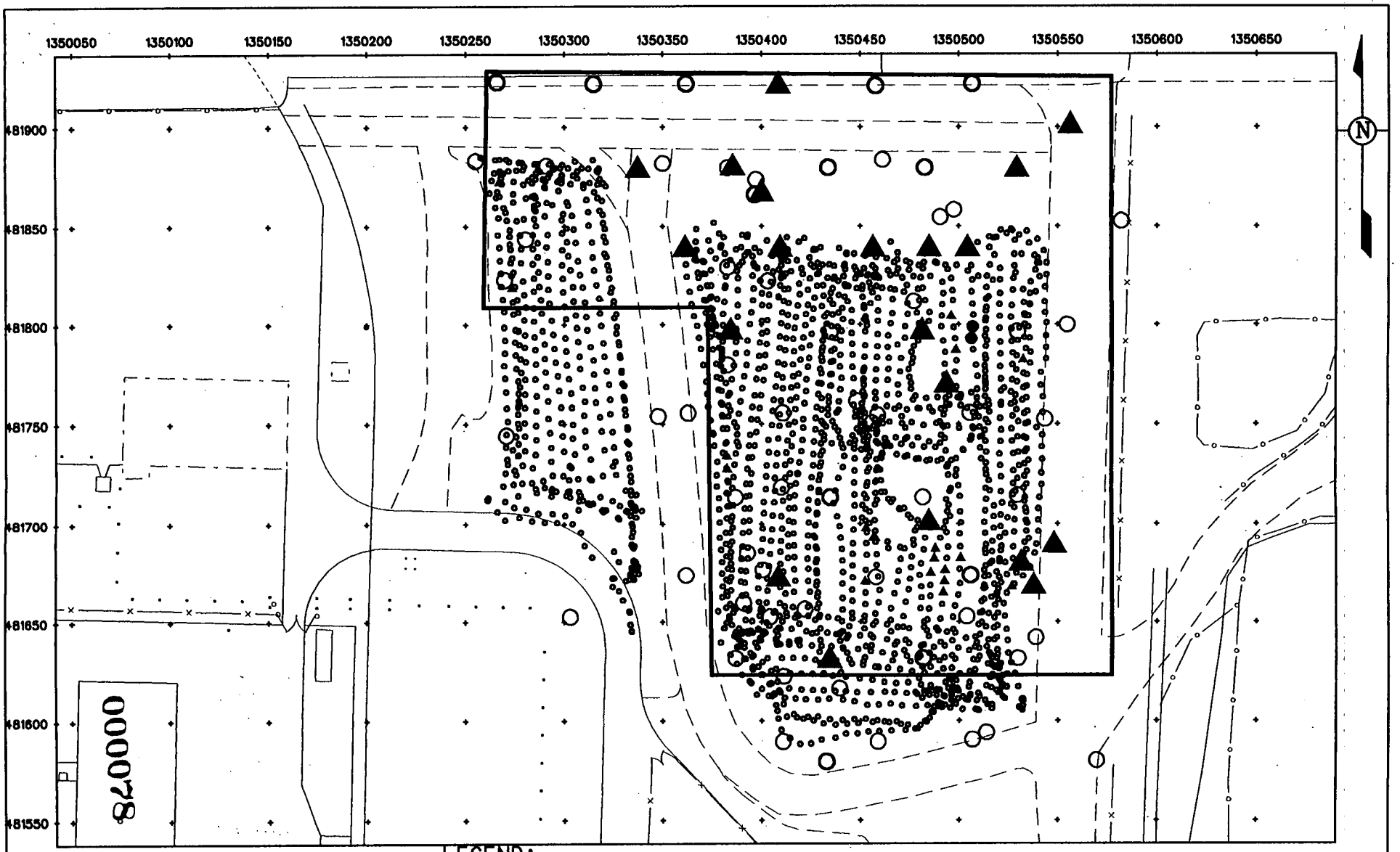

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FIGURE 2-11. EXTENT OF ABOVE-WAC EXCAVATION IN NORTHEAST CORNER

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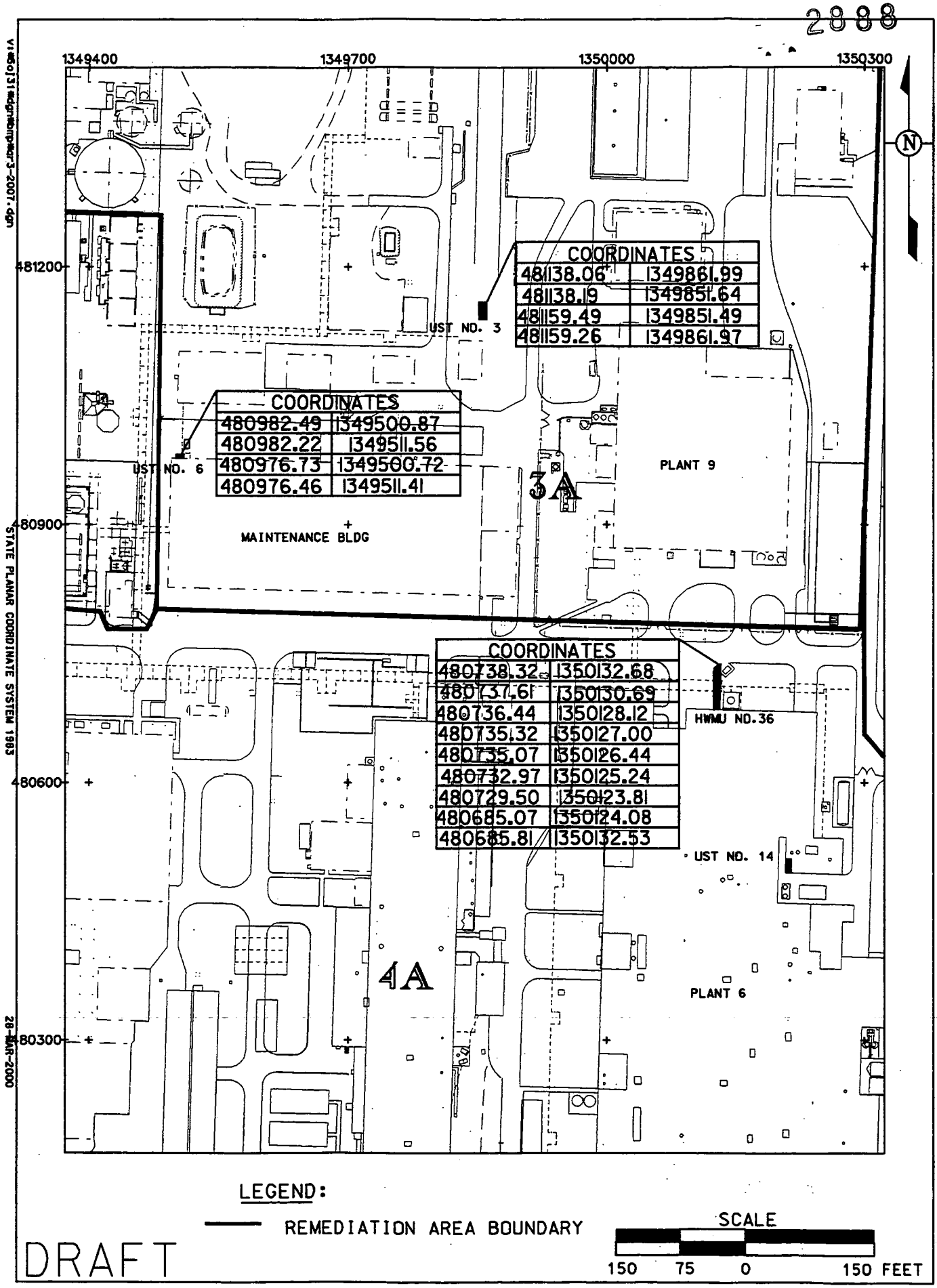

FIGURE 2-12. LOCATION OF HWMUs AND USTs IN AREA 3A/4A

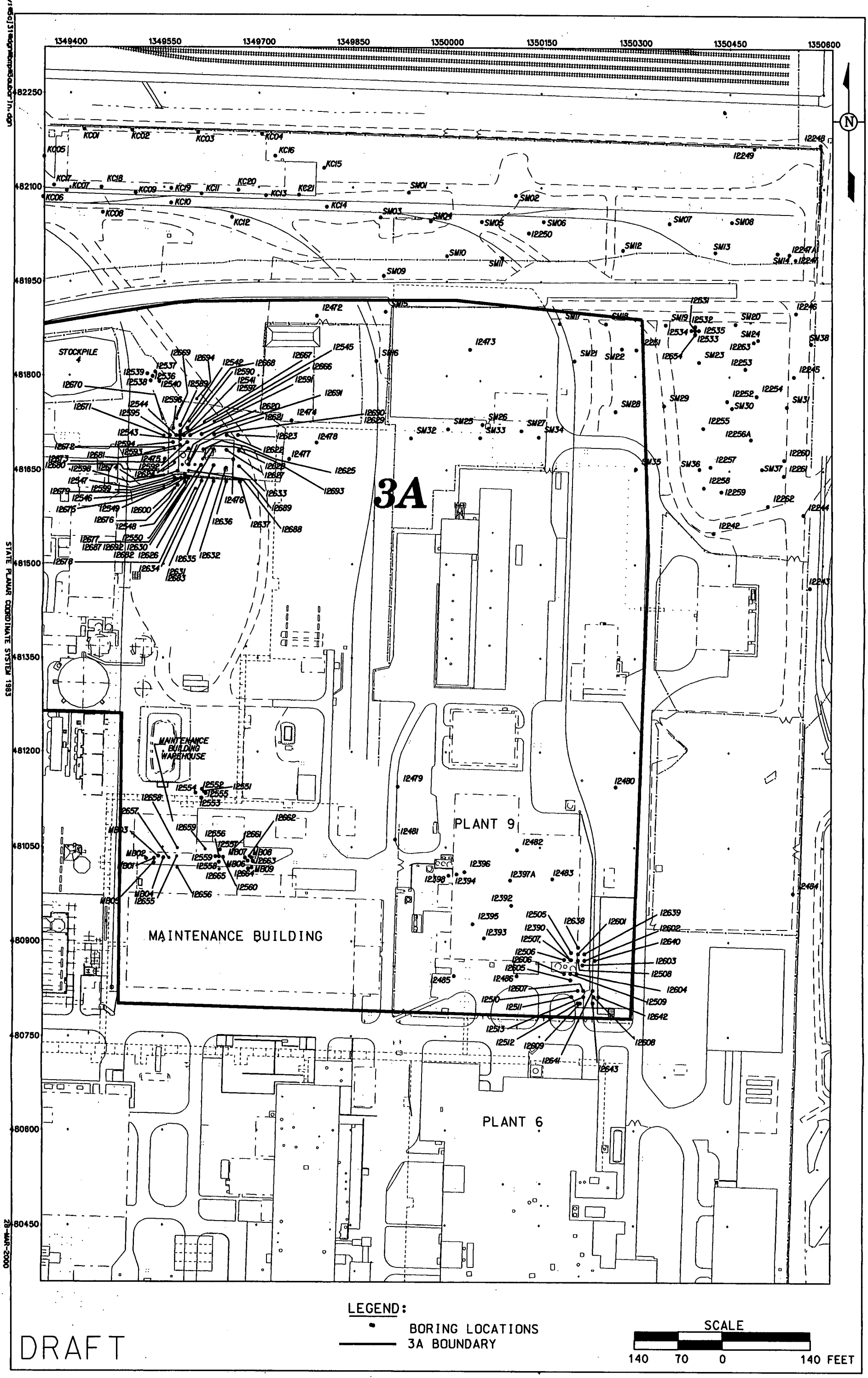

FIGURE 2-13. AREA 3A PREDESIGN SUBSURFACE BORING LOCATIONS

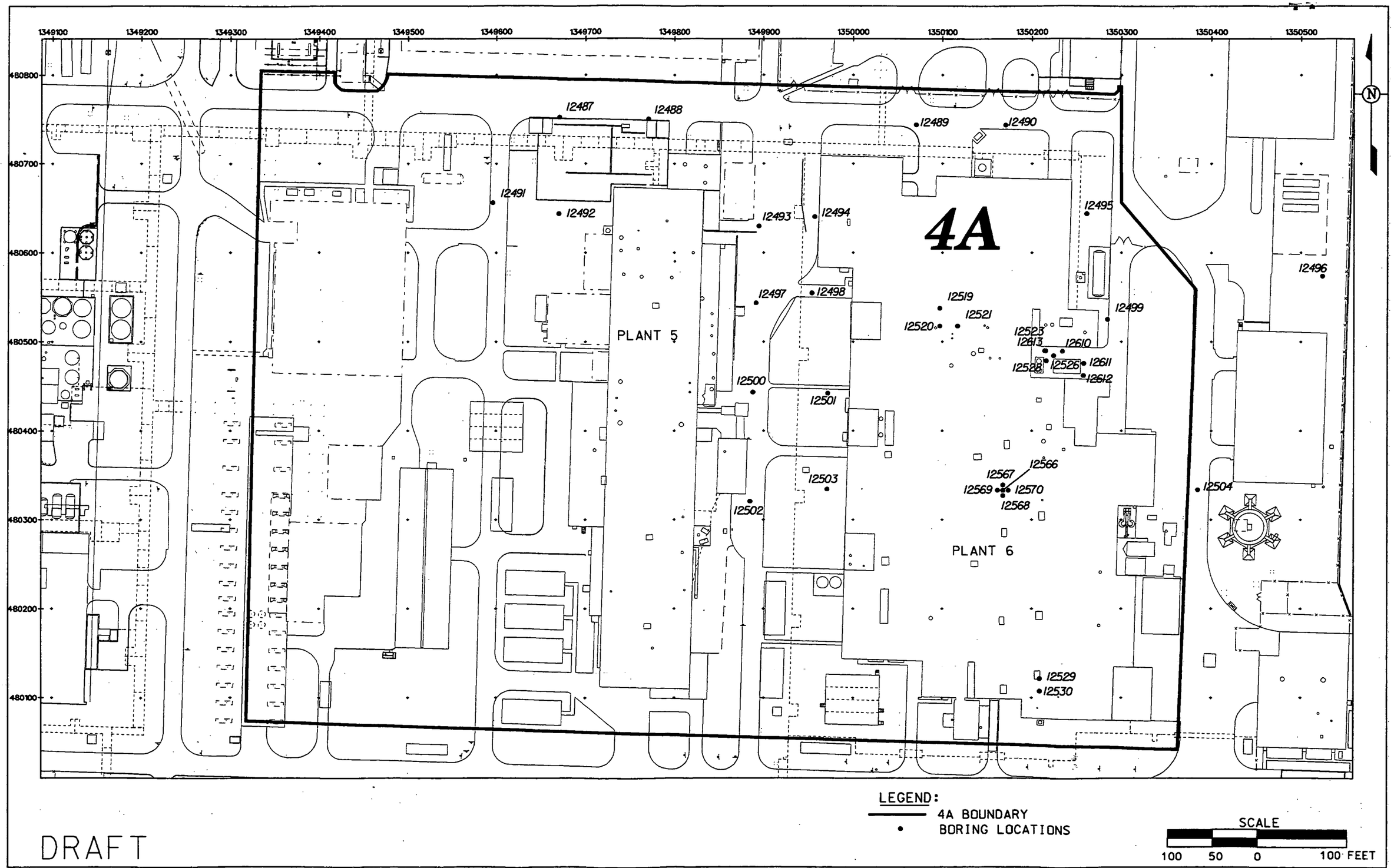

FIGURE 2-14. AREA 4A PREDESIGN SUBSURFACE BORING LOCATIONS

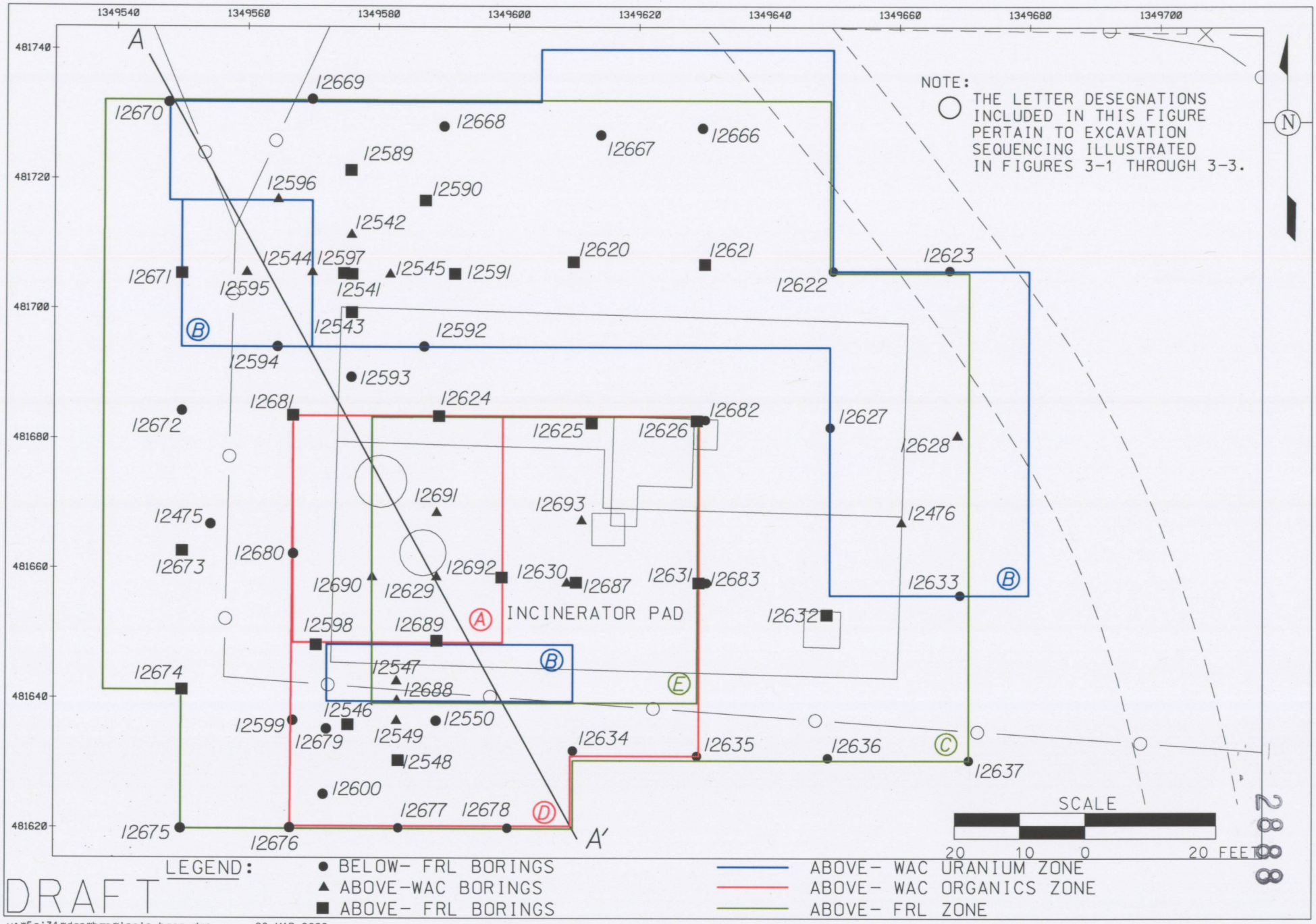

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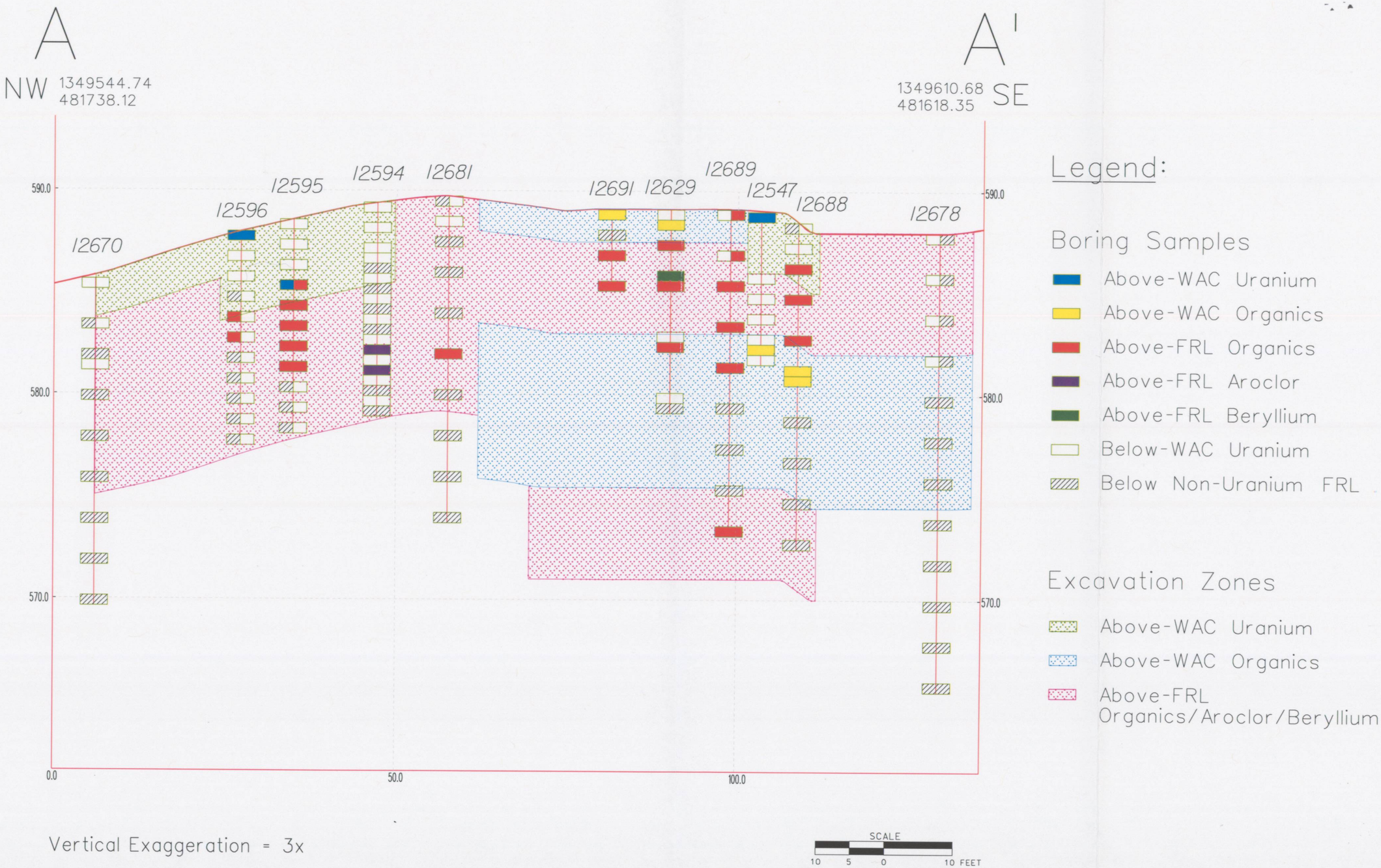
FIGURE 2-15. ABOVE-WAC AND ABOVE-FRL AREAS AT THE INCINERATOR PAD

280082

2888



24-MAR-2000

v:*5cj31*dgn*bmp*incin_sec1.dgn

FIGURE 2-16. CROSS-SECTION OF EXCAVATION ZONES IN THE INCINERATOR PAD AREA

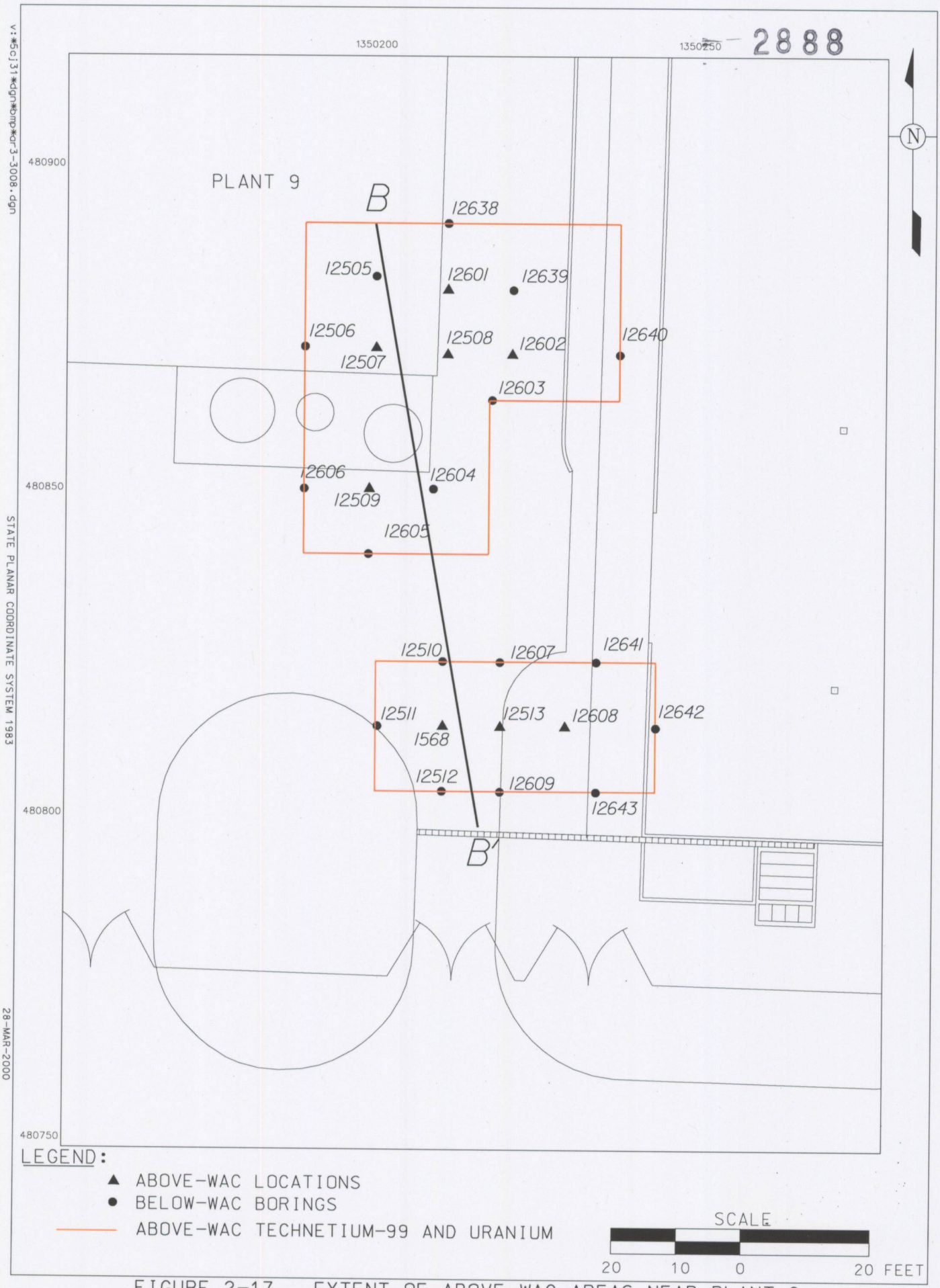
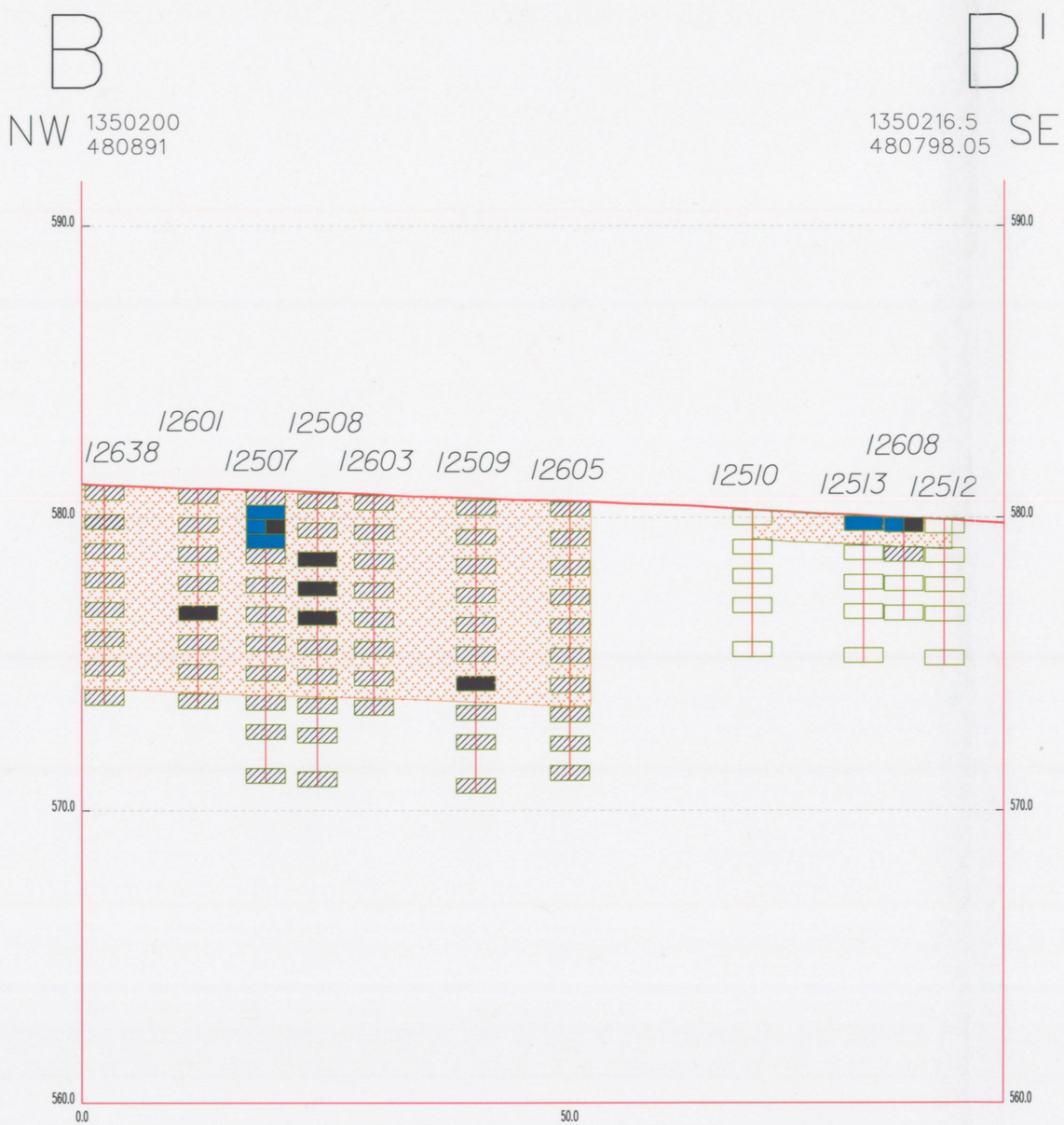


FIGURE 2-17. EXTENT OF ABOVE-WAC AREAS NEAR PLANT 9



Legend:

Boring Samples

- Above-WAC Uranium
- Above-WAC Technetium-99
- Below-WAC Uranium & Technetium-99
- Below-WAC Uranium

Excavation Zones

- Above-WAC Uranium & Technetium-99

Vertical Exaggeration = 3x

SCALE
10 5 0 10 FEET

STATE PLANAR COORDINATE SYSTEM 1983

28-MAR-2000

v:*5cj31*dgn*bmp*ar3_sec1.dgn

FIGURE 2-18. CROSS-SECTION OF ABOVE-WAC EXCAVATION ZONES IN THE SOUTH PLANT 9 AREA

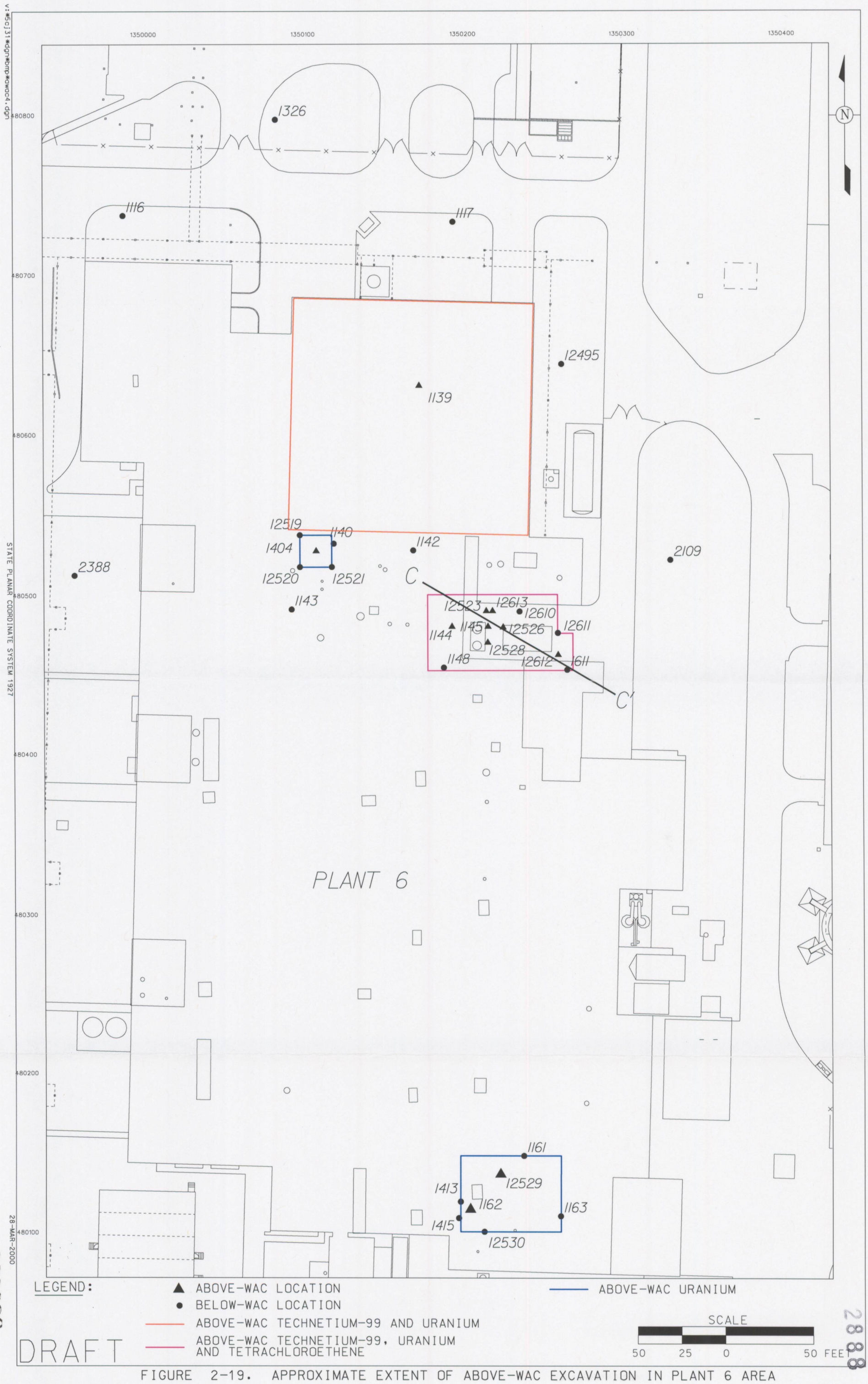


FIGURE 2-19. APPROXIMATE EXTENT OF ABOVE-WAC EXCAVATION IN PLANT 6 AREA

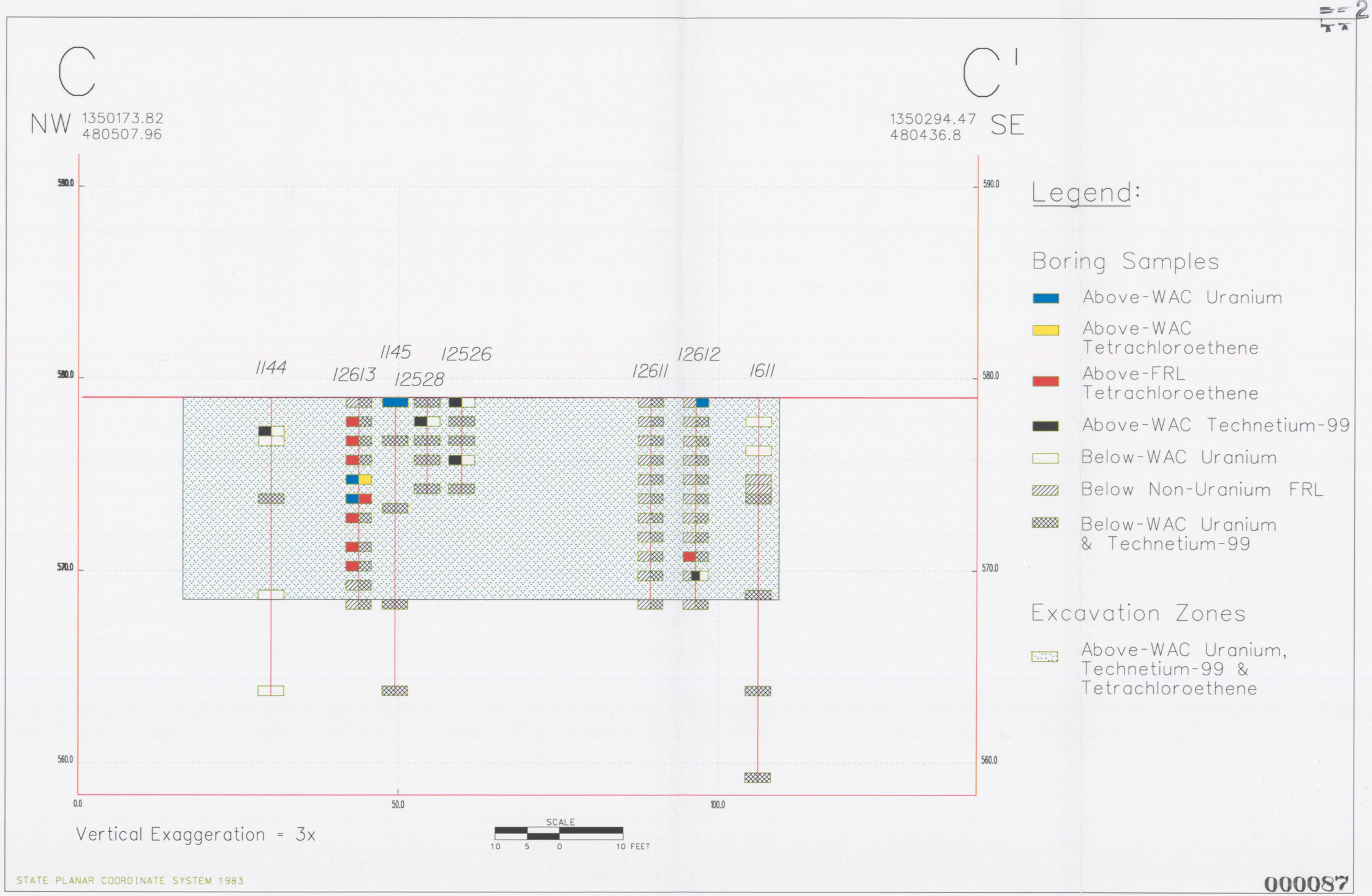


FIGURE 2-20. CROSS-SECTION OF THE ABOVE-WAC EXCAVATION ZONE IN THE EAST PLANT 6 AREA

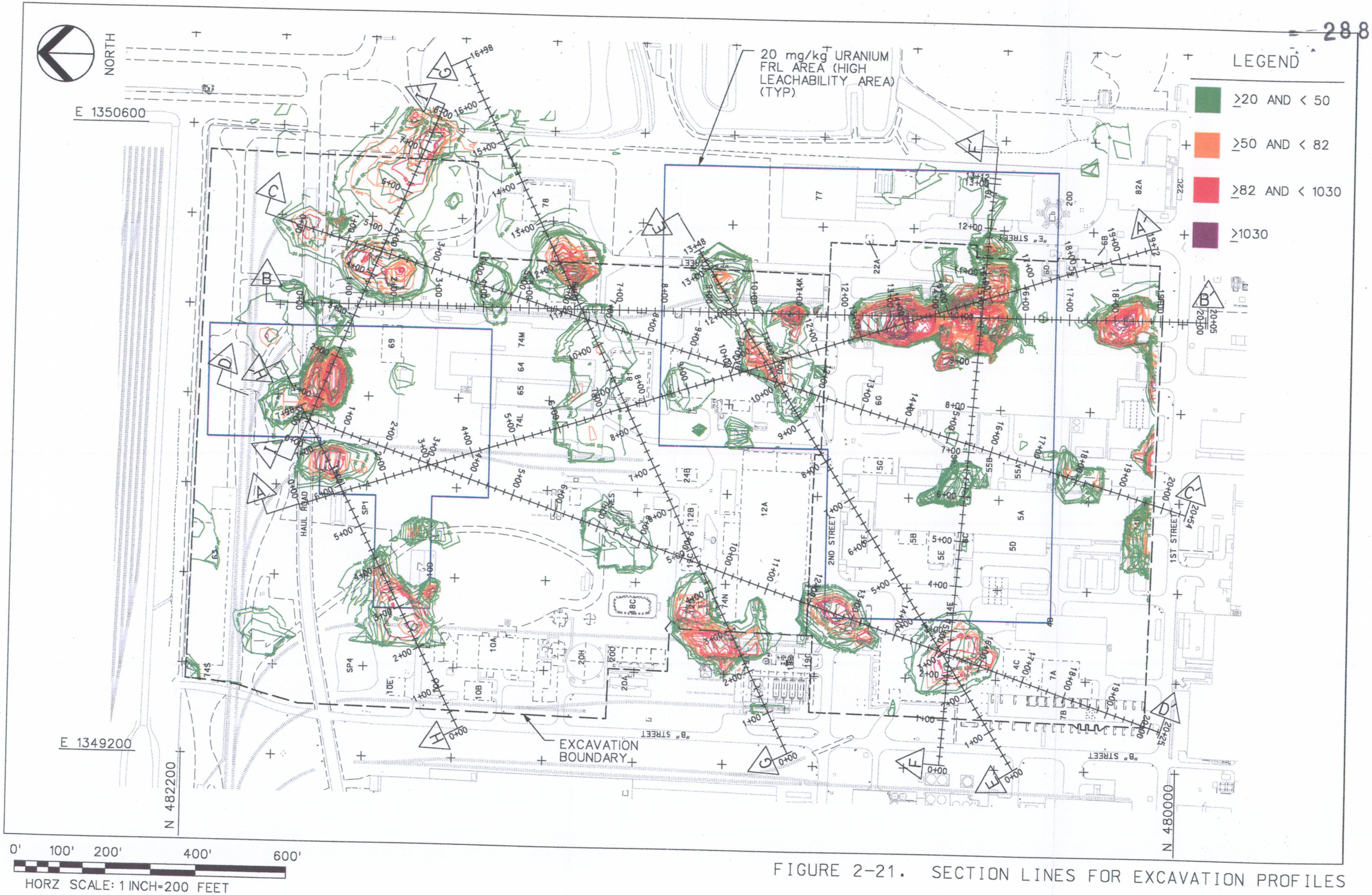
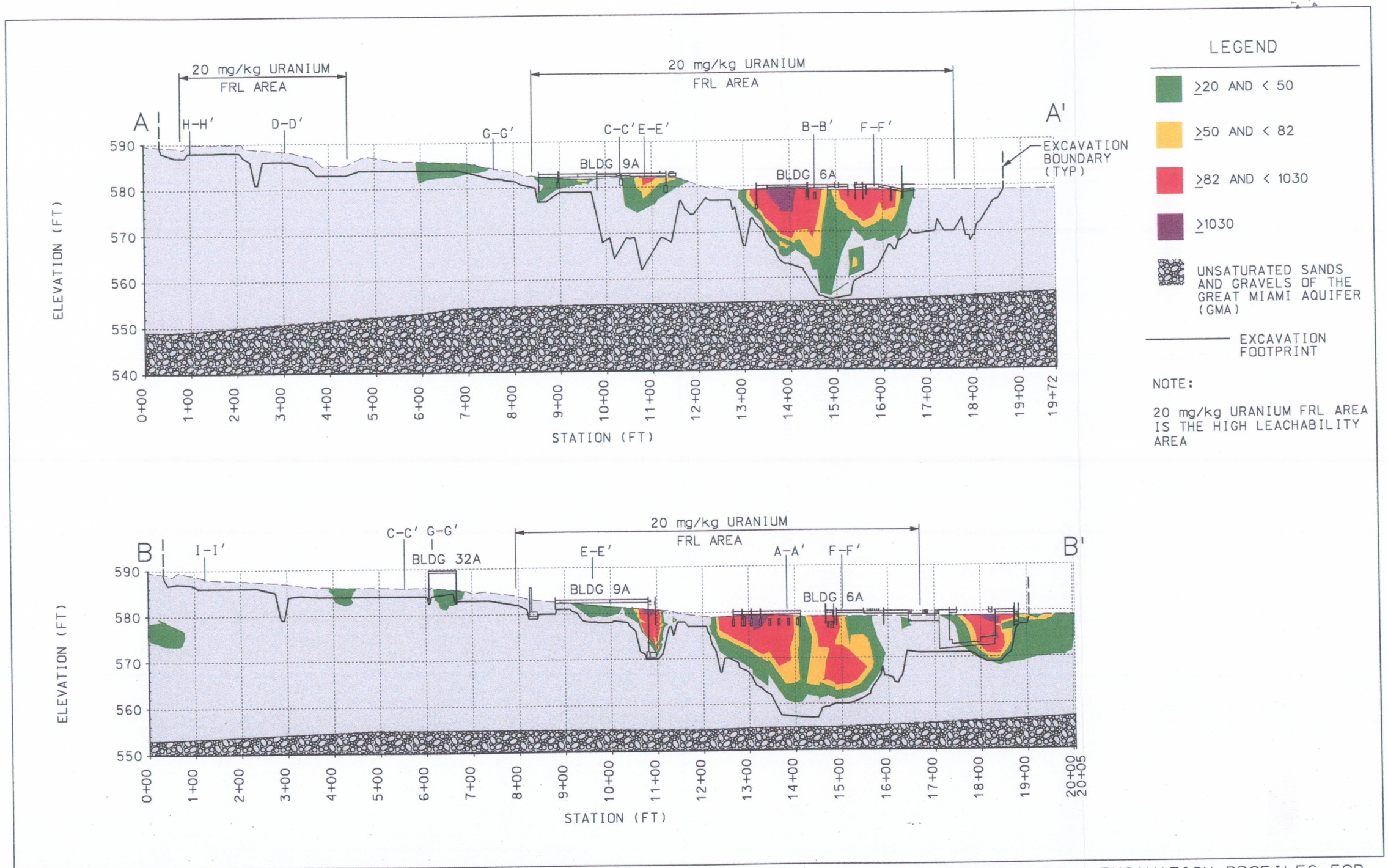


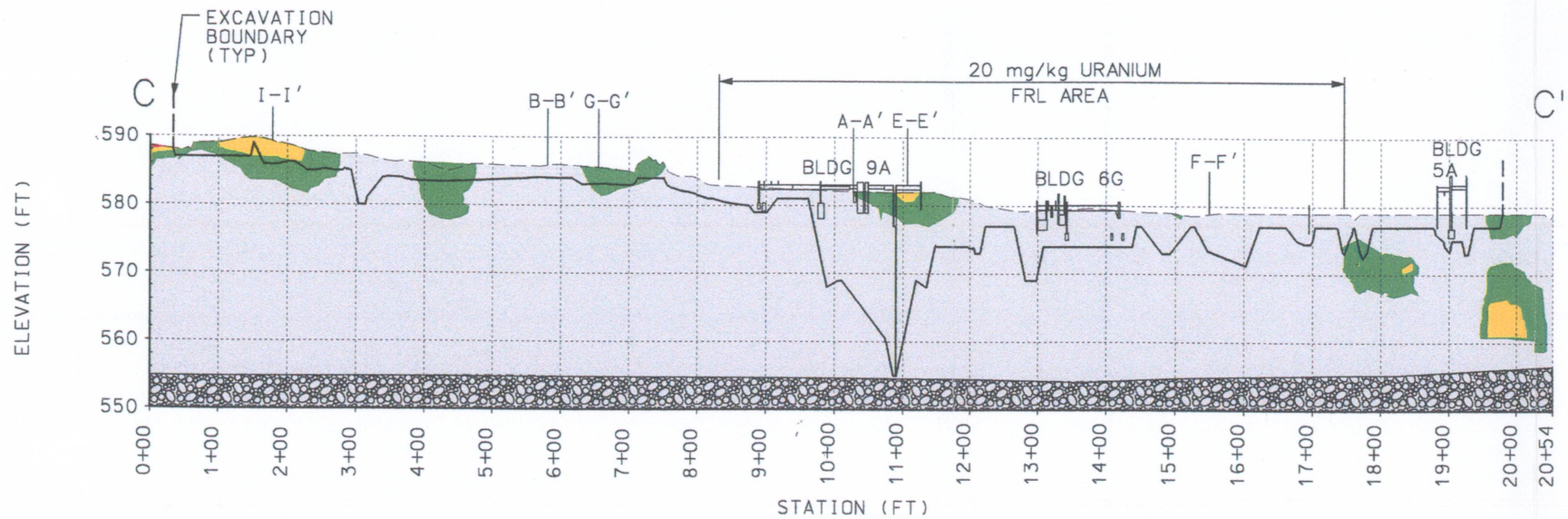
FIGURE 2-21. SECTION LINES FOR EXCAVATION PROFILES

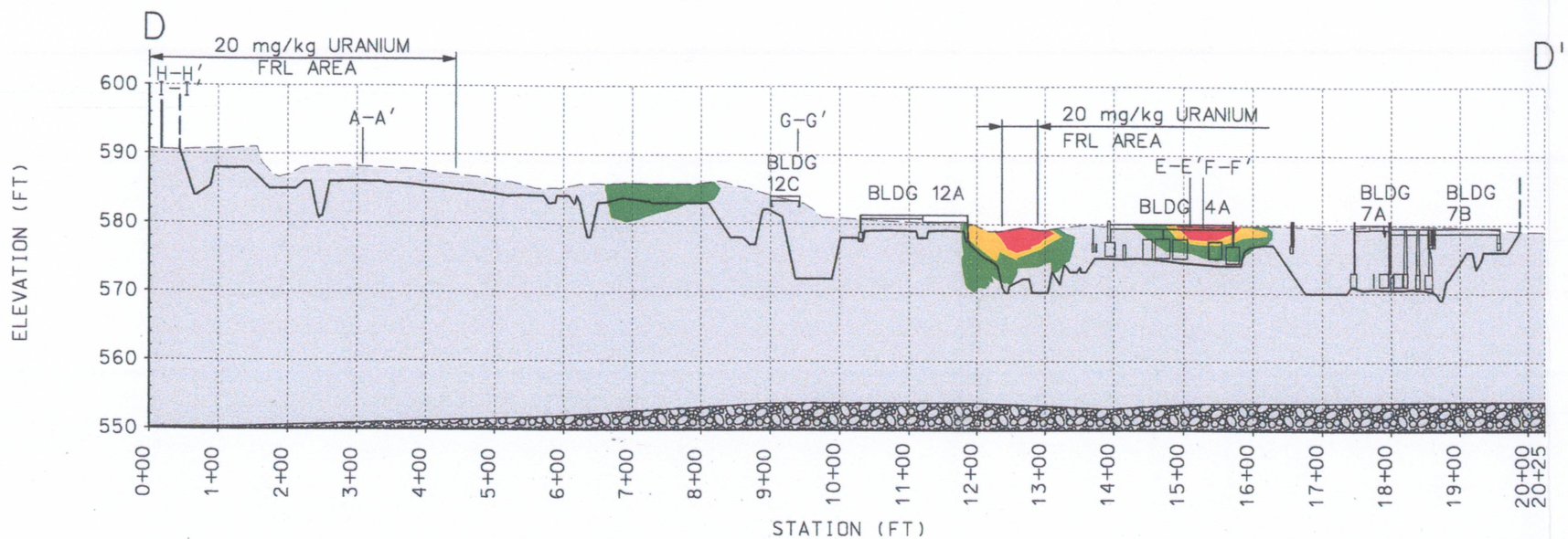


0' 100' 200' 400' 600'
HORZ SCALE: 1 INCH=200 FEET

0' 10' 20' 40' 60'
VERT SCALE: 1 INCH=20 FEET

FIGURE 2-22. EXCAVATION PROFILES FOR SECTIONS A-A' AND B-B'





LEGEND

- ≥20 AND < 50
- ≥50 AND < 82
- ≥82 AND < 1030
- ≥1030
- UNSATURATED SANDS AND GRAVELS OF THE GREAT MIAMI AQUIFER (GMA)
- EXCAVATION FOOTPRINT

NOTE:

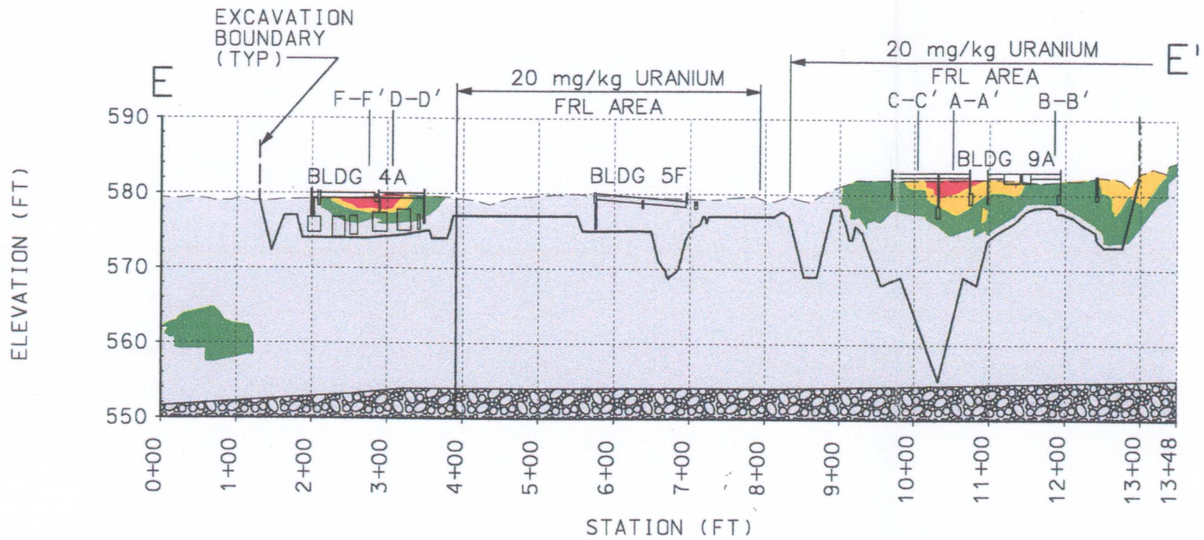
20 mg/kg URANIUM FRL AREA IS THE HIGH LEACHABILITY AREA

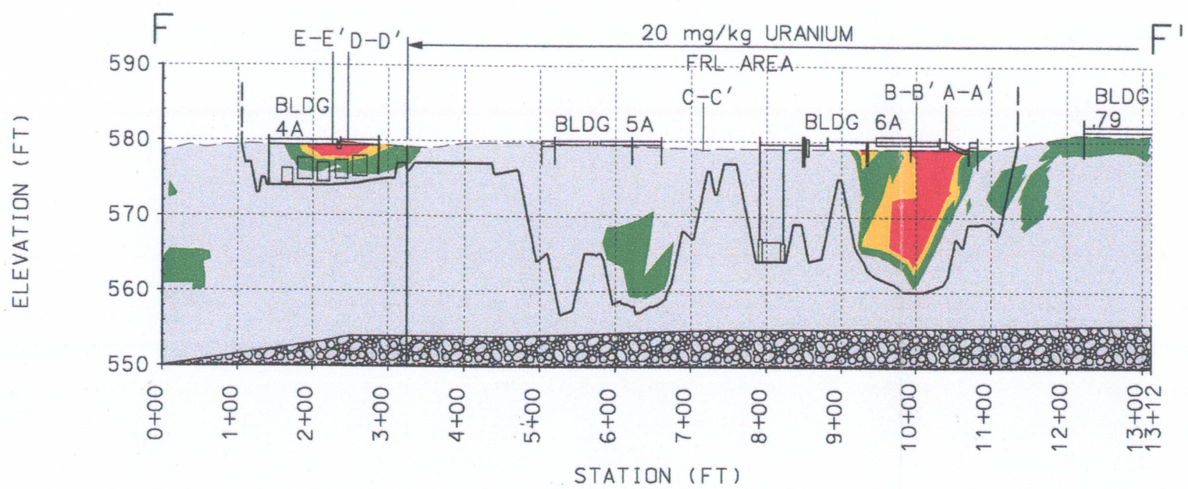
000090

0' 100' 200' 400' 600'
HORZ SCALE: 1 INCH=200 FEET

0' 10' 20' 40' 60'
VERT SCALE: 1 INCH=20 FEET

FIGURE 2-23. EXCAVATION PROFILES FOR SECTIONS C-C' AND D-D'





LEGEND

- ≥20 AND < 50
- ≥50 AND < 82
- ≥82 AND < 1030
- ≥1030
- UNSATURATED SANDS AND GRAVELS OF THE GREAT MIAMI AQUIFER (GMA)
- EXCAVATION FOOTPRINT

NOTE:

20 mg/kg URANIUM FRL AREA IS THE HIGH LEACHABILITY AREA

000091

0' 100' 200' 400' 600'
HORZ SCALE: 1 INCH=200 FEET

0' 10' 20' 40' 60'
VERT SCALE: 1 INCH=20 FEET

FIGURE 2-24. EXCAVATION PROFILES FOR SECTIONS E-E' AND F-F'

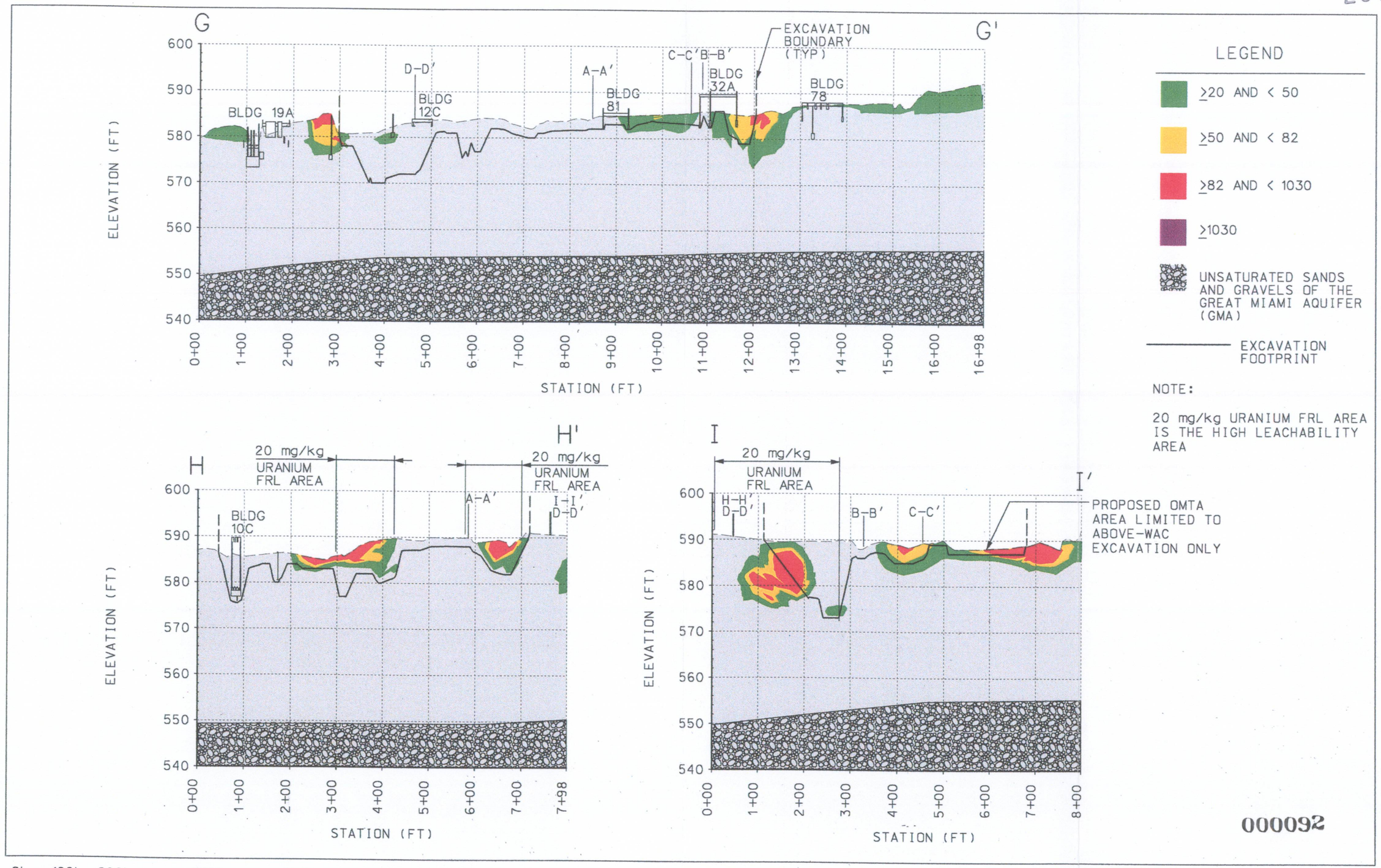


FIGURE 2-25. EXCAVATION PROFILES FOR SECTIONS G-G', H-H' AND I-I'

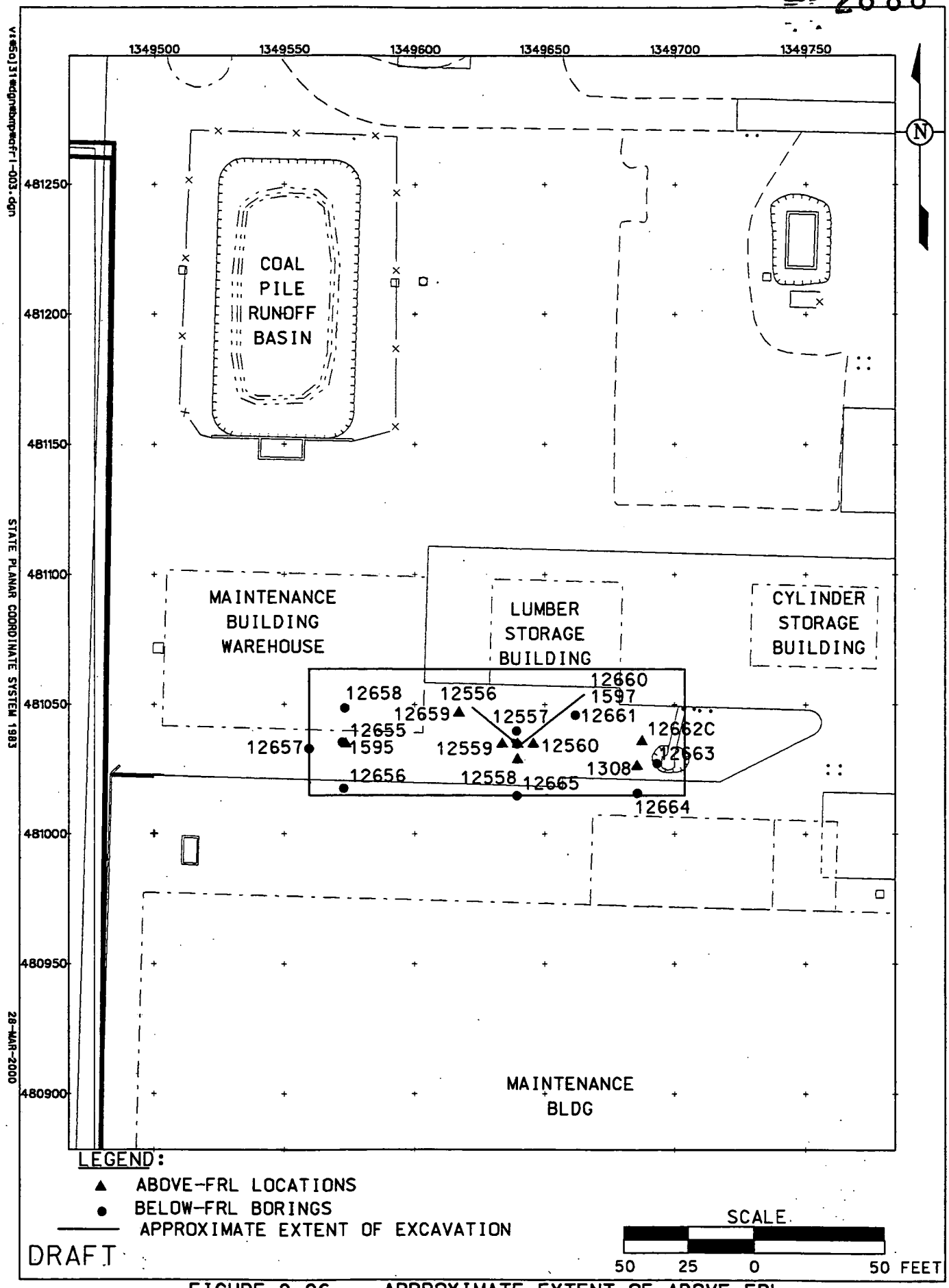


FIGURE 2-26. APPROXIMATE EXTENT OF ABOVE-FRL EXCAVATION IN MAINTENANCE BUILDING AREA

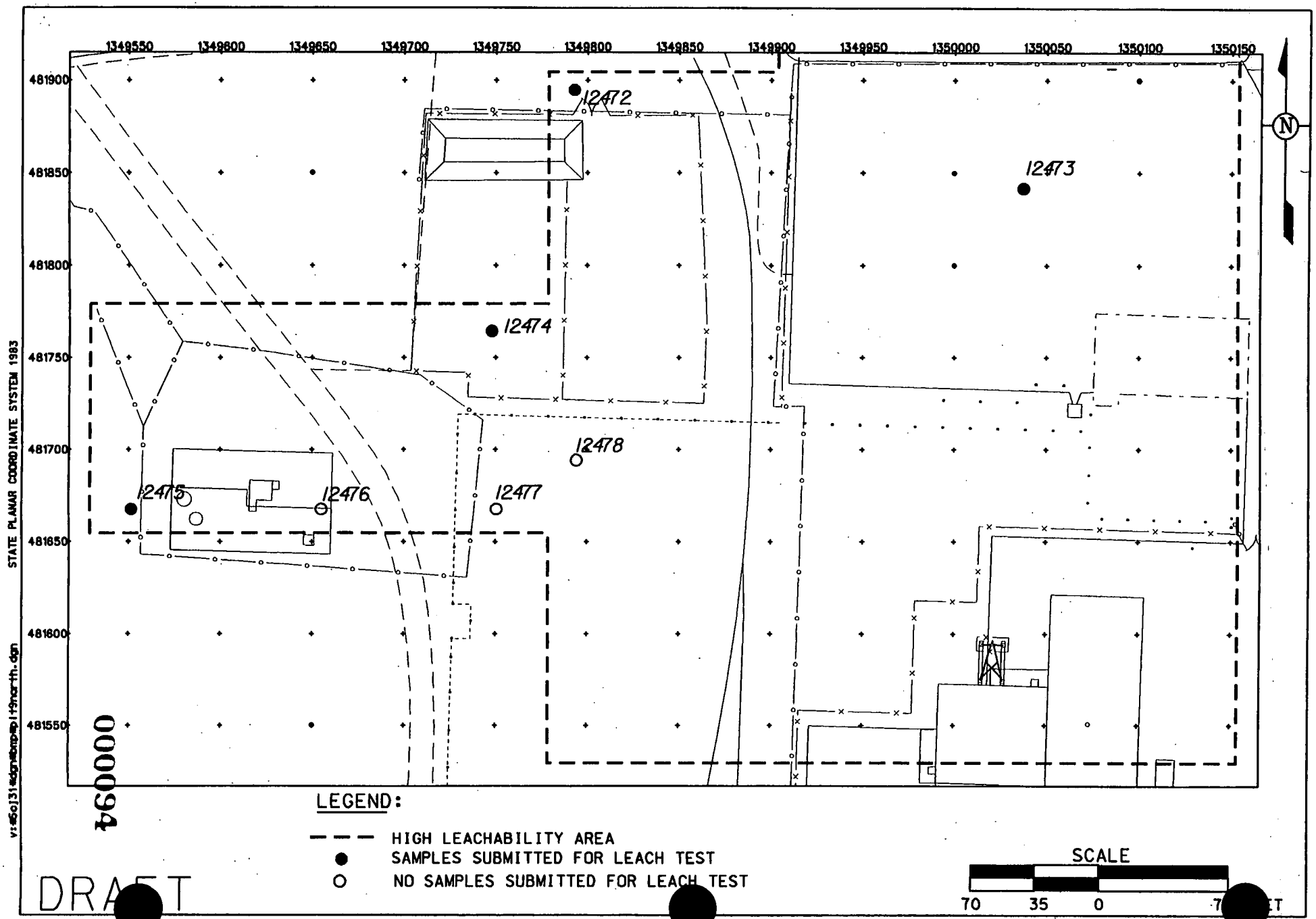


FIGURE 2-27. BORINGS TO CONFIRM AREA 3A/4A NORTHERN HIGH LEACHABILITY AREA

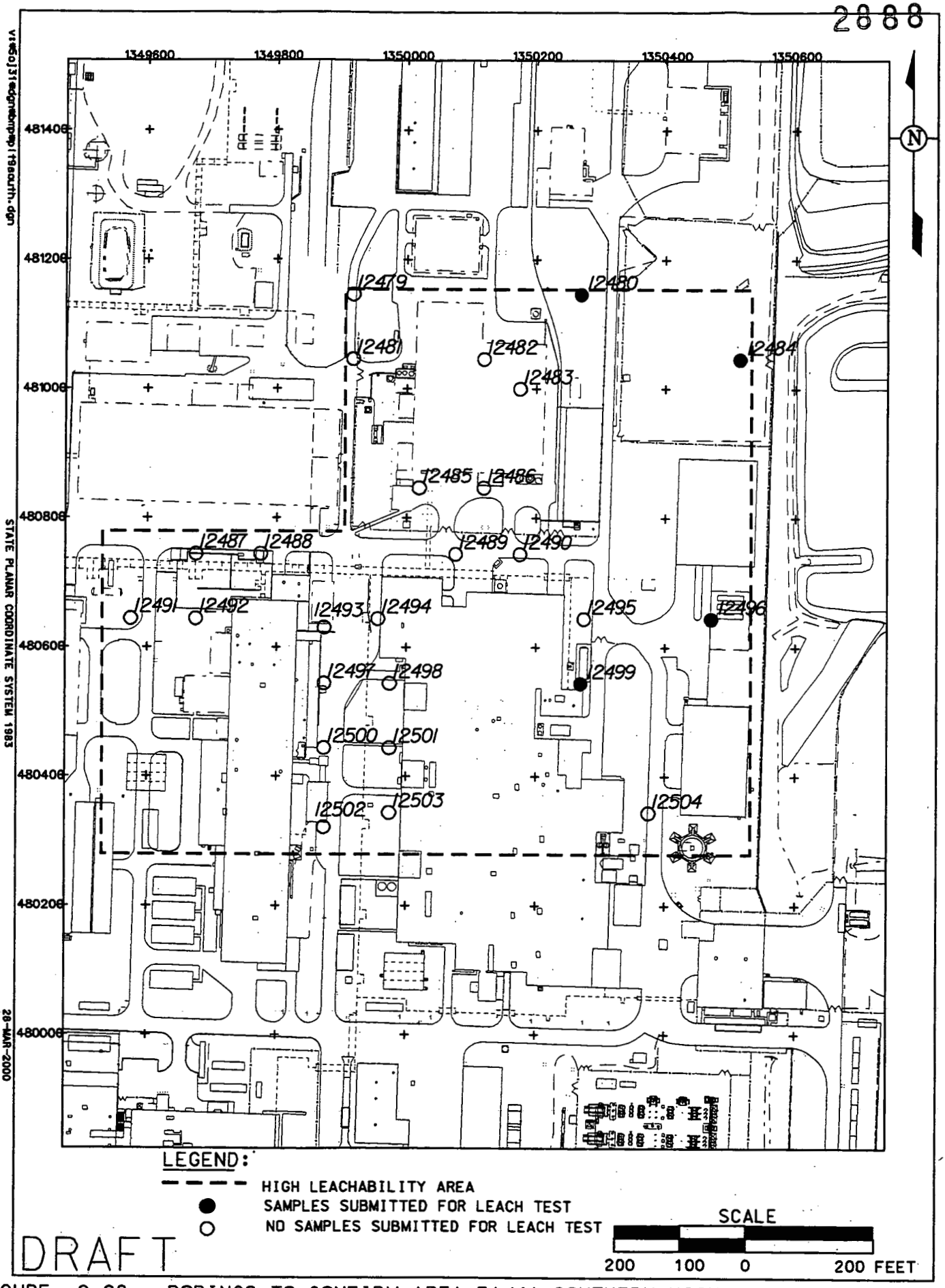


FIGURE 2-28. BORINGS TO CONFIRM AREA 3A/4A SOUTHERN HIGH LEACHABILITY AREA

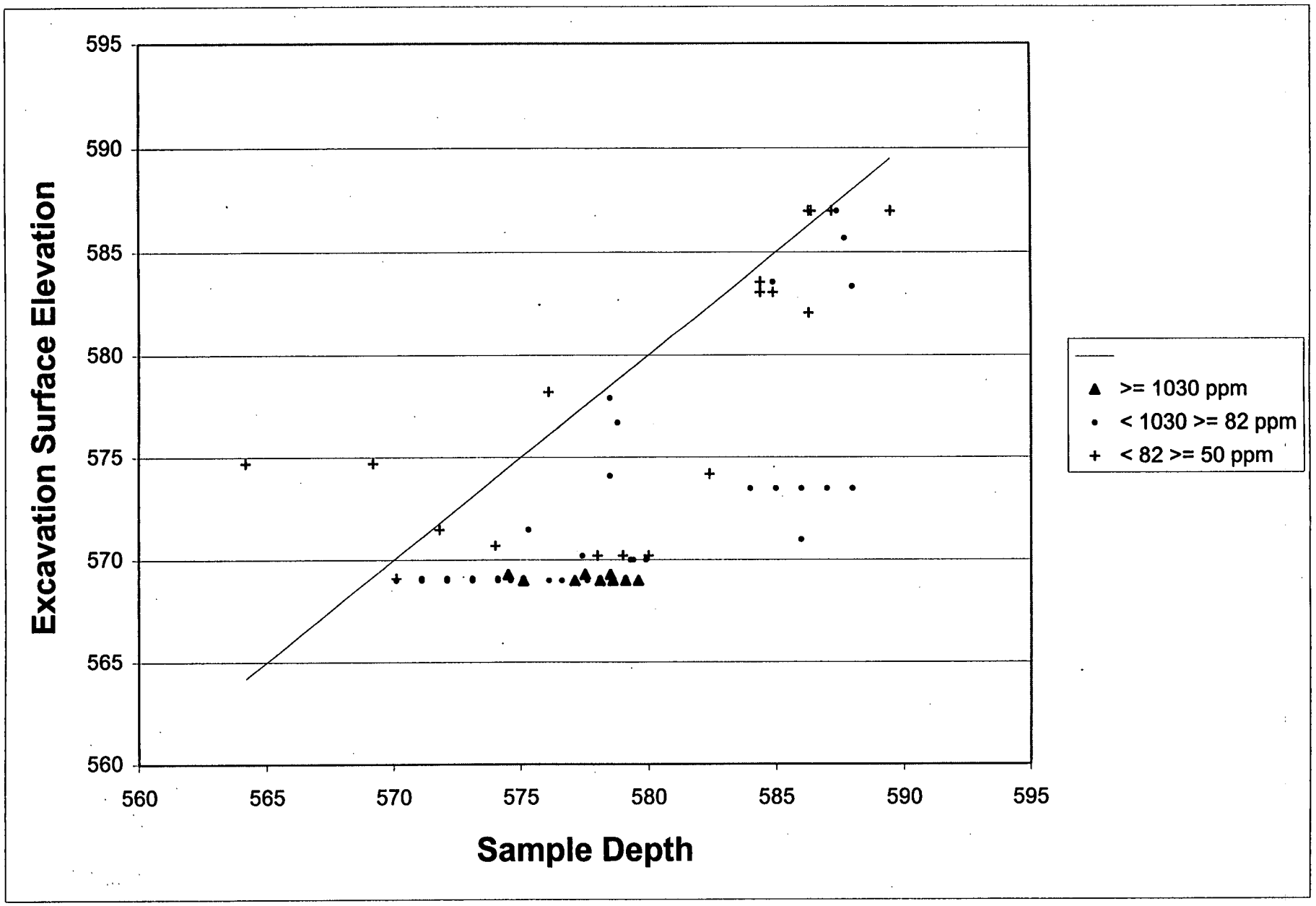


FIGURE 2-29. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR TOTAL URANIUM OUTSIDE HIGH LEACHABILITY AREA

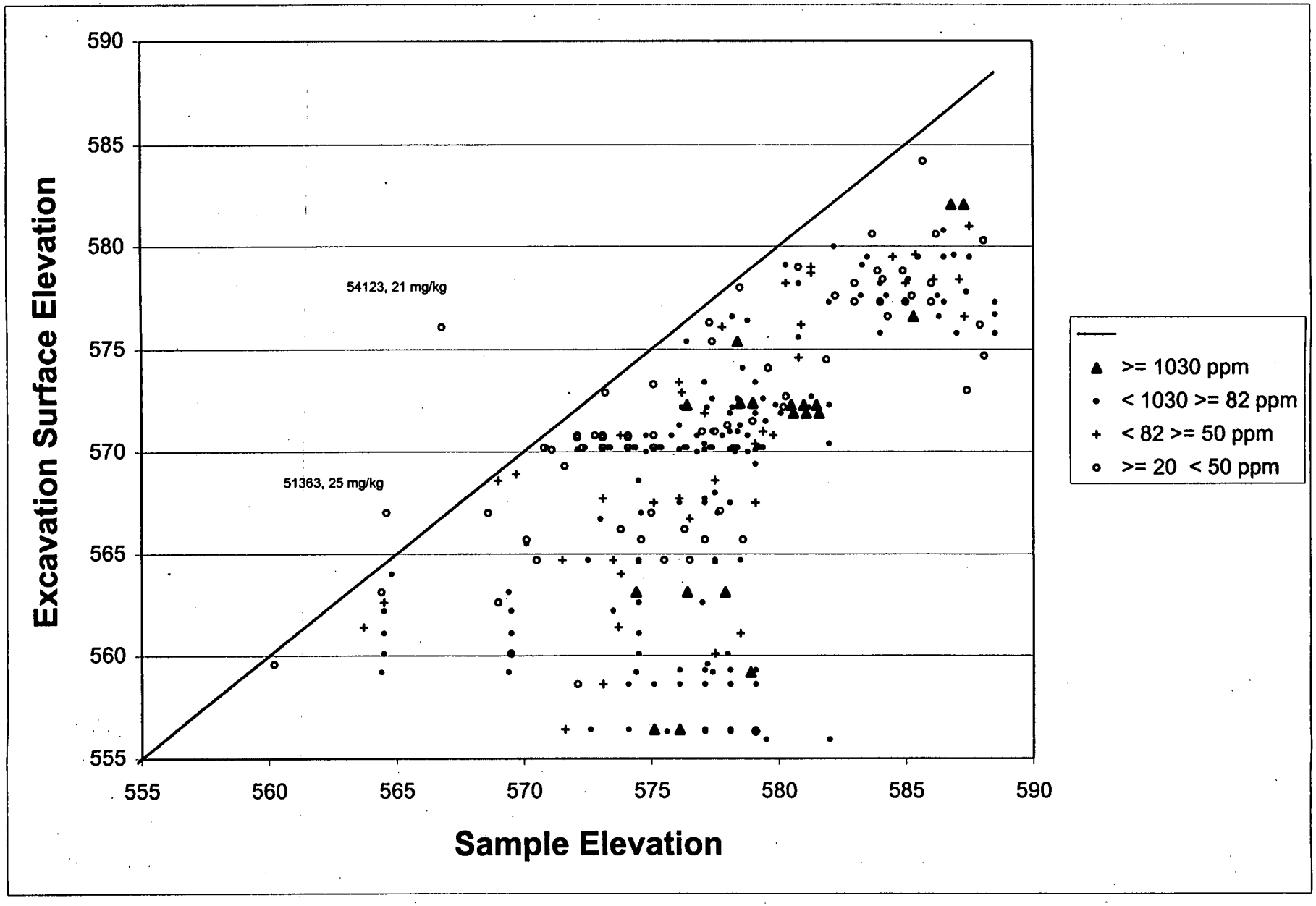


FIGURE 2-30. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR TOTAL URANIUM INSIDE HIGH LEACHABILITY AREAS

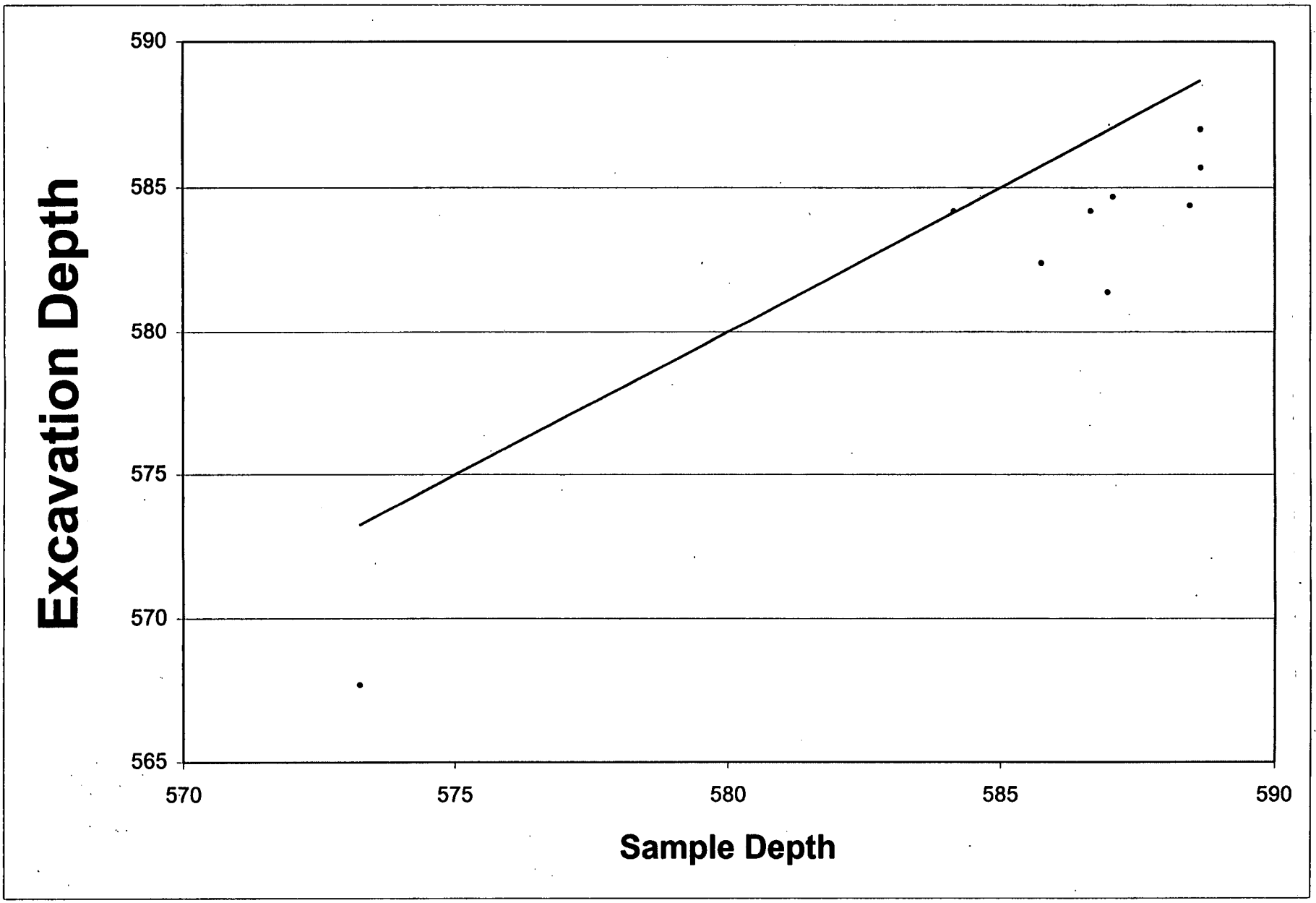


FIGURE 2-31. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR RADIUM-226

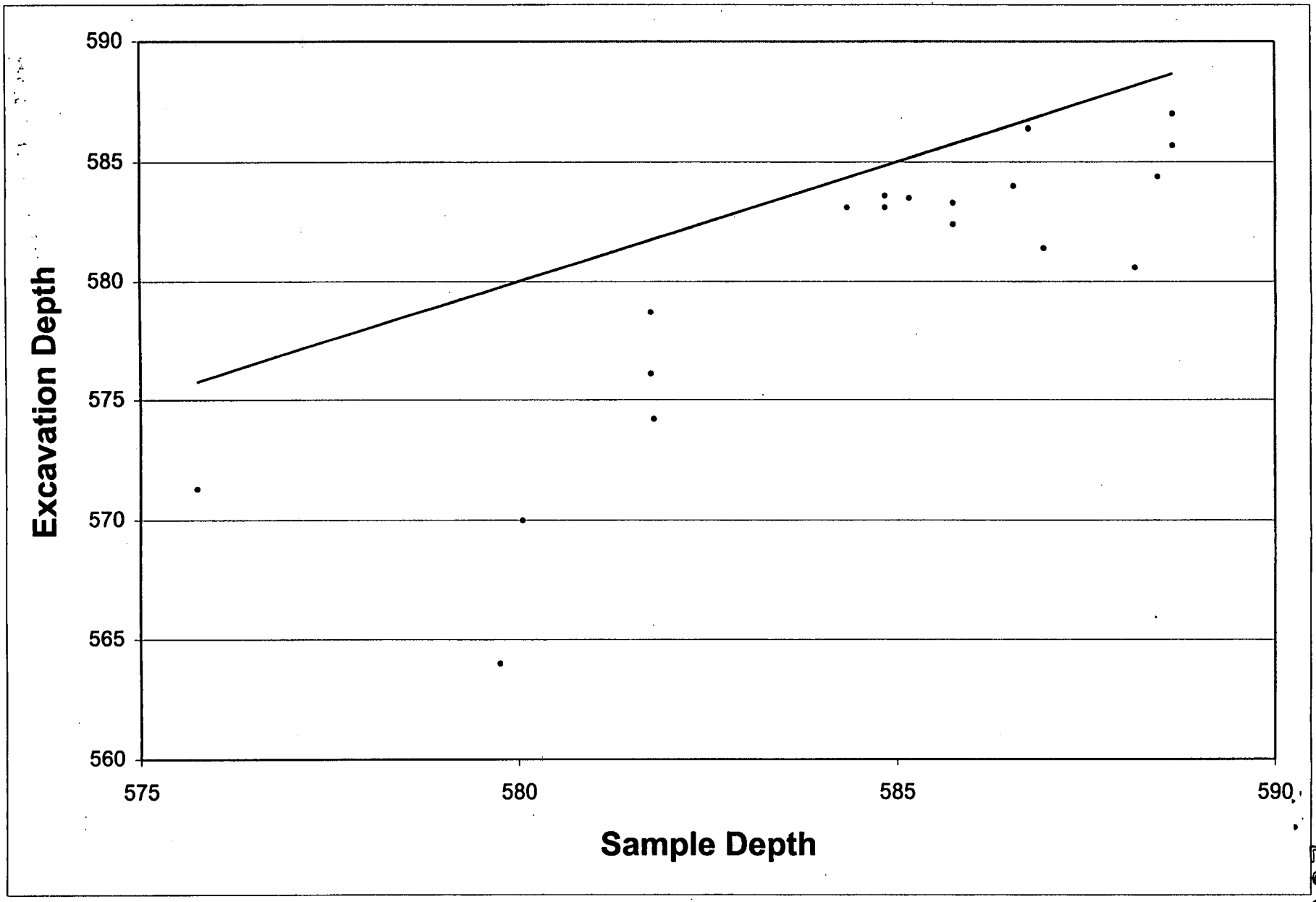


FIGURE 2-32. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR RADIUM-228

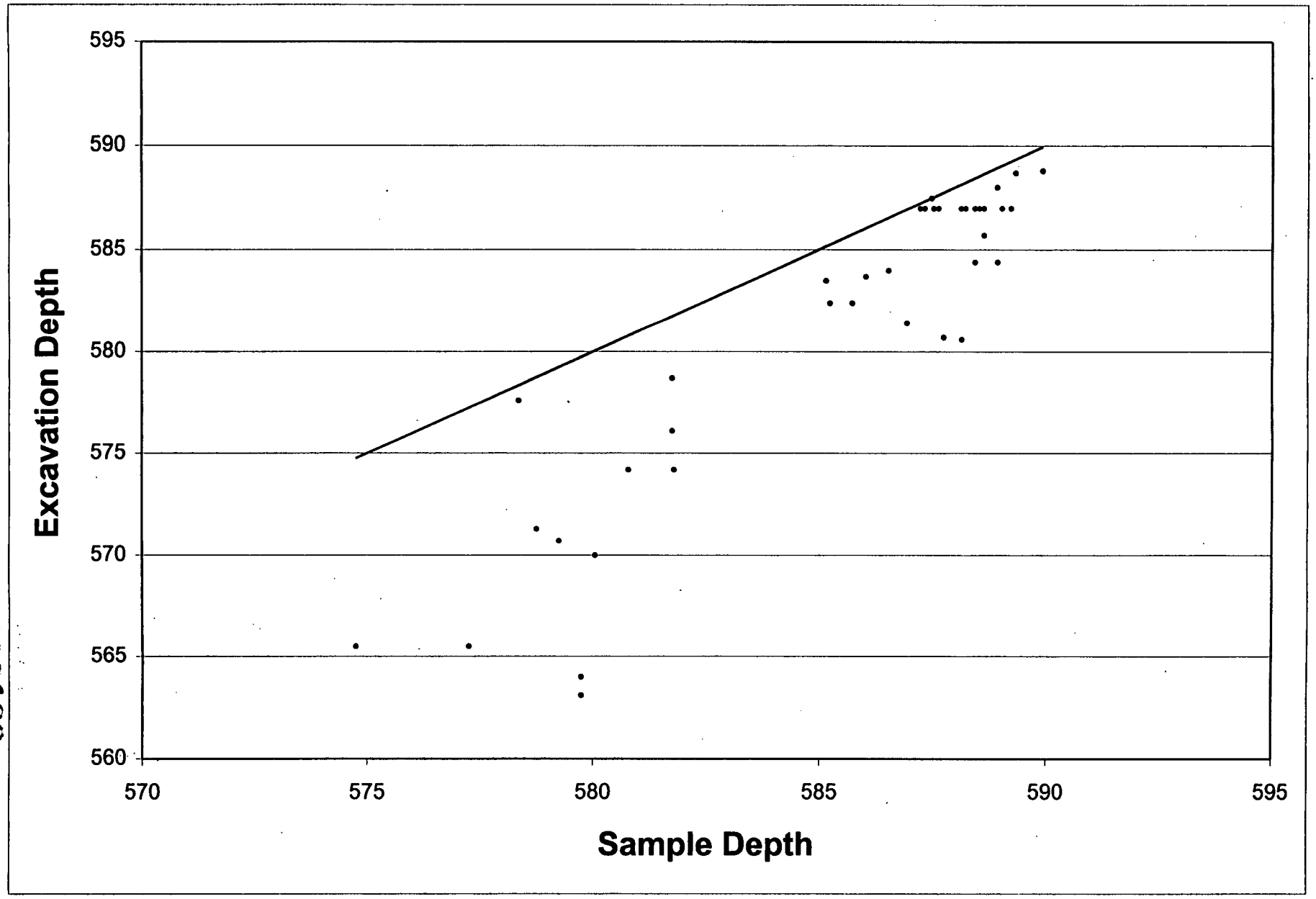


FIGURE 2-33. VARIATION OF EXCAVATION D[illegible]H WITH SAMPLE DEPTH FOR THORIUM-228

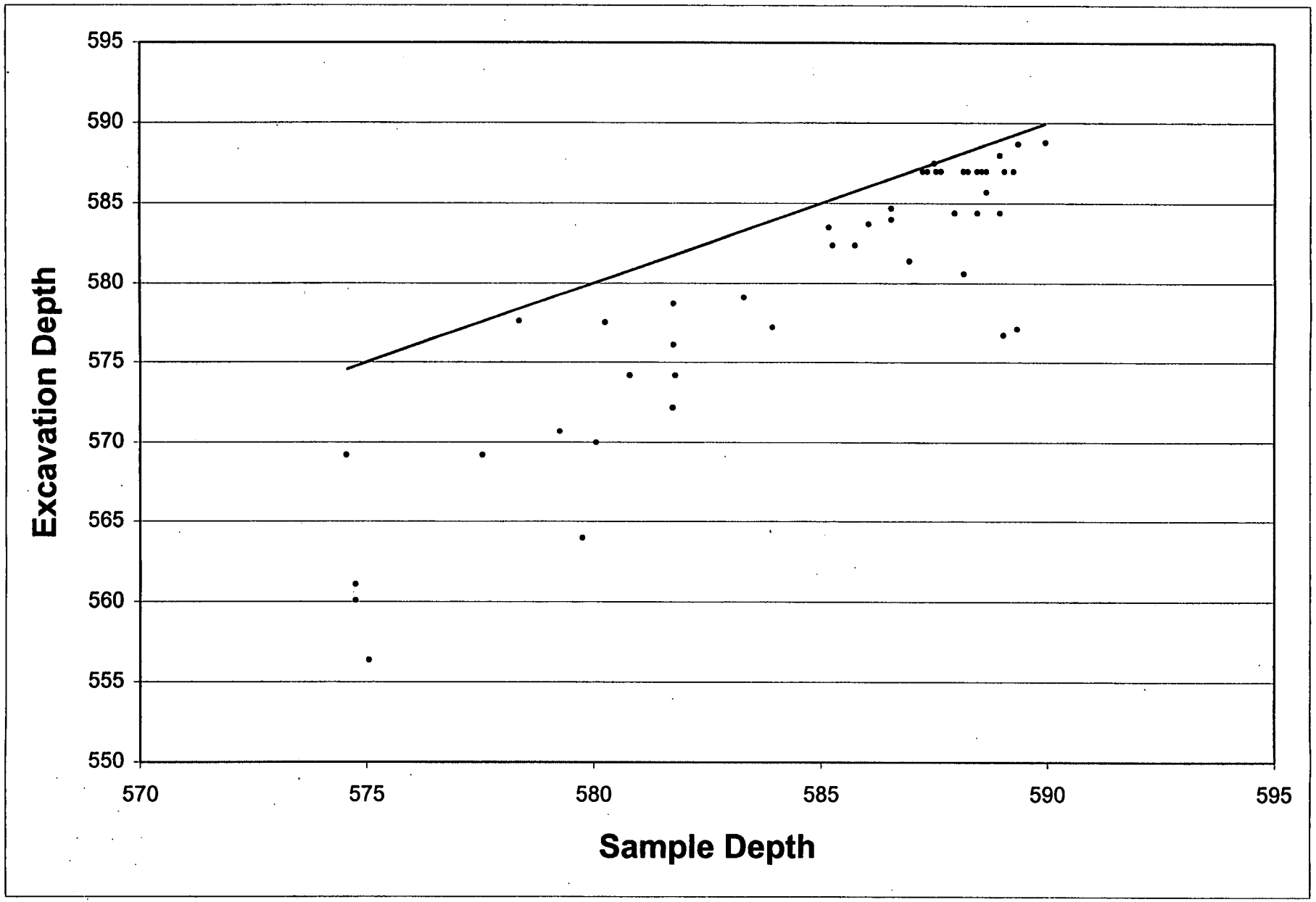


FIGURE 2-34. VARIATION OF EXCAVTION DEPTH WITH SAMPLE DEPTH FOR THORIUM-232

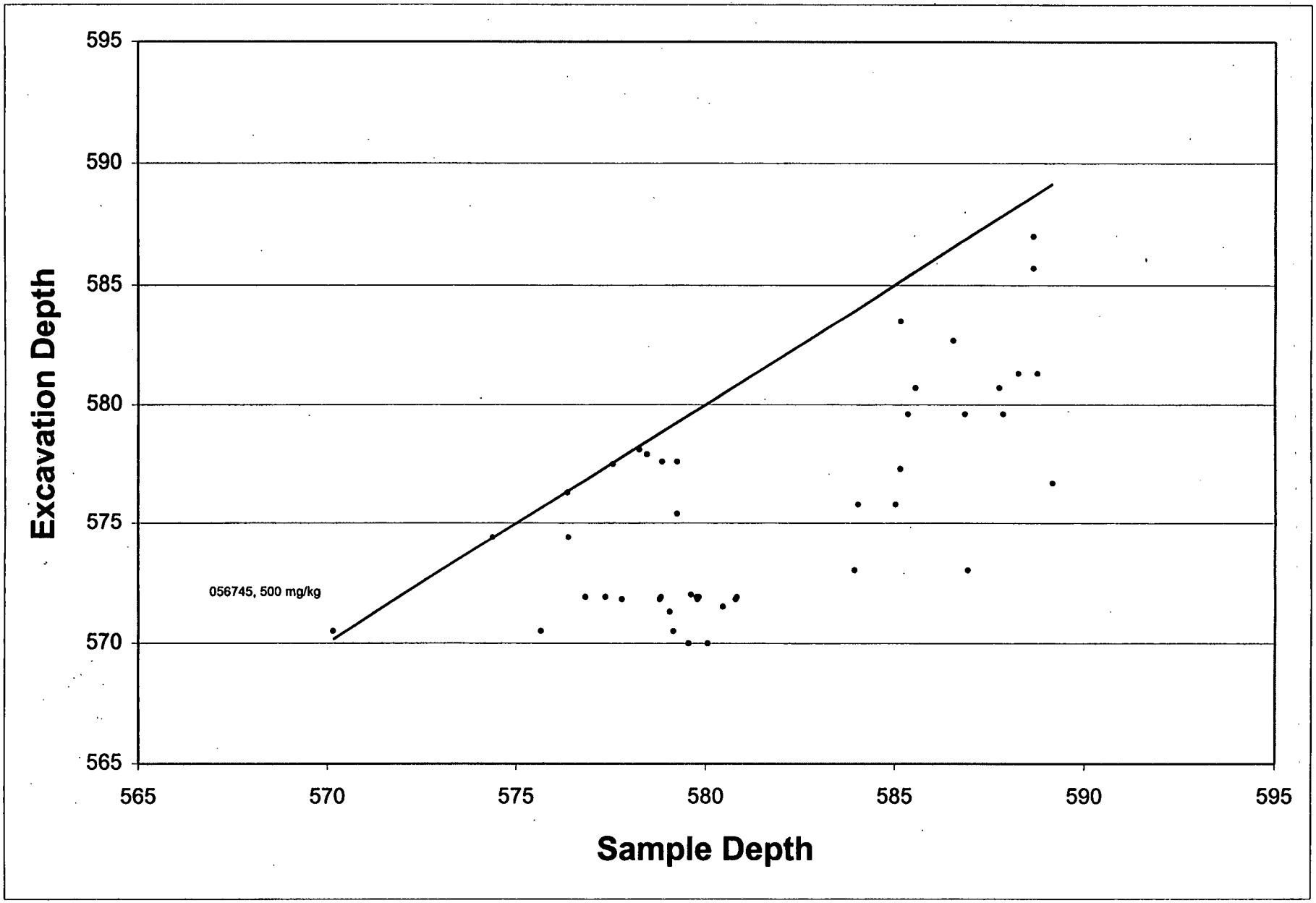


FIGURE 2-35. VARIATION OF EXCAVATION D[illegible] WITH SAMPLE DEPTH FOR AROCLOR-1254

207000

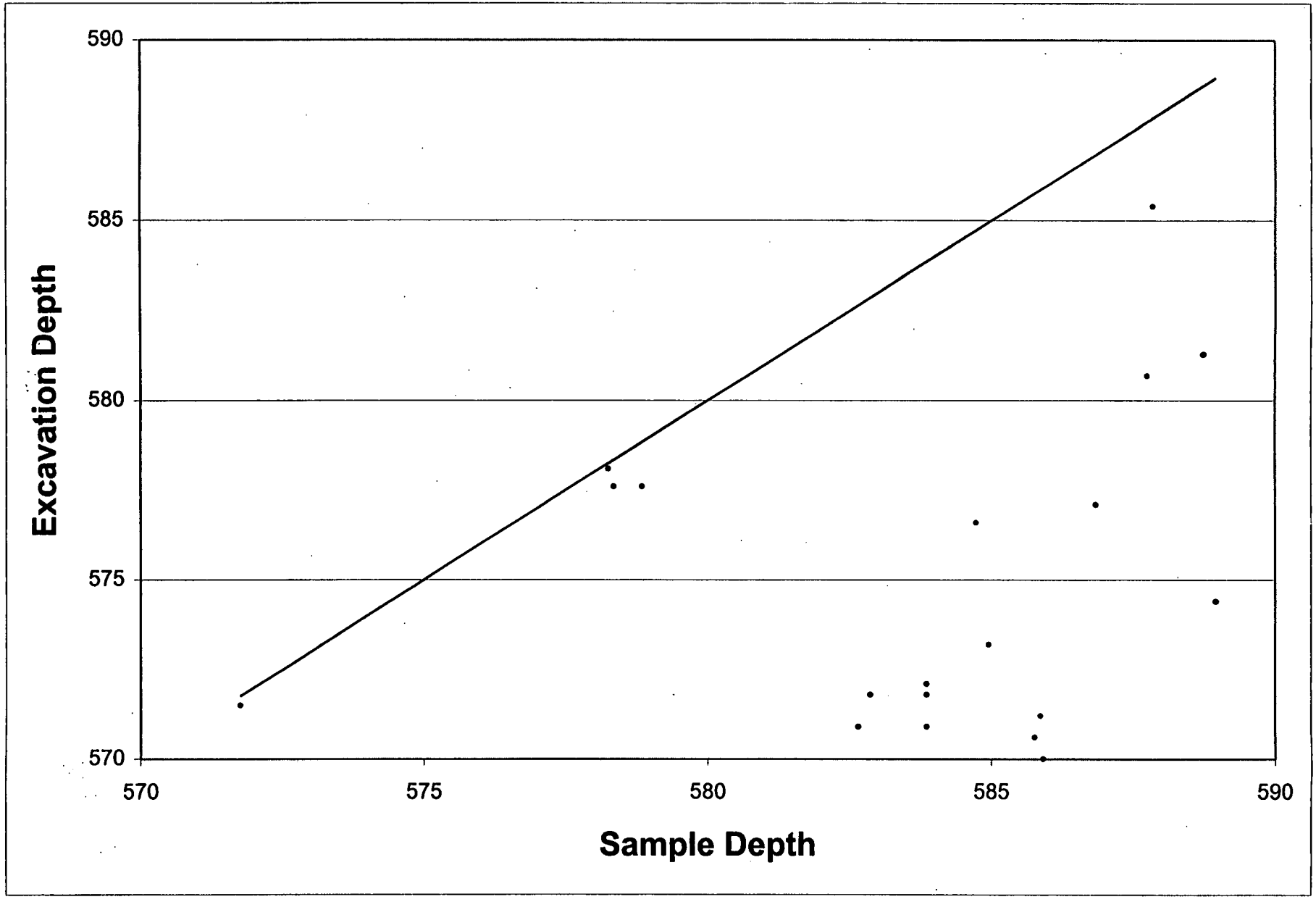


FIGURE 2-36. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR BERYLLIUM

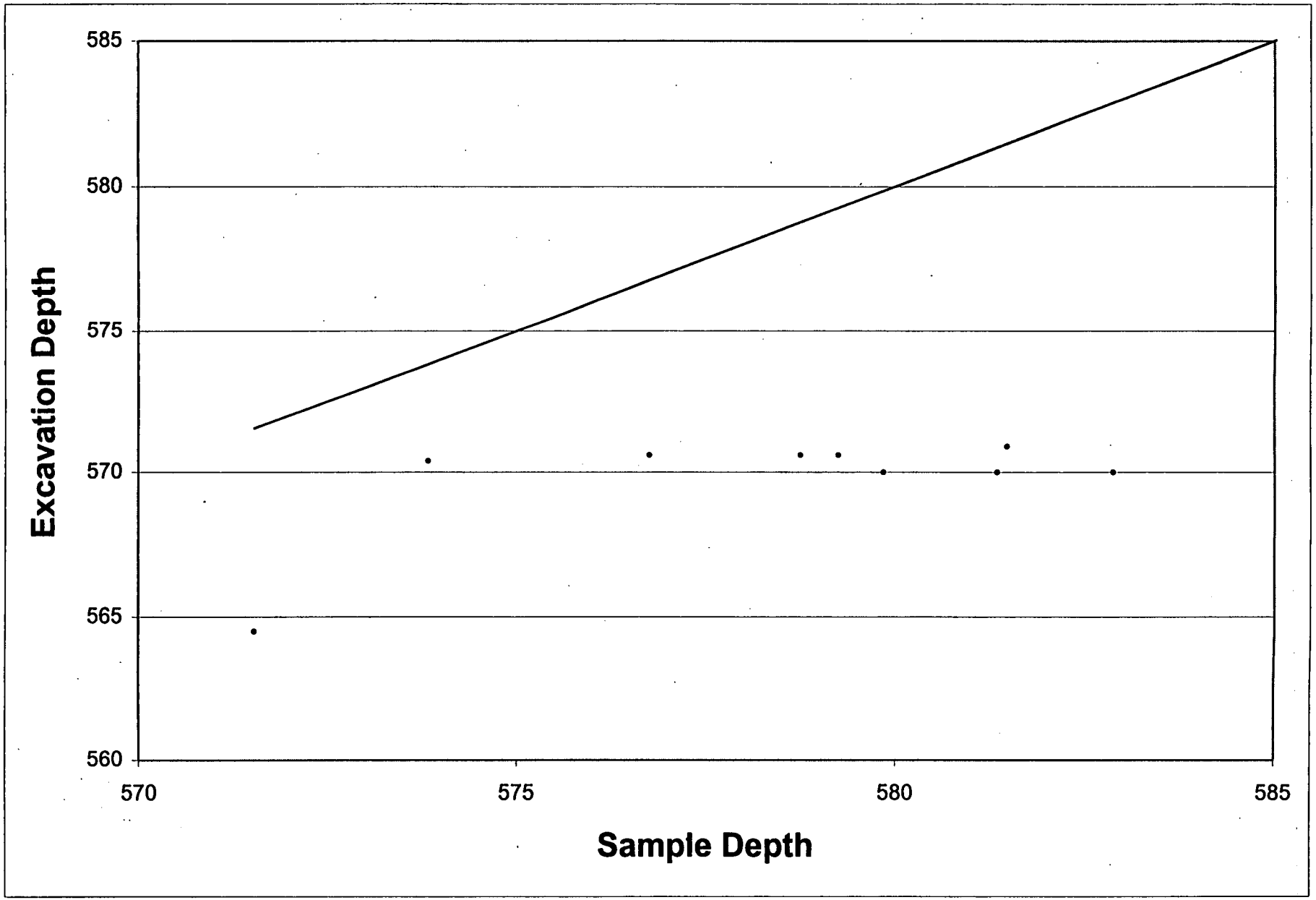


FIGURE 2-37. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR 1,1-DICHLOROETHENE

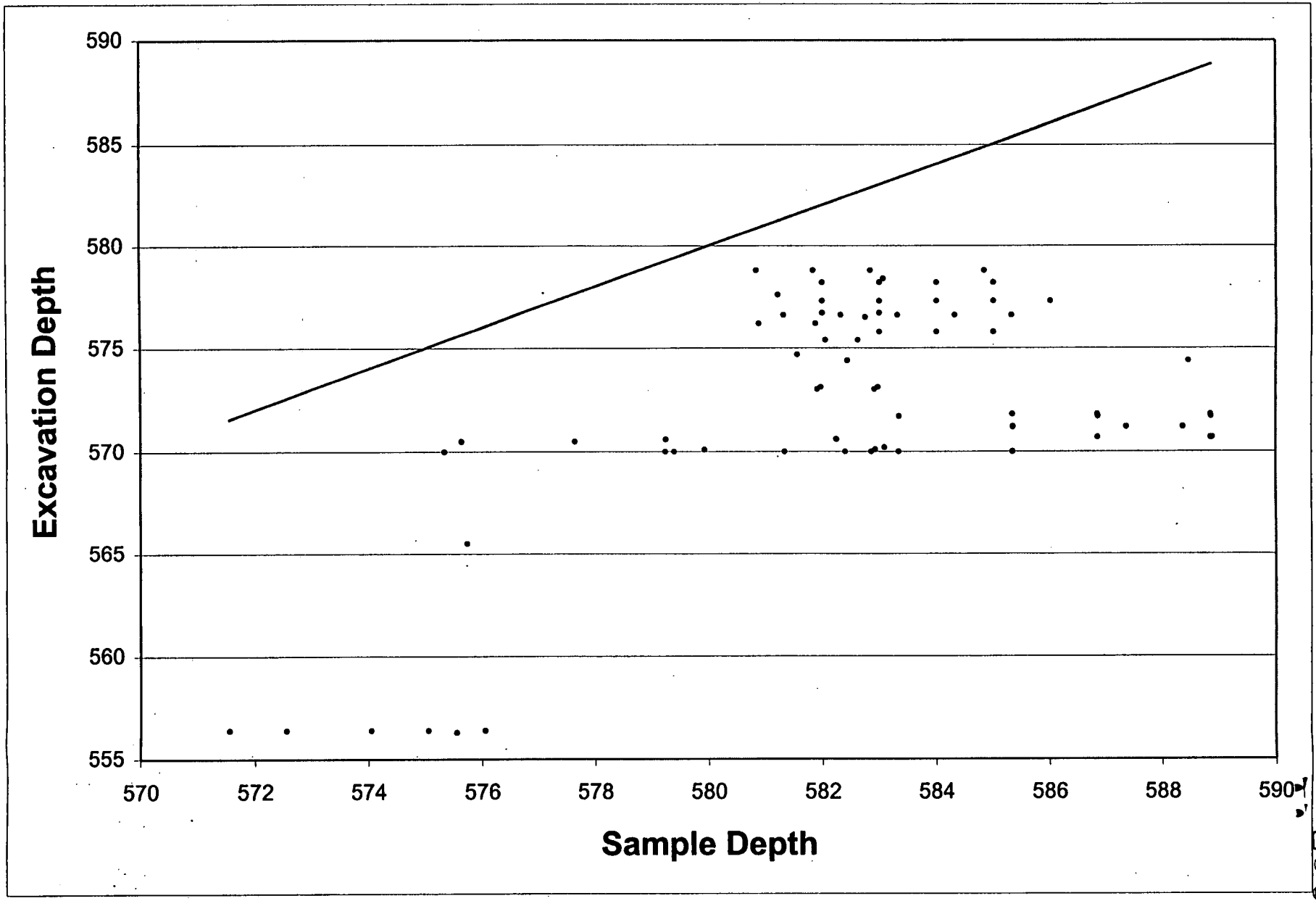


FIGURE 2-38. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR 1,2-DICHLOROETHENE

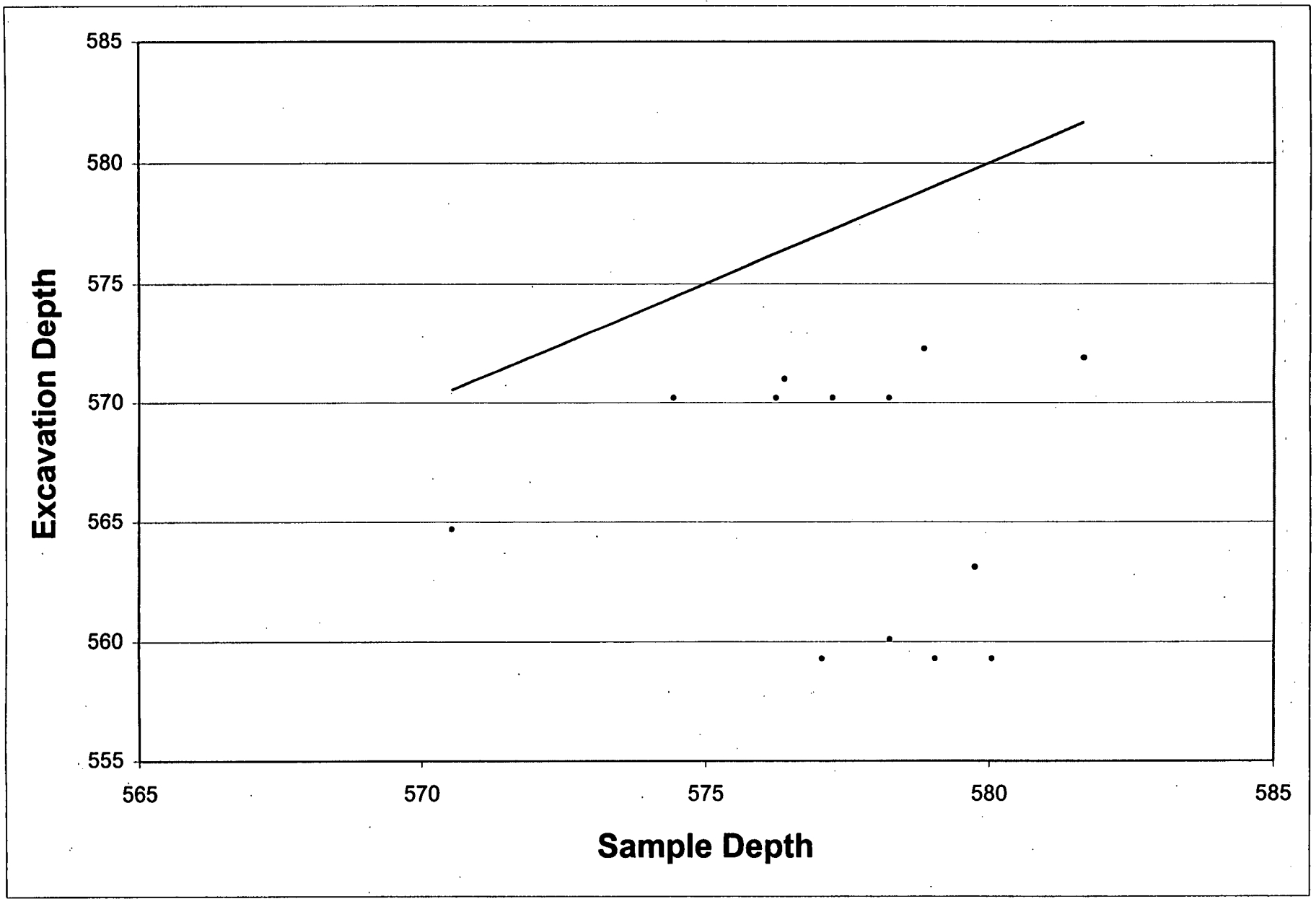


FIGURE 2-39. VARIATION OF EXCAVATION D[illegible] WITH SAMPLE DEPTH FOR TECHNETIUM-99

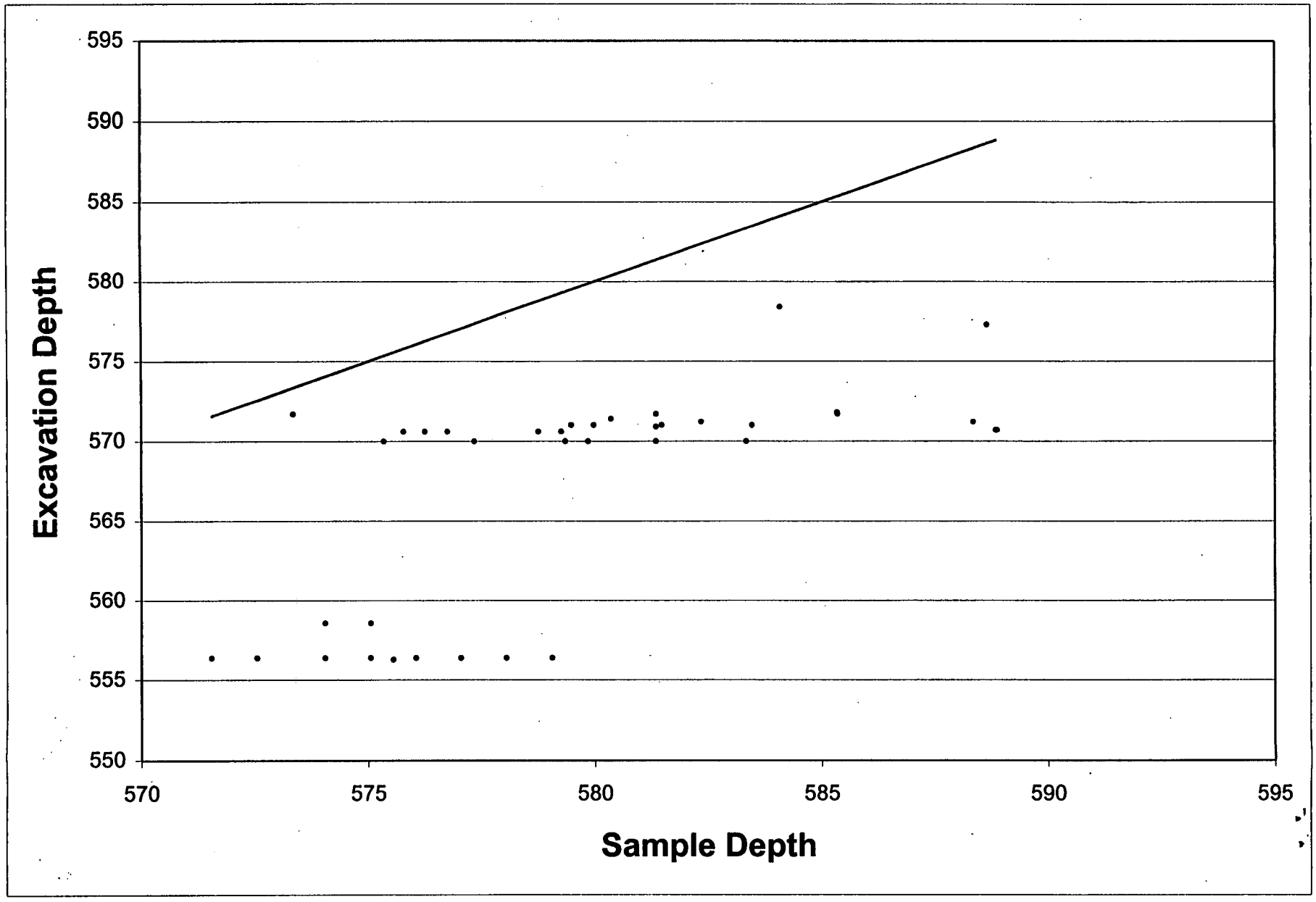


FIGURE 2-40. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR TETRACHLOROETHENE

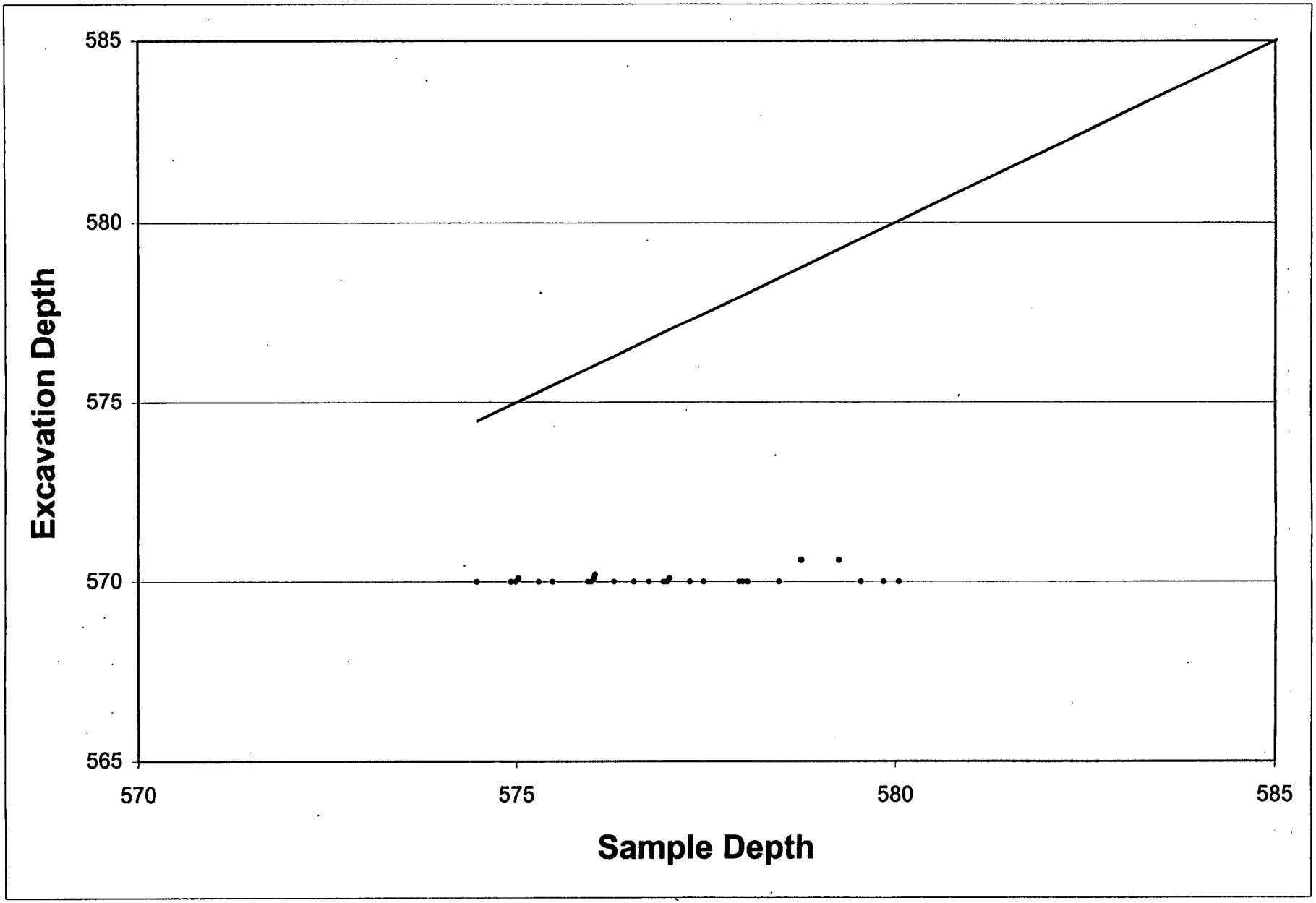


FIGURE 2-41. VARIATION OF EXCAVATION DEPTH WITH SAMPLE DEPTH FOR TRICHLOROETHENE

3.0 REMEDIAL ACTION APPROACH

This section describes the technical approach to remediating soil and the at- and below-grade structures in Area 3A/4A. Remedial activities discussed in this Implementation Plan follow the general guidance provided in Sections 3.0 and 4.0 and Appendix F of the SEP. Construction drawings and technical specifications will dictate the implemented remedial actions, and they will comprise part of the documentation governing contractor activities. The successful contractor will prepare and submit an Excavation Plan and Safe Work Plan describing the specific procedures and methods to be used in performing the work.

The remedial actions in Area 3A/4A will begin with site preparation activities, move into the removal of debris and excavation of soil in above-WAC and RCRA areas, and finish with large-scale excavation and removal of man-made structures and soil exceeding the established FRLs. These initial activities are scheduled to begin in Area 3A and Area 4A in June 2001 and April 2002, respectively. Remedial action will begin slowly as the contractor's work force completes training requirements and becomes familiar with site procedures and regulatory requirements. The contractor is expected to reach standard operating efficiency by Spring 2002.

Some above-grade utility lines will be present in Area 3A/4A until late Summer 2002. Electrical utilities to the change-out facility west of Plant 5 are fed from the substation west of Plant 9. The change-out facility, Plant 9 substation, and overhead electrical lines in Area 3A/4A will be abandoned and dismantled in July 2002. At that time, the Area 3A/4A change-out facility will switch to the established facility located along D Street, southwest of Plant 6. Overhead utilities supporting the Plant 6 change-out facility are brought in from the substation located near the guard station, which is south of Area 4A.

The overhead steam line along the southern side of 2nd Street and eastern side of D Street provides steam to buildings in Area 5, and it is also used as a support structure for communication cables. Steam service will be discontinued in 2002 and communication cables will be rerouted by March 2002 to allow D&D of the overhead lines by July 31, 2002 (i.e., the present closeout date for the Plant 6 D&D contract). Additional details on the remedial actions and components are discussed below.

3.1 LIME SLUDGE PONDS

The LSPs are considered part of Area 3, but their remediation is addressed under a separate IRDP that discusses the excavation and disposition of sludge and soil in the ponds and the subsequent construction to create a water management facility (WMF). This facility may become a component of the surface water management system for the Former Production Area by Spring 2002. If the WMF is used by the Area 3A/4A Project, water contaminated with hazardous organic compounds will be routed to the BSL, which is the headwater for Phase II treatment at the AWWT Facility. All other waters accumulating in the WMF will be routed through the SWRB prior to Phase I treatment at the AWWT.

3.2 SITE PREPARATION

Site preparation for Areas 3A and 4A is scheduled for June 2001 and April 2002, respectively. Activities associated with this work include surveying, trenching to isolate undocumented underground utilities, installing fencing, establishing the needed above-grade electrical and water utilities, and constructing a surface water management system. Additional details are provided in the following text and in the referenced design drawings and specifications.

3.2.1 Establishing Site Boundaries and Controls

Existing radiological control barriers and fencing will remain intact until the project boundary fence is established during site preparation activities (Drawings 006 and 058). The project boundary fence will be posted as a contamination area, and personnel entering and leaving the area will pass through a radiological checkpoint located in the change-out trailers. Vehicle entry points will be controlled with gates, and all exiting vehicles will use contaminated haul routes to reach the decontamination and free-release station located northeast of Building 82A [Receiving and Incoming Materials Inspection Area (RIMIA)].

The Area 3A/4A Project will begin operations in Area 3A. Area 3A is bounded by the east side of B Street, north side of 2nd Street, west side of E Street and the south side of the Impacted Material Haul Road (Figure 1-2). However, the project boundary is extended north of the Impacted Material Haul Road to the north fence line to allow the contractor access to the debris and treatment staging areas (Drawing 006). These staging areas will be remediated as part of Area 6 (Figure 1.1).

When Area 4A site preparation begins (March 2002), the Area 3A/4A Project boundary will be extended to enclose Area 4A. The project area will be increased by extending the boundary along the east side of

B Street south to the north side of 1st Street and then up the west side of E Street to the OSDF Material Transfer Area (OMTA) (Drawing 058). After the perimeter boundary around Area 3A/4A is established, the internal Area 3A/Area 4A boundary along 2nd Street will not be needed (Figure 1-2).

3.2.2 Surveying and Site Layout

Surveys will be used to identify the perimeter trenching line for isolating undocumented below-grade utilities, to establish the excavation boundaries for the above-WAC, RCRA, and FRL materials and to determine banked soil volumes delivered to the OSDF. Site layout diagrams for the Area 3A/4A Project (Drawings 005, 006, 059 and 060) indicate the location of the change-out facility, settling basin, above-WAC areas, RCRA excavations, water sources, and electrical tie-in locations. The construction contractor and Fluor Fernald CM will locate the contractor storage area, cool-down trailer, soil dewatering area, secondary haul routes, fuel transfer point for the project site, and the SMTA. The construction contractor may propose multiple locations for the SMTA.

3.2.3 Trenching to Isolate Undocumented Below-Grade Utilities

Undocumented below-grade utilities are defined as utility lines that are not shown on the current version of the master utility grid plans. Prior to initiating excavation work, undocumented below-grade utilities in Areas 3A and 4A will be isolated by cutting a 2-foot wide by 12-foot deep perimeter trench (Drawings X-00014 and X-00068) that corresponds to the boundary of the excavation area. All known active electrical and water utilities on the grid plans will have been isolated prior to performing the trenching work. A written and/or photographic record will be available to the contractor to demonstrate that the utility lines are abandoned and deenergized prior to trenching around the perimeter of the project area. This record will also provide information on the materials and contamination encountered during isolation activities. The trenching work will provide assurance that all unknown electrical utilities are disconnected at the area boundary prior to performing excavation work in the area. Work scope and execution is detailed in Specification 02207 and summarized below.

The contractor will propose a sequence for maintaining, using and/or abandoning existing storm sewer lines within the excavation area in the Surface Water Management Plan per Specification 02275. Storm sewer lines selected for use will be protected during the area isolation trenching by raising the trench-cutting tool above the storm sewer. The Fluor Fernald CM will direct the construction contractor on exploring areas around existing storm sewer lines for unknown utilities and other known utilities not cut by the trencher. Prior to cutting storm sewer lines that are to be abandoned, the

contractor must ensure that the storm-sewer lines are plugged upgradient to prevent the introduction of storm water into the severed lines.

Trenching activities will be carried out in a manner that allows the CM and WAO to observe the trench and excavated contents at all times. Dust control will be provided, as needed, to prevent the spread of airborne contamination. The operator of the trenching machine will be inside an enclosed cab that provides ventilation through a high-efficiency particulate air filter. The trenching operation will be stopped if the workers encounter draining sanitary sewer lines, special materials, unknown electrical utilities, or cultural resources. Draining sanitary sewer lines will be plugged before backfilling the trench if the seepage has not stopped when backfilling begins. Backfilling of the trench will occur daily using the material excavated from the trench, with the top 2 feet of backfill being compacted to minimize infiltration. The material placed as backfill in the trench will be excavated and removed during the remedial activities associated with the surrounding areas. In the event that the trench needs to be maintained as an open trench, the trench will be barricaded and shored in accordance with applicable safety and health procedures.

3.2.4 Establishing and Identifying Support Facilities

Personnel performing and managing the remedial actions in Areas 3A and 4A will require change-out facilities, office space, a break trailer, and a cool-down trailer. To support the remedial operations, the construction contractor will need a storage area for staging material and equipment distinct and separate from the SMTA. Surface water and perched groundwater encountered during excavation activities will be managed using a settling basin and the existing SWRB. Water will be needed for dust control, and electrical tie-ins will be required for the cool-down trailer, water pumps, break trailer, and contractor office space. The contractor will need to designate a fuel transfer point between the contaminated/controlled interface marked by the project boundary fence. Haul routes will be identified to direct the contractor to the OSDF, OMTA, SMTA, SP7 (the above-WAC stockpile), and the soil treatment area. The following discussion provides additional details on the support facilities and references the relevant construction drawings and/or specifications.

3.2.4.1 Change-Out Facility, Contractor Office Trailer, Break Trailer, and Cool-Down Trailer

The change-out facility will be located west of Plant 5 from June 2001 to July 2002 (Drawing 006), and southwest of Plant 6 from July 2002 through the completion of excavation in Area 4A (Drawing 060).

Trailers that comprise this facility will be provided by Fluor Fernald, and they will act as the radiological control point for personnel entering and leaving the project area.

The contractor office trailer, break trailer and cool-down trailer will be provided by the construction contractor and placed in a location selected by the contractor and the Fluor Fernald CM. The office and break trailers will be located outside of the excavation boundary, and workers must pass through the radiological control point prior to entering the trailers for lunch or other business. A cool-down trailer will be located within the excavation area so workers do not have to pass through the radiological control point to obtain heat relief.

3.2.4.2 Contractor Storage Area

Storage areas for construction materials and equipment will be located in accessible zones that are free of above-WAC and RCRA contamination, and lie outside of areas designated for deep excavation. The contractor will propose a storage area location for approval by the Fluor Fernald CM.

3.2.4.3 Settling Basin, WMF, BSL and SWRB

A settling basin will be constructed in the former tank farm area (Drawings 012 and 013). This facility will be used to remove sediment from surface water prior to delivering the surface water to the existing, active storm sewer system. The existing storm sewer system delivers water to the SWRB. Construction fencing around the settling basin will comply with all Occupational Safety and Health Administration (OSHA) requirements.

The Surface Water Management Plan (Appendix B) provides a detailed discussion of baseline conditions for the project area. In general, surface water must be removed from the excavations within 3 days following a 10-year, 24-hour event. Pumping must be performed at a rate that removes the water by the 3-day limit, yet not so rapid that slopes fail due to rapid pump down. Water must be removed from the excavations during winter shutdown to minimize soil saturation and expedite the restart of excavation operations in the spring. Water from the general excavations will be routed from the excavation through the settling basin to the SWRB. Water contaminated with VOCs will be pumped to portable tanks for disposal at the BSL by the CM. The WMF (to be constructed in the excavation left from remediation of the LSP) may be used as an interim holding point if the BSL or SWRB are filled to capacity. Locations of these holding facilities are shown on Drawing 004.

All water treatment is performed at the AWWT Facility, with the SWRB serving as the headwater for Phase I treatment and the BSL being the headwater for Phase II treatment (i.e., removal of organic compounds). Most surface water will be passed to the SWRB for Phase I treatment. However, surface water collected in excavations associated with Plant 6, the incinerator pad, and the RCRA area north of the Maintenance Building will require Phase II treatment, due to the presence of hazardous organic compounds. Upon receipt of analytical data that demonstrates removal of the hazardous source, the surface water can be directed to the settling basin.

3.2.4.4 Water and Electrical Source

Water will be provided by production wells located on the eastern side of the LSPs (future WMF) and south of the Sewage Treatment Plant office trailers (Drawing 004). However, the contractor must provide adequate above-grade storage of water to support rapid filling of tanker trucks when dust suppression operations are needed.

All underground utility lines entering the project area will be terminated except for lines feeding the electrical substations at Building 20A and east of the Maintenance Building (Drawing 014). These substations are protected corridors that lie outside the excavation footprint.

Building 20A is the source for the electric feed to the Plant 1 Pad, and this substation may be used by the contractor to feed the cool-down hut, pumps, and other needed electrical utilities in Area 3A. The electrical substation east of the Maintenance Building provides the overhead feed to the change-out facilities west of Plant 5, and this facility will be removed in July 2002. When the Plant 5 change-out facility is removed, the substation east of the Maintenance Building will no longer be needed, and it will also be removed. Therefore, the contractor will need to feed the Area 4A operations and their office and break trailers from the substation feeding the Plant 6 change-out facility (Drawing 68).

3.2.4.5 Fuel Transfer Point

Fuel will be brought into the active remediation area to refuel equipment. A transfer point at the contaminated/controlled project boundary will be identified to allow off-site vendors to transfer the fuel into the working area without contaminating their equipment. Two possible transfer locations are: (1) east of RIMIA (Building 82A) near the OSDF Equipment Wash Facility or (2) west of Plant 5 by the radiological control point facility. The first location would be a contaminated/clean interface and the vendor's truck would require minimal monitoring of the pump nozzle used to transfer the fuel to the

contaminated side. At the second location, the vendor's truck would have to enter a controlled area and pass through a more rigorous screening prior to exiting. However, in both cases, the vendor's truck would avoid delays at the equipment wash facility by remaining outside the contaminated area (i.e., the project boundary fence). If the contractor uses a fuel transfer point, a secondary containment pad must be set up at the transfer point.

3.2.4.6 Haul Routes

Haul routes to the OSDF, SP7, OMTA and Soil Treatment Area for Areas 3A and 4A will be as shown on Construction Drawings G-00007 and G-00061. The haul route to the OSDF will be from approved access points at the perimeter of the excavation through the existing OMTA. The existing haul road through the northern section of Area 3A will be the controlled but uncontaminated haul route to SP7 and the Soil Treatment Area during remediation of soil and below-grade debris in Area 3A (Drawings 00007 and 00061). Using controlled haul routes necessitates wheel washing when accessing the existing haul road from the excavation. Above-grade debris from remediation activities outside Areas 3A and 4A will be hauled to the OMTA via 2nd Street and the existing impacted material haul road.

3.2.4.7 Soil Treatment Area

A Soil Treatment Area will be established on the concrete pad of the KC-2 Warehouse (Drawing 006). Concrete barriers will be placed, as directed by the CM, to form an enclosed area for the staging of soil contaminated with PCE, TCE and DCE (Section 3.4). The barriers will contain the staged soil and provide runon/runoff controls during storm events. A cover system for the staged soil will be anchored to the barriers to ensure its integrity during storm events.

3.3 AT- AND BELOW-GRADE STRUCTURE DEMOLITION

Removal of utility lines, concrete and asphalt pads, building footers, and basement walls will be initiated early to prepare the area for general soil excavation activities. The highest priority will be given to the removal of concrete pads and sumps within above-WAC areas. Area 3A/4A contains numerous concrete and asphalt surfaces that are primarily associated with the floors and perimeter storage areas of Plants 4, 5, 6 and 9 and Buildings 12, 64 and 65. The deepest excavation in Area 3A will be associated with removal of the basement walls, floors, and footers associated with the Boiler Plant. In Area 4A, large concrete footers and pads are associated with Plants 4, 5, 6 and 7. A deep

excavation will be required under Plant 6 to remove the basement walls, floors and sumps. Volume estimates for all at- and below-grade debris are provided in Appendix D.

3.3.1 Utility Lines

The principal utility corridors lie along 1st Street, 2nd Street, B Street, and E Street (Drawings 014 and 068). However, the only principal corridor to be excavated during Area 3A/4A remediation is 2nd Street between B and E Streets. Abandoned utilities that will be removed include domestic and fire water, electrical (potential for asbestos material), communication, process lines (potential for production materials or waste), gas, oil, sanitary sewer, and storm sewers and drains. All utility lines will be terminated by the area-isolation trenching performed around the excavation area during site preparation activities (Section 3.2.3) except for some storm sewers and the electrical feed lines into substations located in Building 20A and west of Plant 9.

Most utility lines are buried within 8 feet of the surface, except for the gravity lines associated with the sanitary and storm sewers. Approximately 70,000 linear feet of utility lines lie below the surface of Area 3A/4A (Table D-5, Appendix D), and about 20 percent of the utilities are stacked in the principal utility corridor running parallel to 2nd Street. Therefore, the utility excavation along 1,000 linear feet of 2nd Street will remove nearly 14,000 linear feet of utilities. Materials that may be encountered during utility line excavation include: concrete encasing aluminum ducts that hold electrical lines (some containing asbestos), copper in the electrical and communication lines, steel pipes that have transported gas and fuel oil, concrete and clay pipe associated with the sanitary and storm sewers, and polyethylene and steel water lines. All debris generated by the removal of the utilities will be placed in the OSDF if it meets the physical WAC and passes a visual inspection (Section 3.5).

The contractor will determine the most effective method for removal of the utilities, with oversight by Fluor Fernald construction, WAO, health and safety, and radiological control personnel. In general, a backhoe and shear will be used to excavate and size reduce the utility lines and associated debris. Approximately 40 percent of the utility lines will be captured by excavation needed to remove man-made structures and contamination. The remaining utility lines lie below the designed excavation grade and will be removed by trenching (Section 3.4). During removal activities, the contractor may be shut down by health and safety, radiological control, or WAO personnel if unsafe conditions or special materials are encountered (e.g., high organic-vapor readings, elevated radioactivity, visual observation of pipe interior).

3.3.2 Concrete, Asphalt Pads, Roadways and Floors

Approximately 50 percent of the ground surface in Area 3A is covered with concrete and asphalt, and this coverage increases to 90 percent for Area 4A. The estimates are based on aerial photos and include pads, roadways, and concrete floors remaining from the demolition of buildings and warehouses. Pads and roadways generally consist of 4 to 8 inches of concrete that may be reinforced (i.e., rebar present) and/or covered with asphalt. Warehouse and plant floors generally consist of 6 to 12 inches of reinforced concrete. Structural details are provided on the construction drawings and references therein.

The contractor will develop a sequence schedule for removal of the structures and determine the most efficient methods and equipment for removing, sizing, and transporting the concrete and asphalt. Portions of the floors in Plants 6 and 9 must be removed prior to excavating the above-WAC soil contamination below the floors, which will be scheduled as the first activity when possible. Visible soil on the concrete debris generated within the above-WAC areas must be removed from the debris prior to loading and hauling the debris to the OSDF. All concrete and asphalt debris transported to the OSDF must be sized to meet the physical WAC for the OSDF (WAC Attainment Plan for the OSDF, DOE 1998f). A limited volume of concrete may be selected for size reduction to meet the OSDF Category 1 criterion or to provide aggregate for roads and ramps constructed in impacted areas.

3.3.3 Concrete Footers, Piers, Sumps and Basements

Reinforced concrete building footers generally range in size from 3x3x1 (all cited dimensions are length, width and height in feet) to 20x20x3 (Plant 4), with correspondingly smaller ranges for warehouse structures. Plant 6 contains several long and irregular footers (77x5x2, 31x14 to 8x2, 40x6x2, 63x12x3) and a large concrete monolith (30x8x8) that supported the rolling mill. Historical photos and reference drawings indicate extensive amounts of rebar were used in the concrete structures within Plant 6. Basements are present in the Boiler House and Plant 6, with the deepest sumps in these concrete structures located approximately 38 and 24 feet, respectively, below the surface. Detailed three-dimensional drawings of at- and below-grade structures for all major buildings and warehouses are attached to the design packages as reference material.

The contractor will develop a sequence schedule for removal of the structures and determine the most efficient methods and equipment for removing, sizing, and transporting the concrete and rebar. All concrete debris transported to the OSDF must be sized to meet the physical WAC for the OSDF

(DOE 1998f). A limited volume of concrete may be selected for crushing to provide aggregate for roads and ramps constructed in impacted areas.

3.4 SOIL EXCAVATION, MONITORING AND SEGREGATION

Excavation to remove impacted material will follow the general guidance of Excavation Approach D, as discussed in the SEP. Soil and material identified as above WAC or RCRA will be targeted for early removal, when possible, to minimize cross contamination. For example, the above-WAC excavations in Area 3A can be completed as the first work scope, but this is not the case in Area 4A. Above-WAC contamination in Area 4A lies below Plant 6, and D&D operations for Plant 6 will not be completed until late Summer 2002. At a minimum, general excavation activities will remove the top 2 feet of gravel and soil cover that extends over approximately 40 percent of Area 3A/4A. Approximately 60 percent of the Area 3A/4A surface is covered by asphalt and concrete, and the soil surface under the asphalt and concrete will be scanned with *in situ* gamma spectroscopy techniques to determine if excavation is required outside the established limits of known contamination. The deepest excavations in Area 3A are the Boiler Plant and a sump in the southeast corner of Plant 9. In Area 4A, a deep excavation is needed below Plant 6 to remove contaminated soil and the basement.

3.4.1 Above-WAC and RCRA Excavations

The above-WAC and RCRA locations in Area 3A/4A are shown on Figures 2-15 through 2-20 and Figure 2-7, and Drawings 006, 017, 060, and 071. Above-WAC areas are identified as: (1) the incinerator pad; (2) the northeast corner of Area 3A; (3) the southeast corner of Plant 9; and (4) above-WAC locations associated with Plant 6. The RCRA contamination north of the Maintenance Building is designated RCRA Soil Area 5 in the OU5 ROD. Table 2-10 and Appendix D provide volume estimates.

Based on predesign data, above-WAC material is restricted to depths above 14 feet at Location 1, the top 2 feet at Location 2, and 8 feet at Location 3 (Figures 2-15 through 2-18). Due to D&D activities in Plant 6, the extent of the above-WAC contamination has not been completely delineated at Location 4 (Figures 2-19 and 2-20). The above-WAC areas are contaminated with uranium, technetium-99, PCE and DCE (Table 2-5). When uranium is the only COC driving the above-WAC excavation, real-time monitoring (i.e., *in situ* gamma spectroscopy) will be used to establish the base of the above-WAC footprint. Real-time monitoring will also be used to refine the above-WAC uranium boundary during the excavation process in order to minimize the volume of soil placed at SP7. For all other above-

WAC COCs (i.e., technetium-99, PCE, DCE), physical samples will be collected to verify the removal of above-WAC contamination.

At above-WAC Locations 1, 3, and 4, concrete pads must be removed prior to excavating the contaminated soil. All above-WAC soil must be removed from the concrete using a pressure washer prior to hauling the concrete to the OSDF. After the concrete pads are removed, and prior to initiating soil excavation activities in the above-WAC areas containing uranium, real-time monitoring of the surface area will be performed to confirm and/or redefine the surface boundary of the uranium contamination. If the real-time monitoring indicates above-WAC uranium contamination is present beyond the boundary defined on the construction drawings, the boundary will be extended to cover the additional area. Once the above-WAC area is established in the field it will be flagged, and a buffer area will be established around the above-WAC excavation. The contractor should consider placing dedicated equipment within the flagged perimeter for the duration of the above-WAC excavation. Committing the equipment for the duration of the above-WAC excavation will reduce the decontamination time to a single event at the end of each above-WAC excavation.

The topographic surface outside the buffer zone will be sloped away from the excavation area and silt fence may be installed to provide additional control of sediment during storm events. Surface water that collects within the RCRA excavation and above-WAC excavations containing PCE and DCE will be pumped to a holding tank and transferred to the BSL for Phase II treatment. All other surface water will be routed to the settling basin.

In the uranium above-WAC zones, each excavation lift (nominally 3 feet ± 1 foot) and the base of the excavation footprint will undergo real-time monitoring to verify that all above-WAC uranium contamination has been removed. Lifts may be reduced if the opportunity exists to reduce above-WAC soil volumes by more frequent scans of the excavation surface. Excavation of above-WAC soil will continue until passing results are received from the real-time monitoring survey crew.

Above-WAC soil with levels of uranium and/or technetium-99 will be transported to SP7. Soil classified as above-WAC due to PCE and DCE contamination will be staged at the treatment area (i.e., the KC-2 Warehouse pad). Soil with above-WAC levels of uranium or technetium-99 and PCE and/or DCE will be segregated from soil that exceeds the WAC only for PCE and DCE. Segregation of soil in the staging area will allow soil with above-WAC contamination due only to PCE and DCE to be

placed in the OSDF if treatment is successful. Treatment and final disposal of the soil is discussed in Section 3.5.

Figures 3-1 through 3-3 illustrate the above-WAC contamination and excavation sequence at Location 1, the Incinerator Pad. This location was selected to illustrate a typical excavation sequence because it is the most complex above-WAC area that is completely bounded by analytical results on physical samples. A schematic cross-section of the above-WAC zones (Figure 3-1) and a detailed excavation sequence (Figures 3-2 and 3-3) describe and illustrate the removal of the different above-WAC zones. The general information provided above is implicit in the detailed discussion provided below.

Above-WAC contamination in soil below the Incinerator Pad is due to the presence of uranium, PCE, and DCE (Figure 3-1). Uranium contamination exceeds the WAC to a maximum depth of 4 feet, while the above-WAC PCE and DCE contamination is divided into a shallow and deep zone. Prior to initiating soil excavation, the Incinerator Pad will be broken and the debris cleaned to remove any visible soil or bedding material (Figure 3-2). When the concrete debris is determined to be clean by a visible inspection and has meet the physical WAC, the debris will be loaded and hauled to the OSDF. Underlying soil and bedding material will be removed in accordance with the defined zones of contamination. A real-time scan of the surface will be initiated after the concrete pad is removed to set the final perimeter of the above-WAC uranium area.

Initial soil excavation will remove the shallow above-WAC PCE and DCE contamination in one 18-inch lift (Figure 3-2) and haul the soil to the treatment area. Physical samples of the excavation footprint will be collected to demonstrate that the above-WAC contamination has been removed. Excavation activities will not continue in the above-WAC PCE and TCE footprint until analytical results are received. If the analytical results indicate above-WAC PCE and TCE contamination is present, an additional 12-inch lift will be removed and hauled to the treatment area. The new footprint will then be sampled and the sequence will be repeated until analytical results indicate the above-WAC PCE and DCE contamination has been removed.

Excavation will proceed to the above-WAC uranium zones (Figure 3-2) while the contractor is awaiting results on the physical samples collected from the above-WAC PCE and DCE footprint. Above-WAC uranium contamination will be removed in nominal 3-foot lifts and hauled to SP7. When the depth of

the above-WAC excavation exceeds 3 feet, the slopes will be cut back with equipment that is not contaminated with above-WAC soil. The fresh surface will undergo real-time monitoring to confirm and/or redefine the perimeter of the above-WAC uranium contamination. However, the CM may direct the contractor to remove above-WAC uranium contamination in nominal 1-foot lifts if there is potential for reduction of the above-WAC waste stream by scanning a thinner lift. Excavation of the above-WAC uranium contamination will continue until the real-time monitoring crew indicates uranium contamination is below the WAC.

The above-FRL PCE and DCE contamination zone will be excavated after scanning activities indicate the above-WAC uranium contamination has been removed. Soil will be removed in nominal 3-foot lifts until the top of the above-WAC PCE and DCE zone is reached or until the base of the above-FRL PCE and DCE zone is reached (Figure 3-2). Impacted soil will be placed in a stockpile and physical samples will be collected for TCLP testing. The stockpile location will be selected by the CM and appropriate controls will be established for surface water runon and runoff. If the soil passes the TCLP, it will be hauled to the OSDF; otherwise it will be hauled to the treatment pad. Soil removed to create safe slopes into the excavation will be excavated with equipment that is not contaminated with above-WAC soil, and this soil will be hauled to the OSDF. When the base of the above-FRL PCE and DCE zone is reached, physical samples will be collected to demonstrate FRL attainment. All above-FRL uranium contamination is captured by the removal of the above-FRL PCE and DCE contamination.

Excavation of the deep above-WAC PCE and DCE zone will proceed in nominal 3-foot lifts (Figure 3-3) and the soil will be hauled to the treatment area. Soil derived from safe slopes constructed outside of the above-WAC excavation will be hauled to the OSDF. When the design base of the above-WAC PCE and DCE zone is reached, physical samples will be collected to demonstrate removal of above-WAC contamination. Based on the analytical results, additional above-WAC excavation and sampling will continue or the excavation will pass to the final above-FRL step.

The last excavation step will be to remove the deepest above-FRL contamination associated with PCE and DCE (Figure 3-3). This soil will be placed in a stockpile and undergo TCLP testing, as noted above. Soil removed to maintain a safe-slope configuration will be hauled to the OSDF. Physical samples will be collected from the base of the above-FRL PCE and DCE zone to demonstrate FRL compliance.

Although the geometry and specific COCs will vary in other above-WAC areas, the approach outlined above will cover all variations noted in Section 2.0. The basic excavation elements described above that will be applied to all above-WAC areas are:

- Prepare the above-WAC area and buffer zone to minimize cross contamination from equipment and storm events.
- Remove structures (if present) and perform visual inspection of debris before hauling to the OSDF.
- Perform real-time monitoring (i.e., *in situ* gamma spectroscopy) of the initial surface to establish the perimeter of the above-WAC uranium contamination.
- Remove above-WAC contamination in nominal 3-foot lifts; use 1-foot lifts or less in above-WAC uranium zones if the potential exists for significant volume reduction. Construct safe slopes as needed for safety and access by the real-time monitoring crew.
- Haul the above-WAC soil to SP7 or the treatment area, based on above-WAC COCs present in the soil. Transport soil removed to construct safe slopes to the OSDF, if it lies outside of the above-WAC zone.
- Perform real-time monitoring of each lift surface and base of the footprint to confirm and/or redefine the perimeter of the above-WAC uranium contamination; collect physical samples from the base of the footprint for non-uranium COC zones that exceed the WAC.
- Excavate, as needed, additional above-WAC material detected by real-time monitoring or physical samples.

The RCRA excavation to remove TCE contamination behind Building 12 extends to a depth of about 12 feet (Figure 2-7). This excavation will be carried out using the protocol discussed above for zones of PCE and DCE contamination that exceed the WAC. Prior to initiating excavation of the RCRA soil, a buffer area will be established around the contamination area. The topographic surface outside the buffer zone will be sloped away from the excavation area and silt fence may be installed to provide additional control of sediment during storm events. Excavation equipment used to remove RCRA soil from behind Building 12 (Figure 2-7) will be staged in the buffer zone adjacent to the perimeter of the RCRA contamination. Due to the small size of the area, equipment will not be staged in the RCRA area, but the backhoe bucket and other equipment exposed to the contaminated soil will be decontaminated when the excavation is complete.

Excavation will proceed in nominal 3-foot lifts, and contaminated soil will be loaded and hauled to the treatment area (soil treatment is discussed in Section 3.5). After each lift is completed, the walls of the excavation will be scanned with a photoionization detector (PID) to determine if any areas of gross contamination remain. If PID measurements indicate the presence of contamination, additional excavation of the side walls will occur until the PID measurements are at baseline values. Before proceeding to the next lift, safe slopes will be constructed around the excavation using equipment that is not contaminated with RCRA soil. The soil removed to construct the slopes will be hauled to the OSDF. Each additional lift will proceed in a similar manner until the base of the RCRA footprint is reached. PID measurements will be taken over the floor and wall surface of the final lift to screen for gross contamination. Additional excavation will take place if PID readings indicate contamination. If PID readings are negative, physical samples will be collected from the base of the footprint to confirm the removal of TCE that exceeds the FRL. Analytical results will dictate if additional excavation is needed.

3.4.2 HWMUs and USTs

HWMU and UST footprints are identified on Drawings 006 and 060. The footprint of all HWMUs and USTs will be flagged to maintain a record on the volume of soil removed from each footprint. This volume record is required to close the HWMUs and USTs. Sampling and analysis for closure activities is discussed in the SEP. All soil excavated from the HWMU and UST zones will be hauled to the OSDF, as characterization data indicate it meets the chemical and radiological WAC.

3.4.3 General Excavation

Designed excavation contours are shown on Drawings 018 through 025 and 072 through 079. Cross sections that show the excavation profile relative to the uranium contamination and building structures are provided on Figures 2-22 through 2-25. General excavation covers massive removal of soil that contains COCs at levels below the OSDF WAC. Excavation of Area 3A/4A entails removal of approximately 330,000 yd^3 of debris and soil. Concrete slabs, foundations, roads, and aprons and asphalt pads and roads account for approximately 45,000 yd^3. Therefore, an estimated 285,000 yd^3 of below-WAC soil will be placed in the OSDF. The below-WAC soil is comprised of above-FRL soil (115,000 yd^3) and below-FRL soil (179,000 yd^3). Appendix D provides summary tables of all debris and soil volume estimates.

Most of the below-FRL soil volume is associated with the safe slopes needed to remove building footers and foundations. This non-impacted soil appears on Figures 2-22 through 2-25 as the gray volume above the excavation profile. For example, Section A-A' shows a gray area below Plant 9 (Figure 2-22) that represents the safe slope needed to reach the bottom of the hydraulic rams. Section A-A' does not intersect the hydraulic rams so they are absent from the cross section. Another example is the small inverted cones on the left side of Sections A-A' and B-B' (Figure 2-22). These small inverted cones represent the removal of concrete footers associated with the above-grade steam lines. A final example is the excavation between the two contamination zones below Plant 6 (Figure 2-22, Section B-B'), which is needed to remove storm sewers and utility lines.

Opportunities for decreasing the volume of below-FRL soil will be investigated in future IRDPs to minimize the placement of this material in the OSDF. For example, controlled blasting of sub-grade concrete footers and foundations would allow backhoes to remove the rubble via trenching, rather than the construction of entry slopes. After the concrete rubble is removed, safe slopes can be constructed and the excavated soil can be stockpiled for later use. However, no changes to the current scenario presented below will be implemented without concurrence from the EPA and OEPA.

The generic approach to massive soil excavation is presented in the SEP. Massive soil excavation is in contrast to discrete soil excavation that will be carried out to remove utilities that lie below FRL contamination (Section 3.4.4). In general, excavations to remove above-WAC and RCRA soil will be completed in the designated work area prior to initiating FRL excavation. The FRL excavation will proceed in nominal 3-foot lifts that will not exceed 4 feet in thickness. Excavation will be performed in lifts to allow for visual inspection of the exhumed soil and cut surface. The contractor will determine the most optimum method and equipment for removing the soil, and time will be scheduled to allow real-time monitoring of newly exposed soil lying below gravel, asphalt, and concrete surfaces. Real-time monitoring is required to identify potential above-WAC zones prior to general excavation operations.

Several work areas may be active within the project boundaries at any given time. For example, active work areas in Area 3A may be the Boiler Plant and Decontamination Pad. A minimum of two active work areas will be required to allow the contractor and real-time monitoring crew to switch between the active work areas. That is, the real-time monitoring crew will be surveying one excavation while

the contractor is removing soil from the other excavation. The contractor's Safe Work Plan will determine the actual number of safe work areas that are possible in the project area.

If slopes created during excavation work are to remain dormant for more than 24 hours, they must be no steeper than the following criteria:

- Interim slopes - slopes present for 6 months to two years, 2:1 (horizontal:vertical) or shallower
- Temporary slopes - slopes present for less than 6 months, 1.5:1 or shallower.

These criteria have been established based on the geotechnical properties of the soil and a maximum loading of 108,000 pounds on the margin of the slope (DOE 1998c). These criteria limit the excavation equipment size to a Caterpillar 350L excavator or less. The contractor may choose to collect soil samples and conduct geotechnical tests, at their expense, to demonstrate less stringent criteria are acceptable.

3.4.4 Utilities

Approximately 60 percent of the utility lines will remain after the general excavation has reached the design grade. These utilities lie below the design grade and will be removed using a backhoe and trenching techniques. There are very few data points on the contamination existing in bedding material and soil below the utility lines, due to penetration permit requirements that forbid subsurface investigation of the bedding material. Therefore, a combination of *in situ* gamma measurements and laboratory analyses will be used to demonstrate the soil and bedding material removed from the trench meet the OSDF WAC and site FRLs. Two excavation approaches will be used to remove the utilities, one for removing process lines (e.g., sanitary sewer) and the other for non-process lines (e.g., water, electrical, communication). In both cases, the surface area above the utilities will be precertified with *in situ* gamma spectroscopy measurements prior to initiating the trench work.

Excavation activities to remove process piping below the design grade will proceed as illustrated on Figure 3-4. Overburden soil will be removed and placed upgradient until used as backfill for the trench. The CM and WAO will observe the excavation and direct the contractor to cease the excavation of overburden soil when the pipe or bedding material is encountered. Pipe will be visually inspected and size reduced to meet the OSDF WAC. If the interior walls of the pipe are not visible, the pipe will be

hauled to SP7. Bedding material will be excavated and stockpiled downgradient of the trench. The stockpile will have a 6-foot wide flat surface to allow for real-time monitoring of the material with gamma spectroscopy instruments. Additionally, physical samples will be collected from the stockpile to determine the disposition of the material. Based on the results of the real-time scan and physical samples, the material will be hauled to SP7 (exceeds WAC) or to the OSDF. At 50-foot intervals, the backhoe will excavate a bucket of soil from the trench bottom and place it adjacent to and downgradient of the trench. This soil will be flattened to a minimum thickness of 6 inches, scanned with the real-time instruments, and then sampled for FRL attainment (i.e., certification). After completing the sampling activities, the trench will be backfilled with the overburden soil staged upgradient of the trench and additional non-impacted soil taken from an adjacent precertified area. The backfill will be compacted in accordance with Specification 02206 to meet the surrounding grade.

Figure 3-5 shows the execution of work to remove non-process piping. Overburden soil is placed upgradient of the trench and an initial bucket of bedding material is placed adjacent to and upgradient of the trench to allow for real-time scanning of the bedding material. Based on the results of the real-time measurements and a visual inspection of the pipe and bedding material, the pipe and bedding material will be hauled to the OSDF if the material meets the WAC or to SP7 if the WAC is exceeded. At 50-foot intervals, the backhoe will excavate a bucket of soil from the trench bottom and place it adjacent to and downgradient of the trench. The soil will be scanned and sampled, and the trench backfilled, as noted above. Upon receipt of sample results, the trench will be considered certified if FRLs are met or will be re-excavated and remediated if FRLs are exceeded.

3.5 IMPACTED MATERIAL MANAGEMENT

Impacted material from Area 3A/4A will consist of radiologically contaminated soil and debris, RCRA soil, and other material (e.g., asbestos, process residues, etc). Excavated material that meets OSDF WAC will be placed in the OSDF in accordance with the Impacted Materials Placement Plan. Material that does not comply with OSDF WAC will be transferred to the treatment area, SP7 or the SMTA staging area. Soil staged at the treatment area will be treated to remove organic contamination and then hauled to the OSDF or SP7. Materials placed at SP7 and the SMTA will be shipped to an off-site disposal facility. The material disposition plans (Drawings 043 and 105) lay out the sections and tracking numbers for the impacted material removed from the project area. Generic information on the handling and tracking of impacted materials is provided in Section 3.3.2 of the SEP.

The contractor will be directed to manage the impacted material in a manner that ensures material placement objectives at the OSDF are met. For example, impacted material needed for the OSDF select layer must be stockpiled to ensure the material quantity needed is available during the scheduled liner work. Additionally, soil/debris placement ratios for the OSDF must be maintained through proper stockpiling of soil and debris. The project area located north of the haul road will be the designated area for staging these materials after the above-WAC contamination is removed (Drawing 006).

3.5.1 Perched Groundwater

Perched groundwater encountered during Area 3A/4A remediation will be removed with the excavated soil and handled with surface water that enters the excavation. All perched groundwater and surface water will go through Phase I or Phase II treatment at the AWWT Facility. Perched groundwater that resides in excavation zones that contain organic contamination (i.e., Plant 6, Incinerator Pad, RCRA Soil Area 5) will be collected in tanks and transferred to the BSL, which is the headwater for Phase II treatment at the AWWT Facility. Non-VOC water will be routed through the settling basin and storm sewers to the SWRB. The SWRB serves as the headwater for Phase I treatment at the AWWT Facility.

3.5.2 Contaminated Soil and Debris

All contaminated soil and debris removed from the project area will be assigned the tracking number identified on the material disposition plans (Drawings 043 and 105). Excavated soil and debris will be hauled to the OSDF if the physical, chemical and radiological WAC (DOE 1996d) are met. Materials that do not meet the OSDF WAC will be hauled to SP7 or the Soil Treatment Area.

Above-WAC soil volumes (Table 2-10) will be hauled to SP7 if organic COCs are below the allowable levels of the off-site disposal facility. Soil contaminated with PCE and DCE at levels that exceed the WAC, and TCE contaminated soil from RCRA Soil Area 5, will be hauled to the Soil Treatment Area. Above-WAC PCE and DCE soil that contains uranium or technetium-99 at levels above the WAC will be segregated from soil that contains only above-WAC PCE and DCE. Low-temperature thermal treatment of the soil is envisioned, with treatment performed by a subcontractor. Treated soil will undergo TCLP testing to establish the final disposition of the soil. Soil with below-WAC uranium or technetium-99, and the RCRA soil, will be hauled to the OSDF, if treatment is successful. Treated soil that contains above-WAC levels of uranium or technetium-99 will be hauled to SP7.

Below-WAC PCE and DCE contamination under the Incinerator Pad will be removed and staged near the pad to allow physical samples to be collected. The samples will undergo TCLP testing to determine the disposition of soil. If the soil passes TCLP, it will be hauled to the OSDF; otherwise it will be transported to the treatment pad. Run-on and runoff controls will be maintained around the staged soil until analytical results are received and the soil is hauled to the treatment pad or the OSDF.

3.5.3 Other Materials

Section 3.3.2.2 of the SEP identifies special materials that, when encountered, require WAO input before the contractor can determine their disposition. Materials from this list that are likely to be encountered in Area 3A/4A include:

- Asbestos
- Drums and tanks
- Piping and pumps
- Process residues
- Uranium metal
- Miscellaneous debris
- Acid brick.

These materials can be placed in the OSDF if they meet the physical and chemical WAC, and if a visual inspection of pipe interiors is passed. Materials that do not meet the OSDF WAC will be placed at SP7 or packaged into containers and placed at the SMTA. In general, all special materials that exceed the ODSF WAC, except process residues and uranium metal, will be hauled to SP7. Process residues and uranium metal will be containerized, per Specification 02216, and placed at the SMTA. Fluor Fernald Waste Generator Services will pick up the containers from the SMTA and disposition the material to an off-site disposal facility. Information on the identification, management, and tracking of these materials is provided in the SEP (Section 3.6 and Appendix F).

3.6 GMA AND TRENCH BACKFILLING

Backfilling of excavated areas will not be permitted until the certification process is completed. Exceptions to this policy are:

- Areas where the excavation exposes the sand and gravel deposits of GMA or comes within 5 feet of the GMA (Drawings 029, 030, 038, 039, 077, 079, 092, 093, 100 and 101)

000128

- Trenches excavated below the design grade to remove utilities (Drawings 022, 023, 024, 025, 029, 030, 033, 034, 038, 039, 076, 077, 078, 079, 082, 083, 086, 087, 092, 093, 094, 095, 100, 101, 102, and 103)

In areas identified under Exception (1), backfill material required to cover the exposed sand and gravel of the GMA will be obtained from gray clay below the design grade (i.e., soil that meets the FRLs). The backfill will be obtained from the local excavation area that has been precertified to the same or lower FRLs. A minimum of 2 feet of gray clay will be placed and compacted over GMA breaches within 24 hours (Specification 02206). In excavations where gray clay covers the GMA but the clay is less than 5 feet thick, the thickness of gray clay will be brought up to a minimum thickness of 5 feet. The contractor must initiate work to bring the gray clay up to a thickness of 5 feet within 15 working days. Prior to initiating the backfill work, certification samples of the gray clay will be taken at the design grade. If the samples indicate COCs are present above their FRLs, the backfill area will be re-excavated to remove the soil failing certification.

For Exception (2), soil removed from above the utility lines that is below the FRLs will be set aside and used to backfill the trench after the utility lines and bedding material is removed. Section 3.4.4 describes the excavation, sampling, and disposition of material removed from trenches. Technical work associated with the compaction of the backfill is described in Specification 02206 and on Drawings G-00045 and G-00107. As the trench will be backfilled before analytical results are obtained on the collected soil samples, the trench is backfilled with the risk of re-excavating should the soil samples exceed the established FRLs.

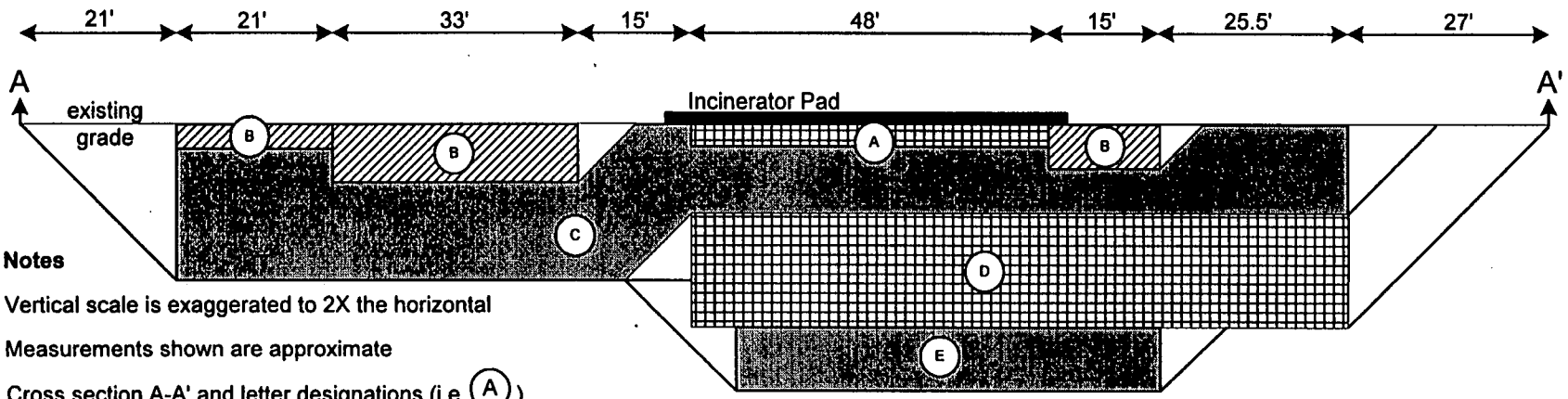
3.7 PRECERTIFICATION AND INTERIM GRADING

Precertification activities will commence after the design grade has been reached and the contractor has left the active excavation area. The precertification area will be delineated and controlled to prevent cross contamination of environmental media (Drawings 044 and 106). Real-time monitoring of the design grade will be performed to precertify the area as attaining the uranium, thorium, and radium FRL goals. Some interim grading of the design slopes may be required to facilitate access by the real-time monitoring crew. However, most of the interim grading executed for slope maintenance will be performed after the precertification measurements are completed.

A radiological control point will be established to monitor ingress and egress of equipment and personnel entering the precertification area. After precertification activities are completed, certification

samples will be collected in a timely fashion to minimize the cost and time associated with pumping surface water out of the excavation. Final grading and vegetation requirements for the slopes will be addressed in the NRRP.

000130



Notes

Vertical scale is exaggerated to 2X the horizontal

Measurements shown are approximate

Cross section A-A' and letter designations (i.e. (A)) correspond to the plan view shown on Figure 2-17

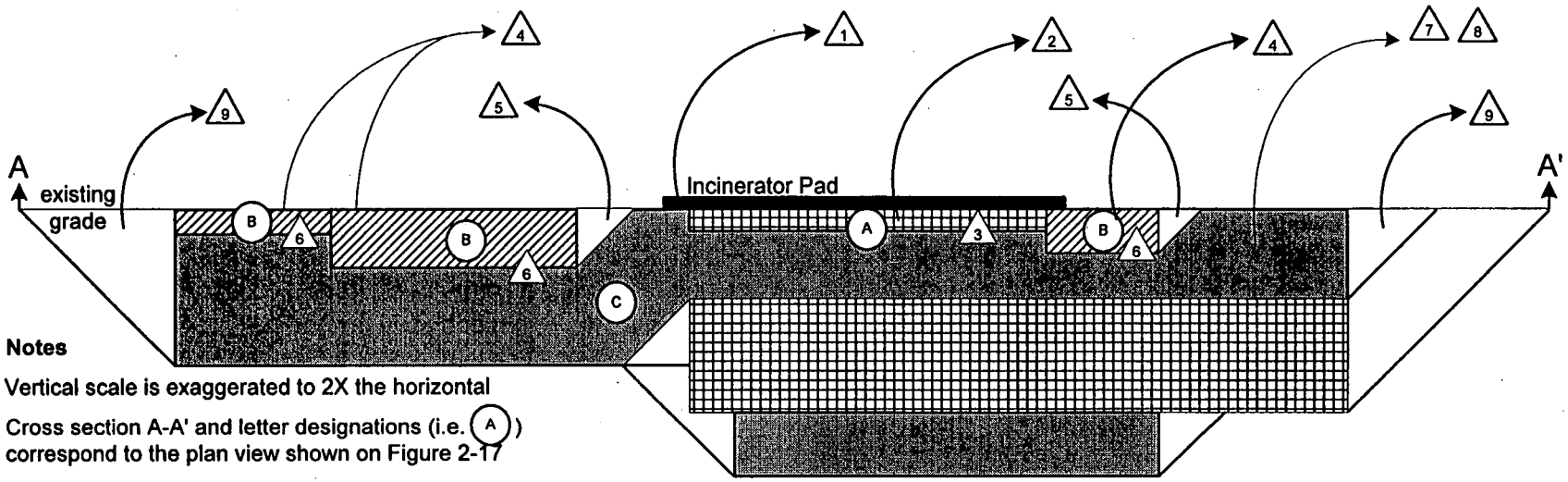
This figure is intended as a summary of text presented in Section 3.

Above-FRL PCE and DCE excavations capture Above-FRL Uranium contamination

Contamination/Excavation Area Legend

- Incinerator Pad
- Above-WAC for Uranium to depths of 2 to 4 feet from existing grade in areas labeled (B)
- Above-WAC for PCE and DCE to a depth of 1-1/2 feet from beneath the Incinerator Pad in area (A) and between 6 feet and 13-1/2 feet deep from existing grade in area (D)
- Above-FRL for PCE and DCE to a depth of 10-1/2 feet from existing grade in area (C) and between 13-1/2 feet and 18 feet deep from existing grade in area (E)
- Excavations for safe slopes

FIGURE 3-1: INCINERATOR PAD CONTAMINATION/EXCAVATION PROFILE



Notes

Vertical scale is exaggerated to 2X the horizontal

Cross section A-A' and letter designations (i.e. (A)) correspond to the plan view shown on Figure 2-17

Contamination patterns correspond to the legend on Figure 3-1

This figure is intended as a summary of text presented in Section 3.

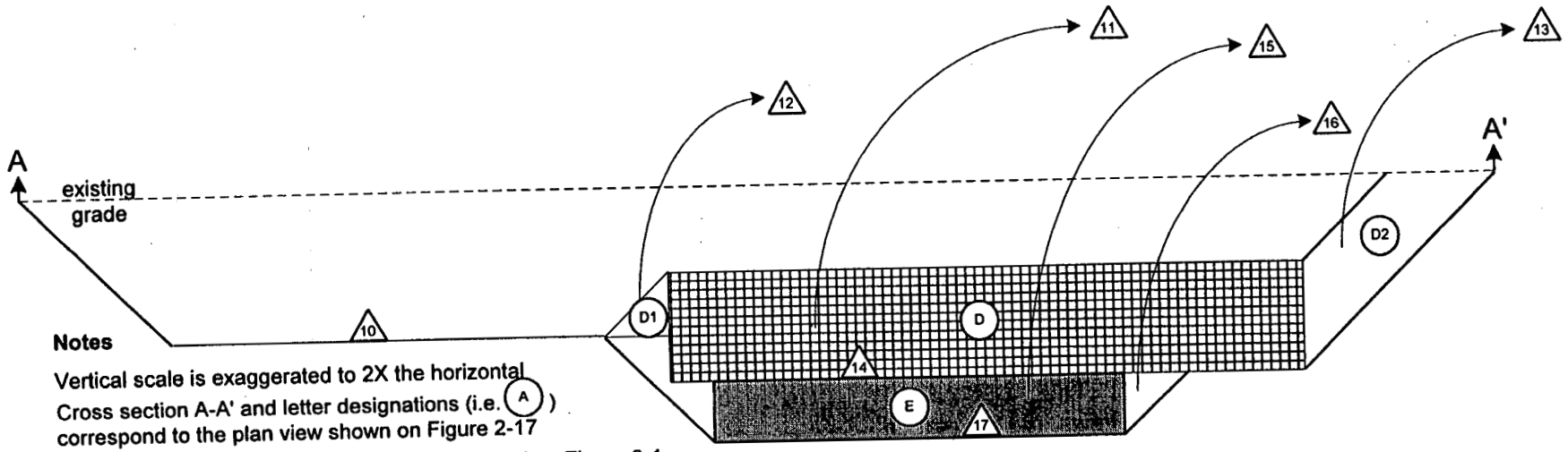
Above-FRL PCE and DCE excavations capture Above-FRL Uranium contamination

Excavation Sequence

1. Remove Incinerator Pad and clean of visible soil/gravel/bedding. Haul clean pad to OSDF. Underlying soil/gravel/bedding shall be removed in accordance with area-specific soil requirements.
2. Excavate (A) in bulk (18" lift), leaving vertical excavation sidewalls, and haul material to Soil Treatment Area. Do not track equipment through surrounding Above-WAC areas.
3. Construction Manager performs physical sampling in (A) excavation footprint.
4. Excavate (B) in 3-ft +/- 1-ft lifts, unless otherwise directed by the Construction Manager, and haul to SP7. Where depth of Above-WAC soil is >/= 3 ft, cut slopes back at 2H:1V using equipment not contaminated with Above-WAC soil. Keep slope excavation material separate from (B) material.
5. Haul material excavated to create safe slopes around (B) to a stockpile location designated by the Construction Manager.
6. Construction Manager performs real-time monitoring of (B) excavation footprint. Excavate additional Above-WAC soil in 1-ft lifts, as directed by the Construction Manager, if detected by real-time monitoring. Again, cut surrounding slopes back at 2H:1V using equipment not contaminated with Above WAC soil.
7. Excavate (C) material in 3-ft +/- 1-ft lifts, unless otherwise directed by the Construction Manager, and haul material to a stockpile location designated by the Construction Manager.
8. Construction Manager performs physical sampling of stockpiled (C) material. If analysis passes TCLP, haul material to OSDF as directed by the Construction Manager. If analysis fails TCLP, haul material to Soil Treatment Area as directed by the Construction Manager.
9. Excavate material to create 2H:1V safe slopes around (C) using equipment not contaminated with Above-WAC material, and haul material to OSDF.

FIGURE 3-2: PHASE 1 INCINERATOR PAD EXCAVATION

000132



Notes

Vertical scale is exaggerated to 2X the horizontal

Cross section A-A' and letter designations (i.e. (A)) correspond to the plan view shown on Figure 2-17

Contamination patterns correspond to the legend on Figure 3-1

This figure is intended as a summary of text presented in Section 3.

Above-FRL PCE and DCE excavations capture Above-FRL Uranium contamination

Excavation Sequence (cont.)

10 Construction Manager performs physical sampling at (C) excavation footprint.

11 Excavate (D) in 3-ft +/- 1-ft lifts, unless otherwise directed by the Construction Manager, and haul to Soil Treatment Area.

12 Excavate (D1) and haul to a stockpile location designated by the Construction Manager.

13 Excavate (D2), maintaining 2H:1V side slope unless otherwise directed by the Construction Manager, and haul to the OSDF.

14 Construction Manager performs physical sampling in (D) excavation footprint.

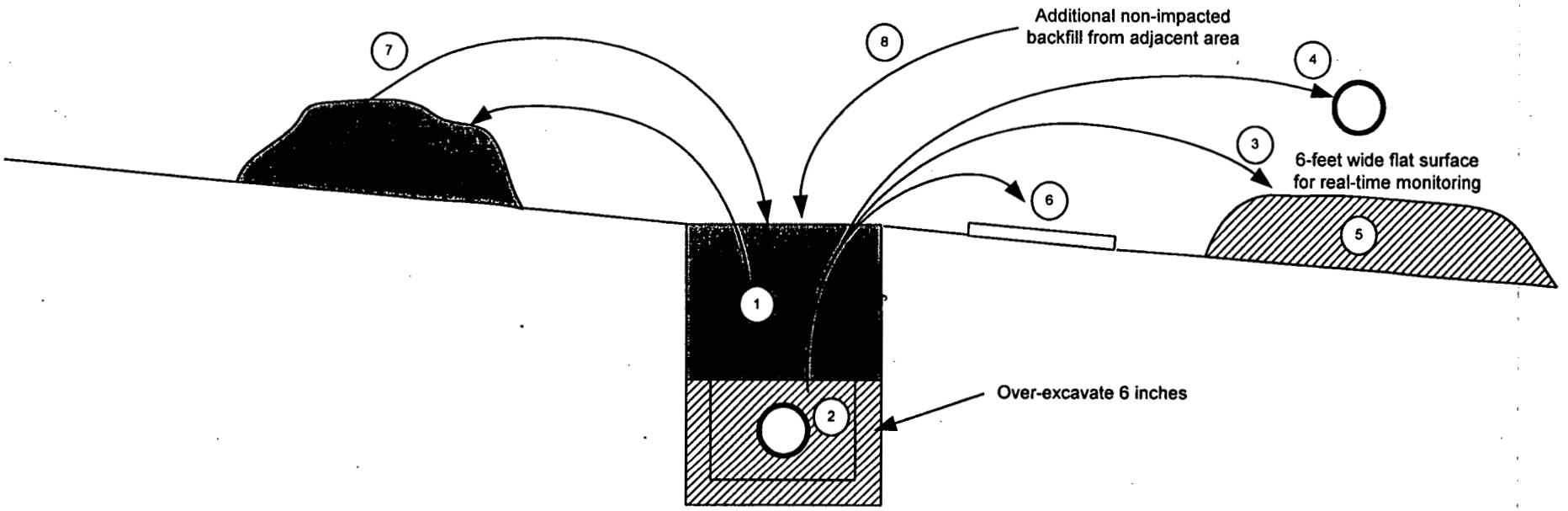
15 Excavate (E) in 3-ft +/- 1-ft lifts, unless otherwise directed by the Construction Manager, and haul material to a stockpile location designated by the Construction Manager.

16 Construction Manager performs physical sampling of stockpiled (E) material. If analysis passes TCLP, haul material to OSDF as directed by the Construction Manager. Ifanalysis fails TCLP, haul material to Soil Treatment Area as directed by the Construction Manager.

17 Excavate 2H:1V slopes surrounding unless otherwise directed by the Construction Manager, and haul to the OSDF.

18 Construction Manager performs physical sampling in (E) excavation footprint.

FIGURE 3-3: INCINERATOR PAD EXCAVATION (cont.)



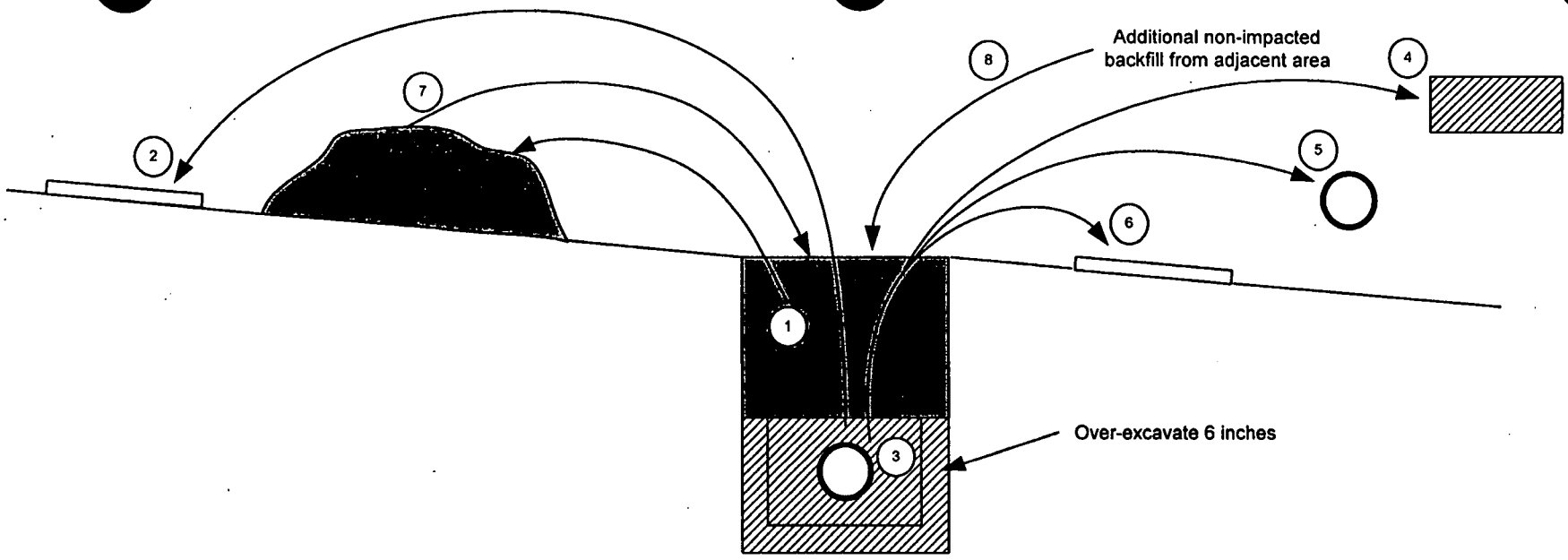
1. Trench overburden soil from above the pipe* and pipe bedding and temporarily stockpile overburden soil adjacent to, and upgradient of, the utility trench. Remaining soil in the trench shall be considered pipe bedding.
2. Excavate pipe and pipe bedding, plus over-excavate 6 inches adjacent to and below the pipe to ensure removal of impacted material.
3. Temporarily stockpile pipe bedding adjacent to, and downgradient of, the utility trench. Stockpiled material shall have a 6-feet wide flat surface for real-time monitoring by the Construction Manager.
4. The Construction Manager visually inspects pipe during excavation. Pipe free of visible process residue shall be dispositioned in the OSDF in accordance with Section 02205. Pipe that cannot be cleaned of visible process residue shall be dispositioned in SP7 in accordance with Section 02205.
5. The Construction Manager performs physical sampling of stockpiled pipe bedding for WAC attainment and directs the Contractor to disposition the material in either the OSDF or SP-7, pending sample results. Over-excavate the stockpile footprint 6 inches to ensure removal of impacted material.
6. At 50-feet intervals, excavate a bucket-load from the trench bottom and place it adjacent to, and downgradient of, the trench. Flatten this material to create 6-inch minimum thickness pads for real-time monitoring and physical sampling by the Construction Manager. Position pads upgradient of stockpiled pipe bedding.
7. Upon completion of real-time monitoring and physical sampling of soil pads, backfill the trench with overburden soil and compact in accordance with Section 02206.
8. Backfill additional non-impacted soil from the immediate pre-certified area and compact in accordance with Section 02206 as needed to meet surrounding grade.

As directed by the Construction Manager, pending soil pad physical sampling results, re-excavate at trench locations designated by the Construction Manager to remove additional impacted material. The Construction Manager certifies the backfilled trench and surrounding area.

*The term "pipe" is used as a generic reference to underground utilities.

FIGURE 3-4: TRENCHING FOR PROCES PING BEYOND THE DESIGN SURFACE

000134



1. Trench precertified overburden soil from above the pipe* and pipe bedding and temporarily stockpile it adjacent to and upgradient of, the utility trench. Remaining soil in the trench shall be considered pipe bedding.
2. Excavate an initial bucket-load of pipe bedding and place it adjacent to the trench in a 6-inch minimum thickness pad for real-time monitoring by the Construction Manager for WAC.
3. Excavate pipe bedding and pipe, plus over-excavate 6 inches adjacent to and below the pipe to ensure removal of impacted material.
4. The Construction Manager visually monitors excavation of pipe bedding. Disposition non-process pipe bedding in the OSDF in accordance with Section 02205 unless otherwise directed by the Construction Manager.
5. The Construction Manager visually inspects pipe during excavation. Disposition non-process pipe in the OSDF in accordance with Section 02205 unless otherwise directed by the Construction Manager.
6. At 50-feet intervals, excavate a bucket-load from the trench bottom and place it adjacent to the trench in 6-inch minimum thickness pads for real-time monitoring and physical sampling by the Construction Manager.
7. Upon completion of real-time monitoring and phyisical sampling of soil pads, backfill the trench with overburden soil and compact in accordance with Section 02206.
8. Backfill additional non-impacted soil from the immediate precertified area and compact in accordance with Section 02206 as needed to meet surrounding grade.

As directed by the Construction Manager, pending soil pad physical sampling results, re-excavate at trench locations designated by the Construction Manager to remove additional impacted material. The Construction Manager certifies the backfilled trench and surrounding area.

*The term "pipe" is used as a generic reference to underground utilities.

FIGURE 3-5: TRENCHING NON-PROCESS PIPING BEYOND THE DESIGN SURFACE

4.0 PROJECT-SPECIFIC ENVIRONMENTAL CONTROLS AND MONITORING

This section defines the project-specific environmental controls and monitoring that will be performed during remediation of Area 3A/4A, use of the resulting information, and how the information will be integrated with sitewide monitoring and reporting requirements. Control mechanisms and monitoring/inspection requirements are provided to account for the air, surface water, and groundwater pathways, as well as impacts to natural resources (i.e., endangered species, wetlands, and cultural resources). The general sitewide controls and monitoring are discussed in Section 5.0 of the SEP.

The IEMP (DOE 1999b) quarterly reporting cycles provide a link between the individual, project-specific remediation actions across the entire FEMP site. Information provided to the IEMP report by the project may include improvements to the surface-water management system, the location of additional air monitors, or newly identified groundwater pathways. Normally, routine decisions made by the Soil and Disposal Facility Project (SDFP) to react and respond to project-specific operating conditions and process-control objectives (e.g., extending boundaries of a real-time survey) will not be reported as part of the IEMP reporting cycles. Rather, these types of routine decisions will be maintained as part of the project record and will be considered normal practice to achieve project-specific operating objectives.

4.1 NATURAL RESOURCE IMPACTS

On-property natural resource impacts include those associated with threatened and endangered species, cultural resources, and wetlands/floodplains. Section 5.0 of the SEP establishes a three-component strategic control mechanism for natural resource impacts:

- Identify unavoidable impacts to natural resources anticipated to result from remediation activities
- Plan and design remediation activities to limit resource damage that is unavoidable
- Conduct natural resource restoration.

The first component has been addressed in the OU3 and OU5 RODs (DOE 1996a, 1996b). There are no wetlands, endangered species, or cultural resources identified within Area 3A/4A, and all access points, staging areas, and equipment laydown areas are outside Priority Natural Resource Areas identified on Figure 5-2 in the SEP. Therefore, the second component is not applicable to Area 3A/4A

at this time. In the event cultural resources are discovered, contingency plans will be developed to deal with the discovery per the intent of component two. Natural resource restoration (third component) is briefly described in Section 1.3.3 and is the subject of the NRRP.

4.2 AIR PATHWAY

This subsection presents the control and monitoring requirements for the air pathway during remediation of Area 3A/4A. The air pathway includes noise, fugitive emissions (visible dust), airborne radiological particulates and radon, and direct radiation. Air pathway monitoring activities, to the maximum extent possible, will make use of both the existing FEMP occupational air monitoring program and the sitewide environmental monitoring program (described in Section 6.0 of the IEMP). Regulatory protocols established in these monitoring programs will be used to ensure that project-specific data are of comparable quality and are beneficial in evaluating and reporting project-specific air pathway releases. Administrative and engineering control techniques, in accordance with Fugitive Dust Control Requirements (RM-0047), will be implemented during Area 3A/4A remediation activities to mitigate potential emissions of fugitive dust and airborne radiological particles.

4.2.1 Noise

Noise control and abatement during the Area 3A/4A remediation will include mufflers on equipment and machinery, proper maintenance of equipment and machinery, and rescheduling heavy equipment use times in the field, if late operational hours are needed. The number of remediation activities performed after sunset will be minimized.

To ensure that the OSHA and American Conference of Governmental and Industrial Hygienists (ACGIH) noise limits are met, an administrative action level below these limits will be set (Section 5.0 of this plan). This administrative action level will be used to assess the need for hearing protection for field personnel in the remediation areas, the need for maintenance of vehicles and machinery, and the need for additional noise control and abatement.

Noise monitoring will be conducted as part of Area 3A/4A project-specific health and safety requirements. Noise measurements will be made in the field by Fluor Fernald and Contractor Safety and Health (S&H) personnel, using safety and health protocols for noise monitoring. The noise measurements will assess whether administrative action levels are exceeded, the need for hearing

protection, the need for maintenance of vehicles and machinery, the need for additional noise control or abatement, and compliance with OSHA and ACGIH occupational noise limits.

The noise monitoring program will develop area-specific background levels prior to the start of excavation activities and monitor noise levels during remedial activities. Field personnel will be responsible for documenting noise levels in the field in accordance with records management guidelines presented in Section 6.7, as well as for initiating noise abatement measures. If background noise levels are within 5 dBA (decibels on the A-weighted scale) of the administrative action level (85 dBA, as specified in the safety and health requirements), S&H personnel will contact the project manager to begin appropriate corrective actions.

4.2.2 Fugitive Emissions

Water, commercially available dust suppression agents, or other appropriate methods and proactive work practices will be used to minimize dust generation during Area 3A/4A remedial activities. In general, dust generation during soil excavation, handling, hauling, and placement will be controlled using work practices that include cleaning paved haul roads or applying water (or other dust suppressant agents) to paved and unpaved haul roads. Water or other dust suppression agents will be applied in sufficient quantities to reasonably minimize dust generation, but limited so that they do not result in water migration beyond work area boundaries.

For excavation activities, dust control will be focused on making the material less dusty. The principal control mechanism will be the inherent moisture in the soil; during dry conditions, dust control will be initiated prior to excavation. If visible dust emissions occur during excavation, one or more of the following dust control methods will be used:

- Apply more water mist
- Add surfactant or other agents to the water mist
- Apply resins, crusting agents, or foams in lieu of water mist.

For soil handling, hauling, and placement activities, dust control will focus on making the transported material unlikely to become airborne. The principal control mechanism will be reliance on inherent moisture in the soil coupled with a 20-mph speed limit during hauling on paved haul roads (10-mph speed limit on unpaved haul roads). If visible dust emissions occur during handling, hauling, or placement, one or a combination of the following dust control methods will be used:

- Change configuration of material (e.g., place less in the trucks)
- Apply water mist
- Add surfactant or other agents to the water mist
- Apply resins, crusting agents, or foams in lieu of water mist
- Reduce truck speed
- Cover load bed.

The numbers or types of dust suppression equipment in operation will not preclude stopping work if there is visible dust or excessive visible dust. Increasing levels of visible dust indicate a need to increase dust control effort, including possible alteration, slowdown, or temporary suspension of the work activities generating the visible dust. The work activities observed to be generating the visible dust will be temporarily suspended if the visible dust exceeds the site-specific limit or Ohio standard (RM-0047). Dust controls will be increased and/or work practices will be modified to bring the fugitive emissions to a level below the limit/standard during dust-generating activities.

Personnel will be on call during non-work periods seven days per week (including holidays) to respond to an "off-hours dust alert," which is defined as whenever Fluor Fernald gives notification to the contractor that visible particulate emissions exceed the site-specific limits during non-work periods. Site personnel will notify the contractor of such an alert and dust suppression will begin no more than 3 hours after such notification.

As part of their Safe Work Plan, the contractor will develop a Dust Control Plan that:

- Describes how field personnel will implement the Dust Control Plan, monitor for visible dust, progressively implement increased dust control or alter work activities when required, and maintain appropriate records of dust control activities

- Lists methods to be used to suppress dust and the associated frequency that routine dust suppression measures are to be implemented

- Describes the materials to be used to suppress dust - e.g., water, dust suppression agents, etc.

- Lists the specific types and quantities of equipment to be used to suppress dust

- Provides a description of the notification process, including designation of personnel, that the contractor intends for SDFP personnel to utilize during non-work periods to notify the contractor of an "off-hours dust alert."

Fluor Fernald will review the contractor's Dust Control Plan against these criteria. Approval of the plan by Fluor Fernald is required before authorization of earthmoving activities.

Project personnel will tour the active remediation areas at the start of the day and periodically during the day. Real-time observation of visible dust, in accordance with the criteria described in Fugitive Dust Control Requirements (RM-0047), will be used to assess fugitive dust emissions and implement corrective measures, as needed. Additionally, visual monitoring will be conducted in accordance with 40 CFR Part 60, Appendix A, Method 22, Visual Determination of Fugitive Emissions from Material Sources and Smoke Emission from Flares. Excavation, hauling, and storage-pile activities will be subjected to opacity measurements in accordance with 40 CFR Part 60, Appendix A, Method 9, Visual Determination of Opacity of Emissions from Stationary Sources (or an approved alternative method).

Field managers will be responsible for documenting visible emissions and maintaining monitoring records in the field, as well as for initiating fugitive dust abatement measures. In accordance with the record keeping guidelines defined in Section 6.7, daily information that will be recorded as part of the Area 3A/4A remediation project includes:

- The date, weather conditions, and scheduled work activities (e.g., excavation, trenching, hauling, placement, compaction, loading, etc.)
- Opacity readings (if any) in accordance with 40 CFR Part 60, Appendix A, Method 9, Visual Determination of Opacity of Emissions from Stationary Sources (or an approved alternative method) [Note: not required for off-hours dust alert responses]
- Time of dust-alert notification (if any) given to the contractor, names of the individuals involved (SDFP individual who gave the notification, contractor individual notified, and dust-alert responders), and time of initiation of dust suppression activity [Note: required only for days when such notification occurs]
- Identification of areas (or segments) where dust control was performed
- The manner or type of dust control activity(ies) applied to each area or segment
- Application rate of water or other dust suppression agents - at a minimum, tank truck load capacity and number of tank loads applied to each area or segment
- Identification of the party(ies) responsible for the dust control activity in each area or segment - at a minimum, name of the contractor.

4.2.3 Airborne Radiological Particles

All airborne radiological particles associated with Area 3A/4A remediation activities are anticipated to be from fugitive emissions. Control mechanisms for fugitive emissions are presented in Section 4.2.2, and these mechanisms provide sufficient control to alleviate environmental and public safety concerns arising from Area 3A/4A soil remediation activities.

Airborne radiological particles associated with Area 3A/4A remediation activities will be monitored via the sitewide airborne particulate monitoring program presented in Section 6.0 of the IEMP. The IEMP monitoring network surrounds the FEMP site and encompasses all the current and expected diffuse and point sources at the FEMP. Data collected under the IEMP particulate monitoring program will be used to assess the collective effect of concurrent remediation activities at the FEMP site, per regulatory drivers described in Section 6.0 of the IEMP.

Supplements or modifications to the IEMP monitoring program are not anticipated to be required as a result of Area 3A/4A soil remediation activities. Monitoring stations surround the FEMP and the monitoring frequency and analyses addressed by the IEMP adequately address the COCs in the remediation area. Therefore, there are no plans to relocate monitor stations prior to soil remediation activities in Area 3A/4A.

4.2.4 Radon

Emission of radon from soil being remediated under the Area 3A/4A project is not anticipated to be an environmental or public safety concern. Hence, no project-specific radon control mechanisms are needed for Area 3A/4A soil remediation activities.

Sitewide radon emissions are monitored via the monitoring program presented in Section 6.0 of the IEMP. No supplement or modification to that program is anticipated for Area 3A/4A soil remediation activities. Radon monitoring stations surround the FEMP site and will not be relocated for Area 3A/4A soil remediation activities.

4.2.5 Direct Radiation

Project-specific direct radiation control mechanisms beyond those provided by fugitive emissions control are not required for environmental or public safety concerns associated with Area 3A/4A soil remediation activities. Environmental radiation levels associated with Area 3A/4A soil remediation

activities will be monitored via the sitewide environmental direct radiation monitoring program (Section 6.0 of the IEMP). No supplement or modification to the IEMP is anticipated to be needed for Area 3A/4A soil remediation activities, and monitoring stations will not be relocated from their present positions.

4.3 SURFACE WATER PATHWAY

As a condition of its NPDES permit (Ohio EPA Permit No. 1IO00004*FD), the FEMP was required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution associated with construction and industrial activities that may affect storm water quality at the facility and describes the practices that will be employed to reduce pollutants within surface water discharges. This plan also contains provisions on the inspection program that must be implemented to ensure that discharges of storm water associated with construction and industrial activities comply with the requirements of the FEMP NPDES permit.

Area 3A/4A is located inside the Former Production Area drainage basin, and all run off is presently passed to the SWRB via storm sewers. Water residing in the SWRB is treated at the AWWT Facility to remove uranium (Phase I) and then discharged to Paddys Run and the Great Miami River. Once soil remediation activities begin in Area 3A/4A, surface water runoff and perched groundwater that seeps into the excavation will be directed to a sediment trap prior to discharge into the storm sewer system that leads to the SWRB.

Perched groundwater under Plant 6 that is contaminated with TCE is an exception to this pathway. For this special case, the Plant 6 excavation will be isolated and all excavation water will be collected and pumped to the BSL prior to treatment at the AWWT Facility to remove organic compounds (Phase II).

The SWPPP mandates that construction activity inspections will be conducted in the remediation area on a weekly basis. FEMP's construction activity inspection program performs weekly inspections within all site construction areas and after any rain events totaling 0.5 inches or more within a 24-hour period. Construction activity inspections are documented and maintained as part of the NPDES and SWPPP files at the facility.

Industrial activity inspections may also be conducted in the Area 3A/4A remediation area, if required under the SWPPP. The industrial activity inspection program covers areas within and outside the

Former Production Area drainage basin. Inspections are conducted in areas draining to the site's controlled storm sewer system (Former Production Area drainage basin) and in uncontrolled watershed basins draining through the NPDES permitted storm water outfalls *4003 through *4006. Industrial activity inspections are documented and maintained as part of the NPDES and SWPPP files at the facility.

Inspections conducted in the Area 3A/4A project will ensure that:

- Erosion and sedimentation control measures are in place and are well maintained
- Work practices and housekeeping activities are conducted in a manner that reduces the potential discharge of pollutants in association with storm water discharges from disturbed areas
- Corrective actions related to the establishment and/or maintenance of erosion and sedimentation control structures are documented and tracked to resolution
- Excessive erosion and/or situation to off-property waterways is not occurring as a result of construction activities initiated under the A2PIII Part Two soil remediation activities.

The SEP discusses potential project-specific storm water monitoring programs for soil remediation areas located outside the formerly storm water runoff-controlled Production Area drainage basin. The objectives of such a program would be to monitor performance of erosion and sedimentation control structures (e.g., sediment traps and basins) against their anticipated design efficiencies, and to determine whether the runoff presents an unacceptable impact to surface water quality or presents an unacceptable cross-media impact to the GMA.

Because the objectives of the SEP-contemplated storm water monitoring program are met through other existing means no project-specific storm water monitoring program will be implemented for the 3A/4A remediation project.

4.4 GROUNDWATER PATHWAY

In Area 3A/4A, water moving from the surface down to the GMA must move through or over the glacial overburden. The perched water table in the glacial overburden follows topography and slopes west-southwest beneath Area 3A/4A at a gradient between 0.008 and 0.015 (i.e., dropping 8 to 15 feet per 1,000 horizontal feet as one traverses to the southwest). The overall vertical hydraulic gradient through the glacial overburden is 1, because unsaturated conditions are present at the base of the

overburden. The water table of the GMA slopes to the east, southeast and south towards the Great Miami River.

Strategic control mechanisms to protect the GMA are outlined in Section 5.1.4 of the SEP. Applicable controls to be used in Area 3A/4A include:

- Prompt removal of water that accumulates in deep excavations to limit the volume of infiltration (Section 3.5)
- Backfill the deep excavations in the Boiler Plant and Plant 6 locations that are expected to reach the unsaturated portion of the GMA (Section 3.6).

The sitewide management strategy for monitoring groundwater during remedial activities is described in detail in Section 3.0 of the IEMP, which lists the objectives, regulatory drivers, monitoring, data evaluation, and reporting requirements for the program. In Area 3A/4A, soil remediation activities are most likely to impact the GMA via the Plant 6 excavation (Drawings 096, 097, 100, 101, 102, 103). However, the OU5 ROD has already identified the GMA below Plant 6 as an area requiring aquifer restoration, and Section 3.0 of the IEMP outlines the strategy and technical approach to extract and treat GMA groundwater below Plant 6. Aquifer monitoring below Plant 6 is ongoing, and it will continue beyond the projected completion date for excavation (2004).

5.0 PROJECT-SPECIFIC HEALTH AND SAFETY

All FEMP employees, visitors, vendors, and contractors associated with remedial activities in Area 3A/4A are required to abide by:

- The applicable project-specific Environmental Safety and Health and Training Requirements Matrix (ESH&TRM)
- Environmental safety and health/training requirements as listed in Part 8 of the contract,
- Site work permits, and
- The contractor's Safe Work Plan, which is prepared by the contractor and approved by Fluor Fernald management.

In addition to the contract requirements, ESH&TRMs, permits, and the requirements of this document, the contractor will comply with all federal, state, and local requirements (e.g., OSHA). Fluor Fernald managers and supervisors are responsible for ensuring that the Safe Work Plan complies with the environmental safety and health/training requirements and ensuring compliance with the Safe Work Plan. All personnel have stop-work authority for imminent safety hazards resulting from noncompliance with the applicable health and safety practices. Health and safety requirements and procedures for this Implementation Plan will be governed by the Area 3A/4A ESH&TRM, site work permits, contractor's Safe Work Plans and the overall strategy discussed in the SEP (Section 6.0).

In accordance with procedure SH-0001, Developing Project Specific Health and Safety Requirements, or an equivalent procedure, a ESH&TRM will be developed for construction, excavation, and impacted material placement activities related to Area 3A/4A. This applicable ESH&TRM will be included in the solicitation packagers to provide information on possible safety hazards and training associated with each task. The contractor will use this information to develop Safe Work Plans. The contractor will incorporate their occupational exposure monitoring requirements into their Safe Work Plan. These strategies will address COCs for the Area 3A/4A project area and will comply with all federal, state, and local requirements (e.g. OSHA, ACGIH).

The contractor's Safe Work Plan may be revised, as tasks and/or associated hazards are identified, added, or deleted. The ESH&TRM, as well as the detailed Work Plans, will be maintained at the project site, with controlled copies in the project document control files.

Fluor Fernald will assign an occupational health and safety representative to the design team to review all project design documents and ensure compliance with all applicable worker safety and health regulations. Fluor Fernald will provide all radiological occupational monitoring for the contractor, including radiological control technicians (RCTs) to support remediation activities. The contractual radiological work requirements for Area 3A/4A remediation activities will be detailed in activity-specific Radiological Work Permits (RWPs). Personnel performing work under a RWP will be briefed on the specific hazards and task requirements before work begins. Radiological control personnel will evaluate the data obtained from field surveys to determine the effectiveness of the radiological controls. Survey results will be forwarded from Fluor Fernald to the contractors.

The contractor will provide safety and health coverage, including air sampling for non-radiological contaminants. Fluor Fernald S&H will provide random verification sampling and perform periodic walk-throughs to assure compliance with OSHA regulations and safety and health requirements.

6.0 REMEDIAL ACTION MANAGEMENT STRATEGY

This section describes the Area 3A/4A organizational structure, contractor selection process, impacted material management, contingency management protocols, data and records management procedures, the QA/QC process, integration of Area 3A/4A activities with other FEMP activities and the activity schedule.

6.1 ORGANIZATION AND RESPONSIBILITIES

The 1991 ACA between DOE and EPA Region V (EPA 1991) decrees that both agencies have ultimate project management responsibility, with DOE as the designated lead agency. OEPA has an oversight and advisory role, as defined by regulatory agreements, for wastewater management (NPDES), hazardous waste management and HWMU closure (RCRA), dust and noise control, groundwater monitoring, and air and water pathways.

The DOE-FEMP Remedial Action Project Manager is responsible for ensuring that FEMP remedial actions meet all project goals, standards, specifications and requirements, while the DOE OU5 Team Leader provides DOE-FEMP programmatic direction for at- and below-grade remediation of Area 3A/4A. DOE-FEMP will assign a Facility Representative to conduct field oversight of the project through Technical Leads that will be responsible for construction, excavation/remediation, engineering, QA/QC, health and safety, environmental controls and monitoring, and other pertinent aspects of the project. The DOE-FEMP Facility Representative and Technical Leads will consult with the OU5 Team Leader or DOE Remedial Action Project Manager, as appropriate, to seek prompt resolution of any issues or problems.

DOE's primary contractor, presently Fluor Fernald, is responsible for overall management and remediation at the FEMP. Remedial activities will be performed by the Area 3A/4A Project Team, which will consist of personnel working for DOE's primary contractor. The Area 3A/4A Project Team consists of personnel in the Soil and Water Division supported by other FEMP functional areas and subcontractors as necessary. Senior SDFP and Soil and Water Division personnel will provide project management, technical and regulatory guidance to the Project Team.

As work progresses, the project organization will change to perform each particular phase of the project as efficiently as possible. The basic organization will stay the same throughout the project;

however, leadership will be shifted between the Area 3A/4A Project Manager (APM) to the Area 3A/4A CM during the project. During characterization, design, and certification phases, the project will be managed by the APM. During construction phases, the project will be managed by the Area 3A/4A CM. This organizational structure provides clear lines of responsibility and experienced leadership to the appropriate technical phases of the project (i.e., the CM will lead the project during construction phase).

The Area 3A/4A Project Team includes personnel in the following groups (Figure 6-1):

- Management
- Primary Technical Areas
- Functional Support.

The roles and responsibilities of SDFP personnel within each group are presented below, and personnel who serve as points of interface between SDFP and other FEMP projects are discussed in Section 6.9.

6.1.1 Management

Area 3A/4A management includes the SDFP Project Director, APM, CM (during construction) and administrative support. Each of these positions is discussed below, and many of the positions are described in greater detail in FEMP procedures and project documents.

6.1.1.1 SDFP Project Director

The SDFP Project Director has overall responsibility for the general direction, guidance, management, and oversight of the project, and reports directly to the Vice President of the Soil and Water Projects Division. In this role, the director also provides guidance and a point of interface for the APM and CM and serves as the primary contact for the SDFP with DOE and the regulatory agencies.

6.1.1.2 Area Project Manager and Construction Manager

The APM and CM oversee and manage the project and have overall responsibility to complete the project scope within budget and on schedule. The hand-off point between the design and construction phases of the project is the approval of the IRDP and CFC drawings. During the characterization, design and certification phases of the project, the project is managed by the APM, with support from the primary technical (i.e., engineering, characterization and construction) and functional (e.g., QA/QC, radiation control, waste management) areas. During construction, the overall project is

managed by the CM and is supported by the APM (who will continue to coordinate the Project Engineer and Characterization Lead) and functional groups.

The general responsibilities of the APM include:

- Overall management of characterization, design and certification phases
- Managing non-construction personnel assigned to the area project
- Developing the IRDP and obtaining regulatory approval of the project
- Assuring the technical accuracy and quality of the CFC drawings and the technical specifications through the completion of construction
- Ensuring that the DCN process is properly evaluated and efficiently managed by the Project Engineer
- Coordinating the Project Engineer, Characterization Lead, and other SDFP resources to provide timely and sufficient technical support per the CM's request during construction
- Facilitating implementation of FEMP oversight functions (e.g., QA/QC, WAO, etc.) on engineering and characterization procedures
- Developing and updating the Area 3A/4A Project Execution Plan (PEP), when necessary
- Closing Nonconformance Reports (NCRs) on engineering and characterization procedures and/or deliverables.

The Area 3A/4A APM will report to the SDFP Project Director at all times, and the Area 3A/4A design team will report to the APM during the characterization, design, and certification phases of the project.

The CM is in charge of, and accountable for, all Area 3A/4A construction activities, including:

- Managing all FEMP construction personnel (i.e., Construction Contract Managers, Field Construction Engineers, and Construction Coordinators) matrixed to the SDFP
- Managing the construction contractor through the Construction Contract Manager
- Ensuring all contractor-initiated Change Orders are properly evaluated and managed through the Construction Contract Manager, with technical input from the SDFP and Project Engineer

- Obtaining all the required FEMP permits and ensuring all permit requirements are fully understood and followed by the construction contractor

- Facilitating timely and sufficient implementation of FEMP oversight functions (e.g., QA/QC, S&H, WAO, etc.) on construction procedures and/or deliverables

- Closing any NCR on construction procedures and/or deliverables

- Providing all documentation, information and support to satisfy the Standard Start-up Review (SSR) requirements for operational facilities

- Requesting engineering, characterization, and other administrative support during construction through the APM.

During construction, the Area 3A/4A CM will report to the Soil and Water Projects Division CM and the SDFP Project Director.

6.1.1.3 Records Management

All project records are submitted to the Engineering/Construction Document Control (ECDC) center. Project personnel are responsible for the management of project records until they have been submitted to ECDC. Specific responsibilities of all project personnel include:

- Interfacing with ECDC
- Managing project documents
- Coordinating the review and comment response process for project documents.

6.1.1.4 Project Controls

The Project Controls group provides the APM and CM with cost and schedule information for all accounts within the project. Specific responsibilities include:

- Ensuring cost and schedule requirements are defined, planned, and monitored against an integrated baseline so that performance can be measured and reported consistent with overall commitments, budgets and available funding

- Establishing cost, schedule, and technical baselines and maintaining them through the issuance of change proposals

- Collecting monthly status reports to identify trends which may result in forecast variances from the baselines

- Assisting the Area 3A/4A Cost Account Managers (CAMs) and other project personnel in the various administrative duties associated with establishing baselines and forecasts, and ensuring that all charges are directed to the proper accounts as defined in the baselines

- Working with sitewide training coordinators to ensure that individuals assigned to the project are in compliance with established training procedures and guidelines

- Working with division and site commitment trackers to ensure that all project commitments are entered into the tracking systems and that responsible personnel are kept informed of the requirements of each commitment

- Providing adequate documentation of commitment completion to sitewide and division trackers.

6.1.2 Primary Technical Areas

The primary technical areas that support soil remediation in Area 3A/4A are:

- Engineering
- Construction
- Characterization.

Each primary technical area will receive support from the functional support groups. Contractors will support Engineering and Construction.

6.1.2.1 Engineering

The engineering staff provides technical input during the development and review of the IRDP and CFC package. The Project Engineer leads the engineering staff and reports to the APM on project-specific remedial designs as well as associated documentation and design modifications. As the primary contact and liaison with the Architect/Engineer (A/E) Subcontractor, the Project Engineer will work with the A/E on a day-to-day basis to address project technical issues, review the A/E's designs and work products, and evaluate the A/E's services. The A/E will perform the majority of the design and engineering services (i.e., drawings and specifications for Title I/II and III) for Area 3A/4A. During construction, the engineering staff will process all Requests for Clarification of Information (RCIs) and DCNs. Specific responsibilities of the engineering staff include:

- Reviewing all engineering documents submitted by the A/E and construction contractors for approval, as required by contract documents

- Developing responses to RCIs

- Developing, reviewing and approving DCNs
- Reviewing and approving vendor data submittals or engineering and design components
- Instructing the A/E when to revise construction drawings/technical specifications
- Reviewing and approving "As-Built Drawings" supplied by the construction contractors at the completion of field work
- Verifying that all contractual work has been performed by the A/E
- Verifying that all regulatory commitments are completed and approved.

6.1.2.2 Construction

Construction, under the lead of the CM, will manage FEMP personnel and the construction contractors during the remedial actions. The CM has a construction coordinator, a construction field engineer, and a construction contracts manager on staff to support these activities. During remedial design, construction will provide input in the form of lessons learned and formal reviews of design drawings and specifications to ensure the design is constructable. Specific responsibilities include:

- Coordinating daily work activities in the field and providing technical direction to the construction contractors within the scope of the contract
- Coordinating day-to-day management of the Area 3A/4A field labor force
- Performing contract administration
- Reviewing and approving any modifications or changes to the contract documents
- Approving contract submittals
- Utilizing the primary area and functional area resources as necessary.

In accordance with the contract documents, the construction contractor shall be registered/permitted in accordance with applicable local, state, and federal requirements and shall demonstrate significant prior related experience. The construction contractor will report to the CM, and they are responsible for scheduling and coordinating work with their subcontractors to complete the project within the schedule approved by the CM.

The construction contractor will be represented on site by field personnel that are qualified to supervise the performance of all tasks associated with the Area 3A/4A remedial activities. They are responsible

for coordinating and supervising their work as well as any subcontractor work in Area 3A/4A. At a minimum, the contractors' field representatives will be responsible for the following:

- Implementing a safety program in accordance with the contract documents
- Discussing and interpreting all elements of the Area 3A/4A design and informing the CM of any discrepancies between the plans, specifications and field conditions
- Distributing all documentation required by the project specifications in a timely manner
- Attending all project coordination meetings
- Scheduling all phases of the applicable remedial activities
- Maintaining a daily log of all Area 3A/4A activities and assisting the CM in reviewing and approving submittals, as necessary
- Implementing and verifying all QC procedures required of the contractor and/or their subcontractors
- Submitting proposed alternative materials or methods to the CM for approval prior to acquisition and use
- Coordinating all technical requirements with the CM
- Updating all construction drawings and specifications on a daily basis to account for deviations from the original plans (i.e., prepare as-built drawings).

6.1.2.3 Characterization

The Characterization Lead will coordinate field measurements, sample collection, laboratory analysis, and data management associated with the characterization of waste materials and soil in Area 3A/4A. These responsibilities include:

- Developing PSPs and coordinating sampling and analysis to support predesign characterization activities
- Evaluating and reporting characterization data to provide recommendations and documentation
- Reporting precertification and certification sampling/measurements.

The Characterization Lead will oversee all sampling and analytical activities that support the remedial design and certification of Area 3A/4A. Sampling personnel are responsible for providing input on PSPs, collecting field data, and performing data management for all project sampling activities, as

directed by the Area 3A/4A Characterization Lead. An exception to this is scheduled environmental monitoring outlined in the IEMP (DOE 1999b), which is performed by environmental monitoring personnel. The individual sampling tasks are defined in PSPs prepared by the Area 3A/4A Characterization Lead and support personnel.

6.1.3 Functional Support

The Area 3A/4A Project will require support from personnel in other FEMP functional areas, and these individuals will be matrixed to the project. Generally, the lead technical group will manage the functional support staff. To the extent possible, functional support will be provided by personnel dedicated to the SDFP (e.g., QA/QC, S&H, etc).

6.1.3.1 Safety and Health

S&H support during the project will include:

- Preparing all S&H documents for the project (including a Safety Assessment and S&H matrix)
- Reviewing documents as they are prepared for compliance with S&H requirements
- Implementing the Area 3A/4A Project-Specific Health and Safety Plan
- Assuring that contractors follow safe work practices.

The S&H representative has stop-work authority if unsafe work practices go uncorrected. Any employee of the FEMP or a contractor can stop work if they feel that the work situation is unsafe.

6.1.3.2 Radiological Control

Radiological control support during the project will include:

- Preparing all required radiological control documents for the project (including radiological ALARA)
- Reviewing project documents as they are prepared for compliance for radiological requirements.

6.1.3.3 Environmental Compliance

Environmental compliance (EC) support during the project will include:

- Preparing all required EC documents for the project, including the ARARs and TBC summary in the Design Criteria Package and the ARARs crosswalk
- Reviewing project documents as they are prepared for EC requirements
- Coordinating with internal and external groups, including regulatory agencies, regarding regulatory matters
- Providing oversight to ensure compliance with environmental requirements.
- Conduct inspections of the erosion and sediment control measures.

6.1.3.4 Quality Assurance

The QA representative will be matrixed to the project from the FEMP QA organization and will report to the APM and CM in an administrative fashion, while retaining an independent oversight role. The QA representative will be responsible for developing and implementing QA plans for the project, with the primary responsibility being oversight of QA/QC activities during design, sampling, waste disposition, and construction excavation tasks. To ensure compliance with FEMP requirements and procedures, the QA representative will monitor and provide support to the project in accordance with quality program elements identified in the FEMP Quality Assurance Program (RM-0012), the Sitewide CERCLA Quality Assurance Project Plan (SCQ, FD-1000), and the SEP Quality Assurance Project Plan (QAPP). The QA representative has stop-work authority if quality concerns go unresolved.

6.1.3.5 Waste Disposition

A FEMP WAO representative will provide waste management support. Support will include preparation of Project Waste Identification and Disposition (PWID) forms, definition of Material Tracking Locations (MTLs), technical direction and oversight for waste stream segregation and management, preparation of Field Tracking Logs (FTLs) and OSDF Manifests, preparation of waste stream profiles, and coordination with the CM, SDFP Characterization, and Waste Management for handling and disposition of waste streams.

6.1.3.6 Natural Resources

Personnel within the Natural Resources organization will be responsible for assessing potential damages to natural resources within Area 3A/4A during the design and planning stages of the project. Natural

resources personnel will also be responsible for planning and implementing interim and final restoration of Area 3A/4A as described in the NRRP. However, natural resources personnel will not monitor natural resources impacts, as this monitoring is covered under the IEMP and is performed by environmental monitoring personnel.

6.1.3.7 Cultural Resources

Cultural Resources will be responsible for handling unexpected discoveries of cultural resources during site preparation and excavation in Area 3A/4A. Because much of the upper 2 to 3 feet of soil in the production area has been disturbed, cultural resources are not expected to be found during site preparation activities. However, the deep excavations to remove uranium contamination could encounter cultural resources, which will be handled in accordance with Section 6.6.3.

6.1.3.8 Procurement

FEMP Procurement will assist the Area 3A/4A Project Team in obtaining services and materials for the project. The principal support will be in the area of procuring a construction contract for removal of soil and at- and below-grade concrete structures.

6.1.4 Coordination of Excavation Site Activities

Several non-excavation activities will be on-going at each active excavation site. Because of the potential safety hazards associated with large construction equipment and open excavations, these activities must be coordinated and supervised. Non-excavation activities include:

- Visual Observation
- Sampling and Monitoring
- Radiological Occupational Monitoring
- Asbestos Monitoring
- Material Documentation
- Occupational Health and Safety Monitoring
- Construction Monitoring
- Surveying
- Visual Dust Monitoring
- Environmental Monitoring
- Safety Inspections.

The following paragraphs describe each of these activities, the personnel involved, and the time required for their tasks. In addition to the coordination responsibilities, the contractor is expected to

have one full-time equipment operator, the equivalent of one full-time truck driver, and a part-time supervisor at each active excavation area.

6.1.4.1 Visual Observation

The active face of all excavations will be monitored visually and continuously to identify special materials encountered during excavation. WAO personnel and the excavation contractor will monitor the excavation face. Special materials that are likely to be encountered during excavation activities include asbestos, miscellaneous debris, piping, non-pressurized containers, non-soil residues, uranium metal, and acid brick. A complete list of special materials is given in Section 2.5.8 of the SEP.

6.1.4.2 Sampling and Monitoring

Physical sampling and/or RSS/RTRAK or HPGe monitoring will be performed as necessary during excavation of Area 3A/4A. In general, RSS/RTRAK or HPGe monitoring will be conducted after each excavation lift in areas known to contain soil above the OSDF WAC. HPGe monitoring may also be used to precertify the area with respect to achieving FRLs for uranium, thorium, and radium. Physical samples may be necessary to characterize suspect zones when special materials are encountered. All sampling and monitoring work will be performed under the direction of the Characterization Lead.

6.1.4.3 Radiological Occupational Monitoring

Radiological Control will have one full-time RCT in the field to monitor the ambient radiation level of the excavation, ensure RWP compliance, assess changes in ambient radiation levels that affect the radiological classification of the area, and to scan any special materials encountered. Additional information on RCT monitoring and oversight is provided in Section 6.4.4.

6.1.4.4 Asbestos Monitoring

When excavation activities encounter material suspected of containing asbestos, a qualified asbestos hazard abatement specialist (as certified by the Ohio Department of Health) must be present to monitor the removal of the material. Asbestos is likely to be encountered during the removal of electrical lines, and it may also be found in the form of buried transite panels.

6.1.4.5 Material Documentation

A WAO representative will complete the OSDF manifest and FTL to document the transfer of material from Area 3A/4A to the OSDF or other MTLs. All trucks hauling to the OSDF from Area 3A/4A

must leave the excavation with an OSDF manifest. The manifest will track the material to a project by identifying all initial, interim, and final MTLs. The WAO representative will use verbal and written information from contractor personnel to document movements between MTLs. Additional information on field documentation information management can be found in Section 3.6.4 of the SEP.

6.1.4.6 Occupational Health and Safety

The contractor will be responsible to monitor the work area for occupational health and safety concerns that include: occupational dust, compliance with the Safe Work Plan, chemical exposure, other hazards, and changes in field conditions affecting worker safety. FEMP S&H will periodically observe health and safety conditions at the active excavation area. Additional monitoring information is discussed in Section 6.4.3.

6.1.4.7 Construction Monitoring

FEMP construction will direct and monitor the remediation work for compliance with the contract documents. One full-time FEMP construction person will be assigned to Area 3A/4A field activities and additional part-time personnel will be assigned on a periodic basis. Other surveillance and inspection responsibilities are discussed in Section 6.4.2.

6.1.4.8 Surveying

The contractor will have a two- to three-person survey crew in the field on an intermittent basis to provide construction control and measure the volume of the excavation for progress payments. FEMP may also perform limited surveying to check construction progress.

6.1.4.9 Visual Dust Monitoring

The contractor will have the primary responsibility to monitor for dust. However, FEMP will also monitor the area for compliance with the best available technology (BAT) dust policy requirements. Additional details on fugitive dust control requirements (i.e., per RM-0047) and BAT are discussed in Section 5 of the SEP.

6.1.4.10 Environmental Monitoring

Environmental monitoring will be done on a regular basis by FEMP personnel. Weekly inspections of surface water control facilities will be supplemented with inspections after every major rain event, per the SWPPP requirements. Ground water and air monitoring is covered under the FEMP IEMP.

6.1.4.11 Safety Inspections

The CM will lead a weekly joint safety inspection of the work area. Participants will include the contractor management, contractor site S&H representative, Fluor Fernald construction representative, and the Fluor Fernald S&H Representative. Additional S&H oversight functions are discussed in Section 6.4.3.

6.1.5 Field Team

The typical field team that will provide oversight at each excavation will consist of one RCT to cover occupational monitoring of ambient radiation, one WAO representative to observe the excavation materials and one WAO representative to prepare waste manifestation documents and one construction representative for oversight of field activities. It is possible that more people could be near an active excavation site at any one time (e.g., utility engineer, S&H, project management, etc). However, only personnel required for actual construction activities will be allowed within 50 feet of the active excavation.

6.1.6 Management of Field Personnel

The potentially large group of personnel at a single excavation site at any given time creates logistical and safety concerns. Therefore, the responsibility for the management and coordination of all field personnel and activities has been assigned to the CM. All personnel needing access to the excavation site will sign in with the CM before entering the excavation area and sign out upon leaving the area. This type of administrative control provides the CM with information on the number of people in a given area at any time, which is critical information needed in the event of an emergency.

6.2 CONFIGURATION MANAGEMENT

Configuration management will be implemented throughout the Area 3A/4A project in accordance with site procedure CM-0001 (Configuration Management), or equivalent procedure, to ensure consistency between the physical configuration and technical operations of the design during construction. Engineering and construction management will identify, track, control, and grade the Area 3A/4A remedial tasks to assess work completion relative to developed baselines. Configuration management also ensures the systematic evaluation, coordination, disposition, documentation, implementation, and verification of all changes, and their impact on cost, schedule, and other project baselines (e.g., D&D operations in surrounding buildings).

As part of the configuration management, a performance grading (PG) of the systems, structures and components (SSCs) encountered during the remediation of Area 3A/4A will be completed to ensure engineering principles are commensurate with the safety and health risks. In accordance with site procedure ED-12-4015 (Performance Grading), most SSCs for the Area 3A/4A Project have been classified as PG 5, which implies little immediate danger to health and safety and minimal document control and QA. However, some systems have been classified as PG 4 due to their potential to cause a life threatening situation (e.g., buried utility lines).

6.3 CONTRACTOR PROCUREMENT AND AWARD STRATEGY

Procurement and contract awards for Area 3A/4A remedial activities will be performed through firm fixed unit price contracts. The FEMP acquisition system follows Federal Acquisition Requirements and is designed to ensure adequate and effective competition among prospective bidders/proposers. A summary of the proposed contract and procurement process is summarized below.

The excavation contract for Area 3A/4A will be combined with the construction contract for Cells 4, 5, 6, and 7 of the OSDF. This contract is referred to as Site Excavation/OSDF Phase III, and it includes the excavation of impacted material from the former Production Area (i.e., Areas 3A, 4A, 3B, 4B, 5 and 6 with 3B, 4B, 5 and 6 being options), placement of all impacted material into the OSDF, construction of the remaining OSDF cells, and capping of all cells. It is anticipated that the period of performance for this contract will be one base year with five one-year options. The FEMP intends to publicize the general requirements of the contract through the Commerce Business Daily and on the Internet. All those who respond to the advertisement will be given the opportunity to bid if they meet the minimum prequalification requirements. Those firms that fail to meet the minimum qualifications will not be solicited with a Request for Proposal (RFP). The successful bidder will be the firm to offer the best-value service to the FEMP based on cost, experience, and technical ability.

The RFP solicitation package will be prepared during the design process by the FEMP Construction Engineer, with input from Engineering, S&H, QA/QC, Procurement, and other applicable disciplines. A solicitation package is made up of several parts, including technical specifications and construction drawings, safety and health requirements, training requirements, QA/QC requirements, and the statement of work. The RFP will follow the FEMP construction format and it will require prospective bidders to provide both technical and cost proposals that address the following:

- Base Contract (March 2001 - February 2002) - Construction of Cell 4 liner, capping of Cell 1, excavation of Area 3A, the LSPs and stockpile areas, placement of all impacted material that meets the OSDF WAC, hauling above-WAC material to SP7, hauling impacted material from the OMTA to the OSDF, and processing and stockpiling materials from the OSDF Borrow Area.

- Option A (February 2002 - February 2003) - Construction of OSDF sediment basin, excavation of Areas 3A and 4A, placement of all impacted material that meets the OSDF WAC, hauling above-WAC material to SP7, hauling impacted material from the OMTA to the OSDF, and processing and stockpiling materials from the OSDF Borrow Area.

- Option B (February 2003 - February 2004) - Construction of Cell 5 liner, capping of Cell 2, excavation of Areas 4A and 3B, placement of all impacted material that meets the OSDF WAC, hauling above-WAC material to SP7, hauling impacted material from the OMTA to the OSDF, and processing and stockpiling materials from the OSDF Borrow Area.

- Option C (February 2004 - February 2005) - Construction of Cell 6 liner, capping of Cell 3, excavation of Areas 3B and 4B, placement of all impacted material that meets the OSDF WAC, hauling above-WAC material to SP7, hauling impacted material from the OMTA to the OSDF, and processing and stockpiling materials from the OSDF Borrow Area.

- Option D (February 2005 - February 2006) - Capping of Cell 4, excavation of Areas 4B and 5, placement of all impacted material that meets the OSDF WAC, hauling above-WAC material to SP7, hauling impacted material from the OMTA to the OSDF, and processing and stockpiling materials from the OSDF Borrow Area.

- Option E (February 2006 - February 2007) - Capping of Cells 5 and 6, excavation of Areas 5 and 6, placement of all impacted material that meets the OSDF WAC, hauling above-WAC material to SP7, and hauling impacted material from the OMTA to the OSDF.

After the RFP is issued, there will be a pre-bid meeting. Submittal of sealed proposals will be required at a specified place, date, and time for prequalified contractors choosing to submit a proposal. The technical proposals will be reviewed by the selection evaluation board (SEB) for responses to the criteria and requirements contained in the RFP. Cost proposals will be evaluated against competing contractors and the FEMP cost estimate. The SEB will then perform an evaluation and select the contractor that provides the best value to the DOE. A pre-award survey will follow to determine if the proposer is both responsive and responsible, after which the FEMP Contract Administrator recommends and makes the final award. The RFP solicitation package dictates how many days after award, or Notice to Proceed, that contractor performance begins and ends.

6.3.1 Equipment and Material Procurement

The standard support equipment and work materials needed for the Area 3A/4A project will be procured by the construction contractor. Procured equipment and material will meet the design specification requirements in the submittal schedule included in the contract, pending approval. Vendor data will be submitted to the project team management (contractor and FEMP CM) to review and ensure design and specification requirements are met. Responsibility for maintenance and repair of procured equipment and material lies with the contractor until final acceptance and turnover.

6.4 CONTRACTOR MANAGEMENT

The FEMP prime contractor is responsible for implementing this remedial action project in accordance with DOE direction. The prime contractor will directly oversee the construction contractor performing remediation work and will be responsible for construction management during the work. Construction management includes, but is not limited to, conducting status meetings, daily work surveillance and inspections, and daily safety tours and oversight of the project. The FEMP CM will ensure that safety concerns are brought to the attention of the FEMP S&H Officer and the responsible contractor who will correct these concerns.

6.4.1 Status Meetings

Upon contract award, the FEMP CM will conduct regularly scheduled status meetings with the APM, Engineering, Health and Safety, QA, construction contractor representative, and others, as warranted. The meetings will address action item status, project progress, planning, schedule status, safety items, quality, environmental protection, and problem resolution.

The construction contractor will be required to submit a daily report (or log) to the CM, covering the previous day's work status and identifying any safety or quality problems encountered. This report and the CM's daily report will be maintained in the FEMP project file.

6.4.2 Surveillance and Inspection

The construction contractor has first line responsibility to inspect work and correct any deficiencies. FEMP and the contractor field representative will conduct inspections and surveillances to ensure the design is being properly implemented and contract requirements are being satisfied. QC inspections will be in accordance with the Construction QA Plan and design requirements. If a deficiency is noted by the FEMP or the construction contractor, the construction contractor will implement the necessary

corrective action(s) as soon as possible. Failure of the contractor to correct a deficiency in a satisfactory manner and reasonable timeframe will constitute cause to either issue a cure order/notice or to stop work.

6.4.3 Safety and Health Oversight

A S&H representative is assigned to the Area 3A/4A project. While all personnel are responsible for following all safety requirements identified in the contractor's Safe Work Plans, as appropriate, the Area 3A/4A Project Team personnel will perform periodic surveillance of the Area 3A/4A remedial action project to monitor compliance. Although all project personnel have stop-work authority for imminent safety hazards, the S&H representative will have stop-work authority (in the event of threat to worker and/or public safety) until the proper corrective follow-up actions are taken. The health and safety representative will be the single point of contact for all safety, industrial hygiene, and fire protection issues. The Radiological Engineer is responsible for radiological concerns. All health and safety issues and concerns will be directed to the CM for resolution/implementation.

6.4.4 Radiological Monitoring and Oversight

To ensure occupational radiological compliance, FEMP RCTs will be assigned to the Area 3A/4A project. The assigned RCTs will perform the necessary radiological monitoring and oversight to provide documentation that demonstrates project compliance with regulatory occupational exposure control requirements. Part 8 of the contract documents will be the basis for the required project occupational radiological monitoring and it will identify action levels to ensure personnel radiological safety, as well as industrial/occupational safety.

6.5 IMPACTED MATERIAL MANAGEMENT

Impacted materials generated during Area 3A/4A remediation will be managed under the FEMP Waste Disposition Program, which is implemented as an integrated effort by WAO, waste programs, and construction organizations. Roles and responsibilities for each of these organizations are established in procedure EW-1022, On Site Tracking and Manifesting of Impacted Material.

Programmatic controls begin with waste planning during the predesign phase, at which time a volume estimate for each waste type (e.g., exceeds OSDF WAC, special materials, RCRA, etc.) is prepared, characterization methods are specified, and tentative interim (if required) and final means of disposal

are identified. During project execution, waste streams are segregated by disposition categories and managed in the context of the following characterization, storage, and disposal options:

- Bulk Waste Streams: On-Site Disposition
  - Physical matrix allows bulk management
  - Meets the OSDF chemical, radiological, and physical WAC
- Bulk Waste Streams: Off-site Disposition
  - Physical matrix allows bulk management
  - Exceeds the OSDF radionuclide WAC (rail transport)
  - Exceeds the OSDF chemical WAC (truck transport)
- Containerized Waste Streams: Off-site Disposition
  - Exceeds OSDF chemical, radiological or physical WAC
  - Cannot be processed to meet OSDF WAC
- Containerized Waste Streams: On-Site Disposition
  - Physical matrix or nature of waste does not allow bulk management
  - Requires processing in a controlled area to meet OSDF WAC
  - Requires confirmatory sampling for OSDF WAC
  - Special Material that meets the OSDF WAC, but requires special handling for health and safety concerns.

Bulk waste stream information will be managed in the Integrated Information Management Systems (IIMS) database. Anticipated impacted material segregation protocols are listed technical specification sections 02205 and 02216. The relationship between IIMS and other site databases are illustrated on Figure 3-9 in the SEP. IIMS is designed to accommodate fast track, bulk waste stream characterization, OSDF WAC attainment demonstration, and OSDF manifesting by using site characterization data. It interfaces with the SED through the State of Ohio NAD 83 coordinate system to track historical RI/FS and newly generated data with the excavated material moved from the source location. It also interfaces with the Sitewide Waste Information Forecasting and Tracking System (SWIFTS) to allow electronic transfer of bulk waste inventory to the container management system, when containerization is required.

Field information for input to IIMS will be collected on FTLs and OSDF Manifests, with information subsequently entered into IIMS. Key data elements that are recorded on these forms are listed below:

- Project number and name
- Source MTL
- Interim or final disposition MTL (FTL only)
- Estimated volume of material
- Material matrix or profile number
- Generation date
- Signature.

Copies of FTLs and OSDF Manifests are kept in the project files.

MTLs are defined electronically in IIMS using the State of Ohio NAD 83 coordinate system. Prior to project start-up, SED data are reviewed and contiguous areas with like data are identified as unique MTLs. MTLs are identified on project drawings and in the field. When data from an FTL log is entered to IIMS, SED data for the specified MTL is tied to excavated soil volumes that have been moved to either an interim (pre-remediation area, stockpile, or container) or final (OSDF disposal) location. IIMS maintains transaction histories to provide cumulative analytical data for soil volumes that are moved more than one time. The main types of MTLs include WAC attainment areas, stockpiles and the OSDF.

A root profile is assigned to each of the five primary waste streams designated for OSDF disposal:

Profile # 91,000	OSDF Category 1	Soil and soil-like material
Profile # 92,000	OSDF Category 2	Debris for en masse placement
Profile # 93,000	OSDF Category 3	Debris for individual placement
Profile # 94,000	OSDF Category 4	High organic content (humus and vegetation)
Profile # 95,000	OSDF Category 5	Friable asbestos-containing material, sludges, and materials requiring case-by-case approval

The waste profile number facilitates electronic information retrieval from IIMS. Numeric extensions (e.g., 91,001...95,999) are used for further waste stream delineation on an as-needed basis. The second digit of the profile number identifies the OSDF category. All wastes manifested to the OSDF will be covered under a waste stream profile. The manifest number is used to retrieve characterization information from IIMS, if required, to support a determination that the waste meets WAC.

6.6 CONTINGENCY MANAGEMENT

Conditions that are unexpected cannot be managed through established excavation guidelines, and they are not accommodated in the detailed remedial design. These conditions will be dealt with according to contingency management protocols and plans set forth in Appendix F of the SEP. The contingencies are categorized as follows:

- Unearthing of materials that require special handling (e.g., asbestos)
- Encountering contamination or soil conditions that may pose a risk to human health or the environment if standard excavation practices are used (e.g., process residues), or which are significantly different than expected, or which may affect other operations
- Discovering unexpected utilities or cultural/historic resources.

6.6.1 Materials Which Require Special Handling

Special materials, and the protocol for their handling, are given in Appendix F of the SEP and procedure EW-1024. The special materials that are likely to be encountered during Area 3A/4A excavation activities include asbestos-containing materials (e.g., asbestos-impregnated bituminous wrapped gas pipeline and transite conduit), acid brick, drums, and piping. Some special materials may meet OSDF WAC, while others will require off-site shipment. The SDFP and WAO will provide assistance to the FEMP CM and construction contractor for field decisions related to the management and disposition of special materials. If applicable, WAO will arrange for movement of materials to the appropriate storage and handling areas for characterization, treatment evaluation, and/or final disposition arrangements. Additional details are provided in technical specification Sections 02205 and 02216.

6.6.2 Unexpected Contamination or Soil Conditions

In accordance with the SEP, the FEMP design change process will be used to effect design changes in cases where conditions and design changes do not differ significantly from the approved IRDP. If conditions are significantly different than the approved IRDP design, one of the following options will be exercised:

- Revise the IRDP design within SEP guidelines, submit a letter to regulatory agencies describing the design revision, and proceed with excavation

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- Stop work at the boundary of the problem condition, and address the continued excavation in a subsequent IRDP

- Discuss optional approaches with the regulatory agencies to determine if the area must be addressed as an exception to SEP guidelines.

Table 6-1 addresses the specific situations relative to discovery of unknown underground utilities and unexpected above WAC material.

6.6.3 Unexpected Discovery of Cultural or Historic Resources

If cultural resources are discovered, the contingency plan described in Appendix F of the SEP and procedure EP-0003 will be implemented. The construction personnel will be trained to the plan and must recognize a potential cultural resource when encountered. Personnel will ensure safe handling of the resources by isolating the affected area until an on-call specialty contractor can perform any necessary data recovery. The specialty contractor is required to be on site within 4 hours. DOE will consult with the appropriate parties (e.g., OHPO, pursuant to 36 CFR Part 800) to determine a course of action that will avoid and minimize any adverse impacts to the extent practical. If human remains, associated funerary objects, unassociated funerary objects, sacred objects, or objects of cultural patrimony are discovered, the appropriate Native American tribe(s) will be consulted. During the consultation, DOE will cease activity in the immediate area and make a reasonable attempt to secure the remains and/or objects. Contractor work stoppages in the immediate area could last a minimum of 30 days.

6.7 DATA AND RECORDS MANAGEMENT

Management of data and records for Area 3A/4A remediation will be in general accord with the strategy and protocols as described in Section 3.6 of the SEP and the quality assurance protocols for data management activities described in Appendix E of the SEP. The primary documents that will be generated during Area 3A/4A remediation, and the files in which they will be maintained, are identified in Table 6-2.

6.8 QA/QC AND REGULATORY AUDIT

Area 3A/4A project activities will be assessed to verify compliance to program requirements specified in this Implementation Plan. The assessment will include audits, surveillances and inspections commensurate to the scope and level of verification needed for the field tasks, contract execution, and programmatic implementation of driver documents. Quality assurance programmatic drivers are the

DOE-approved FEMP QA Plan (RM-0012), the EPA-approved SCQ, and Appendix E of the SEP Quality Assurance Project Plan (QAPP).

The applicable quality requirements will be specified in all project-planning documents. These documents include Data Quality Objectives (DQOs) and PSPs that serve as planning and field instructions for environmental real-time and physical sampling activities. Additionally, the engineering design packages will include the necessary QC to assure conformance to design specifications. Part 9 of the contract documents describes appropriate QA requirements. A Construction Quality Assurance Plan will be submitted by the construction contractor and approved by the FEMP prior to initiating work. Other documents that require QA review and concurrence are procedures, purchase requisitions, and PEPs.

The SDFP QA lead will coordinate project QA/QC oversight through audits, surveillances, inspections, vendor surveys, and other internal assessments needed to verify quality issues associated with the IRDP activities. External assessments from the FEMP will also be coordinated with the SDFP QA lead. The contractor will be responsible for documenting field inspections, nonconformance identification, and corrective actions in a timely and controlled manner.

The DOE-FEMP, EPA, and OEPA have access to IRDP field activities, planning documents, and databases as necessary to assess and verify IRDP implementation. The OEPA has FEMP oversight responsibility for NPDES, RCRA, dust and noise control, ground water monitoring, air and water pathways, and related split-sampling programs.

All FEMP procurement requisitions are reviewed and signed by the SDFP QA representative. The Area 3A/4A QA representative will identify material receipt requirements and the frequency of vendor source inspections, as necessary. Nonconforming items will be tagged and stored as unacceptable until corrective measures are determined.

6.9 INTEGRATION OF AREA 3A/4A PROJECT WITH OTHER FEMP ACTIVITIES

Area 3A/4A remediation activities are planned and conducted in cooperation with other FEMP remediation projects and activities to ensure effective and efficient attainment of project-specific and sitewide remediation objectives. The integration with FEMP support groups is established through functional support representatives that are integral members of the Area 3A/4A Project team

(e.g., environmental compliance, natural and cultural resource management, sampling and analysis, QA, construction management). As noted in Section 6.1, the APM and CM (during construction) are responsible for ensuring that coordination is established and maintained with other projects and support groups, and the Project and Construction Engineers are responsible for implementing this coordination on a day-to-day basis. Key interfaces with organizations not directly represented on the Area 3A/4A Project Team include the following:

- Sitewide Planning and Scheduling
  - Integrating the Area 3A/4A plan and schedule with the FEMP master schedule
- OSDF Project
  - Planning and scheduling activities to ensure timely placement of Area 3A/4A impacted material into the OSDF in accordance with the Impacted Materials Placement Plan and other pertinent requirements
- Demolition Projects
  - Coordinating above-grade demolition of Area 3A/4A components with at- and below-grade remediation of these facilities by SDFP under this IP
- Aquifer Restoration and Wastewater Projects
  - Treatment of storm water and perched water collected and managed from the excavation through Phase I or Phase II of the AWWT system
  - Assessing potential adverse effects on the GMA from deep excavations, if appropriate, and designing and implementing measures to ensure protectiveness
- Site Utilities
  - Coordinating installation of electrical power supply and communications lines to Area 3A/4A Support Area and Radiological Control Point Facility
  - Coordinating as necessary to remove, replace, or relocate other utilities
- WAO
  - WAO, an FEMP organization independent of both the soil- and debris-generating projects and the receiving OSDF project, has programmatic responsibility for the OSDF WAC attainment compliance assurance program presented in the WAC Attainment Plan (DOE 1998f). WAO representatives will provide oversight of field activities from the origin of excavated impacted material to OSDF receipt.

- FEMP Real Estate Office
  - Coordinating to obtain cooperation of Cincinnati Gas and Electric on matters potentially affecting their utility facilities or areas within easements for these facilities
  - Coordinating to secure agreement for off-property remedial activities, if necessary (e.g., off-property impacted area sampling and excavation).

6.10 SCHEDULE

In accordance with the ACA, this Implementation Plan identifies Area 3A/4A project-specific milestones for remedial actions and certification activities (Table 6-3). These milestones are subject to enforceable deadlines by EPA.

Remediation of Area 3A is planned to begin in 2001 and be completed in 2003. The remediation of Area 4A is scheduled to extend from 2002 through 2004. The proposed schedule is based on current funding assumptions and the overall site remediation schedule.

TABLE 6-1
CONTINGENCY PLANS FOR RECOGNIZED BUT UNEXPECTED CONDITIONS

Condition	Contingency Plan
Discovery of unexpected underground utilities	Stop work in the area. Coordinate with Site Utilities and, if appropriate, non-DOE utility owner to determine utility location information, jurisdiction, operational status, necessary safe shutdown requirements (e.g., electrical de-energizing, gas pipeline capping and purging), and remediation options. Revise the design within SEP guidelines and protocols described in this IP for known utilities. Submit a letter to regulatory agencies describing the design revision, and proceed with excavation.
Discovery of above-WAC material outside of areas designated for excavation in the IRDP	Prepare options for remediation. If the design would conform to SEP guidelines, submit letter describing investigation plans, design changes, and schedule implications to the regulatory agencies, complete design, and proceed. Otherwise, discuss optional approaches with the regulatory agencies to determine if the area must be addressed as an exception to guidelines.

TABLE 6-2
AREA 3A/4A PRIMARY RECORDS AND ASSOCIATED FILES

Document	File
Construction drawings and associated field logs	IIMS GIS Component Engineering/Construction Document Control
Miscellaneous Field Logs	Engineering/Construction Document Control
Manifest-type Documents	IIMS SWIFTS Component Engineering/Construction Document Control
Containerized Impacted Material Documents	IIMS SWIFTS Component Site Operating Record
Analytical Data and Associated Field Logs	IIMS SED Component Engineering/Construction Document Control

IIMS - Integrated Information Management System
GIS - Geographic Information System
SWIFTS - Sitewide Information Forecasting and Tracking System
SED - Sitewide Environmental Database

TABLE 6-3
AREA 3A/4A REMEDIAL ACTION AND CERTIFICATION SCHEDULE

RA Phase/ Contract	Issue RFP	Complete CFC Package	Award Contract	Begin Construction	Complete Construction	Submit CDL to Regulators	Submit Certification Report to Regulators
Area 3A	4-1-00	11-1-00	12-1-00	6-1-01	12-31-02	12-31-03	12-31-04
Area 4A	4-1-00	11-1-00	12-1-00	4-1-02	12-31-03	12-31-04	12-31-05

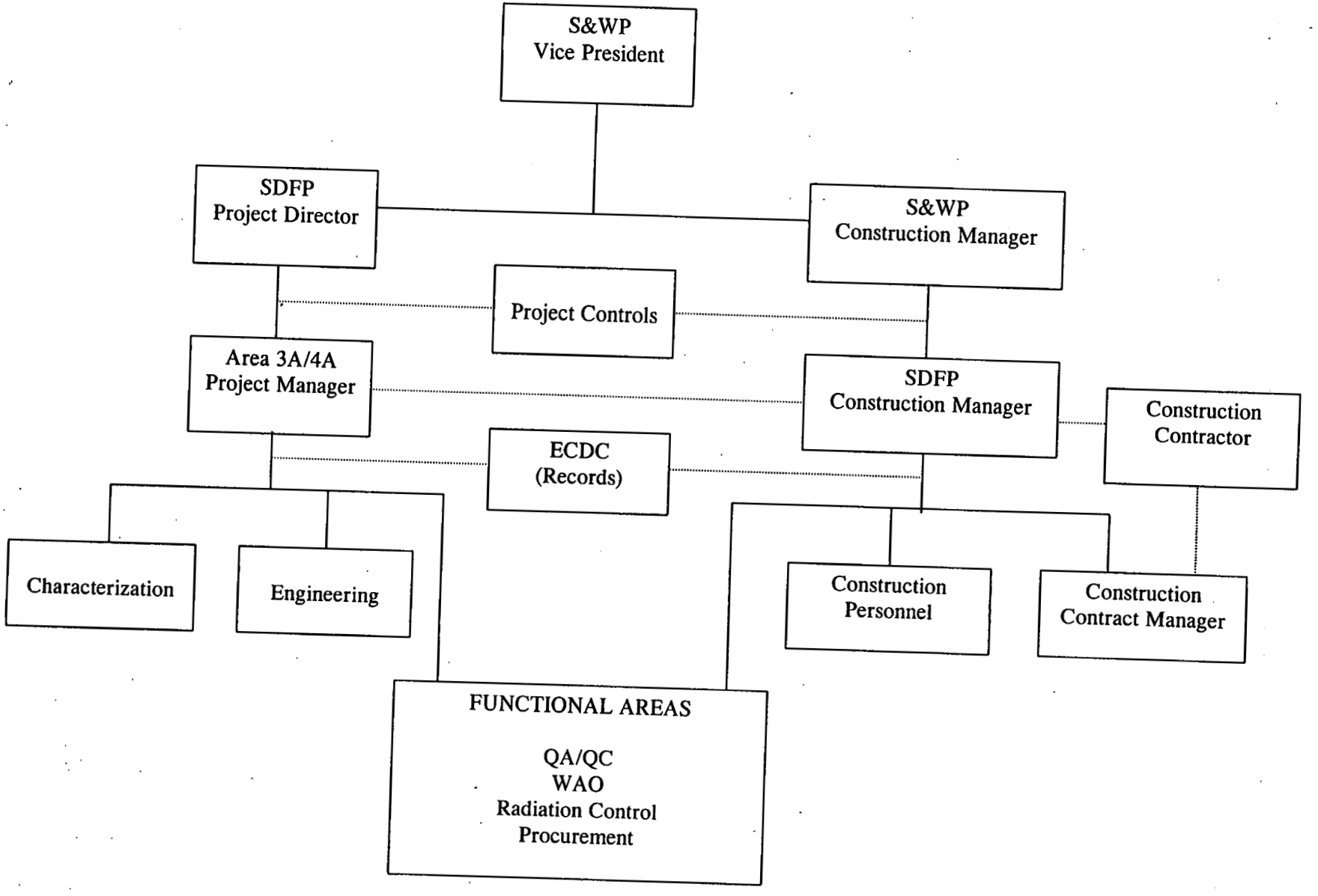

FIGURE 6-1 ORGANIZATION CHART FOR AREA 3A/4A PROJECT

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Appendix A

APPENDIX A

DESIGN CRITERIA PACKAGE

DESIGN CRITERIA PACKAGE FOR THE AT- AND BELOW-GRADE REMEDIATION OF THE FORMER PLANT AREA

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

FLUOR FERNALD
CONTRACT NO. 98PC001323
TASK ORDER L-008

LOCKWOOD GREENE TECHNOLOGIES, INC.
OAK RIDGE, TENNESSEE

LGT PROJECT NO. 007340.01

31 MARCH 2000

20201-DC-0001
REVISION 2

DESIGN CRITERIA PACKAGE FOR THE AT- AND BELOW-GRADE REMEDIATION OF THE FORMER PLANT AREA

20201-DC-0001
REVISION 2

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3/29/00

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REVISION SUMMARY

Revision	Date	Description of Revision
Rev. 0	10 March 1999	Initial issuance of the Design Criteria Package for the At- and Below-Grade Remediation of the Former Plant Area
Rev. 1	26 January 2000	Refined Approvals page Revised Figure 5-1 Revised design storm and water release requirements for surface water management Clarified perched water management narrative
Rev. 2	31 March 2000	Added Revision Summary page Noted characterization criteria for 3-D computer excavation model Renamed Figure 5-1 Added Figure 5-2 Clarified applicability of ODNR requirements for surface water management Refined Options 1 and 2 for perched water management Clarified characterization of stockpiles Refined intended transportation routes Revised interim restoration criteria

DESIGN CRITERIA PACKAGE FOR THE AT- AND BELOW-GRADE REMEDIATION OF THE FORMER PLANT AREA

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LIST OF ACRONYMS AND ABBREVIATIONS

A/E	Architect/Engineer
ALARA	as low as reasonably achievable
ARAR	applicable or relevant and appropriate requirements
ASCE	American Society of Civil Engineers
ASCOC	area-specific constituent of concern
AWWT	Advanced Waste Water Treatment (facility)
BAT	best available technology
BSL	Biodenitrification Sludge Lagoon
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	*Code of Federal Regulations*
COC	constituents of concern
DAC	derived air concentration
DCP	Design Criteria Package
DOE	U S. Department of Energy
EPA	U. S. Environmental Protection Agency
FEMP	Fernald Environmental Management Project
FRL	final remediation level
GMA	Great Miami Aquifer
gpm	gallons per minute
HWMU	hazardous waste management unit
LSP	Lime Sludge Pond
NAD	North American Datum
NOAA	National Oceanic and Atmospheric Administration
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
OEPA	Ohio Environmental Protection Agency
OSDF	On-Site Disposal Facility
OU	Operable Unit
PPE	personal protective equipment
ppm	parts per million
RCRA	Resource Conservation and Recovery Act of 1976
SCQ	Sitewide CERCLA Quality Assurance Project Plan
SCS	Soil Conservation Service
SEP	Sitewide Excavation Plan
SWRB	Storm Water Retention Basin
TBC	to be considered
USGS	U.S. Geologic Survey
WAC	waste acceptance criteria
WMF	Water Management Facility
WPM	Waste Programs Management

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DESIGN CRITERIA PACKAGE FOR THE AT- AND BELOW-GRADE REMEDIATION OF THE FORMER PLANT AREA

1.0 Scope

The purpose of this Design Criteria Package (DCP) is to assemble the specific criteria and assumptions for the at- and below-grade remediation of the Former Plant Area of the Fernald Environmental Management Project (FEMP). The Former Plant Area is comprised of the Former Production Area (Areas 3A, 3B, 4A, and 4B) and the Administration Area (part of Area 5 north of the main parking lot). Comprehensive development of design criteria relating specifically to the project requirements is conducive to orderly and accurate development of preliminary and definitive designs.

The remediation objective for the Former Plant Area is to excavate and remove impacted soil, perched groundwater, at- and below-grade man-made structures (such as pavements, building foundations, basements, debris, and underground utilities, with the possible exception of pile foundations driven below contaminated depths), residual above-grade man-made structures (such as utility poles, fire hydrants, equipment foundations, and bollards), and soil-like containerized materials remaining after Operable Unit (OU) 3 demolition activities. Impacted material will be transported for placement in the On-Site Disposal Facility (OSDF), temporarily staged prior to bulk shipment off site, or containerized for on-site or off-site treatment, depending on attainment of OSDF waste acceptance criteria (WAC). Remediation will be sequenced and integrated with other projects near the subject remediation area. Project documents to be prepared subsequent to this DCP will be written with the goal of achieving this remediation objective.

Also included in the scope of this DCP is the design of support facilities such as personnel and equipment decontamination areas, construction support areas, packaging, material stockpiles, surface water management, erosion and sediment control facilities, and all other facilities (including utilities) necessary to excavate and handle impacted material with the intent of mitigating effects to human health and the environment.

2.0 Comprehensive Design Requirements

The overall remediation objective for the Former Plant Area is to excavate, remove, and dispose all impacted material. Based upon the constituents of concern (COCs), the levels of contamination, and the ability to meet the OSDF WAC, impacted materials will be handled for placement at OSDF, temporarily staged before placement at OSDF, shipped to an appropriate off-site disposal facility, or containerized for on-site or off-site treatment. Impacted material includes soil, man-made structures, and other material with contaminant concentrations above the final remediation levels (FRLs). This presents the comprehensive design requirements necessary to achieve technical, health and safety, and environmental objectives. Project specific requirements are presented in Section 5.0 of this DCP.

2.1 Technical Requirements

The Architect/Engineer (A/E) subcontractor will prepare technical Title I and Title II design documents for the remediation of the Former Plant Area. These documents will include construction drawings, specifications, and other documents that clearly describe the requirements and general procedures of the proposed remediation. Fluor Fernald will provide the A/E with all available reports and plans that summarize previous investigations of the area (e.g., environmental analyses and geotechnical data). The construction contractor will use these design documents to implement the excavation activities after U. S. Department of Energy (DOE), U. S. Environmental Protection Agency (EPA), and Ohio Environmental Protection Agency (OEPA) approval.

The design will address the following technical requirements:

- Excavation Criteria and Objectives - Excavation criteria and objectives to remediate impacted materials will be developed and presented in the design documents. The criteria in the design documents will be performance-oriented. The construction contractor will develop specific excavation methodologies. The design drawings must clearly show the estimated limit of excavation based on analytical and geotechnical data, environmental and stratigraphic modeling, and other appropriate information.
- Excavation Requirements - Impacted material and at- and below-grade structures will be excavated as efficiently as possible. As stated above, the design drawings will clearly show the estimated limit of excavation. Further, perched groundwater zones encountered during excavation will be excavated with the contaminated soil. The design documents will present a general methodology to excavate impacted material, as well as procedures to minimize potential impacts to the underlying Great Miami Aquifer (GMA) during excavation.
- Flexibility - The design effort will prepare documents that can adjust to the actual field conditions encountered during remediation (i.e. contingency will be built into the design). Further, the design will be developed as a phased excavation approach with contingency noted to ensure that cost-saving measures, enhanced excavation techniques, and identified problems are incorporated.
- Consistent with Final Land Use – The primary focus of the restoration activities will be to establish a system of wetland and open water habitats with supporting woodlands and grasslands to support a diverse natural system. The design plans will be developed accordingly.
- Contingency Plans - Contingency plans for encountering unexpected material will be developed during design activities. Also, contingency plans will be developed for adverse weather conditions, seasonal shutdowns, as well as due regard for existing and/or ongoing remedial operations.

2.2 Safety and Health Requirements

The design will incorporate engineered safety controls/measures specific to the work scope to promote the safe execution of the project.

Radiologically contaminated soil and other material can become airborne during excavation and material transportation in contaminated areas. Dust suppression methods that implement the best available technology (BAT) will be used to control airborne emissions in accordance with FEMP procedure RM-0047, Fugitive Dust Control Requirements. Monitoring for airborne radioactive particles will be performed by Fluor Fernald during excavation activities.

Title 10 *Code of Federal Regulations* (CFR) 835.1002 requires that airborne particles be controlled and inhalation of such material by workers be kept to levels as low as reasonably achievable (ALARA). Therefore, activities that increase worker exposure, such as eating, drinking, and smoking, will not be permitted in any radiologically controlled work area. Requirements for respirators will be determined on a task-specific basis, considering the environmental conditions.

All applicable worker safety and health requirements will apply to this project. This includes the requirement that all site workers must have Hazardous Waste Operations and Emergency Response training in accordance with 29 CFR 1910.120. Exposure rate goals for radiological workers are identified in Section 5.0 of this DCP.

2.3 Environmental Requirements

Remediation of the Former Plant Area is part of the FEMP sitewide environmental remediation. Therefore, the remedial design will address protection of the environment during construction and improvement of the environment at the completion of remedial activities.

Environmental considerations include using existing data to develop a computer model of the estimated limit of excavation; evaluating and analyzing the site geology, perched groundwater, and surface water flow characteristics; and incorporating regulatory requirements into the design.

Collection and transfer of perched groundwater and subsequent treatment of that water at the Advanced Waste Water Treatment (AWWT) facility will be addressed during design. Similar technical approaches to stormwater run-on/runoff and erosion and sediment control will be addressed in the design.

2.4 Utility Requirements

Consideration will be given to the utilities required to support the FEMP remedial actions. The design documents will address utility relocation and/or decommissioning. Energy source utilities entering or exiting the demolition area will be identified during design. Utility services required during remediation activities will be included in the design. Precautions and reporting requirements for potentially unidentified utilities will be included in the design documents.

3.0 ARARs and TBCs

The remediation design of the Former Plant Area will conform to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) § 121(d)(2), which requires that remedial actions protect human health and the environment while complying with applicable or relevant and appropriate requirements (ARARs). To be considered (TBC) criteria will also be evaluated as part of the design activities. This includes nonpromulgated criteria, advisories, and guidance issued by federal and state governments that may or may not be legally binding.

Pertinent ARARs and TBCs for the sitewide soil remediation effort are included in the Sitewide Excavation Plan (SEP). These ARARs and TBCs for at- and below-grade remediation of the Former Plant Area have been reissued and are appended to this document (Tables A-1 and A-2 in Appendix A).

4.0 Regulations, Codes, Standards, Orders, Manuals, and Guides

This document contains references to the general regulations, codes, standards, orders, manuals, and guides that apply to Title I and Title II design work. Requirements listed in the latest edition of each of the following documents will apply, unless otherwise noted.

American Society of Civil Engineers (ASCE)

- ASCE 77 — Design and Construction of Urban Stormwater Management Systems

Code of Federal Regulations (CFR)

- 10 CFR 835 — Occupational Radiation Protection
- 10 CFR 1022 — Compliance with Floodplains/Wetlands Environmental Review Requirements
- 29 CFR 1910 — Occupational Safety and Health Standards
- 29 CFR 1926 — Safety and Health Regulations for Construction
- 40 CFR 122 — EPA Administered Permit Program: The National Pollutant Discharge Elimination System (NPDES)
- 40 CFR 125 — Criteria and Standards for the NPDES
- 40 CFR 192 — Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings
- 40 CFR 240 — Guidelines for the Thermal Processing of Solid Wastes
- 40 CFR 256 — Guidelines for Development and Implementation of State Solid Waste Management Plans
- 40 CFR 260 — Hazardous Waste Management System: General
- 40 CFR 261 — Identification and Listing of Hazardous Wastes
- 40 CFR 262 — Standards Applicable to Generators of Hazardous Wastes
- 40 CFR 263 — Standards Applicable to Transporters of Hazardous Wastes

Code of Federal Regulations (CFR) (continued)

- 40 CFR 264 — Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 40 CFR 265 — Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

Fluor Fernald Procedures

- ED-12-2007 — ALARA Review
- ED-12-3001 — Engineering Design Initiation
- ED-12-3002 — Collection, Verification, and Use of Engineering Data
- ED-12-4004 — Design Package
- ED-12-4005 — Calculation Preparation and Review Process
- ED-12-4006 — Specifications Preparation and Issue
- ED-12-4007 — Drawing Preparation and Issue
- FD-1000 — Sitewide CERCLA Quality Assurance Project Plan (SCQ)
- NS-0003 — Safety Assessment Hazard Screening and Classification
- RM-0012 — Quality Assurance Program
- RM-0039 — Storm Water Pollution Prevention Plan
- RM-0047 — Fugitive Dust Control Requirements

National Oceanic and Atmospheric Administration (NOAA)

- NOAA/TP40 — Rainfall Frequency Atlas of the United States for Durations from 30 Minutes to 24 Hours and Return Periods from One to 100 Years

Ohio Administrative Code (OAC)

- OAC 4101 — Ohio Basic Building Code and Related Codes

Ohio Department of Natural Resources (ODNR)

- ODNR — Ohio's Standards for Stormwater Management Land Development and Urban Stream Protection, Second Edition, 1996

Ohio Department of Transportation (ODOT)

- ODOT — Construction and Material Specifications

Ohio Environmental Protection Agency (OEPA)

- OEPA — Stormwater Pollution Prevention Plan Checklist

Soil Conservation Service (SCS), U. S. Department of Agriculture

- TR55 — Urban Hydrology for Small Watersheds

U. S. Department of Energy (DOE)

- DOE 5480.19 Conduct of Operations
- DOE 5480.23 Nuclear Safety Analysis Reports
- DOE-STD-1021 Natural Phenomena Hazards Performance Categorization Guidelines for Structures, Systems, and Components

U.S. Geologic Survey (USGS)

- 1983 NAD Ohio State Plane Coordinate System South, Zone 3402

The following are the primary reference documents that apply to the design of the at- and below-grade remediation of the Former Plant Area. Copies of these documents will be readily available to design personnel.

- Sitewide Excavation Plan, 2500-WP-0028, Revision 0, July 1998
- National Pollutant Discharge Elimination System Permit, Ohio EPA Permit Number 1IO00004*ED, September 27, 1995
- Functional Requirements Document for the Former Plant Area, 20300-PL-0003, Revision 0, December 1998
- Advanced Conceptual Design, 20201-PL-0002, Revision 0, 24 May 1999

The following are the secondary reference documents that apply to the design of the at- or below-grade remediation of the Former Plant Area. Copies of these documents will be readily available to design personnel.

- Geotechnical Sampling and Testing Plan of the Former Plant Area, Revision 0, April 1997
- Geotechnical Engineering Report for Project Order 177, A-E Support Services for Geotechnical Investigation of the Former Plant Area, 20800-RP-0001, Revision C, March 1998
- Impacted Materials Placement Plan On-Site Disposal Facility, 20100-PL-007, Revision 0, January 1998
- Waste Acceptance Criteria Attainment Plan for the On-Site Disposal Facility, 20100-PL-0014, Revision 0, June 1998
- Natural Resource Impact Assessment and Natural Resource Restoration Plan, 20300-RP-0002, Revision D, 212E-PL-0003, Revision E, July 1998
- Strategic Utilities Plan Summary, Final, 1996
- 1997 Integrated Site Environmental Report, 51350-RP-0001, June 1998

The following are tertiary reference documents that apply to the design of the at- and below-grade remediation of the Former Plant Area. Copies of these documents will be available to the design personnel.

- OU3 Remedial Investigation and Feasibility Study Report (4 volumes), February 1996
- OU3 Record of Decision for Final Remedial Actions, August 1996

- OU5 Remedial Investigation Report (18 volumes), March 1995
- OU5 Feasibility Study Report (3 volumes), June 1995
- OU5 Record of Decision for Final Remedial Actions, January 1996
- Utility Design Reconstitution (Parsons PO 141)
- WPRAP Remediation System Design, 10100 (Parsons PO 145)
- Rerouted North Entrance Road, 20120 (Parsons PO 145/158)
- Site Preparation and Underground Utilities, 40310 (Parsons PO 146)
- Southern Waste Units, 20400 (Parsons PO 165)
- Paddys Run Trestle Upgrade, 10200 (Parsons PO 167, includes all OU1 Railroad Upgrades and Additions)
- Closeout Package Report for Area 3 Remedial Design Services, 20810-RP-0003, Revision 0, November 1997 (Parsons PO 180)
- On-Site Disposal Facility Design, 20100
- Borrow Source Evaluation for Fill of the Deep Area 3 Excavations Located Near the On-Site Disposal Facility, 20810-RP-0001, August 1997

5.0 Project Specific Requirements

This section addresses the primary and general deliverable requirements for Title I and Title II design as applied in Fluor Fernald engineering procedures. This DCP will be used to govern both Title I and Title II design efforts for the at- and below-grade remediation of the Former Plant Area.

Title I design generally includes, but is not limited to the following:

- Definition of project design criteria to meet project specific ARARs/TBCs and establishment of quality levels for systems, structures, and components
- Expansion of conceptual design drawings in greater detail or development of new drawings based on new design concepts (including locating and sizing structures, systems, and components)
- Development of an outline of the technical specifications
- Development of conceptual-level technical approaches to address health, safety, and environmental protection requirements
- Development of preliminary cost estimates

Title II design typically advances the preliminary design developed in Title I engineering and planning to a level suitable for construction. Title II design generally includes the following:

- Preparation of final working drawings, specifications and implementation plans
- Development of bidding documents
- Finalization of cost estimates
- Project coordination of all parties involved with the project
- Development of refined construction and procurement schedules

The Title I and Title II design documents will present information necessary to perform remediation activities. These documents will present the remediation plan and excavation sequencing, while allowing flexibility to make adjustments in the field based on actual conditions encountered. The documents will represent a practical approach based on lessons learned from other projects underway on site.

The documents will present specific functional requirements in the following areas:

- Excavation Requirements
- Sequencing Within and Between Remediation Areas 3A, 3B, 4A, 4B, and 5
- Impacted Material Management
- Surface Water Management
- Perched Water Management
- Equipment and Personnel Decontamination
- Environmental Monitoring and Sampling
- Certification
- Predesign Sampling Requirements to Support Design
- Sampling Requirements for Containerized Soil-Like Materials
- Transportation
- Interim Restoration

5.1 Excavation Requirements

Excavation will be performed to remove impacted material in the Former Plant Area. Excavation strategies have been set forth in the SEP. The slope limits for excavation will be no steeper than those recommended by Parsons in the Geotechnical Engineering Report for Project Order 177, A-E Support Services for Geotechnical Investigation of the Former Plant Area (20800-RP-0001). The maximum 2H:1V slope limit that will allow safe access for certification equipment will only govern slope design/implementation when required for final certification or scanning for removal of above-WAC material. The design documents will be developed based on a 3-D computer model of the extent of excavation. The 3-D computer model included in the Advanced Conceptual Design (20201-PL-0002) will be modified and updated during Title I design to support the design effort. Two FRLs for total uranium - 20 mg/kg within high-leachability areas (see Figure 5-1) and 82 mg/kg outside high-leachability areas will be used to develop the 3-D computer model for extent of excavation in accordance with the SEP. An additional ALARA goal of 50 mg/kg for total uranium will be reached if soil with uranium concentrations of 50 mg/kg or greater is within one lift thickness (3 $\pm$ 1 foot) of an area of soil exceeding the 82 mg/kg uranium FRL. The following types of impacted material will be addressed in the design:

- Soil with contaminant concentration levels above OSDF WAC (WAC soil contaminants are listed in the SEP)
- Soil with area-specific constituents of concern (ASCOCs) above the FRL
- Soil with the potential to exhibit Resource Conservation and Recovery Act (RCRA) toxicity characteristics (as identified in the SEP)

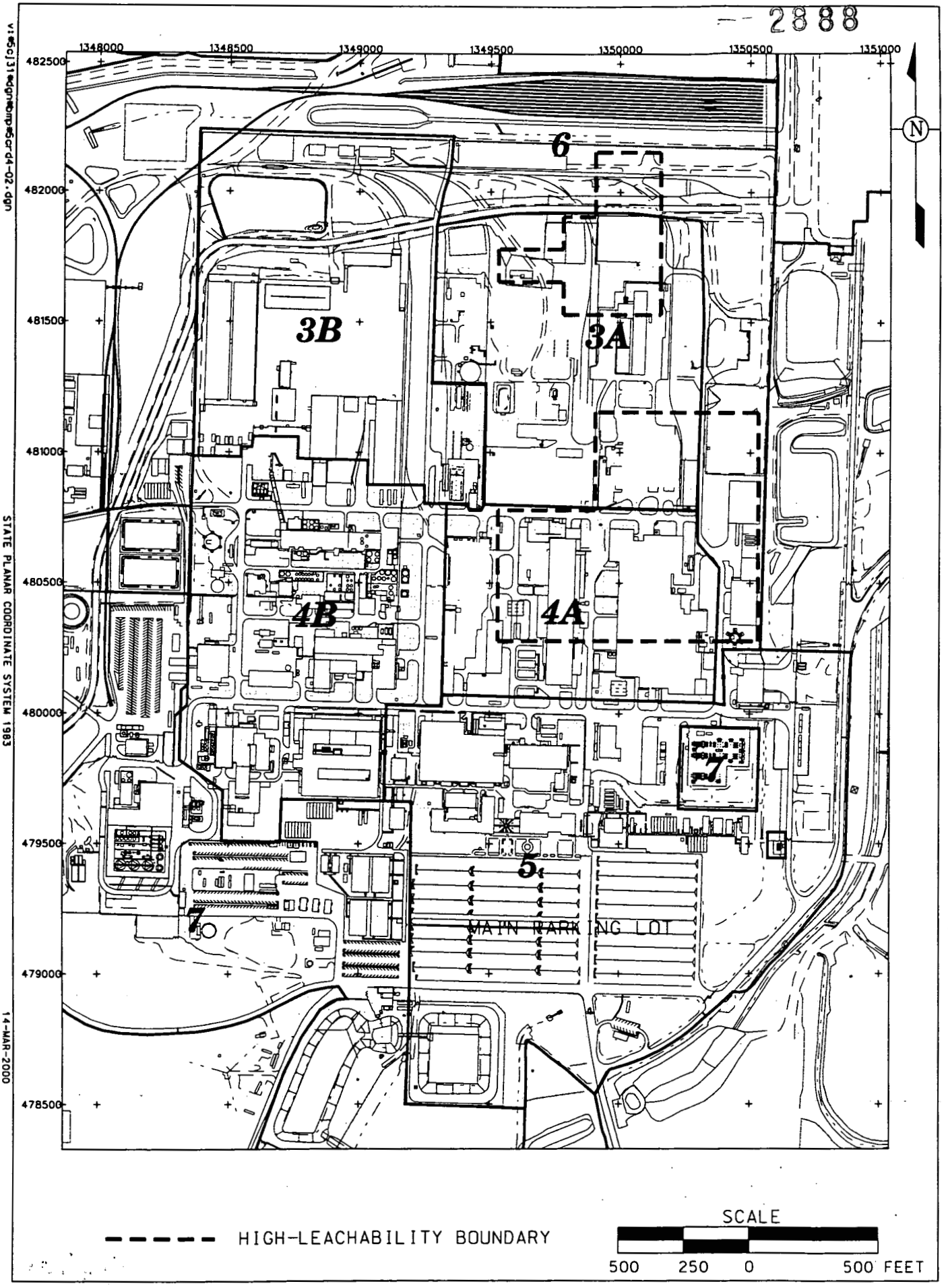

FIGURE 5-1. HIGH-LEACHABILITY AREAS WITHIN AREAS 3A/4A

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- At- or below-grade man-made structures, debris, and utilities (with the possible exception of pile foundations driven below contaminated depths)
- Above-grade man-made structures remaining after OU3 demolition activities
- Fill material
- Contaminated and non-contaminated perched groundwater
- Encountered special materials (as defined in the SEP)

The design must identify locations and depths where elevated levels of contamination are known to exist. This will be done using the 3-D computer model to provide the preliminary extent of excavation based on total uranium concentrations. The top 2 feet of gravel and soil will be removed during the remediation of any area within the Former Plant Area. When excavating for borrow material, the bottom of the excavation will be at least 5 feet above the unsaturated sand and gravel deposits of the GMA. Also, the excavation must maximize OSDF Category 1 material, as defined in the OSDF Impacted Materials Placement Plan.

5.2 Sequencing Within and Between Remediation Areas

The Sitewide Sequencing Plan is summarized for areas within the Former Plant Area, as follows: Area 3A, Area 4A, Area 3B, Area 4B, and portions of Area 5 (area located north of the main parking lot.) Figure 5-2 shows the general sequencing plan. The Lime Sludge Ponds (LSP) will be remediated concurrently with Area 3A and converted to a Water Management Facility (WMF) for use during the remediation of Areas 3 and 4.

Utilities must be sequenced into remediation areas to provide utility requirements for the contractor. The Utilities Integration Group will provide much of the required coordination, but it does not necessarily cover all of this project's specific needs. Specific utility systems that must be considered in this project include electric power, telecommunications, alarms, potable water, firewater, sanitary sewers, and storm sewers.

The 20A electrical substation east of the Plant 1 pad is the designated tie in location for electrical power. The office facilities required by the contractor, as well as the related pump stations, require electrical service. These are located on the periphery or within each remediation area.

5.3 Impacted Material Management

Impacted material excavated from the Former Plant Area will consist of radiologically contaminated soil and debris, RCRA waste, and other material. Excavated material that meets the on-site radiological, physical, and chemical WAC will be placed in the OSDF in accordance with the Impacted Materials Placement Plan. Material that fails to meet the physical WAC may be size reduced to allow placement in the OSDF. Material that cannot be size reduced to meet the on-site physical WAC will be transferred to temporary staging areas and then shipped off site to a permitted and licensed disposal facility. Temporary staging areas will be designated by Fluor Fernald.

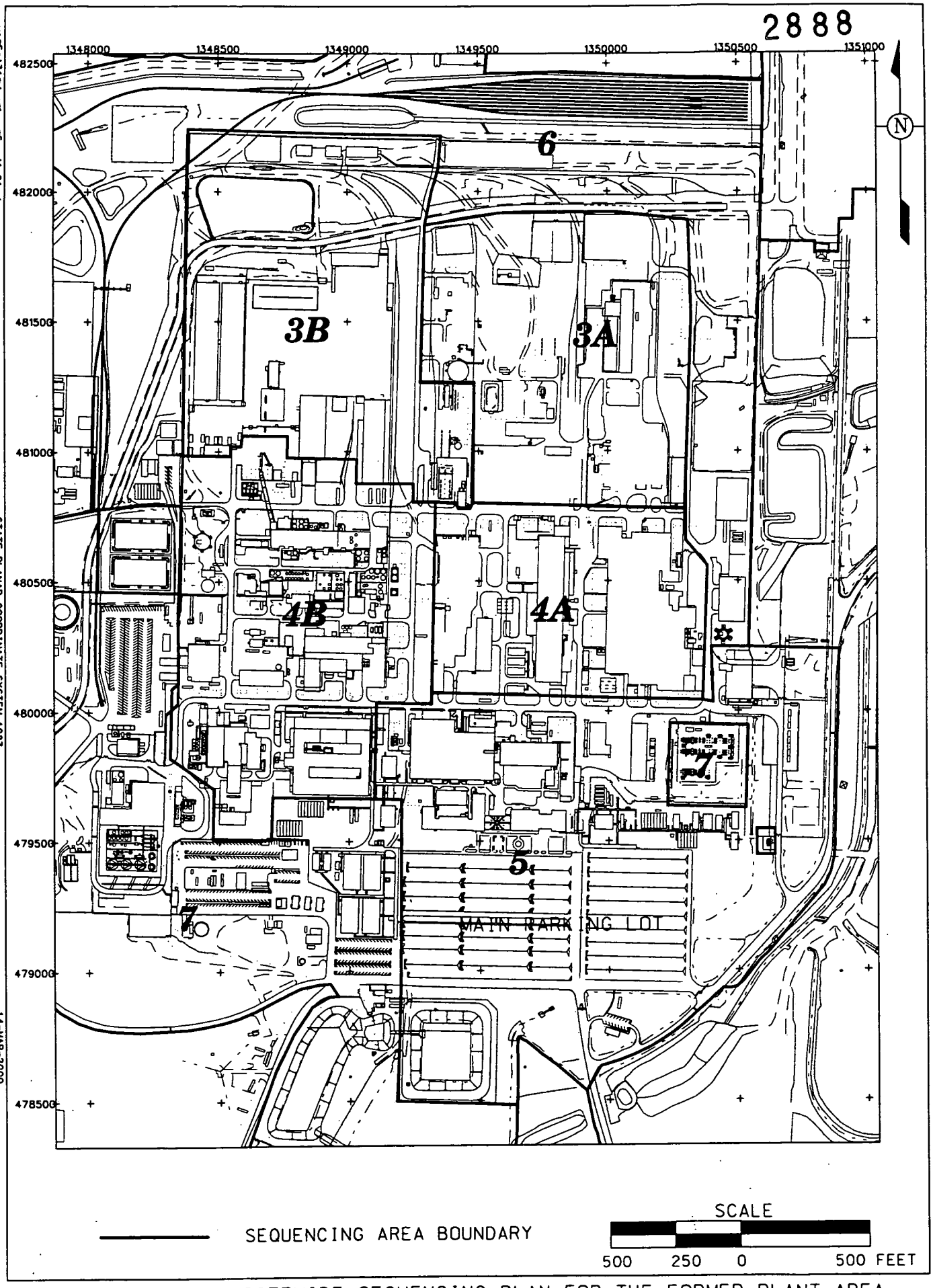

FIGURE 5-2. SITEWIDE SEQUENCING PLAN FOR THE FORMER PLANT AREA

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Impacted materials exceeding the chemical WAC may be treated, according to the nature of the contaminant, material type, and regulatory requirements. Material that does not meet the chemical WAC will generally be transferred to temporary staging areas before off-site shipment unless it can be treated to meet the WAC. During design, the cost-effectiveness of treating the materials to meet the on-site chemical WAC versus off-site disposal will be evaluated.

Soil containing radiological constituents (e.g., uranium, technetium-99, etc.) above the WAC limit will be excavated and staged for off-site disposal. If soil in a RCRA area exhibits the toxicity characteristics and overlaps with an area delineated as exceeding the radiological WAC, the material will be staged separately to await a decision by Fluor Fernald Waste Programs Management (WPM) on treatment and final off-site disposal options.

The amount of Category 1 material needed to place other OSDF material categories is limited (e.g. concrete). Therefore, the design will maximize the amount of Category 1 (i.e., soil and soil-like material) being dispositioned to the OSDF, while attaining FRLs in a cost-effective manner.

5.4 Surface Water Management

A Surface Water Management Plan will be developed to address both stormwater and erosion and sediment control. The stormwater management component will address water storage within the project site from the 10-year, 24-hour storm event. Sitewide pump and retention capacities will be designed so that the following criteria are met.

- Draining and pumping water out of the excavation area to the retention basins will occur within 72 hours (3 days) after the event.
- The existing stormwater retention basin (SWRB), or any newly constructed retention basins, will not be redesigned.

Erosion and sediment control requirements will address construction, remediation, and long-term conditions. The surface water management system for each remedial area will be designed to meet the following requirements:

- Surface water runoff from disturbed and noncertified areas will be collected and controlled.
- Surface water run-on will be diverted away from deep excavations.
- Surface water runoff not requiring AWWT Phase II wastewater treatment will be routed to the existing SWRB via the existing storm sewer system within the Former Plant Area. If the SWRB capacity is met and the WMF is not storing water destined for AWWT Phase II treatment, surface water runoff may be pumped to the WMF for additional retention capacity.
- Surface water runoff requiring AWWT Phase II wastewater treatment will be pumped to the WMF, Biodenitrification Surge Lagoon (BSL), or portable tank before being treated.
- Surface water from disturbed areas will be sent through a sediment basin to remove gross suspended solids prior to being released into the storm sewer system.
- Upon completion of remedial activities and certification of the remediated area, drainage of surface water from the certified area will be rerouted away from the SWRB and subsequent AWWT treatment toward Paddys Run. The capacity of ditches and culverts along the

drainage route will be verified to ensure they can handle the additional flows without flooding adjacent areas and nearby roadways.

- Any new holding tanks will be nonmetallic and contain lifting lugs to ease transport.
- Any required secondary containment must be easily assembled and disassembled for reuse.

During design the following items will be evaluated:

- preventing or minimizing uncontaminated surface water run-on to disturbed areas; and
- removal of gross suspended solids

The stormwater and sediment control structures will be evaluated, selected, designed, and coordinated, as appropriate, to be consistent with the objectives set forth in Storm Water Pollution Prevention Plan (RM-0039), Ohio's Standard for Stormwater Management Land Development and Urban Stream Protection, and sound engineering judgment. The standards set forth in ODNR will not be incorporated into the design of this project in areas where runoff from disturbed surfaces are either discharged into the existing storm sewer system for subsequent AWWT Phase I treatment or collected for AWWT Phase II treatment. The existing stormwater system will be used as much as possible; it will not be upgraded since it will be removed during the course of this project. Use of hay bales is not standard engineering practice at the site, and silt fences and/or riprap check dams will be utilized as the primary erosion control devices.

Stormwater calculations will be based on TR-55 or other commonly accepted stormwater design practices, where applicable. The usage of any other stormwater design practice must be documented in the design calculations.

5.5 Perched Water Management

The evaluation and analysis of geology and groundwater flow characteristics will be incorporated into the design process. This information will be used to develop design and construction procedures and methods to minimize potential contamination of the GMA and remediated areas during remediation and construction. The design of perched groundwater extraction/removal will address slope stability and dewatering requirements of open excavations, particularly for excavations penetrating significant zones of coarse-grained materials.

The need for pretreatment of remediation-generated wastewater, before discharging water to the appropriate main treatment loop of the AWWT (i.e., Phase I and Phase II), will be evaluated during design using the AWWT wastewater acceptance guidelines; these guidelines are based on NPDES permit requirements and coordinated with the AWWT facility.

The AWWT capacity for water treatment is 600 gallons per minute (gpm) for Phase I and 300 gpm for Phase II. Surface water collected in remediation areas will be treated via the AWWT Phase I System. Excavation surface water collected with perched groundwater that contains volatile organic compounds will be treated via the AWWT Phase II treatment system before discharging off site. The following two options are available for Phase II treatment:

Option 1 – If estimated perched groundwater treatment volumes are significant, then the perched groundwater will be pumped to the WMF or BSL for retention and subsequent AWWT Phase II treatment. If possible, project piping will be located so as to be usable during remediation of more than one area without major modification.

Option 2 – If estimated treatment volumes for VOC and contaminated perched groundwater are insignificant, then the water may be pumped into tanker trucks or portable tanks for direct transport to the AWWT for Phase II treatment.

The estimated volume of surface water requiring AWWT Phase II treatment will be included with the estimated volume of perched groundwater, regardless of the selection option.

5.6 Equipment and Personnel Monitoring Decontamination

Radiological control point facilities will be constructed at the ingress/egress points in the designated support areas. Temporary decontamination facilities and/or radiological control point facilities from previous remediation work will be considered for use, when practical. Treated or uncontaminated groundwater will be used for dust control. Before releasing equipment or support materials from a radiological area to an off-site area, radiological control personnel will perform an unrestricted release survey. Decontamination will be performed, as necessary, to support the release of equipment and/or support materials off site.

Exposure levels for personnel performing remedial work associated with at- and below-grade structures in the Former Plant Area are expected to be well below 10 CFR 835 exposure limits. The ALARA process described in engineering procedure ED-12-2007, ALARA Review, will be implemented in a manner consistent with 10 CFR 835 requirements to ensure that personnel exposures are controlled at levels that are reasonably achievable. The goal for total effective dose equivalent is not to exceed 200 mrem/yr/person.

External exposure rates are expected to be well below 0.5 mrem/hr and will be routinely monitored throughout the performance of work on the project. Airborne radioactive material levels contributing to personnel internal exposures are not expected to exceed 4 derived air concentrations (DAC)-hrs/week/person. BAT will be used to minimize fugitive dust emissions and control airborne radioactive materials such that only administrative controls are necessary to maintain personnel internal exposures at levels consistent with ALARA. Occupational air sampling will be performed routinely throughout the project to evaluate airborne radioactive particles. The collected radiological data will be assessed to establish performance indicators that evaluate the remediation project against established goals.

A radiation protection program will be in place to manage and control exposure to operations involving radioactive materials. Surface contamination and airborne radioactivity levels will be monitored as the project progresses to ensure that occupational radiation hazards are minimized. Based on the nature of the work and the hazard present, the prescribed personal protective equipment (PPE) and controls will be correct and appropriate for the work being performed.

Based on evaluation of the radiological survey data obtained during remedial activities, engineering and administrative controls will be adjusted as necessary.

5.7 Environmental Monitoring and Sampling

Environmental monitoring and sampling is not included in the scope of this document. However, sequencing of construction to include environmental monitoring and sampling will be incorporated into the detailed designs. This includes excavation control characterization, environmental radiological monitoring, and certification sampling that will be performed by Fluor Fernald. Fluor Fernald will provide oversight for the incorporation of environmental monitoring and sampling into the detailed design and the implementation of associated procedures. The two principal components of environmental monitoring and sampling (real time scanning and safety and health monitoring) are discussed in the SEP.

5.8 Certification

Between certified areas where deep remedial excavations have occurred and nonremediated/noncertified areas, transitional certification zones will be established that allow sufficient space for stable excavation slopes and run-on prevention systems. Transitional certification zones cannot be certified until the adjacent nonremediated areas are excavated. Because of this transitional requirement, the active remediation area within the Former Plant Area and its associated certification area will not cover exactly the same area. A certification area within the Former Plant Area will generally be smaller than and offset from its associated remediation area.

5.9 Predesign Sampling Requirements to Support Design

In each remediation area, the following predesign sampling and analytical efforts will be completed before the 90 percent submittal of the Title II design:

- Delineation of RCRA soil in areas designated as possessing the potential to contain RCRA constituents
- Radiological surveys, sampling, and analysis to establish surficial extent of above-WAC materials
- Footprint survey for identified hazardous waste management units (HWMUs).
- Subsurface investigation to identify extent of above-WAC material, FRL boundaries, below present grade pads, roads, and building foundations

Within each remediation area, all stockpiles will be characterized prior to remedial excavation.

5.10 Sampling Requirements for Containerized Soil-Like Materials

Sampling and analytical efforts for characterization of soil-like materials in portable waste containers stored within a given remedial area should be completed before the start of remedial excavation within that remedial area or the waste should be relocated to another remediation area

facility to appropriately and safely store the waste. Soil-like waste materials stored in nonmovable containers should be characterized before the completion of Title I design.

5.11 Transportation

Traffic and transportation patterns and requirements will be developed during Title I and Title II design and coordinated with other FEMP remediation and administrative activities. The remediation documents will illustrate routes and/or provisions to transport impacted material to the OSDF and other on-site destinations during remediation (e.g., above-WAC drop-off point, SP-7), while minimizing the impact to other non-construction-related traffic in the area.

Principal haul routes to SP7, the OSDF, the OMTA, and the soil treatment area will use existing road surfaces. The Impacted Material Haul Road, at the northern boundary of Area 3A, will be the controlled haul route to SP7 and the soil treatment area. Trucks leaving the excavation area will pass through a wheel-wash station at the east end of the Impacted Material Haul Road prior to travelling to SP7 or the soil treatment area. Impacted material excavated for placement in the OSDF will be hauled along E Street to the OMTA southern entrance point and follow the contaminated haul route to the active cell. Above-grade debris from the remediation activities outside Area 3A will be hauled to the OMTA via 2nd Street and the Impacted Material Haul Road (not governed by this DCP).

Materials containerized within the excavation area can either be hauled on the Impacted Material Haul Road through the wheel wash station or hauled directly from Special Material Transfer Areas (SMTA). In order to haul directly from an established SMTA, the SMTA must be located on the perimeter of the excavation area with direct access to controlled roadways, and have proper administrative and engineering radiological controls.

Traffic routing will be controlled to minimize haul routes through contaminated areas. Haul routes through contaminated areas will be controlled to prevent cross-contamination of certified clean areas. Traffic will be routed via paved roads, to the extent practical, to minimize dust generation and cross-contamination.

Removal of roads will be sequenced to optimize their use during remediation. Existing roads will be used to support as many areas as possible to minimize new construction costs and reduce waste generation.

5.12 Restoration

Grading and backfilling will be minimized in postexcavated areas (except for safety and GMA protection concerns). In general and where practical, the interim restoration should integrate the project with the sitewide Natural Resource Restoration Plan.

Borrow material used for backfill will be obtained from certified or precertified areas within the Former Plant Area.

Due to the requirement to ensure protection of the GMA, excavations within the Former Plant Area that either breach the sand and gravel deposits of the GMA or remove the till covering from over the GMA sand and gravel deposits must be plugged with uncontaminated clay-like material as quickly as possible. The GMA sands and gravels will not be used for structural or general borrow material. Borrow material used as backfill within high-leachability areas must be obtained from other certified or precertified high-leachability areas, or must otherwise be shown to meet the 20 mg/kg uranium FRL.

Winterization will be necessary to ensure that an excavation area can be reentered in the spring in minimal time following winter shutdown. These activities include stabilization of all exposed surfaces within the project limits, maintenance of all drainage channels and erosion and sediment control devices, protection of liquid lines susceptible to freezing, and submittal of itemized winter maintenance plans.

Since all topsoil and gravel within the Former Plant Area will be excavated and disposed during remedial activities, topsoil and gravel usage will not be included in any interim grading, backfilling, or vegetation plan or design. Restoration grading to be completed for this project will be considered interim grading, which may later be altered to a final restoration grade.

6.0 Assumptions Inherent in the Project Scope

This DCP does not address or govern:

- final restoration grading, backfilling, and vegetation requirements or designs;
- use of topsoil and associated certification process during final restoration; and
- excavation of contamination in the GMA sand and gravel layer.

APPENDIX A

TABLE A-1

GROUPINGS OF ARARs AND TBCs USED IN TABLE A-2

Presentation Group	Topical Subdivision(s)	Table A-2 Pages
Natural and Cultural Resources	Threatened and Endangered Species Protection	A2-A3
	Archeological, Historic, and Cultural Resource Protection	A3-A6
Air Pathway	Noise Pollution Control	A7
	Air Emissions	A7-A19
Surface Water Pathway	Floodplain/Wetlands Protection	A20-A27
	Discharge to Surface Water	A28-A31
Groundwater Pathway	Groundwater Protection	A32
	Wells - Construction	A32
	Wells - Abandonment	A33
Soil Remediation	Closure of Underground Storage Tanks	A34
	Closure of Hazardous Waste Management Units	A34-A38
	Radionuclide Concentrations	A39-A42
	Lead Concentration	A43
	PCB Concentration	A43
	Certification of Cleanup	A44
Impacted Material Management	Definitions and General Facility Standards	A45-A58
	Management of Low-level Radioactive Material	A59
	Management of Hazardous Remediation Waste	A60-67
	Management of PCB-tainted Material	A68
Post-Closure	Description of Post-closure Care	A69-A71
	Modifications to Post-closure Care Plan or Period	A71
	Property Use Restrictions	A72-A73
	Post-closure Notice/Survey Plat	A73
	Deed Notation	A74

TABLE A-2
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
NATURAL & CULTURAL RESOURCES						
THREATENED & ENDANGERED SPECIES PROTECTION						
Procedures for Implementing the National Environmental Policy Act 40 CFR §6.302(h) 10 CFR Part 1021 Endangered Species Act 16 U.S.C. §1531, et seq. Endangered and Threatened Wildlife and Plants 50 CFR §17.21, §17.31, §17.61, §17.71, and §17.94 Interagency Cooperation-Endangered Species Act 50 CFR §402.01	All federal agencies must ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of the constituent elements essential to the conservation of a listed species within a defined critical habitat. Additional requirements apply if it is determined that a proposed activity could adversely affect these species or their habitat.	Appl	Appl	Appl	Findings of 1993-94 updated surveys at the FEMP property: • Populations of the state-listed threatened Sloan's crayfish (*Orconectes sloanii*) are located in sections of Paddy's Run. • Good habitat for the federally-listed endangered Indiana bat (*Myotis sodalis*) exists along Paddy's Run and the storm sewer outfall ditch. • Suitable habitat exists in limited areas for the federal-listed endangered running buffalo clover (*Trifolium stoloniferum*), and only in the northern woodlot for the state-listed threatened spring corralroot (*Corallorhiza wisteriana*). • Marginal habitat for the state-listed endangered cave salamander (*Eurycea lucifuga*) exists in a very limited single area. • Neither habitat nor populations were located for the state-listed endangered mountain bindweed (*Polygonum cilinode*) and slender fingergrass (*Digitaria filiformis*).	Section 5.1 of the Sitewide Excavation Plan. However, DOE does not expect to encounter any federal- or state-listed threatened or endangered species or critical habitat in the areas to be addressed by this remediation project; no additional surveys conducted or planned.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
THREATENED & ENDANGERED SPECIES PROTECTION, continued						
Interagency Cooperation-Endangered Species Act 50 CFR §402.12(a), (b)	A biological assessment shall evaluate the potential effects of the action on listed and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action and is used in determining whether formal consultation or a conference is necessary. These procedures are required for federal actions that are "major construction activities."	Appl	Appl	Appl	No critical habitat is present on the Fernald property. Updated surveys of the FEMP property in 1993 found marginal habitat for the state-listed endangered cave salamander (*Eurycea lucifuga*) exists in a very limited single area.	See preceding.
Endangered Species Regulations ORC 1531.25	No person shall take or possess any native species of wild animal, or any eggs or offspring thereof, that is endangered with state-wide extinction.	Appl	Appl	Appl	Updated surveys of the FEMP property in 1993-94 found populations of the state-listed threatened Sloan's crayfish (*Orconectes sloanii*) in sections of Paddy's Run.	See preceding.
Endangered Species Regulations ORC 1518.02 OAC 1501:18-1	No person shall root-up, injure, destroy, remove, or carry away on or from public highways, public property, or waters of the state, or on or from the property of another, without the written permission of the owner, lessee, or other person entitled to possession, any endangered plant listed in OAC 1501:18-1.	Appl	Appl	Appl	Surveys of the FEMP property in 1994 did not locate populations of the following plants: the federal-listed endangered running buffalo clover (*Trifolium stoloniferum*); the state-listed endangered mountain bindweed (*Polygonum cilinode*) and slender fingergrass (*Digitaria filiformis*); and the state-listed threatened spring corralroot (*Corallorhiza wisteriana*).	See preceding.
ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION						
Antiquities Act of 1906 16 U.S.C. §431	No person may appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity situated or controlled by the Government of the United States without an applicable permit. Identification and preservation of cultural resources on federal lands is required, including natural landmarks.	Appl	Appl	Appl	Proposed areas of disturbance will be surveyed and consultation will occur between DOE, the Advisory Council on Historic Preservation and the State of Ohio Historic Preservation Office (OHPO) as agreed upon in the Programmatic Agreements (later entries).	Section F.4.2 of the Sitewide Excavation Plan
Historic Sites Preservation Act 16 U.S.C. §461-467		✓	Appl	Appl		

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Archaeological Resources Protection Act 16 U.S.C. § 470aa-470ll Procedures for Implementing the National Environmental Policy Act 40 CFR §6.301(c) Protection of Archaeological Resources 43 CFR §7.4(a)	Whenever any Federal agency finds, or is notified, in writing, by an appropriate historical or archaeological authority, that its activities in connection with any Federal construction project or federally licensed project, activity, or program may cause irreparable loss or destruction of significant scientific prehistorical, historical, or archaeological data, such agency shall notify the Secretary of the Interior, in writing, and shall provide the Secretary with appropriate information concerning the project, program, or activity. No person may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands unless such activity is pursuant to a permit. If an EPA activity may cause irreparable loss or destruction of significant scientific, prehistoric, historic, or archaeological data, the responsible official or the secretary of the Interior is authorized to undertake data recovery and preservation activities.	Appl	Appl	Appl	See preceding.	See preceding.
National Historic Preservation Act (NHPA) 16 U.S.C. §470 Protection of Historic Properties 36 CFR Part 800 Procedures for Implementing the National Environmental Policy Act 40 CFR §6.301(a), (b)	A federal agency (DOE) must take into account the effect of an undertaking on historic properties and accord the Advisory Council on Historic Preservation a reasonable opportunity to comment. Historic properties are defined as any prehistoric or historic district, building, site, structure, or object included in or eligible for inclusion in the National Register of Historic Places. This term includes artifacts, records, and persons released to and located within such properties. Historic properties that are to be substantially altered or demolished must be recorded for future use and reference. The purpose of this Act is not only to protect those properties listed in or eligible for the National Register of Historic Places, but also those properties that have not been listed or formally determined eligible for the listings. The heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency. Prior to any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible agency shall, to the extent possible, minimize the harm to such landmark.	Appl	Appl	Appl	See preceding.	See preceding.
Archaeological and Historic Preservation Act 16 U.S.C. §469	Upon discovery that a project may cause the irreparable loss, destruction, significant scientific finding, prehistorical finding, or loss of historical or archaeological data, DOE must notify the Dept. of the Interior in writing and provide appropriate information concerning the project. DOE must, with possible assistance from the OHPO, undertake recovery, protection, and preservation of the data.	√	Appl	Appl	See preceding.	See preceding.

000205

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION, continued					
Executive Order 11593, Protection and Enhancement of Cultural Environment 3 CFR Part 54	An inventory of a site with potential historic places is required for eligibility in the National Register of Historic Places.	√	Appl	Appl	See preceding and following entries.	See preceding.
Programmatic Agreement Regarding Disposition of Facilities under the Operable Unit 3 Record of Decision for Interim Remedial Action at the Fernald Environmental Management Project (January 16, 1996)	• Prepare a report package describing the primary buildings and structures at the FEMP, using existing information to provide information regarding construction details, production process descriptions, design changes, current structural conditions, and current use. The report package is to include written descriptions, photographs, representative engineering drawings, and videotape, as appropriate. If existing documentation is not adequate, additional documentation will be obtained (i.e., additional photographs). Representative support buildings and structures are to be documented with photographs and written summaries as well. • Prepare a separate report package describing the FEMP's role in the DOE weapons complex and the significance of the FEMP contribution to the U.S. defense.		√	√	Draft reports have been submitted to the Ohio Historic Preservation Office (OHPO). Once finalized, both documents will be available to the public in the Public Environmental Information Center and archived as appropriate.	See preceding.
Programmatic Agreement Regarding Archaeological Investigations at the Fernald Environmental Management Project (March 6, 1997)	Annual report packages, the first of which must be submitted on July 1,1997, must be submitted to the Ohio Historic Preservation Office (OHPO) and the Advisory Council on Historic Preservation (the Advisory Council) containing the following information: 1 list of all response actions and associated activities initiated within the year reported on; 2. map showing locations of above response actions/ associated activities; 3. list of response actions/associated activities conducted in previously surveyed (archeological survey) areas; 4. a list of surveys which identified no eligible historic properties; 5. a list of eligible historic properties that were avoided when implementing response actions and/or associated activities; 6. a list of Phase I-III reports generated; and 7. a map of locations of areas identified in item 6 and all properties identified. DOE-FEMP must also submit any and all Phase I reports generated within the last year, and not previously submitted, with the annual report. By September 2, 1997 (within 180 days of the signing of the Programmatic Agreement), submit to the OHPO and the Advisory Council a literature search, examination of aerial photographs, and use of a predictive model for all disturbed and/or contaminated areas of the FEMP (as defined in the Agreement). The predictive model is to utilize existing archeological data from the FEMP and surrounding area to determine the likelihood of additional archeological sites within the contaminated/disturbed areas and the spatial distribution, physical characteristics, and uses.	√	√	√	In accordance with this programmatic agreement, the following will occur for each remediation area as needed: • survey • appropriate consultation with the OHPO and the Advisory Council • appropriate data recovery for potential historic properties discovered. Unexpected discoveries will be addressed accordingly (see Section F.4.2 of the SEP). Draft reports are under preparation for submission to the OHPO and the Advisory Council. Once finalized, the reports will be available to the public in the Public Environmental Information Center and archived as appropriate.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION, continued						
Native American Graves Protection and Repatriation Act 25 U.S.C. §3001 et seq.	Identification and preservation of cultural resources on federal lands is required, including natural landmarks. DOE must consult with appropriate Indian tribes before the intentional excavation or removal after an inadvertent discovery of Native American cultural items including human remains and objects of cultural significance.	Appl	Appl	Appl	DOE will consult with likely culturally affiliated tribes to determine the excavation, treatment, analysis and preparation of any extra reviews, associated funerary objects, unassociated funerary objects, sacred objects, or objects of cultural patrimony. Consultation will be coordinated with NHPA compliance when possible.	See preceding.
43 CFR Part 10	Provides for the return of human remains and cultural objects from Native American graves to affiliated tribes.	Appl	√	√		
American Indian Religious Freedom Act 42 U.S.C. §1996	Provides for tribal access by native peoples to grave sites and sites of cultural, symbolic, or religious significance.	Appl	Appl	Appl	See preceding.	See preceding.

002007

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
AIR PATHWAY						
	NOISE POLLUTION CONTROL					
Noise Control Act, as amended 42 U.S.C. §4901, *et seq.* Noise Pollution and Abatement Act 42 U.S.C. §7641	The public must be protected from noises that jeopardize health and welfare.	Appl	Appl	R&A	Appropriate engineering controls and best management practices will be implemented so that nuisance noise from vehicles and equipment will be reduced to the maximum practicable extent during conduct of the actions.	Section 5.1.2.1 of the Sitewide Excavation Plan
	AIR EMISSIONS					
Solid Waste and Infectious Waste Regulations, Authorized, Limited, and Prohibited Solid Waste Disposal Methods OAC 3745-27-05 ORC 3734.03	Open dumping of solid waste is prohibited [OAC 3745-27-05(C)]. Solid waste disposal by means of open burning, as defined in OAC 3745-19, is permitted only as provided therein [OAC 3745-27-05(B)].	Appl	Appl	Appl		Addressed through the description of the selected remedy in the OU2 ROD (Section 9.0), OU5 ROD (Section 9.0), and OU3 ROD (Section 8.0)
Criteria for Classification of Solid Waste Disposal Facilities and Practices, Air [40 CFR §257.3-7]	Open burning of residential, commercial, institutional or industrial solid waste is prohibited. This requirement does not apply to infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land-clearing debris, diseased trees, debris from emergency clean-up operations, and ordnance [40 CFR §257.3-7].	√	√	Appl		
Open Burning Standards, Open Burning in Unrestricted Areas OAC 3745-19-04©	Open burning is allowed for the following purposes [OAC 3745-19-04(C)]: • Recognized horticultural, silvicultural, range, or wildlife management practices [OAC 3745-19-04(C)(5)]. • Disposal of land clearing waste if the following conditions are met [OAC 3745-19-04(C)(4)]: - The fire is set only when atmospheric conditions will readily dissipate contaminants; - The fire does not create a visibility hazard on roadways, railroad tracks, or air fields; - The fire is located at a point on the premises no less than 1000 feet from any inhabited building not located on said premises.	√	√	Appl		

000208

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
General Provisions on Air Pollution Control, Air Pollution Nuisances Prohibited OAC 3745-15-07 ORC 3704.01-.05	Measures shall be taken to adopt and maintain a program for the prevention, control, and abatement of air pollution in order to protect and enhance the quality of the state's air resource so as to promote the public health, welfare, and economic vitality of the people of the state. The emission or escape into open air from any source whatsoever of smoke, ashes, dust, dirt, grime, acids, fumes, gases, vapors, odors and combinations of the above in such a manner or in such amounts as to endanger the health, safety, and welfare of the public, or to cause unreasonable injury or damage to property shall be declared to be a public nuisance. It is unlawful for any person to cause, permit, or maintain any such public nuisance.	Appl	Appl	Appl	Only fugitive dust (dirt, flyash, bottom ash) is anticipated from this soil remedial action project. Air pollution nuisance prohibitions will be met by employing best management practices for control of fugitive dust.	FEMP Fugitive Dust Control BAT Determination, and Section 5.1.2 of the Sitewide Excavation Plan
ORC 3734.02(I)	No owner or operator of a hazardous waste facility, in the operation of the facility, shall cause, permit, or allow the emission therefrom of any particulate matter, dust, fumes, gas, mist, smoke, vapor, or odorous substances that, in the opinion of the Director [of Environmental Protection, a.k.a., the Director of the OEPA], unreasonably interferes with comfortable enjoyment of life or property by persons living or working in the vicinity of the facility, or that is injurious to public health. Any such action is hereby declared to be a public nuisance.	√	√	R&A		
Particulate Matter Standards, Ambient Air Quality Standards OAC 3745-17-02(B), (C), (D) [National Primary and Secondary Ambient Air Quality Standards 40 CFR §50.6(a), (b), (c)]	The level of the primary and secondary 24-hour ambient air quality standards for particulate matter is a 150 $\mu g/m^3$, 24-hour average concentration [OAC 3745-17-02(C)]. The level of the primary and secondary annual ambient air quality standards for particulate matter is 50 $\mu g/m^3$, annual arithmetic mean (average) [OAC 3745-17-02(D)]. Particulate matter shall be measured in the ambient air as PM_{10} (particles with an aerodynamic diameter less than or equal to a nominal 10 μm).	Appl	Appl	√	The National Ambient Air Quality Standards (NAAQS) were established as regional goals that states were required to meet and maintain. These ambient air quality standards were never intended, nor are they appropriate, as air quality standards for individual facilities. The methods used by the states to comply with the NAAQS are the State Implementation Plan (SIPs), which include state-level regulations for emission controls or emission standards (included as separate entries). By meeting these pertinent individual requirements, FEMP emissions will not cause an exceedance of the NAAQS/Ohio Ambient Air Quality Standards.	See preceding.

000209

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Particulate Matter Standards, Non-Degradation Policy OAC 3745-17-05	The significant and avoidable deterioration of air quality in any part of the area where presently existing air quality is better than the particulate ambient air quality standards in OAC 3745-17-02 (described above) shall be prohibited.	Appl	Appl	√	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions. Also see preceding entry.	FEMP Fugitive Dust Control BAT Determination, and Section 5.1.2.2 of the Sitewide Excavation Plan
Particulate Matter Standards, Control of Visible Particulate Emissions from Stationary Sources OAC 3745-17-07(A)(1)(a)	Visible particulate emissions from any point source shall not exceed 20 percent opacity, as a 6-minute average, but shall not exceed 60 percent opacity, as a 6-minute average, at any time. Transient exceedance limits are included in this regulation.	Appl	Appl	Appl	All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	As necessary, point source monitoring requirements will be addressed in the appropriate IRDP.
Particulate Matter Standards, Control of Visible Particulate Emissions from Stationary Sources OAC 3745-17-07(B)(1)	Visible particulate emissions from any fugitive dust source shall not exceed 20 percent opacity, as a 3-minute average.	√	√	√	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions.	FEMP Fugitive Dust Control BAT Determination, and Section 5.1.2.2 of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Particulate Matter Standards, Control of Visible Particulate Emissions from Stationary Sources OAC 3745-17-07 (B)(4), (5), (6)	There shall be no visible particulate emissions from any paved roadway or paved parking area except for a period of time not to exceed 6 minutes during any 60-minute observation period. There shall be no visible particulate emissions from any unpaved roadway or unpaved parking area except for a period of time not to exceed 13 minutes during any 60-minute observation period. There shall be no visible particulate emissions from any material storage piles except for a period of time not to exceed 13 minutes during any 60-minute observation period.	Appl	R&A	√	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions.	FEMP Fugitive Dust Control BAT Determination, and Section 5.1.2.2 of the Sitewide Excavation Plan
Particulate Matter Standards, Restriction of Emission of Fugitive Dust OAC 3745-17-08(B)	No person shall cause or permit any fugitive dust source to be operated; or any materials to be handled, transported, or stored; or a building (or its appurtenances) or a road to be used, constructed, altered, repaired, or demolished without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne. Such reasonably available control measures shall include, but are not limited to, one or more of the following which are appropriate to minimize or eliminate visible particulate emissions of fugitive dust. • The use of water or other suitable dust suppression chemicals for the control of fugitive dust from the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land; or • The periodic application of asphalt, oil, water, or other suitable dust suppression chemicals on dirt or gravel roads and parking lots, and any other surfaces that may cause emissions of fugitive dust.	Appl	R&A	Appl	This requirement is applicable only to certain cities in Butler and Hamilton Counties. Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions.	See preceding.

000211

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Particulate Matter Standards, Restrictions on Particulate Emissions from Industrial Processes OAC 3745-17-11	The following are restrictions for particulates from any operation, process, or activity which releases or may release particulate emissions into the ambient air. These limits are based on the weight of material being processed. Process Weight at Maximum Capacity (lb/hr) — Allowable Particulate Emission Rate (lb/hr) 100 — 0.551 200 — 0.877 400 — 1.40 600 — 1.83 800 — 2.22 1000 — 2.58 *These limits do not apply to generation of fugitive dust* subject to OAC 3745-17-08 (listed above).	Appl		R&A	All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	See preceding.
Ambient Air Quality Standards for Non-methane Hydrocarbons OAC 3745-21-02(C), -03(D)	The ambient air quality guidelines for nonmethane hydrocarbons is a maximum three hour arithmetic mean concentration of 160 $\mu g/m^3$, not to be exceeded between the hours of 6 and 9 a.m. Hourly and 3-hour concentrations must be determined in accordance with prescribed methods.		Appl		The National Ambient Air Quality Standards (NAAQS) were established as regional goals that states were required to meet and maintain. These ambient air quality standards were never intended, nor are they appropriate, as air quality standards for individual facilities. The methods used by the states to comply with the NAAQS are the State Implementation Plan (SIPs), which include state-level regulations for emission controls or emission standards. By meeting these pertinent individual requirements, FEMP emissions will not cause an exceedance of the NAAQS/Ohio Ambient Air Quality Standards.	See preceding relevant Ohio air regulation citations.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
National Primary and Secondary Ambient Air Quality Standards 40 CFR §50.12 Ohio Lead Emissions, Ambient Air Quality Standards—Lead OAC 3745-71-02(A)	The ambient air quality standards for lead shall be a maximum arithmetic mean of 1.5 micrograms per cubic meter during any calendar quarter.	R&A	R&A		See preceding.	See preceding
National Primary and Secondary Ambient Air Quality Standards 40 CFR Part 50	The following are the primary National Ambient Air Quality Standards (NAAQS):	R&A			Note that other NAAQSs are presented in preceding entries.	
	Criteria Pollutant / Primary Standard, ppm / Averaging Time					
	Carbon Monoxide — 9 — 8-hour	R&A				
	35 — 1-hour					
	Nitrogen Dioxide — 0.053 — Annual	R&A				
	Ozone — 0.12 — 1-hour	R&A				
	Sulfur oxides — 0.03 — Annual	R&A				
	0.14 — 24-hour					
Permit to Install New Sources of Pollution OAC 3745-31-05 (A)(3)	The installation or modification and operation of an air contaminant source, solid waste disposal facility, water pollution source, disposal system, land application of sludge, or public water system, must employ the best available technology. The terms used in the above are defined in OAC 3745-15-01, unless otherwise defined in OAC 3745-31-01.	R&A	Appl	R&A	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions. All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	FEMP Fugitive Dust Control BAT Determination, and Section 5.1.2.2 of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Standards of Performance for New Stationary Sources, Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants 40 CFR §60.672(a), (d), (e)	No owner or operator shall cause to be discharged into the atmosphere from a crusher any emissions which: • Contain particulate matter in excess of 0.05 grams per dry cubic meter at standard conditions (g/dscm); and • Exhibit greater than 7 percent opacity Truck dumping of nonmetallic minerals into any crusher is exempt from these requirements.	R&A	√		It is not anticipated that a crusher will be used during this remedial action project. All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	See preceding.

000214

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Waste Disposal for Manufacturing, Fabrication, Demolition, Renovation, and Spraying Operation 40 CFR §61.150	(a) Discharge no visible emissions [of asbestos] to the outside air during the collection, processing, packaging, or transporting of any asbestos-containing waste material, or use one of the emission control methods specified in paragraphs (a)(1) through (4) of this section: (1) Adequately wet asbestos-containing material (ACM). After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; or, put materials that will not fit into containers without additional breaking into leak-tight wrapping. Label the containers or wrapped materials in accordance with 29 CFR 1910.1001(j)(2) or 1926.58(k)(2)(iii). ... (4) Use an alternative emission control and waste treatment method that has received prior approval from the Administrator. (5) As applied to demolition and renovation, the requirements above under paragraph (a) of this section do not apply to Category I non-friable ACM waste and Category II non-friable ACM waste that did not become crumbled, pulverized, or reduced to powder. "Adequately wet" means sufficiently mix or penetrate with liquid to prevent the release of particulates; if visible emissions are observed coming from the asbestos-containing material, the material has not been adequately wetted [40 CFR §61.41].	✓	✓	Appl		See preceding, and following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials F.4.1.1 Asbestos
Asbestos Emission Control, Standard for Asbestos Waste Handling OAC 3745-20-05(B), (C)&(D)	(B) Discharge no visible emissions [of asbestos] during the collection, processing, packaging, transporting or deposition of any asbestos-containing waste material, and use one of the emission control methods below: (1) Adequately wet asbestos-containing material and seal the material into durable leak-tight containers or enclosure system. (2) For facilities where asbestos was not removed prior to demolition [or excavation], keep asbestos-containing waste adequately wet or sealed/encapsulated until collected for disposal.					

000215

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	(C) Seal all friable asbestos-containing waste material into durable leak-tight disposal containers or use an approved alternative disposal system in accordance with the following: (1) Label all containers of asbestos-containing waste material: DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD R.Q. Hazardous Substance N.O.S. asbestos ORM-E 9188 (2) Seal asbestos-containing waste materials in plastic bags at least 6 mils (0.006 inch) thick, and seal that in a second clean, leak-tight plastic bag at least 6 mils thick; or (4) Facility components coated with, covered or containing friable asbestos materials and removed in sections or units — Seal with leak-tight plastic at least 12 mils (0.012 inch) thick or leak-tight polypropylene woven fabric at least 10 mils (0.010 inch) thick; or (3) Whenever necessary to prevent any asbestos-containing waste material from penetrating a container (bag or wrap) — Seal the materials using a combination of a 6 mils thick plastic bag and a leak-tight steel, plastic, or fiber drum, or reinforced disposal box, leak-tight polypropylene woven fabric bag, or similar suitable and durable container. Fit drums with a matching lid and lock-rims. Band and seal boxes with reinforced tape or in accordance with manufacturers recommendations; or (5) Asbestos-containing waste materials, facility components, and contaminated debris may be disposed of using an alternative disposal system which has received prior approval from the Director. (D) Prepare and secure any load of asbestos-containing waste material in a manner that prevents any visible emissions [of asbestos], load loss, and spillage or leakage of liquids.					

000216

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Asbestos Emission Control, Standard for Active Asbestos Disposal Sites OAC 3745-20-06(A)&(B) [40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Active Waste Disposal Sites, 40 CFR §61.154]	(A) Each owner or operator of an active asbestos waste disposal site shall cause or permit no visible emissions [of asbestos] to the outside air; or shall comply with the requirements of paragraph (B) of this rule. (B) Rather than meet the no visible emissions requirement of paragraph (A) of this rule, each owner or operator of an active asbestos waste disposal site shall comply with the following: (1) There shall be no visible emissions from asbestos-containing waste materials during the on-site transportation, transfer, deposition or compacting operations. (2) Deposition and burial operations shall be conducted in a manner which prevents handling by equipment or persons that causes asbestos-containing waste materials to be broken-up or dispersed before the materials are buried. (3) As soon as practicable after deposition of the asbestos-containing waste materials but no later than at the end of each operating day, the asbestos-containing waste material deposited at the site during the operating day shall be buried with at least twelve inches of compacted nonasbestos-containing material. Alternatively, any owner or operator of an active asbestos waste disposal site may apply for approval of the Director [of Environmental Protection, a.k.a. Director of the OEPA] to utilize alternative control measures to bind dust, control wind erosion or convert [friable] asbestos to non-friable forms. (4) During the unloading, deposition, burial, and initial compaction of asbestos-containing materials, the owner or operator of the active [asbestos] waste disposal site shall establish a restricted area adequate to deter the unauthorized entry of the general public and any unauthorized personnel from any location within one hundred feet of the operations, and shall display the following information on a sign not less than twenty by fourteen inches, so that it is visible before entering the restricted area: ASBESTOS DUST HAZARD Do Not Remain In Area Unless Your Work Requires It Breathing Asbestos Dust Is Hazardous To Your Health	√	√	Appl	Pertinent to the management of asbestos-containing materials. Also note that requirements from paragraphs (A) and (B) which are pertinent to disposal of asbestos-containing materials, are included in the OSDF Impacted Materials Placement Plan. NOTE: The sizing & language for warning signs under (B)(4) at left conflicts with that required by OSHA under 29 CFR §1926.1101(k)(7). The FEMP will follow either the Ohio active asbestos waste disposal sites language or the OSHA required sign language: DANGER ASBESTOS CANCER & LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY OSHA does not impose a minimum sign size.	See preceding.

000217

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Asbestos Emission Control, Standard for Inactive Asbestos Disposal Sites OAC 3745-20-07(C) [40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Inactive Waste Disposal Sites, for Asbestos Mills and Manufacturing and Fabricating Operations 40 CFR §61.151]	The owner or operator may use an alternate control method that has received prior approval of the Director [of Environmental Protection, a.k.a. Director of the OEPA] rather than comply with the requirements of paragraph (A) [emissions and cover requirements] or (B) [posting and access control requirements] of this rule.	✓	✓	Appl	These requirements for inactive asbestos waste disposal sites are very similar to those for active asbestos waste disposal sites under OAC 3745-20-06 (preceding entry). During soil remediation activities under this remedial action project, the requirements for active asbestos disposal sites (preceding entry) will be followed while managing friable asbestos-containing material. Also note that requirements pertinent to disposal of asbestos-containing materials under paragraphs (A) and (C) of OAC 3745-20-07 are included in the OSDF Impacted Materials Placement Plan.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Asbestos Emission Control, Standard for Inactive Asbestos Disposal Sites OAC 3745-20-07(D) [40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations, 40 CFR §61.151(d)]	Each owner or operator of an inactive asbestos waste disposal site shall notify the Director [of Environmental Protection, a.k.a. the Director of the OEPA] in writing prior to disturbing or removing any asbestos-containing waste material. The notice shall contain:	✓	✓	✓	Submission of the project-specific IRDPs to OEPA constitute this notification.	
	• the reason for disturbing the waste,					The reason for disturbing the material is documented in the OU2, OU5 and OU3 RODs.
	• the procedures to be used to control emissions,					FEMP Fugitive Dust Control BAT Determination, the OSDF Impacted Materials Placement Plan, and following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials 5.1.2.2 Fugitive Emissions F.4.1.1 Asbestos
	• the duration of the operation, and				Project schedules contained in project-specific IRDPs.	
	• the location of the final disposal site.					The OSDF, unless the OSDF WAC is not met; else, an off-site permitted/licensed disposal facility.

000219

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
National Emission Standards for Hazardous Air Pollutants, Subpart H—National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities, 40 CFR §61.90, §61.91 and §61.92 - .97 [Radiation Protection of the Public and the Environment DOE Order 5400.5 Chapter II (1)(b)]	Emissions of radionuclides (except radon-220 and radon-222) to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. To determine compliance with the standard, radionuclide emissions shall be determined and effective dose equivalent values to members of the public calculated using EPA-approved sampling procedures, computer models CAP-88 or AIRDOS-PC, or other procedures for which EPA has granted prior approval.	Appl	Appl	Appl		Section 6 of the Integrated Environmental Monitoring Plan (IEMP) and the following sections of the Sitewide Excavation Plan: 5.1.2.3 Airborne Radiological Particulates 5.1.2.4 Radon 5.1.2.5 Direct Radiation
National Emission Standards for Hazardous Air Pollutants, Subpart Q—National Emission Standards for Radon Emissions From Department of Energy Facilities 40 CFR §61.190, §61.192	No source at a DOE facility shall emit more than 20 pCi/m^2/sec of radon-222 as an average for the entire source into the air.	Appl	Appl	R&A	The existing distribution of contaminants within the site soils attains compliance with this requirement. Will be addressed sitewide as necessary by the Integrated Environmental Monitoring Plan (IEMP).	

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
SURFACE WATER PATHWAY						
	FLOODPLAIN/WETLANDS PROTECTION					
Executive Order 11990, Protection of Wetlands	Federal agencies are required to take action to avoid adversely impacting wetlands wherever possible, to minimize wetland destruction, and to preserve the values of wetlands.	Appl	Appl		Floodplain and wetland impacts associated with soil remediation activities will be minimized and avoided to the maximum extent practicable. Projects with unavoidable impacts will be undertaken in accordance with 33 CFR Parts 323 and 330. A review of an overlay of each remediation area boundary on the FEMP Jurisdictional Wetland Delineation (Drwg. 75X-5500-G-00372) will be conducted to determine the approximate acreage of jurisdictional wetlands that will be dredged and filled during excavation of the remediation area. Dredge and fill activities within these wetlands will comply with the substantive requirements of Nationwide Permit Nos. 38 and 26 (subsequent entry) — promulgated in Appendix A of 33 CFR Part 330 (subsequent entry) and OEPA's corresponding State Water Quality Certification (see subsequent entry for OAC 3745-32).	Approximately 36 acres of jurisdictional wetlands and 9 acres of waters of the United States were identified on the FEMP property as a result of the 1993 Jurisdictional Wetlands & Waters of the U.S. (1993 FEMP Wetland Delineation). The U.S. Army Corps of Engineers officially approved the delineation on August 19, 1993. See also: Appendix H of the OU2 FS Report; Appendix J of the OU5 FS Report, and Appendix J of the OU3 RI/FS. The Natural Resources Restoration Plan (NRRP); also, remedial action completion reports must include NEPA compliance, as per following sections of the Sitewide Excavation Plan: 1.4.2 Related Documents 7.4 Certification Report 7.5 Other Related Future Documents
Procedure for Implementing the National Environmental Policy Act 40 CFR §6.302(a)	Federal agencies conducting certain activities must avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands, and avoid support of new construction in wetlands when a practicable alternative exists.	Appl	Appl		See preceding.	See preceding.

000221

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Executive Order 11988, Floodplain Management Procedures for Implementing the National Environmental Policy Act 40 CFR §6.302(b)	Federal agencies must evaluate the potential effects of actions they may take in a floodplain to avoid, to the extent possible, adverse effects associated with direct and indirect development of a floodplain.	Appl	Appl		Remediation is needed, and can not be avoided. Nationwide Permit # 38 (subsequent entry) authorizes such remedial activity in a floodplain. The floodplain will not be developed as a result of this federal agency action.	An updated floodplain determination was conducted in October 1992 for Paddy's Run using the U.S. Army Corps of Engineers' standard HEC2 water surface profile analysis program. The 100-year flood elevations reach the western slope of the Inactive Flyash Pile and the toe of the South Field slope.

000222

2888

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	FLOODPLAIN/WETLANDS PROTECTION, continued					
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.3(a), 3(b)(1), 3(b)(2), 3(b)(3), 3(b)(5), 3(b)(6), 3(c), 3(d), 3(e)	DOE shall exercise leadership and take action to: • Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction of wetlands and the occupancy and modification of floodplains and wetlands, and avoid direct and indirect support of floodplain and wetland development wherever there is a practicable alternative. • Incorporate floodplain management goals and wetlands protection considerations into its planning, regulatory, and decision-making processes and shall to the extent practicable: - Reduce the hazard and risk of flood loss. - Minimize the impact of floods on human safety, health, and welfare. - Restore and preserve natural and beneficial values served by the floodplain. - Minimize the destruction, loss, or degradation of wetlands. - Preserve and enhance the natural and beneficial values of wetlands. • Undertake a careful evaluation of the potential effects of any DOE action taken in a floodplain and any new construction undertaken by DOE in wetlands not located in a floodplain. • Identify, evaluate, and as appropriate, implement alternative actions which may avoid or mitigate adverse floodplain/wetlands impacts. • Provide opportunity for early public review of any plans or proposals for actions in floodplains and new construction in wetlands.	Appl	Appl	Appl	10 CFR Part 1022 is the DOE implementing regulation for Executive Orders 11988 and 11990 (see corresponding preceding entries).	Remediation decisions included avoidance to/ minimization of wetlands impacts. See: Appendix H of the OU2 FS Report; Appendix J of the OU5 FS Report, and Appendix J of the OU3 RI/FS. Also, see preceding entries.
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.5(b), (h)	This part shall apply to all proposed floodplain/wetlands actions, including those sponsored jointly with other agencies, where practicable alternatives to the proposed actions are still available. The policies and procedures of this part which are applicable to floodplain actions shall apply to all proposed actions which occur in a wetlands located in a floodplain.	Appl	Appl	Appl	See preceding entries.	See preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.11 (a), (b), (c)	Concurrent with its review of a proposed action to determine appropriate NEPA requirements, DOE shall determine applicability of the floodplain management and wetlands protection requirements of this part. In making a floodplain determination, DOE shall utilize the Flood Insurance Rate Maps (FIRMs) or the Flood Hazard Boundary Maps (FHBMs) prepared by the Federal Insurance Administration of the Department of Housing and Urban Development to determine if a proposed action is located in the base or critical action floodplain, as appropriate. For a proposed action in an area of predominately federal or state land holdings where FIRM or FHBM maps are not available, information shall be sought from the land administering agency (e.g., Bureau of Land Management, Soil Conservation Service, etc.) or from agencies with floodplain analysis expertise.	Appl	Appl		See preceding entries.	See preceding entries.
DOE Compliance with Floodplain/ Wetlands Assessments 10 CFR §1022.12(a)	If DOE determines, pursuant to 10 CFR §§ 1022.5 and 1022.11, that this part is applicable to the proposed action, DOE shall prepare a floodplain/wetlands assessment, according to the requirements in this section (10 CFR §1022.12).	Appl	Appl		See preceding entries.	See preceding entries.
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.15(a)	If DOE finds that no practicable alternative to locating in the floodplain/wetland is available, consistent with the policy set forth in Executive Order 11988, DOE shall, before taking action, design, or modify its action in order to minimize potential harm to or within the floodplain or wetland.	Appl	Appl		See preceding entries.	See preceding entries.
Federal Water Pollution Control Act (a.k.a., Clean Water Act) General Regulatory Policies 33 CFR §323.3	Permits will be required for the discharge of dredged or fill material into waters of the United States including wetlands. Certain discharges specified in 33 CFR Part 330 are permitted by that regulation (nationwide permits). If a discharge of dredged or fill material is not permitted by 33 CFR Part 330 (Nationwide Permits), an individual section 404 permit will be required for the discharge of dredged or fill material into waters of the United States. Discharges of dredged or fill material into waters of the United States done by or on behalf of any Federal agency, other than the Corps of Engineers, are subject to the authorization procedures of these regulations. Remedial actions involving the discharge of dredge and fill material into these areas shall meet the substantive requirements of this section and 40 CFR Part 230.	Appl	 Appl		See preceding entry for Executive Order 11990 (first Floodplain/Wetland Protection entry). Discharges of dredged and fill material not authorized by a NWP will be conducted in accordance with the substantive requirements of these regulations.	See preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	FLOODPLAIN/WETLANDS PROTECTION, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit (NWP) Program 33 CFR Part 330	The U.S. Army Corps of Engineers has authorized certain categories of activities involving the discharge of dredged and fill material into wetlands and waters of the United States under the NWP program. Activities involving the discharge of dredged and fill material will be conducted in accordance with the substantive requirements of applicable NWPs as required. Discharges not authorized by NWP will be conducted in accordance with the substantive requirements of 33 CFR Part 323 and 40 CFR Part 230.	√	Appl	R&A	See preceding entries.	Following sections of the Sitewide Excavation Plan: 3.3.1 Implementation of Construction, Excavation, and Material-handling Activities 5.1.1 Natural Resource Impacts 5.1.3 Surface Water Pathway
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program 33 U.S.C. §1341(a)(1), (d) 33 CFR §330.1(c)	An activity is authorized under an Nationwide Permit (NWP) only if that activity and the permittee satisfy all of the individual NWP's terms and conditions. Potentially applicable NWPs include: • Nationwide Permit #38 — Cleanup of Hazardous and Toxic Waste - This permit authorizes specific activities required to affect the containment, stabilization or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority provided the permittee notifies the district engineer. - For discharges in special aquatic sites, including wetlands, the notification must include a delineation of affected special aquatic sites, including wetlands. - This nationwide permit does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste. • Nationwide Permit #26 — Headwaters and Isolated Waters Discharges - The discharge does not cause the loss of more than 10 acres of waters of the United States. - The permittee notifies the district engineer if the discharge would cause the loss of waters of the United States greater than 1 acre. - For discharges in special aquatic sites, including wetlands, the notification must also include a delineation of affected special aquatic sites, including wetlands. - The discharge, including all attendant features, both temporary and permanent, is part of a single and complete project.	Appl	Appl	R&A	See preceding entry for Executive Order 11990 (first Floodplain/Wetlands Protection entry).	January 17, 1992 letter from Donald R. Schregardus, Director of the OEPA, to the U.S. Army Corps of Engineers, "401 Certification — Grant," the OEPA conditionally certified that projects authorized by NWP #s 38 and 26 will comply with the applicable provisions of the Federal Water Pollution Control Act.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program Section B(26) to Appendix A of 33 CFR Part 330	Discharges of dredged or fill material into headwaters and isolated waters [under Nationwide Permit # 26] are approved provided: • The discharge does not cause the loss of more than 10 acres of waters of the United States. • The permittee notifies the district engineer if the discharge would cause the loss of waters of the United States greater than 1 acre. • For discharges in special aquatic sites, including wetlands, the notification must also include a delineation of affected special aquatic sites, including wetlands. • The discharge, including all attendant features, both temporary and permanent, is part of a single and complete project.	✓	✓	✓	See preceding and following entries.	See preceding and following entries.

000226

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	FLOODPLAIN/WETLANDS PROTECTION, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program 33 CFR §330.4 (c)(1) Ohio Section 401 State Water Quality Certifications OAC 3745-32-02	Section 401 State Water Quality Certification pursuant to Section 401 of the Clean Water Act, or waiver thereof, is required to prior to issuance or re-issuance of individual or nationwide permits authorizing (dredge and fill) activities which may result in a discharge into waters of the United States. State Water Quality Certification is granted provided: 1. The discharge does not prevent or interfere with the attainment or maintenance of applicable water quality standards; and 2. The discharge does not result in a violation of any applicable provisions of the Federal Water Pollution Control Act (a.k.a., Clean Water Act).	Appl	Appl		See preceding and following entries.	January 17, 1992 letter from Donald R. Schregardus, Director of the OEPA, to the U.S. Army Corps of Engineers, "401 Certification — Grant," the OEPA conditionally certified that projects authorized by the NWP #s 38 and 26 (see previous entry) will comply with the applicable provisions of the Federal Water Pollution Control Act.
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program Section C of Appendix A to 33 CFR Part 330	In addition to the General Conditions, the following [Section 404 only] conditions apply only to activities that involve the discharge of dredge or fill material and must by followed in order for authorization of the nationwide permits to be valid: • No discharge of dredged or fill material may consist of unsuitable material (e.g., trash, debris, car bodies, etc.). And material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act). • Discharges of dredged or fill material into waters of the United States must be minimized or avoided to the maximum extent practicable at the project site, unless the District Engineer has approved a compensation mitigation plan for the specific regulated activity.	✓	✓		See preceding entries.	The Natural Resources Restoration Plan (NRRP)

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	FLOODPLAIN/WETLANDS PROTECTION, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program Section C of Appendix A to 33 CFR Part 330	Factors that the District Engineer will consider when determining the acceptability of appropriate and practicable mitigation include, but are not limited to: • To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of overall project purposes. • To the extent appropriate, permittees should consider mitigation banking and other forms of mitigation including contribution to wetland trust funds, which contribute to the restoration, creation, replacement, enhancement, or preservation of wetlands. • Furthermore, examples of mitigation that may be appropriate and practicable include but are not limited to: reducing the size of the project; establishing buffer zones to protect aquatic resource values; and replacing the loss of aquatic resource values by creating, restoring, and enhancing similar functions and values. In addition, mitigation must address impacts and cannot be used to offset the acreage of wetland losses that would occur in order to meet the acreage limits of some of the nationwide permits.	✓	✓		See preceding entries.	The Natural Resources Restoration Plan (NRRP)
Federal Water Pollution Control Act (a.k.a., Clean Water Act) §404 (33 U.S.C. §1344) Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, Subpart B—Compliance With the Guidelines, Restrictions on Discharge 40 CFR §230.10	No discharge of dredged or fill material shall be permitted: • If there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as, the alternative does not have other significant adverse environmental consequences. • Unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. No discharge of dredged or fill material shall be permitted if it: • Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable state water quality standard. • Violates any applicable toxic effluent standard or prohibition under section 307 of the Clean Water Act. • Jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, or results in likelihood of the destruction or adverse modification or a habitat which is determined to be a critical habitat under the Endangered Species Act of 1973, as amended.	Appl	✓	✓	See preceding entries.	Appendix H of the OU2 FS Report; Appendix J of the OU5 FS Report, and Appendix J of the OU3 RI/FS.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER					
Pollution to Waters of the State ORC 6111.04	No person shall cause pollution or place or cause to be placed any sewage, industrial waste, or other wastes in a location where they cause pollution of any waters of the state. No person to whom a permit has been issued shall place or discharge, or cause to be placed or discharged, in any waters of the state any sewage, industrial waste, or other wastes in excess of the permissive discharges specified under such existing permit without first receiving a permit from the Director to do so. Pollution to waters of the state is prohibited.	Appl	Appl	R&A		FEMP Site NPDES Permit Number 1IO00004*ED, the FEMP Stormwater Pollution Prevention Plan (RM-0039), Section 4 of the Integrated Environmental Monitoring Plan (IEMP), and the following section of the Sitewide Excavation Plan: 5.1.3 Surface Water Pathway
Compliance with Ohio Water Pollution Control Requirements ORC 6111.07(A), (C)	Failure to comply with water pollution control requirements is prohibited.	✓	Appl	Appl		See preceding.
Water Quality Standards, Criteria Applicable to All Waters OAC 3745-1-04	To every extent practical and possible, all surface waters of the State of Ohio shall be free from: • Suspended solids or other substances that enter the waters as a result of human activity that will form putrescent or otherwise objectionable sludge deposits • Floating debris, oil, scum and other floating materials entering the waters as a result of human activity in amounts sufficient to be unsightly or cause degradation • Materials entering the waters as a result of human activity producing color, odor or other conditions in such a degree as to create a nuisance • Substances entering the waters as a result of human activity in concentrations that are toxic or harmful to human, animal or aquatic life and/or are rapidly lethal in the mixing zone • Nutrients entering the waters in concentrations that create nuisance growths of aquatic weeds or algae	✓	R&A	R&A		See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER, continued					
Water Quality Standards, Antidegradation Policy OAC 3745-1-05(A)&(B)	(A) Existing instream water uses as defined in OAC 3745-1-07 [subsequent entry] shall be maintained and protected. No further water quality degradation which would interfere with or become injurious to designated uses is allowable. (B) Waters in which existing water quality is better than the criteria prescribed in these rules and exceeds those levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water shall be maintained and protected. ... Degradation of water quality shall not interfere or become injurious to existing or planned uses, and the Director shall require that ... feasible management or regulatory programs pursuant to Section 208 and 303 of the Act [Clean Water Act], 33 U.S.C. Sections 1288 and 1313, be applied to nonpoint sources.	✓	✓	Appl	Soil remedial action projects will ensure that existing instream water uses of the Great Miami River and Paddy's Run will be maintained as health protective.	See preceding.
Water Quality Standards, Great Miami River OAC 3745-1-21	Paddy's Run and the Great Miami River are designated as: • Warm water aquatic life habitat • Agricultural and industrial water supply • Primary contact recreation The Great Miami River between Ross Road (RM 95.7) to Taylorsville Dam (RM 92.6) is a state resource water, and RM 130 and 118 are public water supplies.	Appl	Appl	Appl	Discharges to the Great Miami River and Paddy's Run must not cause a violation of applicable numeric or narrative water quality standards for these designations. The FEMP effluent discharge pipe, located at River Mile (RM) 24.73 on the Great Miami River, is downstream of the state resource waters and public water supplies.	See preceding.
National Pollutant Discharge Elimination System 40 CFR §122.26(a)(l)(ii), 40 CFR §122.26(b)(14)(v), (x)	A discharge composed entirely of storm water associated with industrial activity is required to obtain a NPDES permit. These categories of facilities are considered to be engaging in "industrial activity": • Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection), including those that are subject to regulation under Subtitle D of RCRA; and • Construction activities including clearing, grading, and excavation that disturbs five acres or more of total land area.	Appl	Appl	Appl	Discharges of stormwater associated with industrial and/or construction activities are regulated in accordance with the existing FEMP NPDES Permit (Ohio EPA Number 1IO00004*ED), and the FEMP Stormwater Pollution Prevention Plan (RM-0039).	See preceding.
Ohio NPDES Permits, Ohio NPDES Permits Required OAC 3745-33-02(A)	No person may discharge any pollutant or cause, permit, or allow a discharge of any pollutant [from a point source] without applying for and obtaining an Ohio NPDES permit in accordance w with the requirements of this Chapter, 3745-33.	✓	✓	✓	See preceding and following entries.	FEMP Site NPDES Permit (Ohio EPA Number 1IO00004*ED), and the FEMP Stormwater Pollution Prevention Plan (RM-0039).

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Ohio NPDES General Permits, Ohio NPDES Permit Required OAC 3745-38-02(A)	No person may discharge any pollutant or cause, permit, or allow a discharge of any pollutant from a point source without either applying for and obtaining an Ohio NPDES permit in accordance w with the requirements of Chapter 3745-33 of the Administrative Code [preceding entry], ... or have authorization to discharge under an Ohio NPDES general permit in accordance with the requirements of this chapter [3745-38]. **NOTE:** In September 1992, the FEMP applied for an individual stormwater permit to cover its industrial stormwater discharges to Paddy's Run. On the basis of the information provided in the original FEMP Stormwater Permit Application, Ohio EPA has chosen to regulate FEMP site industrial stormwater discharges under the individual permit process (OAC 3745-33, preceding entry), by incorporating stormwater monitoring requirements at Paddy's Run into the NPDES permit. The site NPDES permit also addresses discharges of stormwater associated with construction activities by requiring a Stormwater Pollution Prevention Plan that defines the manner in which these discharges will be managed.	✓	✓	✓	In accordance with the note at left, the general permitting process described in OAC 3745-38 is not applicable to the FEMP site stormwater discharges. Rather, these are regulated within the context of the existing FEMP NPDES Permit (Ohio EPA Number 1IO00004*ED) and the FEMP Stormwater Pollution Prevention Plan (RM-0039), both of which derive their regulatory basis from OAC 3745-33 (preceding entry).	See preceding entries.
Rules and Regulations of the Hamilton County Soil and Water Conservation District Governing Earthwork for Unincorporated Hamilton County, Ohio	Temporary and/or permanent erosion and sediment control features and devices shall be designed and constructed in general accordance with the State of Ohio Temporary Erosion Control Specifications. *Exempted* from these requirements are: • *any public work performed by or under control of any governmental agency*, provided such operations do not cause instability of any adjacent or contiguous property and substantially equivalent sediment control policies are applied [3.10 E]. • *operations involving process and stockpiling of soils or rock materials where controlled by other regulations*, provided such operations do not cause instability of any adjacent or contiguous property [3.10 H].	✓	TBC	TBC		FEMP Site NPDES Permit (OEPA Number 1IO00004*ED), and the FEMP Stormwater Pollution Prevention Plan (RM-0039), and the following sections of the Sitewide Excavation Plan: 5.1.3 Surface Water Pathway App F Implementation of Construction

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Subpart K—Best Management Practices (BMP) Programs 40 CFR §125.104	BMP programs shall be developed in accordance with good engineering practices and: 1) Be documented in narrative form and include any necessary plot plans, drawings or maps; 2) Establish specific objectives for the control of toxic and hazardous pollutants: (a) Each facility component or system shall be examined for its potential for causing a release of significant amounts of toxic or hazardous pollutants to waters of the United States due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc. (b) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances to result in significant amounts of toxic or hazardous pollutants reaching surface waters, the program should include a prediction of the direction, rate of flow and total quantity of toxic or hazardous pollutants which could be discharged from the facility as a result of each condition or circumstance; 3) Establish specific BMPs to meet the objectives identified in (2) above, addressing each component or system capable of causing a release of significant amounts of toxic or hazardous pollutants to the waters of the United States.		Appl	R&A	BMP requirements will be met by implementing FEMP's BMP Plan. The BMP Plan will be progressively updated to accommodate changing site activities during the conduct of CERCLA remedial actions.	Addressed as part of the selected remedy described in the OU5 ROD. Also see preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
GROUNDWATER PATHWAY						
GROUNDWATER PROTECTION						
Safe Drinking Water Act 42 U.S.C. §1424(e)	All Federal financially assisted projects constructed in the area of a sole source aquifer and its principal recharge zone will be subject to EPA's review to insure that these projects are designed and constructed so that they do not create a significant hazard to public health.	Appl	Appl	Appl	A notice in 53 FR 15876 (May 4, 1988) designated the Buried Valley Aquifer System of the Great Miami/ Little Miami River Basins of southwestern Ohio as a sole or principal source of drinking water. The Fernald site is located above this aquifer.	EPA and OEPA review of project submittals
WELLS — CONSTRUCTION						
Water Well Standards, Pumping Wells OAC 3745-9-08(C)	Pumps may only be primed with potable water.		Appl		Pertains to all well pumps that require priming.	The Sitewide CERCLA Quality Assurance Project Plan (SCQ), the Integrated Environmental Monitoring Plan (IEMP), and the individual project-specific plans for sampling.
Water Well Standards, Monitoring Well Maintenance and Modification OAC 3745-9-09(A) through (C), and (E) through (G)	Monitoring wells must be maintained or modified to avoid cross-contamination of groundwater.		Appl		Pertains to all groundwater wells and piezometers.	The Sitewide CERCLA Quality Assurance Project Plan (SCQ), the Integrated Environmental Monitoring Plan (IEMP), and the following section of the Sitewide Excavation Plan: F.6.3 Monitoring Well Preservation

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WELLS — ABANDONMENT					
Water Well Standards, Abandonment of Test Holes and Wells OAC 3745-9-10	Upon completion of testing, a test hole shall be either completely filled with grout or such other material as will prevent contaminants from entering groundwater. If a well [or similar device] containing walls is not being used for obtaining groundwater or for determining the quality, quantity, or level of groundwater, it shall be completely filled with grout or other similar material as wneeded, wells, peizometers and				lysimeters are to be properly plugged and abandoned in accordance with these requirements.	The Sitewide CERCLA Quality Assurance Project Plan (SCQ), the Integrated Environmental Monitoring Plan (IEMP), and the following section of the Sitewide Excavation Plan: F.6.1 Plugging and Abandonment F.6.2 Monitoring Well Excavation

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
SOIL REMEDIATION						
CLOSURE OF UNDERGROUND STORAGE TANKS						
General Requirements OAC 1301:7-7-36 40 CFR §§280.61 through .66	Owner or operators of petroleum or hazardous substance underground storage tank (UST) systems must, in response to a confirmed release from the UST system, comply with abatement measures, site characterization, product removal, investigations for soil and groundwater cleanup, and corrective action plan, except for USTs excluded under 40 CFR §280.10(b) and UST systems subject to RCRA Subtitle C corrective action requirements under Section 3004(u) of RCRA, as amended.		Appl	✓	Risk-based closures are to be performed for USTs with media contamination as integrated with the CERCLA soil remediation activities.	Risk-based soil cleanup levels, known as FRLs, are established in the RODs. Following sections of the Sitewide Excavation Plan: 2.1.1.2 Underground Storage Tanks 2.2.6 UST Closure 4.0 Location-Specific Excavation Approaches App F Implementation of Construction
CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS						
OEPA Closure Plan Review Guidance for RCRA Facilities (Interim Final) September 1, 1993	Federal Regulations of May 2, 1986 (50 FR 16422) and March 19, 1987 (52 FR 8704) modified the closure performance standard such that risk assessment, or what constitutes "decontamination" of a site, may be considered by EPA as a closure option. On December 8, 1988 (see OAC 3745-67-28), the OEPA adopted the equivalent of the EPA's March 19, 1987 regulations, clarifying that risk assessment may be a closure option. It is OEPA and its Division of Hazardous Waste Management (DHWM) practice to consider risk assessment/risk-based closure as a possible third option for closure for all types of units [hazardous waste management units (HWMUs) and solid waste management units (SWMUs)].		TBC	✓	Risk-based closures are to be performed for HWMUs with media contamination as integrated with the CERCLA soil remediation activities (see following entry).	Risk-based soil cleanup levels, known as FRLs, are established in the RODs. Following sections of the Sitewide Excavation Plan: 2.1.1.1 Hazardous Waste Management Units 2.2.5 HWMU Closure 4.0 Location-Specific Excavation Approaches App F Implementation of Construction

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.1	The Respondent ... shall comply with the closure regulations contained in OAC rules 3745-66-11(A) and (B), 3745-66-11(C) as applicable, 3745-66-14, and 3745-66-16 through 3745-66-20 as applicable for the HWMUs [hazardous waste management units] listed in Attachment A [to these Orders].		√	√	Pertinent to closures of HWMUs presented in Table 2-1 of the Sitewide Excavation Plan (derived from the DF&O's Attachment A) during the CERCLA soil remediation activities	See subsequent entries in this table for those OAC rules determined by the RODs as ARARs. While OAC 3745-66-11 and -14 are presented in the next two entries, entries for 3745-66-16 through -20 for post-closure are addressed in the subsequent Post-Closure presentation group of this table.
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.1	The Respondent ... shall comply with the closure regulations contained in OAC rules 3745-66-11(A) and (B), 3745-66-11(C) as applicable, 3745-66-14, and 3745-66-16 through 3745-66-20 as applicable for the HWMUs [hazardous waste management units] listed in Attachment A [to these Orders].		√	√	Pertinent to closures of HWMUs in preceding entry during the CERCLA soil remediation activities.	See preceding and subsequent entries.
Closure and Post-Closure Under Interim Standards Closure Performance Standard OAC 3745-66-11 [40 CFR §265.111]	The owner or operator shall close his facility or hazardous waste management unit (HWMU) in a manner that: (A) minimizes the need for further maintenance; (B) controls, minimizes, or eliminates, to the extent necessary to protect public health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and (C) complies with these closure requirements.	√	Appl	Appl	Pertinent to closures of HWMUs during the CERCLA soil remediation activities; also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. **NOTE:** These requirements are the same as those for new hazardous waste facilities under OAC 3745-55-11 (40 CFR §264.111). **NOTE:** DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Following sections of the Sitewide Excavation Plan: 2.1.1.1 Hazardous Waste Management Units 2.2.5 HWMU Closure 4.0 Location-Specific Excavation Approaches App F Implementation of Construction

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS, continued					
Closure and Post-Closure Under Interim Standards Disposal or Decontamination of Equipment, Structures and Soils OAC 3745-66-14 [40 CFR §265.114]	During the partial and final closure periods, all contaminated equipment, structures, and soils must be properly disposed of or decontaminated [to risk-based cleanup levels] [i.e., clean closed, have risk-based closure, or be closed in place], unless otherwise specified in: OAC 3745-66-97 Closure and Post-Closure Under Interim Standards: [Tank System] Closure and Post-Closure Care OAC 3745-67-28 Surface Impoundments: Closure and Post-Closure Care OAC 3745-67-58 Surface Impoundments: [Waste Piles] Closure and Post-Closure Care OAC 3745-67-80 Surface Impoundments: [Land Treatment Facility] Closure and Post-Closure Care OAC 3745-68-10 Landfills, Incinerators, Thermal Treatment, Miscellaneous Units: Closure and Post-Closure	√	Appl	Appl	Pertinent to closures of the identified HWMUs during the CERCLA soil remediation activities; also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. **NOTE:** These requirements are the same as those for new hazardous waste facilities under OAC 3745-55-14 (40 CFR §264.114), with corresponding cross-references presented therein.	Risk-based soil cleanup levels, known as FRLs, are established in the RODs. Also see preceding entry.
Surface Impoundments: [Surface Impoundments] Closure and Post-Closure Care OAC 3745-67-28	At closure of a surface impoundment HWMU, the owner or operator must remove or decontaminate [to risk-based cleanup levels] all waste residues, contaminated waste containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. If the owner or operator demonstrates that not all contaminated soils can be practically removed or decontaminated [to risk-based cleanup levels], he must close the HWMU and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills under OAC 3745-66-10 to 3745-66-20 and OAC 3745-68-10 (40 CFR §264.310).		√	√	Pertinent to closure of surface impoundment HWMUs during the CERCLA soil remediation activities, as cited in a preceding entry. **NOTE:** These requirements are the same as those for new hazardous waste facilities under OAC 3745-56-28 (40 CFR §264.228).	See preceding.
Hazardous Waste New Facility Corrective Action, Closure and Post-Closure Requirements [Container Storage Area] Closure OAC 3745-55-78 [40 CFR §264.178]	At closure of a container storage area HWMU, the owner or operator must remove all hazardous waste and hazardous waste residues from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be removed or decontaminated [to risk-based cleanup levels].	√	R&A	√	Pertinent to closures of container storage area HWMUs during the CERCLA soil remediation activities **NOTE:** There are no corresponding requirements for interim status hazardous waste facilities under OAC 3745-65, -66, or -67 (40 CFR Part 265).	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Landfills, Incinerators, Thermal Treatment, Miscellaneous Units: Closure and Post-Closure OAC 3745-68-10(A) [40 CFR §265.310(a)]	At final closure of a HWMU as a landfill ... the owner or operator must cover the HWMU ... with a final cover designed and constructed to: • provide long-term minimization of migration of liquids through the closed HWMU; • function with minimum maintenance; • promote drainage and minimize erosion or abrasion of the cover; • accommodate settling and subsidence so that the cover's integrity is maintained; and • have a permeability less than or equal to the permeability of any bottom liner system or natural subsoil present.	✓	R&A	✓	Pertinent to HWMUs that are "closed in place" — i.e., all contaminated soils can not practically be removed or decontaminated [to risk-based cleanup levels] — during the CERCLA soil remediation process. **NOTE:** DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs rather than close in-place (close as a landfill).	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS, continued					
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.2 in lieu of Closure and Post-Closure Under Interim Standards Closure Plan; Amendment of Closure Plan OAC 3745-66-12	The Respondent ... are hereby exempted from complying with OAC rule 3745-66-12 for the HWMUs identified in Attachment A of these Orders, provided that the Respondent: a. Submits the documents contained in Attachment C [of these Orders] to Ohio EPA in accordance with the dates established pursuant to the ACA [Amended Consent Agreement]. Within one week after submitting these documents to Ohio EPA, the Respondent shall submit a cross-reference index which contains pertinent page and section identifications for each HWMU that is contained in the documents and said index shall be cumulative and reference all previous document locations. ... d. Implements the final remedies as reflected in the Records of Decision issued in accordance with the ACA.		✓	✓	Pertinent to closures of HWMUs listed in preceding entries (see Table 2-1 of the Sitewide Excavation Plan, derived from the DF&O's Attachment A) during the CERCLA soil remediation activities. DOE will submit the cross-reference index for the listed HWMUs accordingly.	Following sections of the Sitewide Excavation Plan: 2.1.1.1 Hazardous Waste Mangement Units 2.2.5 Hazardous Waste Management Unit Closure 3.3.1.3 Treatment, Special Handling and Disposal Options. 3.4.7 Certification Reports

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	RADIONUCLIDE CONCENTRATIONS					
Radiation Protection of the Public and the Environment DOE Order 5400.5 Chapter I (4) and Chapter II (2)	An "as low as reasonably achievable (ALARA)" process is to be used in planning and carrying out all DOE activities that have the potential to cause radiation exposure to the public. ALARA requires judgement with respect to what is reasonably achievable. Factors that relate to societal, technological, economic, and other public policy considerations shall be evaluated to the extent practicable. Factors to be considered, at a minimum, include: • Maximum dose to members of the public; • Collective dose to the population; • Alternative processes, such as alternative treatment of discharge streams, operating methods, or controls; • Doses for each process alternative; • Cost for each of the technological alternatives; • Examination of the changes in cost among alternatives; and • Changes in societal impact associated with process alternatives (e.g., differential doses from various pathways). Except for meeting requirements of NEPA, qualitative analyses are acceptable, in most instances, for ALARA judgements, especially when the potential doses are well below the dose limit. The bases for these judgements should be documented. More detailed analyses should be considered if the decision might result in doses that approach the limit.	TBC	TBC		In addition to the evaluations conducted as part of the CERCLA selection of remedy process [the short- and long-term risk assessments of the Comprehensive Remedial Action Risk Evaluation (CRARE) within the feasibility studies (FSs)], documentation of "equivalent evaluations" for environmental ALARA are performed in accordance with the "FEMP Environmental ALARA Plan" and retained as part of the site and project records. Also addressed through the approved selected remedy in the RODs. An ALARA goal is set in the OU5 ROD for the total uranium FRL.	Following sections of the Sitewide Excavation Plan: 2.1.3 Final Remediation Levels 2.1.5.2 Radiological Hot Spots 2.1.5.3 ALARA Requirements 2.2.2 Certifying FRL Attainment 2.2.3 Detection of and Criteria for Hot Spots 3.3.1.4 ALARA Implementa-tion 3.3.3 Precertifica-tion Activities 3.4.6 Implementa-tion Strategy for Hot Spot Criteria 3.4.7 Certification Report

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	RADIONUCLIDE CONCENTRATIONS, continued					
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Subpart B— Standards for Cleanup of Land and Buildings Contaminated with Residual Radioactive Materials from Inactive Uranium Processing Sites 40 CFR §192.12(a) Subpart C— Implementation 40 CFR §192.20	Remedial actions shall be conducted so as to provide reasonable assurance that, as a result of residual radioactive materials, the concentration of radium-226 in land averaged over any area of 100 m^2 shall not exceed the background level by more than: • 5 pCi/g averaged over the first 15 cm of soil below the surface, and • 15 pCi/g, averaged over 15-cm-thick layers of soil more than 15 cm below the surface. Compliance with this requirement should be shown through measurements performed within the accuracy of currently available types of field and laboratory instruments in conjunction with reasonable survey and sampling procedures.	R&A	R&A	R&A	Met through the selection of FRLs based on risk assessment, followed by certification of cleanup. The selected remedy in the OU2 and OU5 RODs established more stringent clean-up levels for radium-226 of 1.7 pCi/g, as opposed to 5.0 pCi/g above background.	See preceding.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Subpart C— Implementation 40 CFR §192.21(f) and §192.22(b)	Where radionuclides other than radium-226 and its decay product are present in sufficient quantity and concentration to constitute a significant radiation hazard from residual radioactive materials, remedial actions shall, in addition to satisfying the standards of Subpart A in 40 CFR §192.02 and Subpart B in 40 CFR §192.12 (both listed above), reduce other residual radioactivity to levels that are ALARA.	R&A	R&A	R&A	The approved selected remedy in the OU5 ROD set an ALARA goal for the total uranium FRL.	See preceding.
Postclosure Standards for Uranium and Thorium Mill Tailings, Subpart D— Standards for the Management of Uranium Byproduct Materials Pursuant to Section 84 of the Atomic Energy Act of 1954, as Amended 40 CFR §192.32 (b)(2)	The requirements for the management of uranium byproduct materials after closure of a disposal area [40 CFR §192.32(b)(1)] shall not apply to any portion of a disposal site which contains a concentration of radium-226 in land, averaged over areas of 100 m^2, which, as a result of uranium byproduct material, does not exceed the background level by more than the limits specified in 40 CFR §192.12(a) (see above).	R&A	R&A	R&A		See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Management of Thorium Mill Tailings, Subpart E— Standards for the Management of Thorium Byproduct Materials Pursuant to Section 84 of the Atomic Energy Act of 1954, as Amended 40 CFR §192.40 - §192.42	The following are requirements for the management of thorium byproduct materials: • The provisions for the management of uranium byproduct material (40 CFR §192.32) shall apply to thorium byproduct material and: - Provisions applicable to the element uranium shall also apply to the element thorium - Provisions applicable to radon-222 shall also apply to radon-220 - Provisions applicable to radium-226 shall also apply to radium-228 With the concurrence of EPA, alternative provisions may be substituted for any of the above requirements provided the alternative provisions will provide at least an equivalent level of protection for human health and environment.	R&A	R&A	R&A		See preceding.
Radiation Protection of the Public and the Environment, DOE Order 5400.5 Chapter IV (4)(a)	Guidelines for residual concentrations of radionuclides other than thorium and radium shall be derived from the basic dose limits by means of an environmental pathway analysis using specific property data where available. Procedures for these derivations are given in DOE/CH-8901. Residual concentrations of radioactive material in soil are defined as those in excess of background concentrations averaged over an area of 100 m^2.	TBC			Considered in the development of the selected remedy in the OU2 and OU5 RODs.	See preceding.
Radiation Protection of the Public and the Environment, DOE Order 5400.5 Chapter IV (4)(a)(1) 10 CFR Part 834 (PROPOSED)	If the average residual concentration of radionuclides in any surface or below- surface area less than or equal to 25 m^2 exceeds the limit or guideline by a factor of $(100/A)^{0.5}$ [where A is the area (in square meters) of the region in which the concentrations are elevated], limits for "hot spots" shall also be developed and applied. Procedures for calculating these hot spots limits, which depend on the extent of the elevated local concentrations, are given in DOE/CH-8901. In addition, reasonable efforts shall be made to remove any source of radionuclide that exceeds 30 times the appropriate limit in the soil, irrespective of the average concentration in the soil.	TBC	TBC			See preceding.

RADIONUCLIDE CONCENTRATIONS, continued

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Radiation Protection of the Public and the Environment, DOE Order 5400.5 Chapter IV (4)(a)(2)(3) 10 CFR Part 834 (PROPOSED)	The generic guidelines for residual concentrations of radium-226, radium-228, thorium-230, and thorium-232 are: • 5 pCi/g, averaged over the first 15 cm of soil below the surface; and • 15 pCi/g, averaged over 15-cm-thick layers of soil more than 15 cm below the surface. These guidelines take into account ingrowth of radium-226 from thorium-230 and of radium-228 from thorium-232, and assume secular equilibrium. If both thorium-230 and radium-226, or both thorium-232 and radium-228, are present and not in secular equilibrium, the appropriate guideline is applied as a limit for the radionuclide with the higher concentration. If other mixtures of radionuclides occur, the concentrations of individual radionuclides shall be reduced so that either the dose for the mixture will not exceed the basic dose limit or the sum of the ratios of the soil concentration of each radionuclide to the allowable limit for that radionuclide will not exceed 1. Explicit formulas for calculating residual concentrations guidelines for mixtures are given in DOE/CH-8901.	TBC	TBC		Included as it is more restrictive than the federal standard in 40 CFR §192.02, .12(a), .20, .21(f), .22(b), .32(b)(2), .40-.42.	See preceding.
Guidelines for Residual Radioactive Material—Surface Contamination DOE Order 5400.5 Chapter IV (4)(d) 10 CFR Part 834 (PROPOSED)	These generic surface contamination guidelines are applicable to existing structures and equipment. These guidelines are generally consistent with standards of the NRC (1982) and functionally equivalent to Section 4, "Decontamination for Release for Unrestricted Use," of Regulatory Guide 1.86, but apply to nonreactor facilities. These limits apply to both interior equipment and building components that are potentially salvageable or recoverable scrap. If a building is demolished, the guidelines in paragraph IV (6)(a) are applicable to the resulting contamination in the ground.		TBC		Will be used for any process facility building or structures built and/or used for the remedial action, including the AWWT, soil staging, etc.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	LEAD CONCENTRATION					
Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, OSWER Directive # 9355.4-12 (July 14, 1994)	EPA recommends using 400 ppm soil lead as a screening level for lead in soil for residential scenarios at CERCLA sites and at RCRA Corrective Action sites. Residential areas with soil lead below 400 ppm generally require no further action. Site-specific preliminary remediation goals (PRGs) at CERCLA sites and media cleanup standards at RCRA corrective action facilities for residential land use are described.	TBC	TBC		The selected remedy in the OU2 and OU5 RODs established this value as the lead FRL.	Following section of the Sitewide Excavation Plan: 2.1.3 Final Remediation Levels
	PCB CONCENTRATION					
Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions, Subpart A— Applicability, Definitions 40 CFR §761.3	PCB materials which appear at concentrations less than 50 ppm are excluded from the PCB disposal requirements in this regulation.	R&A	√	R&A	Operable Unit 2 does not contain PCB materials which have a concentration greater than 50 mg/kg (ppm by weight).	Following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials; 3.3.2.2 Special Materials; F.4.1 Materials Which Require Special Handling
Subpart G— PCB Spill Cleanup Policy, Requirements for PCB Spill Cleanup 40 CFR §761.125(c)	PCBs at a concentration of greater than 50 mg/kg (ppm by weight) are subject to TSCA decontamination requirements in 40 CFR §761.120(b). Soil in restricted access areas contaminated by a PCB spill shall be cleaned to 25 mg/kg PCBs [40 CFR §761.125(c)(3)(v)]. At such times as restricted access areas (other than outdoor electrical substations) are converted to another use, the spill site shall be cleaned up to the non-restricted access area requirements of 40 CFR §761.125(c)(4)(v). Soils in non-restricted access areas contaminated by a PCB spill shall be cleaned to 10 mg/kg PCBs, provided that the soil is excavated to a minimum depth of 10 inches. The excavated soil will be replaced with clean soil (i.e., containing less than 1 mg/kg PCBs), and the spill site will be restored (e.g., replacement of turf) [40 CFR §761.125(c)(4)(v)].		TBC	TBC	Soil containing PCBs will be excavated as necessary to attain FRLs; soil concentrations are expected to be less than 50 mg/kg PCBs. The OU5 ROD established FRLs for the PCBs Arochlor-1254 and Arochlor-1260 as 0.13 mg/kg.	Following section of the Sitewide Excavation Plan: 2.1.3 Final Remediation Levels
Subpart G— PCB Spill Cleanup Policy, Sampling Requirements 40 CFR §761.130	Criteria that the EPA uses to determine the adequacy of the cleanup of spills resulting from the release of regulated PCB materials at concentrations of ≥50 mg/kg. Applies to spills which occur after May 4, 1987.			TBC	Applies to spills of regulated PCB materials (i.e., those that have a concentration ≥50 mg/kg) that occurred after May 4, 1987.	See preceding

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CERTIFICATION OF CLEANUP					
Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media EPA 230/02-89-042 NTIS PB89-234959 February 1989	This EPA guidance document describes methods for testing whether soil chemical concentrations at a site are statistically below a cleanup standard or ARAR. If it can be reasonably concluded that the remaining soil or treated soil at a site has concentrations that are statistically less than relevant cleanup standards then the site can be judged protective of human health and the environment.	TBC	√			Following sections of the Sitewide Excavation Plan: 2.2.2 Certifying FRL Attainment 3.4 Certification App G Certification Design Rationale
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.4 in lieu of Closure and Post-Closure Under Interim Standards Certification of Closure OAC 3745-66-15	For the HWMUs identified in Attachment A of these Orders, the Respondent ... are hereby exempted from complying with OAC rule 3745-66-15 provided that they submit Remedial Action Reports for the HWMUs contained in operable units 1, 3, and 5 within 60 days from completion of remedial activities at each operable unit, which is determined by the U.S. EPA, in accordance with CERCLA. These Remedial Action Reports shall certify that the HWMUs contained in operable units 1 and 3 have been closed, and that the environmental media in operable unit 5 has been managed, in accordance with the final remedies contained in the Records of Decision and in accordance with the Director's closure performance standards. Attachment C [of these Orders] summarizes the documents that will be provided during remediation process. These CERCLA documents contain the substantive requirements of the RCRA and Ohio hazardous waste closure regulations.		√	√	Pertinent to closures of HWMUs listed in preceding entries (from Table 2-1 of the Sitewide Excavation Plan, derived from the DF&O's Attachment A) during the CERCLA soil remediation activities.	Following sections of the Sitewide Excavation Plan: 2.2.5 HWMU Closure 3.4 Certification 7.3 Certification Design Letter 7.4 Certification Report 7.5 Other Related Future Documents

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
IMPACTED MATERIAL MANAGEMENT						
	DEFINITIONS & GENERAL FACILITY STANDARDS					
Resource, Conservation, and Recovery Act 42 U.S.C. §6903 (27)	Solid waste means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities, but does not include source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954.	Appl	√	√		Following sections of the Sitewide Excavation Plan: 3.0 General Implementation Approach App F Implementation of Construction
Solid Waste and Infectious Waste Regulations, Definitions OAC 3745-27-01 (B)(40)	Solid wastes means such unwanted residual solid or semisolid material as results from industrial, commercial, agricultural, and community operations, *excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that would normally be included in demolition debris, nontoxic flyash, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health*, and includes, but is not limited to, garbage, tires, combustible and noncombustible material, street dirt, and debris. Solid waste does not include any material that is an infectious waste or a hazardous waste. For the purpose of this definition, "semisolid material" does not contain liquids which can be readily released under normal climatic conditions, as determined by method 9095 (paint filter liquids test) in SW-846: "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods".	Appl	√	√		See preceding.
Solid Waste and Infectious Waste Regulations, Definitions OAC 3745-27-01 (B)(15) OAC 3745-27-30 (A), (E), (H) ORC 3734.021 (A)(1)(c), (d)	Infectious waste is defined by nine categories of waste including human blood specimens and blood products, sharp wastes used in the treatment or inoculation of human beings, and any other waste materials generated in the diagnosis, treatment, or immunization of human beings. A generator who places all sharp infectious wastes and all unused hypodermic needles, syringes, and scalpel blades into a "SHARPS" container before they are transported and who generates less than 50 lbs. of infectious wastes each month and does not hold a certificate of registration as a generator of infectious wastes may transport and dispose of infectious wastes in the same manner as solid wastes. Treated infectious wastes can be transported and disposed in the same manner as noninfectious waste. Infectious waste that is also radioactive shall be managed in accordance with applicable Ohio Department of Health and U.S. Nuclear Regulatory Commission regulations.	Appl	√			See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Identification and Listing of Hazardous Waste, Definition of Hazardous Waste OAC 3745-51-03(A) [Identification and Listing of Hazardous Waste, Subpart A—General, Definition of Hazardous Waste 40 CFR §261.3(a)]	A solid waste is a hazardous waste, if: (1) it is not excluded from regulation as a hazardous waste under OAC 3745-51-04(B) [40 CFR §261.4(b)]; and (2)(a) it exhibits any of the characteristics of hazardous waste identified in OAC 3745-51-20 to 3745-51-24, with certain exceptions noted therein; or (2)(b) it is listed as hazardous waste in OAC 3745-51-31 to 3745-51-33 [40 CFR §§ 261.30 - 261.35]; or (2)(c) it is a mixture of solid and hazardous wastes; (2)(d) it is a mixture of hazardous wastes as defined in OAC 3745-51-03(A)(2)(a) to 3745-51-03(A)(2)(c) [three previous bullets in this entry] and source material, special nuclear material, or by product material, as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq., or other radionuclides. However, only the hazardous components of the mixture are subject to regulation for purposes of this [OAC 3745-51] chapter. (2)(e) Wastewater mixed with a RCRA F-listed spent solvent waste, whose concentration is less then the following *de minimis* levels before *or* at introduction to the headworks of a Clean Water Act-regulated system, *is not a listed hazardous waste*: 1 mg/L: carbon tetrachloride; tetrachloroethene; and trichloroethene. 25 mg/L: the remaining listed spent solvents.	Appl	✓	✓	This Hazardous Waste Mixture Rule Exclusion is pertinent to management of perched water and other remediation-generated wastewaters, particularly near the Fire Training Facility (HWMU 1) and Sludge Drying Beds (HWMU 41).	See preceding. Following section of the Sitewide Excavation Plan: 2.5.4 Perched Water
Identification and Listing of Hazardous Waste, Exclusions OAC 3745-51-04(B)(4) [Identification and Listing of Hazardous Waste, Subpart A—General, Exclusions 40 CFR §261.4(b)(4)]	The following are not hazardous wastes: fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.	Appl	✓	✓		See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Identification and Listing of Hazardous Wastes, Requirements for Recyclable Materials OAC 3745-51-06(A)(3) [40 CFR §261.6]	The following recyclable materials are not subject to regulation under rules 3745-50-40 to 3745-50-62 or Chapters 3745-52 to 3745-57 and 3745-65 to 3745-69 of the Ohio Administrative Code [Parts 262 through 266 or 268, 270, or 124 of 40 CFR], and are not subject to the notification requirements of Chapter 3734 of the Ohio Revised Code [Section 3010 of RCRA]: (b) used batteries (or used battery cells) returned to a battery manufacturer for regeneration; (c) used oil that exhibits one or more of the characteristics of hazardous waste but is recycled in some other manner than being burned for energy recovery; (d) scrap metal.	✓	✓	Appl	Pertinent to remediation generated materials. Recycling of remediation generated materials may be conducted.	Operable Unit 3 Integrated RD/RA Work Plan
Termination of Operating Licenses for Nuclear Reactors Section C.4 Decontamination for Release for Unrestricted Use U.S. Nuclear Regulatory Commission Regulatory Guide 1.86 (June 1974)	A reasonable effort shall be made to eliminate residual surface radiological contamination and to achieve the acceptable surface contamination levels stated in this guide.	✓	✓	TBC	Pertinent to releasing to off-site any potentially radiologically-contaminated materials. Radiation surveys will be performed prior to releasing any potentially radiologically-contaminated materials off-site to demonstrate compliance with the surface contamination levels stated in this guide.	Operable Unit 1 Design Criteria Package
Identification and Listing of Hazardous Waste, Subpart A—General, Definition of Hazardous Waste 40 CFR §261.3	Debris means solid material exceeding a 60-mm particle size that is intended for disposal and that is a manufactured object, plant or animal matter, or natural geologic material.	✓	Appl	Appl	Applicable to hazardous debris that will be disposed of off-site.	Operable Unit 1 Design Criteria Package, and following sections of the Sitewide Excavation Plan: 1.3.2.4 Remediation Debris 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
DEFINITIONS & GENERAL FACILITY STANDARDS, continued						
Land Disposal Restrictions, Subpart A—General, Definitions Applicable to This Part 40 CFR §268.2	Hazardous debris means debris that contains a listed hazardous waste, or that exhibits a characteristic of hazardous waste.	√	Appl	Appl	"contains a listed hazardous waste" portion is not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD.	See preceding.
Hazardous Waste Regulations Contained-In Policy 58 FR 48092 (September 14, 1993) Proposed rule. 58 FR 59976 (November 12, 1993) Notice to extend comment. 59 FR 10778 (March 8, 1994) Clarification, partial withdrawal.	Hazardous soil means soil that contains RCRA hazardous waste(s) listed in Subpart D of 40 CFR Part 261, or that exhibits one or more of the characteristics of a hazardous waste as defined in Subpart C of 40 CFR Part 261. This proposed rule recommends contained-in determinations for hazardous debris, hazardous soil and other environmental media. Any person may petition the Regional Administrator to exclude, under 261.3(f)(2) or 261.3(g) of this chapter, hazardous debris and hazardous soil or other environmental media, including but not limited to groundwater, surface water, and sediment, from regulation as hazardous waste. The petition for a contained-in determination must include information sufficient to demonstrate that specific constituent concentrations in the hazardous debris, hazardous soil, or other environmental media to be excluded do not pose a hazard to human health and the environment at that site. (Such a petition is not necessary for remedial actions conducted pursuant to RCRA or CERCLA authorities provided that a similar determination is made by the Regional Administrator based on substantially equivalent information including public notice and comment requirements).		TBC	TBC	Will be considered for managing treated soil that is contaminated with RCRA waste.	Addressed in the selected remedy in the OU5 ROD. Following sections of the Sitewide Excavation Plan: 3.3 Remedial Action App F Implementation of Construction
Ohio Petroleum Contaminated Soil Policy OEPA Policy PP.01-03-200	The basis of the "contained in" policy is that environmental media, such as soil or groundwater, are not considered to be waste material. Because they are not a solid waste, the mixture rule, as set forth in OAC 3745-51-03, does not apply when they become contaminated with a listed hazardous waste but only contains the waste. The result of this policy is that if the waste constituents can be removed, the soil is no longer considered to contain a hazardous waste. Therefore, since soil is not a waste material it does not have to be de-listed in order for it to be used for its intended purpose. However, as long as the soil contains the waste material, it must be managed as a hazardous waste. If this concept is applied to petroleum-contaminated soil, the soil containing a petroleum hydrocarbon would not need to be managed as a solid waste if the contaminants were removed.	TBC	TBC		Allows for treated/clean soil to be used as backfill. Thus, any soil below FRLs can be backfilled or otherwise used as clean soil.	See preceding.
DEFINITIONS & GENERAL FACILITY STANDARDS, continued						

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Hazardous Waste Management System: General, Subpart B—Definitions 40 CFR §260.10	Remediation waste means all solid and hazardous waste, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR §264.101 and RCRA section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.	R&A	√	√	Under the Consent Agreement as amended in 1991 (a.k.a., the ACA), remediation at the FEMP is conducted under the authorities of CERCLA as well as RCRA sections 3004(v) and 3008(h).	Following sections of the Sitewide Excavation Plan: 1.3.2.1 Soil and Sediment 1.3.2.6 Corrective Action Management Unit Rule 2.1 Remediation Drivers 2.2.1 Demonstrating OSDF WAC Attainment
CERCLA Compliance with Other Laws Manual Section 2.7	Placement/disposal of waste does not occur under the following circumstances: • waste is consolidated within a unit (including an area of contamination that can be viewed as a single unit); • waste is capped in place, including grading prior to capping; • waste is treated in situ; and • waste is processed within the unit in order to improve its structural stability for closure or for movement of equipment over the area.	TBC	√	TBC	See following entry on the Corrective Action Management Unit.	See following entry.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Corrective Action Management Unit Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart S- 40 CFR §264.552 (58 FR 865829, February 16, 1993)	For the purpose of implementing remedies under Sec. 264.101 or RCRA Section 3008(h), the EPA Regional Administrator may designate an area at the facility as a corrective action management unit (CAMU). One or more CAMUs may be designated at a facility under the following conditions: 1) Emplacement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes. 2) Consolidation or emplacement of remediation wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements. 3) The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies. 4) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to the wastes. 5) The CAMU shall include uncontaminated areas of the facility only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility. 6) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable. 7) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and applicable. 8) The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU. 9) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU. The owner/operator shall provide sufficient information to enable the Regional Administrator to designate a CAMU in accordance with the criteria in Sec. 264.552. **Note:** RCRA regulated units (HWMUs) within a CAMU are fully subject to RCRA closure regulations.	R&A	Appl	R&A	Per the selected remedy in the OU5 ROD: • the FEMP property (bounded by its property boundaries) is designated as a CAMU; • consolidation or management of on-site remediation wastes into or within the CAMU does not constitute creation of a unit subject to minimum technology requirements (MTRs) [OAC 3745-68-101 and 40 CFR §265.301(a)] and does not invoke land disposal restrictions (LDRs)[OAC 3745-59 and 40 CFR §§268.40 through .44].	Section 9.1.8 of the OU5 ROD, and following section of the Sitewide Excavation Plan: 1.3.2.6 Corrective Action Management Unit Rule

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Generator Standards, Hazardous Waste Determination OAC 3745-52-11(A) through (F)	A person who generates a solid waste must determine if that waste is a hazardous waste using the following method:	✓	R&A	R&A		Following sections of the Sitewide Excavation Plan: 2.1.1 RCRA 2.1.2 Waste Acceptance Criteria 3.1 Predesign Investigation 3.3.1 Implementation of Construction, Excavation, and Material-handling Activities 3.3.2 Impacted Materials Handling and Tracking 3.6 Record Keeping and Information Management
[Standards Applicable to Generators of Hazardous Waste, Subpart A—General, Hazardous Waste Determination 40 CFR §262.11]	1) First determine if the waste is excluded from regulation (not a solid waste) under OAC 3745-51-04 (40 CFR §261.4).					
	2) If the waste is not excluded from regulation, then determine if the waste is listed as a waste ("listed waste") in OAC 3745-51-30 to 3745-51-33 (Subpart D of 40 CFR Part 261).				Not pertinent for on-site disposal because of the CAMU rule (see preceding entry); pertinent for off-site treatment or disposal.	See preceding entry, and following sections of the Sitewide Excavation Plan: 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	3) For purposes of complying with OAC 3745-59 (40 CFR Part 268), or if the waste is not a "listed waste" per step 2 above, then determine if the waste is a "characteristic waste" as identified in OAC 3745-51-20 through 3745-51-24 (Subpart C of 40 CFR Part 261), by either (a) testing the waste using appropriate methods, or (b) applying knowledge of the hazardous characteristic of the waste in light of the materials or processes used ("process knowledge").				Per the RODs, pertinent only to the following areas: In OU2: approx. 300 cubic yards of lead-containing soil in the South Field Firing Range. In OU5: 1) Abandoned sump west of Pilot Plant; 2) Area between KC-2 Warehouse and RR tracks; 3) Trap Range; 4) Paddy's Run streambank fill materials west of OU4's Silos 1-4; 5) Scrap Metal Pile area; and 6) Area north of maintenance building.	Sections 7.4 (@ p. 7-5), 9.1 (@ p. 9-2), and 10.2.2 (@ p. 10-4) of the OU2 ROD; Section 9.1.1 (@ p. 9-6) and Table 9-1 of the OU5 ROD
Interim [Status Hazardous Waste Facility] Standards —General Provisions, General Provisions OAC 3745-65-13 through -16 [Interim Status Hazardous Waste Facility Standards, Subpart B—General Facility Standards 40 CFR §§265.13 through .16]	Owners/operators of a facility must obtain chemical and physical analyses of a representative sample of each hazardous or nonhazardous waste to be treated, stored or disposed of at the facility prior to treatment, storage or disposal. At a minimum, the analysis must contain all the information which must be known to treat, store or dispose of the waste, and may include using existing published or documented data on the waste or on waste generated from similar processes ("process knowledge") [OAC 3745-65-13].	✓	R&A	R&A	Pertinent to management of hazardous waste.	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management
	The facility owner/operator must prevent the unknowing entry, and minimize the possibility of unauthorized entry, to the active portion of the facility unless certain conditions apply [OAC 3745-65-14].				Controls which limit access to the FEMP will remain in place throughout remediation activities.	F.2.1 Establishing Excavation Boundaries and Access Controls

DEFINITIONS & GENERAL FACILITY STANDARDS, continued

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	The facility operator must maintain and inspect all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing human health hazards. The frequency of inspection may vary by item, and should be based on the rate of possible deterioration of the equipment/item and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected [OAC 3745-65-15]. The facility operator must train personnel for procedures relevant to the positions in which they are employed [OAC 3745-65-16].					F.8 Remediation Maintenance Activities
Hazardous Waste Facility Environmental Impact ORC 3734.05(D)(6)(c)	A hazardous waste facility installation and operation permit shall not be approved unless it is proven that the facility represents the minimum adverse environmental impact, considering the state of available technology, the nature and economics of various alternatives and other pertinent considerations	√	Appl	√	**NOTE:** Incorrectly cited in RODs as OAC 3745.05(D)(6)(c).	Appendix H of OU2 FS, Appendix J of OU5 FS, and Appendix J of OU3 RI/FS.
Hazardous Waste Facility Minimum Risk ORC 3734.05(D)(6)(d)	A hazardous waste facility installation and operation permit shall not be approved unless it is proven that the facility represents the minimum risk of all the following: 1) contamination of groundwater and surface water; 2) fires or explosions from treatment, storage, or disposal methods; 3) accidents during transportation; 4) impact to public health and safety; 5) air pollution; and 6) soil contamination.	√	Appl	√	**NOTE:** Incorrectly cited in RODs as OAC 3745.05(D)(6)(d).	OU2, OU5, and OU3 FS Reports and RODs. Also, see preceding.
Interim [Status Hazardous Waste Facility] Standards—General Provisions, Preparedness and Prevention OAC 3745-65-31 through -35, and -37 [Interim Status Hazardous Waste Facility Standards, Subpart C—Preparedness and Prevention 40 CFR §§265.31 through .35, and .37]	TSD facility operators must design, construct, maintain and operate facilities to minimize the possibility of fire, explosion or any unplanned sudden or non-sudden release of hazardous waste to air, soil, or surface water which might threaten human health or the environment.	√	R&A	R&A		See two preceding entries. For waste that is dispositioned for off-site disposal, see the Operable Unit 1 Design Criteria Package.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Interim [Status Hazardous Waste Facility] Standards—General Provisions, Contingency Plan and Emergency Procedures OAC 3745-65-51, -52, -55 and -56 [Interim Status Hazardous Waste Facility Standards, Subpart D—Contingency Plan and Emergency Procedures 40 CFR §265.51, .52, .55 and .56]	Each facility operator must have a contingency plan designed to minimize hazards to human health and the environment due to fires, explosions, or any unplanned releases of hazardous waste constituents to air, soil or surface/groundwater.	√	R&A	R&A	Pertinent to on-site facilities that treat, store, or dispose of hazardous waste.	FEMP Emergency Plan (PL-3020); all HWMUs identified in Table 2-1 of the Sitewide Excavation Plan (and the subset identified previously in this table) are addressed in Section G: Contingency Plan of the RCRA Part B Permit Application. Also, see three preceding entries. For waste that is dispositioned for off-site disposal, see the Operable Unit 1 Design Criteria Package.
Hazardous Waste Incinerators [and Miscellaneous Units], Environmental Performance Standards OAC 3745-57-91 and -92 [Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart X—Miscellaneous Units, 40 CFR §§264.601 through .603]	Prevention of any release that may have adverse effects on human health or the environment includes, but is not limited to: A. Migration of waste constituents in the groundwater or subsurface environment. B. Migration of waste constituents in surface water, or wetlands or on the soil surface. C. Migration of waste constituents in the air. Monitoring, tests, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with pertinent portions of the OAC.	√	R&A	√	Pertinent to on-site facilities that treat, store, or dispose of hazardous waste in miscellaneous units unless the CAMU Rule is applied.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Radioactive Waste Management DOE Order 5820.2A Chapter III (3)(d)	Low-level waste shall be characterized with sufficient accuracy to permit proper segregation, treatment, storage, and disposal. This characterization shall ensure that, upon generation after processing, the actual physical and chemical characteristics and major radionuclide content are recorded and known during all stages of the waste management process. Waste characterization data shall be recorded on a waste manifest and shall include: • the physical and chemical characteristics of the waste; • volume of the waste (total of waste and any solidification or absorbent media); • weight of the waste (total of waste and any solidification or absorbent media); • major radionuclides and their concentrations; and • packaging date, package weight, and external volume.	TBC	√	TBC	The CERCLA RI/FS process established the nature and extent of contamination at the FEMP. During excavation, monitoring will be performed in accordance with of the Sitewide Excavation Plan and individual IRDPs, and results will be documented in order to determine if impacted material meets the OSDF WACs or offsite WACs. These sources of characterization information (RI/FS sampling, pre-design investigations, FRL attainment, WAC attainment) will provide the required manifest information.	Addressed throughout the CERCLA RI/FS and selection of remedy process, culminated in the OU2, OU5 and OU3 RODs; OSDF Impacted Materials Placement Plan; following section of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Waste Treatment DOE Order 5820.2A Chapter III (3)(f)	Waste treatment techniques such as incineration, shredding, and compaction to reduce volume and provide more stable waste forms shall be implemented as necessary to meet performance requirements. Use of waste treatment techniques to increase the life of the disposal facility and improve the long-term facility performance, by improved site stability and reduction of infiltrating water, is required to the extent it is cost effective. The development of large scale waste treatment facilities shall be supported by the appropriate National Environmental Policy Act documentation. Operation of waste treatment facilities shall be supported by adequate documentation.	TBC	TBC	TBC	Based upon CERCLA RI/FS data, the majority of the impacted material from OU2, OU5 & OU3 will meet the OSDF WACs and thus the performance objectives of the OSDF & DOE Order 5820.2A without treatment. This has been demonstrated through the modeling performed in the FSs to establish the OSDF WACs. Two categories of impacted materials may need to be treated before disposal. Toxicity characteristic soil from seven areas will be quantified & treated to the extent necessary to remove the toxicity characteristic that cause them to be regulated as hazardous. Physical sizing & treatment as per the OSDF Impacted Material Placement Plan will be conducted as needed on debris for proper waste placement and stability within the OSDF. Some physical treatment might also be necessary for the sludge from the OU2 Lime Sludge Ponds to decrease the moisture content before placement into the OSDF.	Addressed throughout the CERCLA RI/FS and selection of remedy process, culminated in the OU2, OU5 and OU3 RODs; OSDF Impacted Materials Placement Plan; following sections of the Sitewide Excavation Plan: 1.3.2.7 RCRA Characteristic Waste Disposal 2.1.1.3 Toxicity Characteristic Hazardous Wastes 3.3.2 Impacted Materials Handling and Tracking F.5 Excavated Material Management

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Radioactive Waste Management DOE Order 5820.2A Chapter III (3)(g)	The volume of waste and number of shipments of low-level wastes shall be minimized and the shipments will be conducted based on plans developed by field organizations. Generators shall provide an annual forecast in the third quarter of the fiscal year to the field organizations managing the off-site disposal facility to which the waste is to be shipped. Generators must receive advance approval from the receiving facility and shall certify prior to shipment that waste meets the receiving facility waste acceptance criteria. The certification program shall be auditable and able to withstand independent review.	TBC	TBC	TBC	The volume of impacted material to be disposed onsite in the OSDF will be minimized through a number of programs. First, extensive sampling has been performed during the CERCLA RI/FS process and the extent of excavation has been established using this data. Combined with the sampling/monitoring that will be performed during excavation in accordance with Section 3.3 of the Sitewide Excavation Plan and individual IRDPs, this will confirm that only impacted materials are excavated and sent to disposal. Compliance with the FEMP Pollution Prevention and Waste Minimization Awareness Plan will minimize the amount of low-level waste (i.e., equipment and personal protective equipment) generated during remediation.	FEMP Pollution Prevention and Waste Minimization Awareness Plan; also see preceding.
Control of Residual Radioactive Material DOE Order 5400.5 Chapter IV (6)(b) 10 CFR Part 834 (PROPOSED)	Interim storage must provide: 1) Control and stabilization features shall be designed to provide, to the extent reasonably achievable, an effective life of 50 years with a minimum life of at least 25 years.	✓	TBC		The selected remedies are for a permanent remedy, not for interim storage; any short-term management of impacted material to be employed is to facilitate implementation of the permanent remedy.	The approved selected remedy in the OU2 and OU5 RODs, associated remedial design documents (i.e., IRDPs).
	2) Controls shall be designed such that radon-222 concentrations in the atmosphere above facility surfaces or openings in addition to background levels, will not exceed: (a) 100 pCi/L at any given point; (b) An annual average concentration of 30 pCi/L over the facility site; and (c) An annual average concentration of 3 pCi/L at or above any location outside the facility site. (d) Flux rates from the storage of radon producing wastes shall not exceed 20 pCi/m^2/sec, as required by 40 CFR Part 61.					

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	3) Controls shall be designed such that concentrations of radionuclides in the groundwater and quantities of residual radioactive material will not exceed applicable federal or state standards.					Section 5.0 of the Sitewide Excavation Plan, for environmental controls to be implemented during remediation.
	4) Access to a property and use of on-site material contaminated by residual radioactive material should be controlled through appropriate administrative and physical controls such as those described in 40 CFR Part 192. These control features should be designed to provide, to the extent reasonable, an effective life of at least 25 years.					Section 3.0 and Appendix F of the Sitewide Excavation Plan and IRDPs, for access controls to be implemented during remediation.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF LOW-LEVEL RADIOACTIVE MATERIAL					
Low-level Radioactive Waste Generation DOE Order 5820.2A Chapter III (3)(c)	Technical and administrative controls shall be directed to reducing the gross volume of waste generated and/or the amount of radioactivity requiring disposal. Waste reduction efforts shall include consideration of process modification, process optimization, materials substitution, and decontamination. All DOE low-level waste generators shall establish auditable programs to assure that the amount of low-level waste generated and/or shipped for disposal is minimized. Each DOE low-level waste generator shall separate uncontaminated waste from low-level waste to facilitate cost-effective treatment and disposal. Each DOE low-level waste generator preparing a design for a new process or process change shall incorporate principles into the design that will minimize the generation of low-level waste.	TBC	TBC	TBC	Implementation of the FEMP Pollution Prevention and Waste Minimization Awareness Plan will confirm that all newly generated waste is minimized during remediation. Additionally, excavation controls such as rapid test methodology and additional laboratory sampling will be implemented to confirm that only impacted material with contamination that is potentially above the FRLs is being excavated and sent to disposal. Physical sampling of the impacted materials and/or rapid test method methodology will also confirm that only material that exceeds the OSDF WAC is sent offsite for disposal.	Addressed throughout the CERCLA RI/FS and selection of remedy process, culminated in the OU2, OU5 and OU3 RODs; also, FEMP Pollution Prevention and Waste Minimization Awareness Plan.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE					
Identification and Listing of Hazardous Waste, Residues of Hazardous Waste in Empty Containers OAC 3745-51-07(A) &(B) [Identification and Listing of Hazardous Waste, Subpart A—General, Residues of Hazardous Waste in Empty Containers 40 CFR §261.7]	Any hazardous waste remaining in either an empty container or an inner liner removed from an empty container is not subject to regulation under 40 CFR Parts 261 through 265 (RCRA requirements). A container is empty if: 1) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container (e.g., pouring, pumping, and aspirating); and 2) No more than 2.5 cm (1 inch) of residue remains on bottom of the container or inner liner; or 3) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gal. in size, or no more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gal. in size.	√	R&A	Appl	Pertinent when containerizing: soil contaminated by RCRA waste; any treatment residues exhibiting RCRA characteristics including soil decontamination residues.	Following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials App F Implementation of Construction

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued						
Closure and Post-Closure Under Interim Standards, Condition of Containers OAC 3745-66-71 Compatibility of Containers OAC 3745-66-72 Management of Containers OAC 3745-66-73 Inspections OAC 3745-66-74 Special Requirements for Ignitable or Reactive Waste OAC 3745-66-76 Special Requirements for Incompatible Wastes OAC 3745-66-77 [Interim Status Standards, Subpart I—Use & Management of Containers, 40 CFR §§265.171 through .174, .176 and .177]	If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with this requirement.	√	R&A	Appl	Pertinent to handling containers holding environmental media contaminated with RCRA waste.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
[New Facilities] Corrective Action, Closure and Post-Closure Requirements Containment OAC 3745-55-75 [Interim Status Hazardous Waste Facility Standards, Subpart I—Use & Management of Containers 40 CFR §§265.175(a) through (c)]	A containment system for RCRA container storage areas must be designed and operated to provide: 1) A sufficiently impervious base, which is sloped to collect any leaking liquids. 2) Sufficient capacity to contain liquids. 3) Prevention of run-on into the containment system. 4) A sump to prevent overflow of the collection system. Storage areas for containers holding only wastes that do not contain free liquids need not have a containment system, provided that: 1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or 2) The containers are elevated or are otherwise protected from contact with accumulated liquid.	✓	R&A	Appl	Pertinent to handling soil contaminated with RCRA listed or characteristic hazardous waste. A Part B Permit Application for RCRA storage has been submitted to the OEPA.	See preceding.
[New Facilities] Surface Impoundments, Waste Piles, and Tanks [Waste Piles] Design and Operating Requirements OAC 3745-56-51(A) through (F)	A waste pile used to store or treat hazardous waste must have: 1) A liner that is designed, constructed, and installed to prevent any migration of waste out of the pile into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the waste pile, and 2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile.	✓	R&A	✓	Pertinent to on-site hazardous waste piles used for longer than 90 days unless the CAMU Rule is applied.	Addressed through remedial design documents (IRDPs).
	The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-yr storm and manage a runoff management system to collect and control at least the water volume resulting from a 24-hr, 25-yr storm.	✓	R&A	✓		
	If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the pile to control wind dispersal.	✓	R&A	✓		FEMP Fugitive Dust Control BAT Determination, and Section 5.1.2.2 and Appendix F of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
MANAGEMENT OF HAZARDOUS REMEDIATION WASTES, continued						
Monitoring and Inspection OAC 3745-56-54(A) and (B)	During construction or installation, liners and cover systems must be inspected for uniformity, damage, and imperfections.	√	R&A	√		
	Collection and holding facilities associated with run-on and runoff control system must be inspected weekly and be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.	√	R&A	√		FEMP Stormwater Pollution Prevention Plan (RM-0039), and Appendix F of the Sitewide Excavation Plan
Special Requirements for Ignitable or Reactive Waste OAC 3745-56-56(A) and (B) Special Requirements for Incompatible Wastes OAC 3745-56-57(A), (B) and (C) [Subpart L—Waste Piles, 40 CFR §§264.251 through .259]	Ignitable, reactive, or incompatible waste must not be added to a waste pile, unless specified in OAC 3745-56-56(A) and (B) or 57(A), (B) and (C).	√	R&A	√	The CERCLA RIs did not find evidence of ignitive or reactive material on-site. Impacted and non-impacted materials management will be segregated and managed in separate piles, based upon intended disposition (waste acceptance criteria).	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management
Temporary Units Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart S- 40 CFR §264.553 (a), (b) (58 FR 865829, February 16, 1993)	For temporary tanks and container storage areas used for treatment or storage of remediation wastes during remedial activities, the Regional Administrator may determine that a design, operating, or closure standard applicable to such units may be replaced by alternative requirements which are protective of human health and the environment. Any temporary unit to which alternative requirements are applied shall be: • located within the facility boundary; and • used solely for treatment or storage of remediation wastes.	R&A	√	R&A	Pertinent to short-term management/storage of impacted materials during the CERCLA soil remediation activities. IRDPs can designate and utilize temporary units to facilitate remediation within the already designated CAMU. Alternative requirements which are protective of human health and the environment may be used in lieu of the design, operating, or closure requirements that would otherwise apply to such units under RCRA.	Following section of the Sitewide Excavation Plan: 1.3.2.6 CAMU Rule

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart DD—Containment Building 40 CFR §§264.1100 through .1102 57 FR 37194 (August 18, 1992)	The owner or operator is not subject to the definition of land disposal in RCRA Section 3004(k) provided that the unit: 1) Is a completely enclosed, self-supporting structure that is designed and constructed of synthetic materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls; 2) Has a primary barrier for management of solids, in addition to a liquid collection system and secondary containment for management of liquids. 3) Has controls sufficient to prevent fugitive dust emissions to meet the no visible emission standard in Sec. 264.1101(c)(1)(iv); and 4) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoil, and structures and equipment contaminated with waste and leachate, and handle them as a hazardous waste.	✓	R&A	R&A	Pertinent to excavated RCRA hazardous soil and sediment that may require short-term management/ storage during the CERCLA soil remediation activities. DOE does not anticipate utilizing containment buildings.	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
Procedures for Planning and Implementing Offsite Response Actions ("The CERCLA Offsite Rule") 40 CFR §300.400	Materials from remediation of a CERCLA site ("CERCLA waste") may only be transferred to offsite facilities that are in compliance with Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), or other applicable federal and state requirements. Only U.S. EPA has the authority to determine whether the facility in question meets the acceptability criteria and is acceptable for receiving CERCLA waste from offsite. A determination of acceptability for a potential receiving facility is to be made in advance (prior to initiating transportation offsite, and optimally prior to making offsite treatment/ storage/disposal contract arrangements). Materials covered under this rule ("CERCLA waste") are any hazardous substance, pollutant, or contaminant as defined under CERCLA sections 101(14) and 101(33). Samples of waste sent to a laboratory for characterization are exempt from the rule, as are certain treatability study waste. The receiving facility must meet compliance and release criteria presented therein. Facility is defined as the receiving unit(s) that directly stores, treats, or disposes of the CERCLA waste. Non-receiving units at the facility need not be in compliance in order for the U.S. EPA to determine that the receiving unit meets acceptance criteria. U.S. EPA may deem a facility acceptable even if certain minor violations have occurred at the facility. If a facility does not meet the criteria for receiving CERCLA wastes, the rule presents notification, determination, appeal/review and reinstatement procedures.	√	√	Appl	Pertinent to preparation of materials for off-site disposition.	Operable Unit 1 Design Criteria Package, and following sections of the Sitewide Excavation Plan: 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal
[Hazardous Waste] Generator Standards OAC 3745-52-20 through -23, and -30 through -33 [40 CFR §§262.20 through .23, and .30 through .33]	Before transporting hazardous waste or offering hazardous waste for transportation off-site ("pre-transport"), for either treatment or disposal, general requirements for the generator require a manifest [OAC 3745-52-20 through -23] in accordance with the requirements specified therein. Pre-transport requirements also include appropriate packaging [OAC 3745-52-30], labeling [OAC 3745-52-31], marking [OAC 3745-52-32], and placarding [OAC 3745-52-33], in accordance with the requirements specified therein.	√	Appl	Appl	Pertinent to preparation of RCRA hazardous waste (and mixed waste) for off-site treatment and/or disposal.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and the International Civil Aviation Organization's Technical Instructions 59 FR 67390 (December 29, 1994) as amended by 60 FR 26796 (May 18, 1995)	These rules (final rule was effective October 1, 1995) comprehensively revise the Hazardous Materials Regulations (HMR), 49 CFR Parts 171-173, 177, and 178, with respect to hazard communication, classification, and packaging requirements based on United Nations recommendations.	√	√	Appl	These Hazardous Materials Regulations are requirements embedded in both the state (OAC) and federal (CFR) regulations in both the generator standards (preceding entry) and the transporter standards (subsequent entry).	See preceding generator standards entry and subsequent transporter standards entry.
[Hazardous Waste] Land Disposal Restrictions OAC 3745-59 [Land Disposal Restrictions, Subpart D—Treatment Standards 40 CFR §§268.40 through .44]	A restricted hazardous waste may be land disposed only if: 1) An extract of the waste or of the treatment residue of the waste does not exceed the value shown in 40 CFR §268.41. 2) It is treated using a technology specified in 40 CFR §268.42(a) or an equivalent treatment method. 3) The constituent concentrations in the waste or treatment residue of the waste do not exceed the value shown in 40 CFR §268.43.	√	Appl	Appl	Not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD. Applicable to those RCRA hazardous wastes that will be dispositioned off site.	See three preceding entries.
Land Disposal Restrictions, Subpart D—Treatment Standards, Treatment Standards Expressed as Concentrations in Waste Extract 40 CFR §268.41	The maximum concentration of lead (5.0 mg/L) may not be exceeded whether it is the extract of a waste or waste treatment residual.	R&A	Appl		Not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD. Applicable to those RCRA hazardous wastes that will be disposed of off-site.	See four preceding entries.

TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
Land Disposal Restrictions, Subpart D—Treatment Standards, Contaminated Debris 40 CFR §268.45	Hazardous debris must be treated before land disposal unless the EPA determines that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard for the waste contaminating the debris. Provided the debris does not exhibit a RCRA characteristic it is not subject to regulation under 40 CFR 260, 261 to 266, 268, or 270 if: 1) The hazardous debris has been treated using one of the required extraction or destruction technologies specified in 40 CFR §268.45; or 2) The debris, considering the extent of contamination, is determined to no longer be contaminated with hazardous waste.	√	Appl	Appl	Not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD. Applicable to those RCRA hazardous wastes that will be disposed of off-site.	See five preceding entries.
[Hazardous Waste] Transporter Standards OAC 3745-53-20 through -22, -30 and -31 [40 CFR §§263.20 through .22, .30 and .31]	General requirements for the transporter during transportation of hazardous waste for off-site treatment and/or disposal require acceptance and handling of hazardous waste and use of the manifest system [OAC 3745-53-20], compliance with the manifest [OAC 3745-53-21], and recordkeeping [OAC 3745-53-22], in accordance with the requirements specified therein. Appropriate response actions must be taken for any hazardous waste discharge during transportation [OAC 3745-53-30 and -31], in accordance with the requirements specified therein.	√	Appl	Appl	Pertinent to transportation of RCRA hazardous wastes for off-site treatment and/or disposal.	See six preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF PCB-TAINTED MATERIAL					
Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions, Subpart D—Storage and Disposal, Disposal Requirements 40 CFR §761.60(a)(4)	Any nonliquid PCBs at concentrations 50 mg/kg or greater in the form of contaminated soil, rags, or other debris shall be disposed of in an incinerator which complies with 40 CFR §761.70, or in a chemical waste landfill which complies with 40 CFR §761.75.		Appl	Appl	Pertinent if soil or other material containing PCBs above 50 mg/kg is excavated. PCBs were detected in soil beneath the Fire Training Facility.	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management
Subpart D—[PCB] Storage and Disposal, Disposal Requirements 40 CFR §761.60(e)	Any person who is required to incinerate PCBs or PCB items under this subpart and who can demonstrate that an alternate method of destroying PCBs or PCB items can achieve a level of performance equivalent to the requirements under 40 CFR §761.70 may submit a written request to either the Regional Administrator or the Director, Exposure Evaluation Division, for an exemption from the incineration requirements of 40 CFR §§ 761.70 or 761.60. The applicant must show that the alternate method of destroying PCBs will not present an unreasonable risk of injury to health or the environment.		Appl	Appl	Pertinent only if PCB contaminated soil is greater than 50 mg/kg and is treated on-property using a method besides incineration. DOE neither currently anticipates any such material nor on-property treatment for any such material under the soil remediation projects.	See preceding entry, plus following sections of the Sitewide Excavation Plan: 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal
Subpart D—[PCB] Storage and Disposal, Storage for Disposal 40 CFR §761.65	This section applies to the design of storage areas to be used for later disposal of PCBs at concentrations of 50 ppm (mg/kg or mg/L) or greater.		Appl	Appl	Pertinent to storage of PCB-contaminated material at 50 ppm or greater. DOE does not currently anticipate any such material under the soil remediation projects.	See two preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
POST-CLOSURE						
	DESCRIPTION OF POST-CLOSURE CARE					
[New Facilities Hazardous Waste] Surface Impoundments, Waste Piles, and Tanks, [Waste Piles] Post-Closure OAC 3745-56-58(B) [Subpart L—Waste Piles, 40 CFR §§264.251 through .259]	If, after removing or decontaminating all residues and making all reasonable effort to effect removal or decontamination of contaminated components, subsoil, structures and equipment, the owner/operator finds that not all contaminated subsoil can be practically removed or decontaminated, he must close the unit/facility and perform post-closure care in accordance with OAC 3745-57-10. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	✓	R&A		Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Currently addressed in the OSDF Post-closure Care and Inspection Plan, which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed. Will also be addressed in the Certification Report and Remedial Action Report — see following sections of the Sitewide Excavation Plan: 1.4.2 Related Documents 2.2.5 HWMU Closure 3.4.7 Certification Report 3.5.3.6 Postremediation/post-closure Care and Inspection 7.4 Certification Report 7.5 Other Related Future Documents
[New Facilities Hazardous Waste] Incinerators [and Miscellaneous Units], [Miscellaneous Units] Environmental Performance Standards OAC 3745-57-93 [Subpart X—Miscellaneous Units, 40 CFR §§264.601 through .603]	If a treatment or storage miscellaneous unit has contaminated soil or groundwater that cannot be completely removed or decontaminated during closure, the unit must also meet the requirements of OAC 3745-57-91 during the post-closure care period. The post-closure plan under OAC 3745-55-18 must specify the procedures that will be used to satisfy this requirement. A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with OAC 3745-57-91 during the post-closure care period. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	✓	R&A		Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Closure and Post-Closure Under Interim Standards, Post-closure Care and Use of Property OAC 3745-66-17(A) [40 CFR §265.117(a)(2)]	Post-closure care of hazardous waste management units must begin after completion of closure of the unit and continue for 30 years after that date unless shortened by the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] in accordance with OAC 3745-66-18(G) (40 CFR §117(a)(2)). **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	√	Appl		**NOTE:** Identified in the OU5 ROD as applicable only to existing hazardous waste management units (HWMUs); also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.
Closure and Post-Closure Under Interim Standards, Post-closure Care and Use of Property OAC 3745-66-17(A)(1) [40 CFR §265.117(a)(1)]	Post-closure care...must consist of at least the following: • monitoring and reporting; and • maintenance and monitoring of waste containment systems. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DESCRIPTION OF POST-CLOSURE CARE, continued					
Closure and Post-Closure Under Interim Standards, Post-closure Plan; Amendment of Plan OAC 3745-66-18(A)&(C)	The owner of a hazardous waste disposal unit shall have a written post-closure plan, which shall identify the activities that will be carried on after closure of each unit and the frequency of those activities, and include at least: • a description of the planned monitoring activities and frequencies at which they will be performed; • a description of the planned maintenance activities and frequencies at which they will be performed, to ensure (a) the integrity of the cap and final cover or other containment systems, and (b) the functioning of the monitoring equipment; and • the name, address and telephone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure period. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.
	MODIFICATIONS TO POST-CLOSURE CARE PLAN OR PERIOD					
Closure and Post-Closure Under Interim Standards, Post-closure Plan; Amendment of Plan OAC 3745-66-18(D)	The owner may amend the post-closure plan any time during the active life of the facility or during the post-closure period. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.
Closure and Post-Closure Under Interim Standards, Post-closure Plan; Amendment of Plan OAC 3745-66-18(G)	The post-closure plan and length of the post-closure period may be modified any time prior to the end of the post-closure care period. A modification of the post-closure plan may include, where appropriate, the temporary suspension rather than permanent deletion of one or more post-closure care requirements. At the end of the specified period of suspension, the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] would then determine whether the requirements should be permanently discontinued or reinstated to prevent threats to human health and the environment. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	PROPERTY USE RESTRICTIONS					
Closure and Post-Closure Under Interim Standards, Post-closure Care and Use of Property OAC 3745-66-17© [40 CFR §265.117(c)]	Post-closure use of property on or in which hazardous waste remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the facility's monitoring systems, unless the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] approves otherwise. **NOTE:** If clean (or risk-based) closure is performed, then post-closure care is not required.	✓	Appl	✓	**NOTE:** Identified in the OU5 ROD as applicable only to existing hazardous waste management units (HWMUs); also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Currently addressed in the OSDF Post-closure Care and Inspection Plan, which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings Subpart A— 40 CFR §192.02(a)	Controls of residual radioactive materials from inactive uranium processing sites shall be designed to be effective for up to 1,000 years, to the extent reasonably achievable, and in any case, for at least 200 years, and provide protection of groundwater.	R&A	R&A		Most pertinent to the design and closure of the On-Site Disposal Facility.	Addressed by selected remedies of OU2 and OU5 RODs in establishment of FRLs.
Long-Term Management of Residual Radioactive Material DOE Order 5400.5 Chapter IV (6)(d) 10 CFR Part 834 (PROPOSED)	Controls of residual radioactive materials from inactive uranium processing sites shall be designed to be effective for up to 1,000 years, to the extent reasonably achievable, and in any case, for at least 200 years, and provide protection of groundwater.		TBC			Addressed by selected remedies of OU2 and OU5 RODs in establishment of FRLs.
	For long-term management of uranium, thorium, and their decay products, access to a property and use of on-site materials contaminated by residual radioactive material should be controlled through appropriate administrative and physical controls such as those described in 40 CFR 192. These controls should be designed to be effective to the extent reasonable for at least 200 years.	TBC	TBC			
Control of Residual Radioactive Material Above the Guidelines DOE Order 5400.5 Chapter IV (6)	Residual radioactive material with concentrations above the generic guidelines (see chemical-specific requirements) shall be managed in accordance with Chapter II, Requirements for Radiation Protection of the Public and the Environment, and operational and control requirements.	TBC	✓			See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Supplemental Limits and Exceptions for Residual Radioactive Material DOE Order 5400.5 Chapter IV (7)	If special specific property circumstances indicate that the concentration guidelines or authorized limits are not appropriate, supplemental limits or an exception may be requested to those guidelines or limits.	TBC	√			See preceding.
Release of Property DOE Order 5400.5 Chapter II (5)	Real property (land and structures), personal property, materials, and equipment shall be released if the concentration of radioactivity is within the limits of residual radioactive contamination.	TBC	√			See preceding.
POST-CLOSURE NOTICE/SURVEY PLAT						
Closure and Post-Closure Under Interim Standards, Survey Plat OAC 3745-66-16	The owner shall submit -- to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] -- a survey plat, prepared and certified by a professional land surveyor, indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. The plat must contain a note, prominently displayed, which states the owner's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with OAC 3745-66-17(C).	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	Currently addressed in the OSDF Post-closure Care and Inspection Plan, which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed.
Closure and Post-Closure Under Interim Standards, Post-closure Notices OAC 3745-66-19(A)	The owner shall submit -- to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] -- a record of the type, location, and quantity of hazardous waste disposed of within each cell or disposal unit of the facility.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEED NOTATION					
Closure and Post-Closure Under Interim Standards, Post-closure Notices OAC 3745-66-19(B)	The owner shall record, in accordance with state law, a notation on the deed of the facility property, or on some other instrument which is normally examined during title search, that will notify in perpetuity the potential purchasers of the property that: • the land has been used to manage hazardous wastes; • its use is restricted under the Ohio Administrative Code closure and post-closure rules; and • a survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or hazardous waste unit of the facility as required by OAC 3745-66-16 and OAC 3745-66-19(A) have been filed with the local zoning authority or th. the Ohio Director of Environmental Protection].	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	Currently addressed in the OSDF Post-closure Care and Inspection Plan, which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed. Will also be addressed in the NRRP.
Closure and Post-Closure Under Interim Standards, Post-closure Notices OAC 3745-66-19©	If the owner or any subsequent owner of the land upon which a hazardous waste disposal unit was located wishes to remove hazardous wastes and hazardous waste residues in satisfaction of the criteria in OAC 3745-66-17(C), the owner may request that the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] approve either: • the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or • the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	See preceding.

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Appendix B

APPENDIX B

SURFACE WATER MANAGEMENT PLAN

2888

SOIL AND DISPOSAL FACILITY PROJECT

SURFACE WATER MANAGEMENT PLAN FOR THE REMEDIATION OF AREAS 3A AND 4A

PREPARED FOR

FLUOR FERNALD
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

DOCUMENT NO. 20800-PL-0003

CONSTR. CONTRACT NO. FSC 642
ENGR. CONTRACT NO. 98PC001323
TASK ORDER L-010

LOCKWOOD GREENE

1201 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831-3562

Project No. 008919.01

Date: 03/31/00
Rev.: J

000277

SOIL AND DISPOSAL FACILITY PROJECT

SURFACE WATER MANAGEMENT PLAN FOR THE REMEDIATION OF AREAS 3A AND 4A

PREPARED BY

LOCKWOOD GREENE

1201 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831-3562
Project No. 008919.01

ISSUED FOR 90% EPA REVIEW
31 MARCH 2000

PREPARED BY: SD Stilhan

APPROVED BY: 3/29/00

Date: 03/31/00
Rev.: J

SURFACE WATER MANAGEMENT PLAN FOR THE REMEDIATION OF AREAS 3A AND 4A

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LIST OF ACRONYMS AND ABBREVIATIONS

AWWT	Advanced Waste Water Treatment
BSL	Biodenitrification Surge Lagoon
CB	Catch Basin
CM	Construction Manager for Operating Contractor
FEMP	Fernald Environmental Management Project
FY	Fiscal Year
GMA	Great Miami Aquifer
MH	Manhole
OAC	Ohio Administrative Code
OEPA	Ohio Environmental Protection Agency
ODNR	Ohio Department of Natural Resources
OSDF	On-Site Disposal Facility
RCRA	Resource Conservation and Recovery Act
SWRB	Storm Water Retention Basin
SWMP	Surface Water Management Plan
VOC	Volatile Organic Compound
WAC	Waste Acceptance Criteria
WMF	Water Management Facility

SECTION 1

INTRODUCTION

1.1 Objective

This Surface Water Management Plan (SWMP) describes the surface water management and erosion and sediment control practices to be followed for remediation of Areas 3A and 4A of the Former Production Area at the Fernald Environmental Management Project (FEMP).

The objective of this SWMP is to provide guidance to the Contractor in the use of engineered features designed to manage surface water and minimize erosion and off-site sedimentation. It is not the intent of this SWMP to prescribe the sequence of remediation activities, but rather to provide the Contractor with performance standards to be implemented during remediation.

The information that accompanies this SWMP is intended to provide the Contractor with the initial and final site conditions that may be expected prior to and immediately after remediation. It is expected that the Contractor will provide the necessary detailed discussion and calculations using the accompanying information to support the specific SWMP that they will implement during remediation.

1.2 Project Description

Areas 3A and 4A are roughly the eastern half of the Former Production Area. Generally, the project areas are bounded by B Street to the west, 1st Street to the south, and the Former Production Area boundary fences to the east and north. Area 3A encompasses approximately 35 acres and Area 4A is approximately 18 acres. Refer to Figure 1-1 for the general site features of Areas 3A and 4A. As illustrated in Figure 1-1, Areas 3A and 4A are located inside the Former Production Area watershed. Presently, all surface water runoff from the project areas is passed to the storm water retention basin (SWRB) via storm sewers.

Work in each project area will consist of site preparation activities, including but not limited to, constructing the Tank Farm Settling Basin, installing excavation boundary structures, as required, and excavating initial above-WAC and RCRA hazardous material areas. The initial excavation will provide detention necessary to minimize erosion and sediment transport outside the local area. In addition, work in Area 3A includes construction of storm water control measures to intercept surface drainage from the north side of the Impacted Material Haul Road and convey it to the existing storm sewer system. Thereafter, the initial excavation areas will be remediated, as discussed in Sections 3.2 and 3.4 of this plan.

After the initial excavation areas have been remediated, excavation work in each project area will consist of removal of all impacted materials and excavation to design depths shown on the Construction Drawings. After the excavation has reached the design grade and any supplemental excavation has been completed, the Contractor will be responsible for dewatering by pumping accumulated water within the excavation areas until precertification activities are complete. Surface water management after the certification phase of the project areas is beyond the scope of this plan.

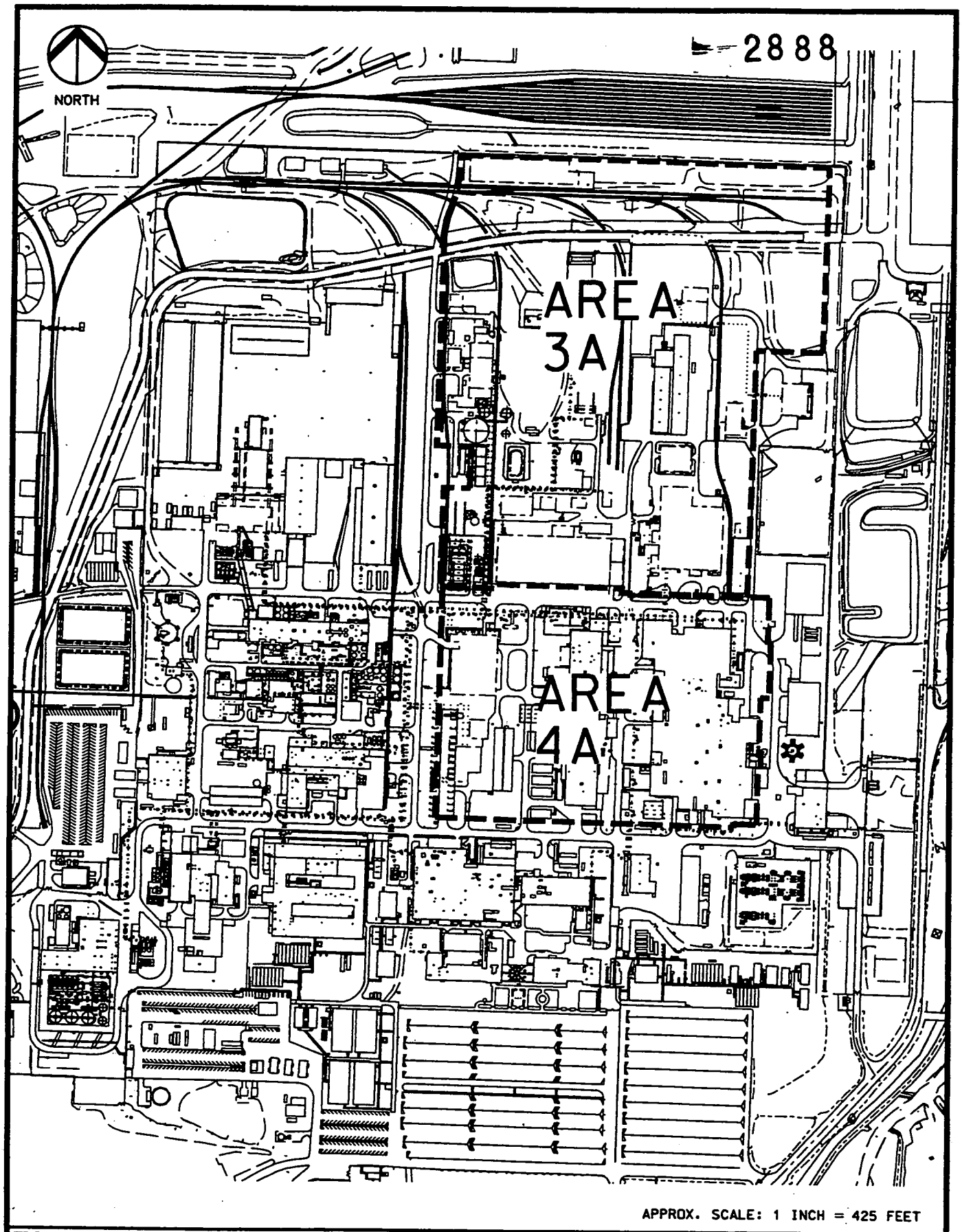
To aid the Contractor in preparing the specific SWMP, this SWMP addresses the existing surface flow conditions and anticipated final surface flow conditions that may be expected after remediation is complete. This SWMP also provides a benchmark for the Contractor to use in preparing the specific SWMP, insofar as the level of detail and calculations that shall be submitted for approval.

1.3 Plan Scope

This SWMP establishes the minimum surface water management, erosion minimization, and sediment control practices that the Contractor shall follow to minimize impacts to surrounding areas and the existing storm sewer system from excessive sediment loading from project work in Areas 3A and 4A. The scope of this SWMP includes a discussion of the engineering controls to be implemented during the remediation of the project areas, including the following:

- Surface water run-on from outside of the Area 3A and 4A project areas will be minimized and discharged through the existing storm sewer system of the Former Production Area.
- Surface water runoff from the Area 3A and 4A project areas will be discharged to the existing storm sewer system via the Tank Farm Settling Basin.
- Perched groundwater that seeps into excavations within the Area 3A and 4A project areas will be collected and conveyed to the existing storm sewer system via the Tank Farm Settling Basin.
- Perched groundwater that contains volatile organic compounds (VOCs) that seeps into excavations will be contained, collected, and transferred to portable tanks for transport to treatment by the Construction Manager (CM).

The applicable requirements and design criteria to be used to prepare the SWMP are in Section 2 of this plan. The discussion of project activities is in Section 3 of this plan. The engineered features are described in Sections 4, 5, and 6 of this plan, as well as presented in the Construction Drawings and Technical Specifications. A summary of data sources, codes/references, assumptions and calculations are attached as Appendix A. Detailed hydrologic and hydraulic calculations, as well as pump data, have been prepared for Areas 3A and 4A and are presented in Appendices B through G.



TITLE

FIGURE 1-1
AREAS 3A AND 4A

FLUOR FERNALD

SECTION 2

APPLICABLE REQUIREMENTS

2.1 Overview

Regulatory and other requirements applicable to this SWMP are summarized below. These requirements address the individual phases of remediation to include site preparation, initial excavation, and final excavation.

2.2 Project Requirements

Project requirements have been established for the Former Production Area remediation. The applicable project requirements that the Contractor shall meet are:

- Construct Tank Farm Settling Basin as shown on the Construction Drawings.
- Surface water runoff from disturbed areas will be collected within the excavations and pumped to the Tank Farm Settling Basin; the runoff will be routed to the SWRB via the existing storm sewer system within the Former Production Area.
- Surface water run-on from undisturbed areas will be diverted away from excavations.
- Isolation of existing storm sewers by either plugging or air-gapping will be implemented in phases during remediation, as required. Surface runoff at the isolated storm sewers shall be pumped to the Tank Farm Settling Basin.
- Surface water runoff requiring Advanced Waste Water Treatment (AWWT) Phase II wastewater treatment (i.e., VOC contaminated water) must be segregated from other surface water runoff.
- Direct infiltration of surface water into the Great Miami Aquifer (GMA) must be prevented.
- Existing active storm sewers must be maintained as free flowing for the duration of the contract.

In addition to the above requirements, the Contractor shall incorporate additional requirements into the plan to manage surface water and minimize erosion and sediment transport:

- Disturbed areas shall be stabilized (e.g., vegetated) after the area has been excavated to design grade.
- General practices for construction, inspection, and maintenance of erosion and sediment control features shall be consistent with guidelines recommended by the ODNR document entitled *"Rainwater and Land Development"*, unless otherwise stated.

- The Tank Farm Settling Basin shall be cleaned to the design capacity when the sediment retained in the trap reaches a depth of 10 inches.

2.3 Contractor Performance Criteria

A number of performance criteria for remediation of the Former Production Area have been identified. The Contractor shall incorporate these criteria into his plan to manage surface water and minimize erosion and sediment transport. The applicable performance criteria are:

- Excavate initial above-WAC and RCRA hazardous material areas to provide detention as necessary to minimize erosion and sediment transport from the project area until adequate detention capacity is provided within these initial excavation areas.
- Remediation shall be sequenced and performed to manage drainage within the excavation areas for subsequent pumping to the Tank Farm Settling Basin.
- Surface runoff (up to the 10-year, 24-hour storm event) from disturbed areas shall be managed within the excavations and pumped to the Tank Farm Settling Basin within 3 days.
- Surface runoff (greater than the 10-year, 24-hour storm event) from disturbed areas that does not overflow to the existing storm sewer shall be routed through the excavations and pumped to the Tank Farm Settling Basin in a timely manner.

SECTION 3

AREA 3A AND 4A REMEDIATION RELATED TO SURFACE WATER MANAGEMENT AND EROSION CONTROL

3.1 Introduction

Currently, Areas 3A and 4A are a combination of paved, graveled and vegetated surfaces, as well as a mixture of various sized concrete slabs and pads. Within these project areas, surface water runoff consists of sheet flow leading to concentrated flows to the inlets of the existing storm sewer system. All runoff from these project areas presently flows into the SWRB. During remediation of the project areas, surface water management will be implemented to minimize run-on to the project area, collect and convey runoff from the project area up to the 10-year, 24-hour design storm, and collect and convey perched groundwater that may be encountered.

During remediation, perched groundwater and surface water that collects in the excavation areas will be pumped into the Tank Farm Settling Basin. Outflow from the Tank Farm Settling Basin will drain by gravity into the existing storm sewer system to discharge into the SWRB. Discharge from the Water Management Facility (WMF) will be to the SWRB or Biodenitrification Surge Lagoon (BSL) for AWWT Phase I or II treatment. Phase I treatment is required for all non-VOC containing surface water and perched groundwater. Phase II treatment is necessary for VOC containing perched groundwater and surface water. Figure 3-1 shows the general collection and treatment routes for the collected perched groundwater and storm water.

After remediation, the disturbed areas will not be restored to the original topography. These areas will be graded to provide positive drainage, as necessary, and vegetated. The Contractor will be responsible for pumping the areas until precertification is complete. The precertification process is divided into four general steps performed by the Contractor as follows: 1) excavate to the design grade shown on the Construction Drawings, 2) obtain precertification samples, 3) excavate additional contamination as necessary based on sample test results, and 4) obtain certification samples. Surface water management after the certification phase of the project areas is beyond the scope of this plan.

3.2 Area 3A Initial Excavation

Prior to any land-disturbing activities in the project area, the Tank Farm Settling Basin will be constructed at the existing tank farm location. As discussed in Section 6.3, the Tank Farm Settling Basin will reduce the amount of sediment in the runoff prior to discharging to the SWRB.

Prior to Area 3A initial excavation, storm water control measures will be constructed along the north side of the Impacted Material Haul Road. These storm water control measures will intercept surface water drainage north of the Impacted Material Haul Road and convey it into the existing storm sewer system. Construction drawings 99X-1900-G-00008 and 99X-1900-G-00009 illustrate these storm water control measures.

Area 3A initial excavation will begin with installation of temporary diversions at the excavation boundary that, when combined with the existing storm water control features, will control run-on/runoff for the project area. Thereafter, the Contractor shall construct the initial excavation areas as necessary to minimize erosion and sediment transport from the local area. The initial excavation areas will be limited to the above-WAC and RCRA hazardous material areas within Area 3A. During the Area 3A initial excavation, the Contractor will contain water contaminated with VOCs and pump it to portable tanks for transfer to treatment by the CM.

After the above-WAC and RCRA hazardous material areas have been removed, the resulting excavations will provide detention capacity for the runoff from up-gradient disturbed areas. The initial excavations resulting from the remediation of the above-WAC and RCRA hazardous material areas. Detention must be provided for runoff from the disturbed areas. The areas of disturbance must be limited to no more than the available detention volume can contain at any time. Construction drawings 99X-1900-G-00008 through 99X-1900-G-00011 illustrate the initial excavation areas for Area 3A.

3.3 Area 3A Final Excavation

After the above-WAC and RCRA hazardous material areas have been removed, the resulting excavations will provide detention capacity for the runoff from up-gradient disturbed areas. Based on the anticipated excavations for the above-WAC and RCRA hazardous material areas, the initial disturbed areas shall be limited to 3 and 10 acres for the western and eastern half of Area 3A, respectively. The work will consist of soil excavation and removal of at-and below-grade utilities and foundation structures. Remediation shall be sequenced and performed to manage drainage within the excavation areas for subsequent pumping to the Tank Farm Settling Basin, in accordance with the Contractor's approved SWMP. As the project area is excavated and the existing storm sewer system is removed, temporary sumps will be excavated at low points within the excavation to collect surface water and perched groundwater.

During the excavation activities, direct infiltration of surface water into the GMA must be prevented. Prior to breaching the GMA, the first bench terrace above the GMA shall be sloped toward the excavated slope. This bench terrace shall be graded to drain to a sump for pumping to the Tank Farm Settling Basin. After breaching the GMA, the GMA plug shall be constructed in accordance with Technical Specification 02206.

Also, modifications to the existing storm sewer system (e.g., pipe plugs and air gaps) will be constructed to control run-on/runoff for the project area, as required in accordance with the Contractor's approved SWMP. In general, mechanical plugs will be installed where pipes daylight into the excavation or at locations where the storm sewer pipes can be accessed through structures such as manholes or catch basins. Also, air gaps will be installed where the pipes cannot be easily accessed or the pipes are too small or too large for the mechanical plugs. At locations where the storm sewer pipes have been modified, runoff from disturbed areas will be directed to an excavation area and pumped to the Tank Farm Settling Basin.

After the excavation reaches the design grade until the final excavation is completed, the Contractor will establish a precertification buffer area for Area 3A. The certification boundary will be located 50 feet (nominal) inside the excavation boundary or inward from the bottom of the excavated slope. The certification boundary will provide a buffer area for a road to allow access for site inspection and maintenance. The buffer area will be graded away from the precertified area. A ditch will be provided as close to the excavation boundary as possible to allow collection of runoff that will flow to a sump and be pumped out of the precertification buffer area to the Tank Farm Settling Basin. Further, runoff collected in excavated areas will be pumped to the Tank Farm Settling Basin until precertification is complete. After the project area has been certified, the runoff will be pumped to Paddys Run. Construction drawing 99X-1900-G-00044 illustrates the precertification buffer area for Area 3A.

3.4 Area 4A Initial Excavation

Area 4A initial excavation will begin with installation of temporary diversions at the excavation boundary that will control run-on/runoff for the project area. Thereafter, the Contractor shall construct the initial excavation areas as necessary to minimize erosion and sediment transport outside the local area. The initial excavation areas will be limited to the above-WAC areas within Area 4A. During the Area 4A initial excavation, the Contractor will contain water contaminated with VOCs and pump it to portable tanks for transfer by the CM.

After the above-WAC areas have been removed, the resulting excavations will provide detention capacity for the runoff from up-gradient disturbed areas. The initial disturbed areas shall be limited to detention capacity of the initial excavations resulting from the remediation of the above-WAC areas. Above-WAC areas shall be excavated first unless access is restricted by decommission and demolition activities (by others). If access to above-WAC areas is restricted, the Contractor shall provide detention capacity for Area 4A remediation activities by making initial excavations elsewhere in the project area (e.g., 74E area), as approved by the CM. Detention must be provided for runoff from the disturbed areas. The areas of disturbance must be limited to no more than the

available detention volume can contain at any time. Construction drawings 99X-1900-G-00063 and 99X-1900-G-00065 illustrate the initial excavation areas for Area 4A.

3.5 Area 4A Final Excavation

After the above-WAC areas have been removed, the resulting excavations will provide detention capacity for the runoff from up-gradient disturbed areas. Based on the anticipated excavations for the above-WAC areas, the initial disturbed areas shall be limited to 10 acres for Area 4A. Similar to Area 3A, the work in Area 4A will consist of soil excavation and removal of at-and below-grade utilities and foundation structures. Remediation shall be sequenced and performed to manage drainage within the excavation areas for subsequent pumping to the Tank Farm Settling Basin, in accordance with the Contractor's approved SWMP. As the project area is excavated and the existing storm sewer system is removed, temporary sumps will be excavated at low points within the excavation to collect surface water and perched groundwater.

As discussed for Area 3A, direct infiltration of surface water into the GMA must be prevented during Area 4A excavation activities. Prior to breaching the GMA, the first bench terrace above the GMA shall be sloped toward the excavated slope. This bench terrace shall be graded to drain to a sump for pumping to the Tank Farm Settling Basin. After breaching the GMA, the GMA plug shall be constructed in accordance with Technical Specification 02206.

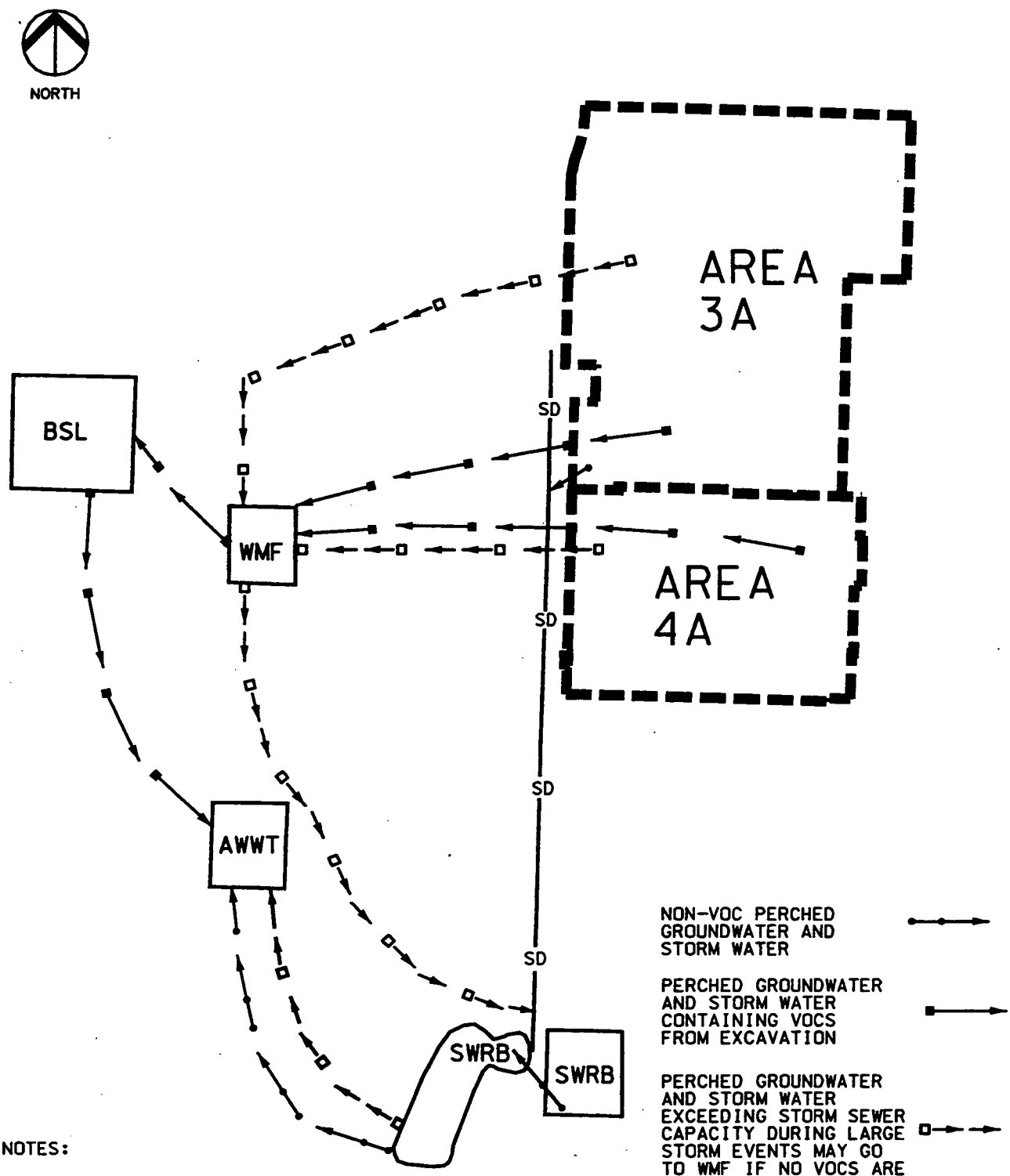
Similar to Area 3A, Area 4A will consist of modifications to the existing storm sewer system (e.g., pipe plugs and air gaps) to control run-on/runoff for the project area, as required in accordance with the Contractor's approved SWMP. At locations where the storm sewer pipes have been modified, runoff from disturbed areas will be directed to an excavation area and pumped to the Tank Farm Settling Basin.

Prior to removal of the existing storm sewer along 2nd Street, runoff from the OMTA and Building 77 areas will be intercepted and diverted around the remediation area (by others). The intercepted runoff may be diverted via surface and/or culvert flow to the existing storm sewer system along 1st Street. Temporary diversions may be necessary along a portion of 1st Street to prevent runoff from spilling into the nearby off-site drainage channel.

After decommission and demolition activities, the CM will modify the existing berms in the Plant 6 basement to contain water contaminated with VOCs and commence dewatering operations. The CM will formally turn over the pumping operations for dewatering the Plant 6 basement to the Contractor for operation and maintenance after removal of the above-grade facilities. During demolition of the Plant 6 below-grade structures, the Contractor will contain water contaminated with VOCs and pump it to

portable tanks for transfer by the CM. The general location of the openings to the Plant 6 basement is shown on drawing 99X-1900-G-00060.

After the excavation reaches the design grade until the final excavation is completed, the Contractor will establish a precertification buffer area for Area 4A. The certification boundary will be located 50 feet (nominal) inside the excavation boundary or inward from the bottom of the excavated slope. The certification boundary will provide a buffer area for a road to allow access for site inspection and maintenance. The buffer area will be graded away from the precertified area. A ditch will be provided as close to the excavation boundary as possible to allow collection of runoff that will flow to a sump and be pumped out of the precertification buffer area to the Tank Farm Settling Basin. Further, runoff collected in excavated areas will be pumped to the Tank Farm Settling Basin until precertification is complete. After the project area has been certified, the runoff will be pumped to Paddys Run. Construction drawing 99X-1900-G-00106 illustrates the precertification buffer area for Area 4A that ties into the existing precertification buffer area for Area 3A.



NOTES:

1. ALL VOC PERCHED GROUNDWATER AND STORM WATER IS PUMPED INTO PORTABLE TANKS FOR TRANSPORT TO TREATMENT.
2. PERCHED GROUNDWATER AND STORM WATER WITH NO VOCS MAY BE TEMPORARILY STORED AT THE WMF AND DISCHARGED TO THE SWRB.

TITLE

FIGURE 3-1
PERCHED GROUNDWATER AND STORM WATER ROUTING

FLUOR FERNALD

SECTION 4

SOIL STABILIZATION

4.1 Introduction

A description of the construction, inspection, and maintenance of the soil stabilization features for both temporary and long-term conditions is presented in this section. Stabilization features include:

- Temporary seeding and mulching.
- Dumped rock fill.
- Aggregate construction entrance.
- Crusting agent.

The construction, inspection, and maintenance of these control features shall be based on standard engineering and soil conservation practices. The methods presented in this section are taken from the ODNR document entitled *"Rainwater and Land Development"*. The Contractor shall be prepared to implement other methods to control erosion of sediment at the site as deemed necessary by the CM.

4.2 Temporary Seeding and Mulching

Definition

Temporary seeding and mulching are common soil stabilization measures that serve to hold soil in place until permanent cover is provided at the time of final grading. Temporary seeding establishes a temporary vegetative cover on disturbed areas by sowing the appropriate rapid growing plants. Vegetation is essential to preserve the integrity of earthen structures used to control sediment transport, such as temporary diversion berms and ditches. Mulching involves the application of plant residues and other suitable materials to the soil surface and protects against rain, wind, and sun while seeds are germinating and helps to ensure a vegetative stand.

Purpose

The Contractor shall apply temporary seeding to:

- Reduce the erosion and sedimentation by stabilizing disturbed areas that will not be brought to the design grade for less than two years.
- Reduce problems associated with mud or dust from bare soil surfaces during remediation.

- Reduce sediment runoff to downgradient areas and improve the visual aspects of the remediation area.

The Contractor shall apply mulch to:

- Inhibit erosion by protecting the soil surface from raindrop impact and reducing the velocity of overland flow.
- Foster the growth of vegetation by increasing available moisture and providing insulation against extreme heat and cold.

Application

The Contractor shall apply temporary seed and mulch to soil surfaces where additional grading or reworking is not scheduled for a period greater than 45 days but less than two years. Temporary seeding and mulching shall be applied in accordance with Section 02930 of the Technical Specifications.

Maintenance

Where seeding does not establish as expected, the Contractor shall reseed and mulch the area within three weeks. The cause of the failure should be ascertained and corrected by the Contractor before reseeding. Physical conditions (e.g. soil conditions) may be unfavorable and result in the failure, requiring an alternative approach and/or type of cover. Areas requiring reseeding shall be prepared in the same manner as the original installation. Once established, a regular maintenance program shall be performed.

The Contractor shall inspect applied mulch on a weekly basis, after rain events exceeding 0.5 inches and daily during prolonged rainfall to check for rill erosion. Where erosion is observed, the Contractor shall apply additional mulch. Nets used to anchor mulch shall also be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall nets as necessary after repairing damage to the slope. Inspections should take place until grasses are firmly established. Additional temporary seeding and mulching considerations and design criteria are provided in *"Rainwater and Land Development"*.

4.3 Dumped Rock Fill

Definition

Dumped rock fill is an erosion-resistant ground cover consisting of large, loose, angular stone installed wherever soil conditions, water turbulence and velocity, expected vegetative cover, etc., are such that soil may erode under design flow conditions.

Purpose

The Contractor shall place dumped rock fill to:

- Protect the soil surface from the erosive forces of concentrated runoff.
- Slow concentrated runoff velocity while enhancing the potential for infiltration.
- Stabilize slopes with seepage problems and/or erosive soils.

The size and areal extent of the dumped rock fill is determined based on surface water calculations.

Application

The Contractor shall place dumped rock fill at soil-water interfaces where the soil conditions, water turbulence and velocity, and vegetative cover are such that the soil may erode under the design peak flow conditions. Typical uses of dumped rock fill may be at storm drain outlets, on channel banks and/or bottoms, within drainage channels, or at the toe of slopes.

The Contractor shall place dumped rock fill in accordance with the following minimum guidelines:

- Dumped rock fill used at channel transitions shall extend upgradient and downgradient of the transition a distance of five times the downgradient channel depth; the minimum extension should be 15 feet.
- Dumped rock fill used at culvert outlets shall have a minimum width of 4 feet wider than the pipe diameter and a minimum width based on calculated peak flow velocities.
- Separator geotextile fabrics shall be used to minimize piping and erosion beneath dumped rock fill in temporary facilities. Separator geotextile fabrics shall meet the requirements of Section 02275 of the Technical Specifications.

The Contractor shall install the dumped rock fill in accordance with the detail provided on drawing 99X-1900-G-00041.

Maintenance

Once dumped rock fill has been installed, it should require little maintenance though the Contractor shall inspect dumped rock fill areas weekly, after rain events exceeding 0.5 inches and daily during prolonged rainfall to determine if high flows have caused scour beneath the dumped rock fill or dislodged any of the stone. If repairs are needed, the Contractor shall accomplish such repairs within 24 hours of the damage discovery.

4.4 Construction Entrance

Definition

A construction entrance is a stabilized pad of aggregate over a separator geotextile fabric and is used to reduce the amount of mud tracked outside the excavation boundary.

Purpose

The Contractor shall use a construction entrance:

- Where construction vehicles leave active construction areas.
- At all points of egress to existing haul roads.
- Where frequent vehicle and equipment ingress/egress is expected.

Application

The Contractor shall build construction entrances in accordance with the detail provided on drawings 99X-1900-G-00041 and 99X-1900-G-00104 for Areas 3A and 4A, respectively.

Maintenance

The Contractor shall inspect the construction entrances on a weekly basis, after rain events over 0.5 inches and daily during periods of prolonged rainfall. The Contractor shall follow the maintenance guidelines provided in Section 02275 of the Technical Specifications.

4.5 Crusting Agent

Definition

A crusting agent provides a protective layer to bare soil and abates erosion by binding the soil together and shielding it from raindrop impact. It also provides dust suppression for the exposed soils.

Purpose

The Contractor shall use a crusting agent to:

- Reduce the erosion and sedimentation by stabilizing disturbed areas that will not be brought to the design grade for a period of less than two years.
- Reduce problems associated with mud or dust from bare soil surfaces during remediation.

Application

The Contractor shall apply the crusting agent in accordance with Section 02275 of the Technical Specifications.

Maintenance

The Contractor shall follow the maintenance guidelines provided in Section 02275 of the Technical Specifications.

SECTION 5

RUN-ON/RUNOFF CONTROLS

5.1 Introduction

The principal objectives of surface water management in the Area 3A and 4A project areas are to prevent or minimize surface water run-on to the remediation areas and to manage water and runoff that has come into contact with impacted material and direct it to on site treatment facilities. Surface water management, as described in this SWMP, addresses the peak runoff that discharges from the Area 3A and 4A project areas during remediation activities.

Both project areas cover a total of approximately 53 acres. The topography is gently sloped to the south. Existing drainage consists mainly of an extensive storm sewer system to manage surface water. The storm sewer system for Area 3A and 4A project areas conveys surface water in a south and westerly direction and drains to the existing SWRB.

As a basic approach to surface water management, run-on from upgradient areas will be prevented, where possible, from flowing into the remediation areas. This will minimize the possibility of erosion and limit the amount of potentially contaminated water. The existing drainage patterns and facilities will be used for surface water management, wherever possible, by implementing improvements to convey design flows. Where necessary, temporary diversions will be constructed to manage run-on and/or direct runoff from the remediation area. Initial excavations will be constructed to provide adequate detention capacity for the disturbed areas. Modifications to the existing storm sewer system (i.e., pipe plugs and air gaps) will be used to collect and convey the runoff, as required.

A description of the construction, inspection, and maintenance of the run-on/runoff control features is presented in this section. These control features include:

- Temporary diversions.
- Temporary drainage channels.
- Culverts.
- Excavation dewatering sumps.

The construction, inspection, and maintenance of these control features shall be based on standard engineering and soil conservation practices. The Contractor shall be prepared to implement other methods to minimize erosion and sediment transport at the site as deemed necessary by the CM.

5.2 Temporary Diversions

Definition

Temporary diversions consist of an earthen swale and/or dike constructed across the slope.

Purpose

In general, temporary diversions are intended to prevent erosion and contain surface runoff within the disturbed areas. This is accomplished by diverting water (overland sheet flow) from areas where the water may cause erosion to areas where the water can be used or disposed safely.

The Contractor shall use temporary diversions to:

- Divert surface water run-on away from above WAC and RCRA areas prior to soil disturbance and during excavation.
- Divert surface water runoff away from unprotected slopes to a stabilized outlet.
- Divert sediment-laden runoff from a disturbed area to the Tank Farm Settling Basin.
- Shorten the flow length within a long sloping drainage area.

Application

The Contractor shall construct temporary diversions in areas where runoff from upgradient areas has the potential to damage; a) downgradient areas; b) cut or fill slopes or steeply sloping land; c) critical sediment source areas; or d) active gullies or other erodible areas.

Temporary diversions shall have stable outlets. The Contractor shall stabilize each diversion throughout its planned life. Guidelines for stability are provided in the references. Diversions are not recommended below high sediment-producing areas unless land treatment practices or structural measures, designed to prevent damaging accumulations of sediment, are installed with or before the diversions cited in this document. The Contractor shall locate the temporary diversions according to outlet condition, topography, land use, soil type, and length of slope. Temporary diversions must be located so that water will empty on established water disposal areas, a stable watercourse, waterway, or structure.

A detail for temporary diversions is presented on drawings 99X-1900-G-00041 and 99X-1900-G-00104 for Areas 3A and 4A, respectively. The temporary diversion locations are presented on drawings 99X-1900-G-00006 and 99X-1900-G-00060 for Areas 3A and 4A, respectively. These locations are considered the minimum necessary during

remediation. Additional temporary diversions may be installed by the Contractor to manage run-on/runoff in active excavation areas, upon approval by the CM.

Maintenance

The Contractor shall inspect on a weekly basis, after rain events exceeding 0.5 inches and daily during prolonged rainfall and maintain temporary diversions as follows:

- Check for points of scour or bank failure, rubbish or channel obstruction, rodent holes, breaching or settling of the berm, excessive wear from pedestrian or construction traffic.
- Repair damage and remove deposits or sediment from the diversion. The excavated sediment shall be managed as described in Section 02205 of the Technical Specifications.
- Restabilize, as needed.

5.3 Temporary Drainage Channels

Definition

A temporary drainage channel is a natural or constructed channel or outlet shaped or graded to convey run-on and runoff. The channel may have a protective lining of vegetation or erosion-resistant materials such as dumped rock fill, erosion mat, or grass.

All temporary drainage channels shall have stable outlets with adequate capacity for the designed peak flow. The outlet must discharge in such a manner as not to cause erosion. Outlets should be constructed and stabilized prior to the operation of the temporary drainage channels.

Purpose

The Contractor shall construct temporary drainage channels to provide for the conveyance of excess surface water from diversions and other erosion and sediment control measures, or natural concentrations of flow without causing erosion or flooding.

Application

The Contractor shall construct temporary drainage channels as needed to manage run-on and runoff and to minimize erosion resulting from concentrated runoff. Temporary drainage channels shall be designed based on surface water calculations. Whenever possible, temporary drainage channels shall be used in such a way that preserves the existing and permanent drainage systems. Temporary drainage channels shall generally be located in existing and permanent drainageways where water can drain in

from all sides. In all situations, channels shall be located so that they do not make sharp, unnatural changes in direction of flow.

Maintenance

The Contractor shall inspect and maintain the temporary drainage channels in accordance with the following:

- Inspection shall be frequent and repairs shall be made promptly as needed.
- All temporary drainage channels shall be inspected weekly. Also, the channels shall be inspected daily after each rain event exceeding 0.5 inches and at least daily during prolonged rainfall events. Necessary repairs to channels shall be made within 24 hours of the damage discovery.
- Temporary drainage channels shall be kept clear of debris at all times.
- The protective lining shall be maintained to prevent undermining, scour, or deterioration.

5.4 Culverts

Definition

Culverts are temporary or permanent structures used to convey surface water beneath a road or other embankment.

Purpose

The Contractor shall install culverts to provide means to convey surface water under construction and operation-related roads.

Application

The Contractor shall install culverts as needed to manage run-on and runoff. A typical trench section for Class B pipe bedding is provided on drawing 99X-1900-G-00040.

Maintenance

The Contractor shall inspect and maintain the culverts as follows:

- Inspection shall be frequent to ensure that the culverts are clear and not damaged.
- All culverts shall be inspected on a weekly basis, after rain events exceeding 0.5 inches and daily during prolonged rainfall. Necessary repairs to culverts shall be made within 24 hours of the damage discovery.

- Maintenance shall be performed in a timely manner to ensure that the culverts are functioning as designed. This shall include removal and disposal of all trapped sediment or debris. The excavated sediment or debris shall be managed as described in Section 02205 of the Technical Specifications.

5.5 Excavation Dewatering Sumps

Definition

Excavation dewatering sumps are collection points or pits constructed at the bottom of and along the downgradient side of an excavation.

Purpose

Excavation sumps are used to collect perched groundwater and surface water runoff within the excavation. Collected runoff is then pumped from the excavation sump into the Tank Farm Settling Basin. The volume of these sumps is achieved through excavation.

Application

The excavations will be positively drained as shown on drawing 99X-1900-G-00044 for Area 3A. The excavations will be positively drained as shown on drawing 99X-1900-G-00106 for Area 4A. Excavation dewatering sumps will be constructed at the bottom of the excavation, as necessary to collect perched groundwater and surface water runoff for pumping to the Tank Farm Settling Basin. The bottom of an excavation dewatering sump shall not extend to within 5 feet of the GMA (approximate elevation of the GMA is 555 feet) with the excavation positively drained to the sump location. Excavations below this elevation will be limited to periods of dry weather. Multiple sumps/pumps may be used to pump runoff to the Tank Farm Settling Basin to dewater excavation areas. The sump pumps will be provided and moved by the Contractor as excavation progresses or as necessary to collect water from specific areas, based on the construction requirements.

Maintenance

- The Contractor will be required to maintain the pumps in proper working condition in accordance with Section 15160 of the Technical Specifications. Further, the Contractor will be required to periodically remove sediment from the sump such that at least half of its design depth is maintained. When sediment is removed, the excavation sump should be restored to its original dimensions. The excavated sediment shall be managed as described in Section 02205 of the Technical Specifications.

SECTION 6

SEDIMENT CONTROL

6.1 Introduction

The construction, inspection, and maintenance of the sediment control features are presented in this section. These features are:

- Silt fences.
- Tank Farm Settling Basin.

The construction, inspection, and maintenance of these control features should be based on standard engineering and soil conservation practices. The methods presented in this section are taken from the ODNR document entitled *"Rainwater and Land Development"*. The Contractor shall be prepared to implement other methods to minimize erosion and sediment transport at the site, as deemed necessary by the CM.

6.2 Silt Fences

Definition

A silt fence is a temporary sediment barrier constructed of posts and filter fabric. The filter fabric is stretched across and attached to the supporting posts and is entrenched.

Purpose

The Contractor shall use silt fences to:

- Intercept and detain small amounts of sediment from disturbed areas during remediation operations in order to prevent sediment from leaving the site.
- Decrease the velocity of sheet flows and low-to-moderate level channel flows.

Application

The Contractor shall install silt fences on the downgradient side of areas to be disturbed until permanent drainage and erosion control structures are established. The silt fence shall be placed on the level contour of the land near the toe of the slope. A silt fence should not be placed directly at the toe of the slope if it is at all possible to place it several feet away. It can also be placed in a minor drainage way to intercept and detain sediment and decrease flow velocities from drainage areas of limited size. Under no circumstances shall the Contractor install silt fences in streams or in channels

where flows are likely to exceed 1 cubic foot per second. Criteria for establishing silt fence locations are provided in the ODNR document.

The silt fence locations presented on drawings 99X-1900-G-00006 and 99X-1900-G-00060 for Areas 3A and 4A, respectively, are considered the minimum necessary during remediation. These locations coincide with the temporary diversions that are installed for run-on/runoff control during remediation. The silt fence minimizes sediment transport for the temporary diversions until the seeded areas of the temporary diversions are established. A typical silt fence detail is provided on drawings 99X-1900-G-00041 and 99X-1900-G-00104 for Areas 3A and 4A, respectively. Intermediate silt fence may be used by the Contractor to manage flows in initial and other active excavation areas. Further, the Contractor will install breaks and overlaps in the silt fence to allow vehicle access to the remediation areas.

Maintenance

The Contractor shall inspect and maintain silt fences in accordance with Section 02275 of the Technical Specifications. Inspection and maintenance shall include the following:

- Weekly inspection of the silt fence to identify areas that require repair or removal of accumulated sediment.
- Silt fences shall be inspected immediately after each rainfall exceeding 0.5 inches and at least once a day during prolonged rainfall. Any required repairs shall be made within the same workday.
- Accumulated silt and debris shall be removed from behind the face of the silt fence when the silt fence deposits reach approximately one-half the height of the fence. The excavated sediment shall be managed as described in Section 02205 of the Technical Specifications.
- If runoff overtops the silt fence, flows under or around the ends, or otherwise becomes a concentrated flow, one of the following shall be performed as appropriate: a) change the layout of the silt fence; b) remove the accumulated sediment; or c) install a different erosion and sediment control measure.
- The expected usable life of a silt fence is 6 months. Should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the fence is still necessary, the fabric shall be replaced promptly.

6.3 Tank Farm Settling Basin

Definition

Settling basins are settling ponds having a simple spillway outlet structure.

Purpose

The purpose of the Tank Farm Settling Basin is to reduce the amount of sediment in the runoff prior to discharging to the existing site storm sewer system in order to maintain a free flowing system.

Application

The tank farm area will be modified to include an outlet structure and designated as the Tank Farm Settling Basin. Surface water runoff from remediation areas will be pumped into this modified structure. The Tank Farm Settling Basin is located near the southwest corner of Area 3A (i.e., centrally located within the Former Production Area) and has an approximate 0.1-acre surface area.

The Contractor shall construct the Tank Farm Settling Basin in accordance with drawing 99X-1900-G-00012, as well as the Technical Specifications. After final excavation activities in Areas 3A and 4A have been completed and the project areas are stabilized, the Tank Farm Settling Basin will no longer be required. However, this Tank Farm Settling Basin may be left intact to aid with surface water management of future remediation projects in the Former Production Area.

Maintenance

The Contractor shall inspect and maintain the Tank Farm Settling Basin. Inspections shall be performed following rainstorms.

- The Contractor will be required to periodically remove sediment from the trap when sediment reaches a depth of 10 inches. When sediment is removed, the Tank Farm Settling Basin should be restored to its original dimensions. The excavated sediment shall be managed as described in Section 02205 of the Technical Specifications.

APPENDIX A

SUMMARY OF DATA SOURCES, CODES/REFERENCES, ASSUMPTIONS AND CALCULATIONS

APPENDIX A

SUMMARY OF DATA SOURCES, CODES/REFERENCES, ASSUMPTIONS AND CALCULATIONS

Data Sources:

1. ASCE, 1992. *Manual No. 77 – Design and Construction of Urban Stormwater Management Systems.*

2. Haestad Methods, 1995. *FlowMaster version 1.0.*

3. Soil Conservation Service, August 1992. *Soil Survey of Hamilton County, Ohio.*

4. Soil Conservation Service, June 1986. *TR-55, Urban Hydrology for Small Watersheds.*

Codes/References:

1. Applicable sections of the Ohio Department of Natural Resources, 1996. *Rainwater and Land Development Manual.*

2. State of Ohio, Department of Transportation, January 1995. *Construction and Material Specifications.*

3. OEPA, November 1995. *NPDES Permit No. 1IO00004*ED.*

General Assumptions:

1. Hydrologic computations for initial and final excavation areas will be calculated using SCS TR-55.

   A. Hydrologic Soil Group, HSG, for all soils in the project area is assumed to be "C". This is based on the soil type (FeA – Fincastle) shown on the SCS soils map for Hamilton County, Ohio in the vicinity of the Former Production Area.

   B. CN values used in the TR-55 calculations for discharge are based on the following assumptions for land use:

      "Open Space" is considered to be a vegetated area in fair condition with approximately 50-75% grass cover. Use CN value equal to 80.

"Impervious Areas" are considered to be paved streets and roads, as well as gravel roadways. Also, the concrete building slabs are included in these assumptions. Use CN value equal to 95.

"Construction" is considered to be an area with bare soil conditions, primarily due to excavation activities. Use CN value equal to 90.

C. Design criterion for storm water runoff is the 10-year, 24-hour storm event (precipitation equal to 4.1 inches based on SCS TR-55). Rainfall distribution is Type II for the project area.

2. Hydrologic computations to determine runoff from the precertification buffer areas will be calculated using the Rational Method (Q = ciA) due to the small drainage areas.

   A. For the precertification buffer areas with bare soil conditions, use C value equal to 0.9.

   B. For the 10-year, 24-hour storm event at the project area, use i value equal to 0.2 in/hr.

3. Hydraulic computations will be calculated using Haestad Methods' *FlowMaster*. It will be used for open channel flow, assuming uniform channel flow.

4. For initial excavation activities in Areas 3A and 4A, the work is limited to construction required to ensure proper surface drainage with initial excavations to provide adequate detention.

5. For excavation activities in Areas 3A and 4A, the work consists of removal of concrete building slabs and foundations and excavating impacted materials as represented in the three-dimensional model provided by Fluor Fernald.

6. Other assumptions are as noted within the calculations.

Table A-1: Area 3A Initial Excavation Hydrologic Calculation Summary[1]

Watershed/ Structure	Drainage Area (acres/miles^2)	Curve No. (I_a/P)	Runoff (inches)	Time of Concentration (hours)	Peak Discharge (cfs)
1A/trench	0.62/0.0010	90 (0.05)	3.02	0.04[2]	3.02[3]
1B/trench	0.99/0.0015	90 (0.05)	3.02	0.04[2]	4.53[3]
1C/CB71	1.26/0.0020	90 (0.05)	3.02	0.05[2]	6.04[3]
1D/CB313	0.49/0.0008	90 (0.05)	3.02	0.03[2]	2.42[3]
1E/trench	1.84/0.0029	90 (0.05)	3.02	0.04[2]	8.76[3]
1F/MH47	1.99/0.0031	90 (0.05)	3.02	0.03[2]	9.36[3]
2A/CB105	1.15/0.0018	90 (0.05)	3.02	0.03[2]	5.44[3]
2B/ditch	1.83/0.0029	90 (0.05)	3.02	0.10	8.76
2C/CB87	2.35/0.0037	90 (0.05)	3.02	0.09[2]	11.17[3]
2D/CB79	2.42/0.0038	90 (0.05)	3.02	0.03[2]	11.48[3]
2E/sump	3.05/0.0048	90 (0.05)	3.02	0.04[2]	14.50
3A/CB21	2.26/0.0035	90 (0.05)	3.02	0.23	7.93[3]
3B/CB22&23	0.65/0.0010	90 (0.05)	3.02	0.10	3.02
4A/CB68	0.76/0.0012	90 (0.05)	3.02	0.07[2]	3.62[3]
4B/CB205	0.64/0.0010	90 (0.05)	3.02	0.03[2]	3.02[3]
4C/CB206	0.45/0.0007	90 (0.05)	3.02	0.02[2]	2.11[3]
4D/CB139	2.25/0.0035	95 (0.02)	3.53	0.13	11.73[3]
4E/CB147	1.51/0.0024	90 (0.05)	3.02	0.04[2]	7.25[3]
4F/MH50	1.00/0.0016	90 (0.05)	3.02	0.02[2]	4.83
5A/CB56	0.88/0.0014	90 (0.05)	3.02	0.04[2]	4.23[3]
5B/CB91	2.84/0.0044	90 (0.05)	3.02	0.05[2]	13.29[3]
5C/CB62	1.08/0.0017	90 (0.05)	3.02	0.05[2]	5.13
5D/CB208	1.60/0.0025	90 (0.05)	3.02	0.03[2]	7.55
5E/CB65	0.22/0.0003	90 (0.05)	3.02	0.05[2]	0.91[3]
H1A/MH84	0.48/0.0007	95 (0.02)	3.53	0.02[2]	2.47
H1B/CB64	2.70/0.0042	90 (0.05)	3.02	0.06[2]	12.68
H1C/trench	1.19/0.0019	90 (0.05)	3.02	0.04[2]	5.74
H1D/trench	0.30/0.0005	90 (0.05)	3.02	0.02[2]	1.51
Tank Farm	45.0/0.0700	--	--	--	2.6[4]

1. See Figure A-1: Watershed Key Map for Area 3A Initial Excavation and Appendix B for detailed calculations.
2. Use minimum time of concentration equal to 0.1 hours.
3. Individual peak discharges computed using *TR-55*. Design discharges using the existing storm sewer system may vary. Refer to detailed calculations for clarification.
4. Peak discharge based on peak pump rates from Area 3A and 4A final excavation computations. Refer to detailed calculations for clarification.

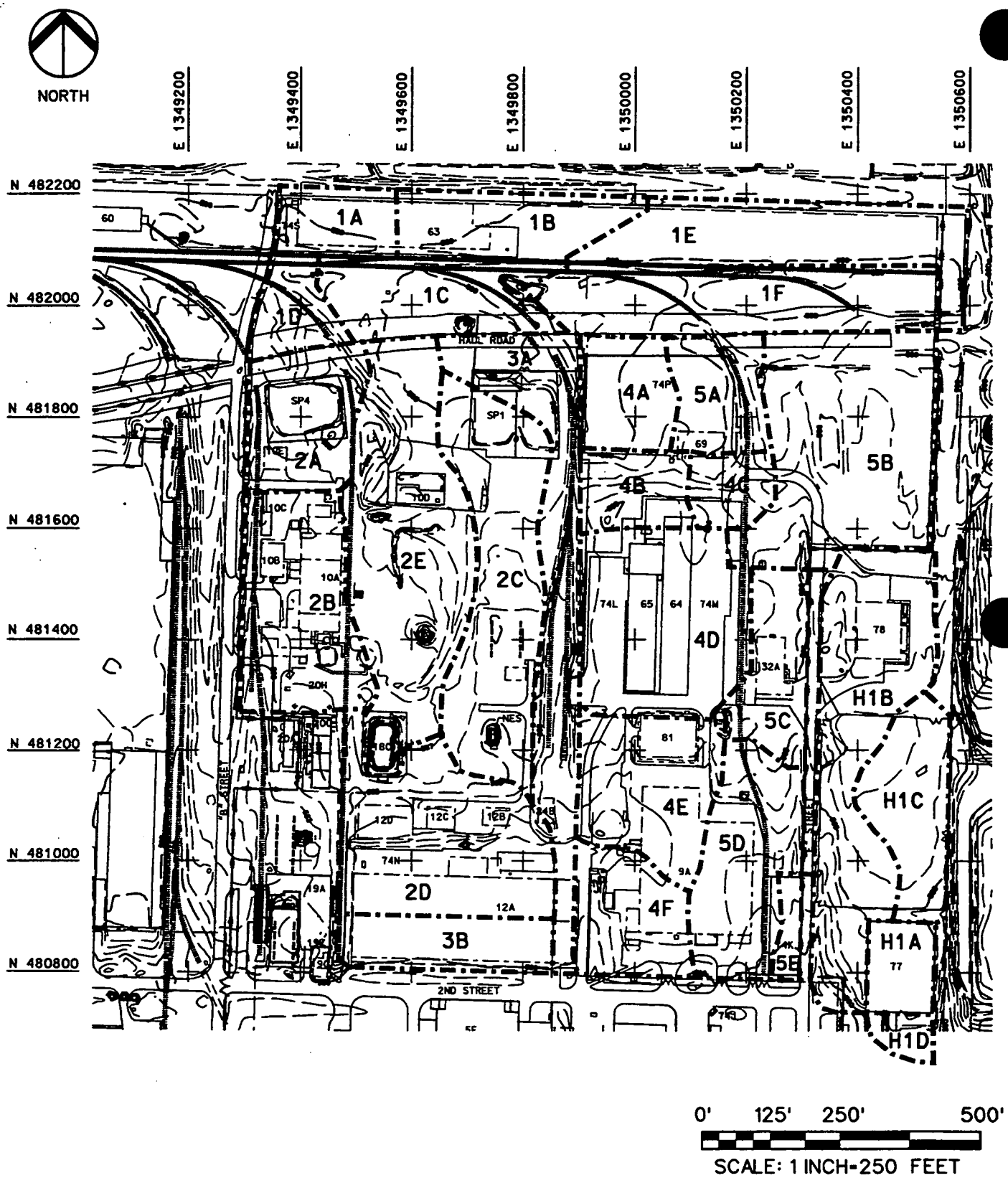


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FIGURE A-1
WATERSHED KEY MAP
AREA 3A INITIAL EXCAVATION

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Table A-2: Area 3A Final Excavation Hydrologic Calculation Summary[1]

Watershed	Drainage Area (acres/miles^2)	Curve No. (I_a/P)	Runoff (inches)	Time of Concentration (hours)	Peak Discharge (cfs)
2	4.07/0.0064	90 (0.05)	3.02	0.05[2]	19.33
3	1.73/0.0027	90 (0.05)	3.02	0.03[2]	8.15
4	1.55/0.0024	90 (0.05)	3.02	0.05[2]	7.25
5	2.08/0.0032	90 (0.05)	3.02	0.05[2]	9.66
6	3.36/0.0053	90 (0.05)	3.02	0.04[2]	16.01
7	1.54/0.0024	90 (0.05)	3.02	0.08[2]	7.25
8	4.90/0.0077	90 (0.05)	3.02	0.14	21.39
9	2.71/0.0042	90 (0.05)	3.02	0.02[2]	12.68
10	1.01/0.0016	90 (0.05)	3.02	0.03[2]	4.83
11	3.75/0.0059	90 (0.05)	3.02	0.07[2]	17.82

1. See Figure A-2: Watershed Key Map for Area 3A Final Excavation and Appendix C for detailed calculations.
2. Use minimum time of concentration equal to 0.1 hours.

Table A-3: Area 3A Final Excavation Pumping Calculation Summary[1]

Watershed	Drainage Area (acres)	Volume (acre-feet)	Pump Rate (gpm)[2]	Pump Head (feet)[3]	Pump Distance (feet)[4]
2	4.07	1.39	105	24	530
3	1.73	0.59	45	10	800
4	1.55	0.53	40	16	1210
5	2.08	0.71	55	9	960
6	3.36	1.15	85	11	1050
7	1.54	0.53	40	16	480
8	4.90	1.67	125	17	260
9	2.71	0.93	70	9	770
10	1.01	0.35	25	22	570
11	3.75	1.28	95	24	650
Buffer area	1.1	--	75	24	400

1. See Figure A-2: Watershed Key Map for Area 3A Final Excavation and Appendix C for detailed calculations.
2. Based on maximum 3-day pump down period.
3. Difference between the bottom of an excavation dewatering sump and the top of the sediment trap. Note that the bottom of an excavation dewatering sump shall not extend to within 5 feet of the GMA (approximate elevation of GMA is 555 feet); excavations below this elevation will be limited to dry periods.
4. Minimum horizontal distance between pump and sediment trap; actual distance may vary depending on field routing of pump lines.

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Table A-4: Area 3A Final Excavation Pump Data Summary[1]

Pump No.	Suction Pipe Diam. (in)	Suction Pipe Length (ft)	Discharge Pipe Diam. (in)	Discharge Pipe Length (ft)	Flow Rate (gpm)	Total Head (ft)	NPSH Avail. (ft)	Suction Static Lift (ft)
P-101	3	15	3	530	105	50	21.34	10
P-102	2	15	2	800	45	57	21.15	10
P-103	2	15	2	1210	40	72	21.45	10
P-104	3	15	3	960	55	24	22.27	10
P-105	3	15	3	1050	85	41	21.77	10
P-106	2	20	2	480	40	42	16.27	15
P-107	4	15	3	260	125	36	20.85	10
P-108	3	15	3	770	70	27	22.94	10
P-109	2	20	2	570	25	38	17.08	15
P-110	3	15	3	650	95	50	21.57	10
P-119	3	15	3	400	75	45	21.96	10[2]

1. See Figure A-2: Watershed Key Map for Area 3A Final Excavation and Appendix D for detailed calculations.
2. Refer to Appendix G for detailed calculations.

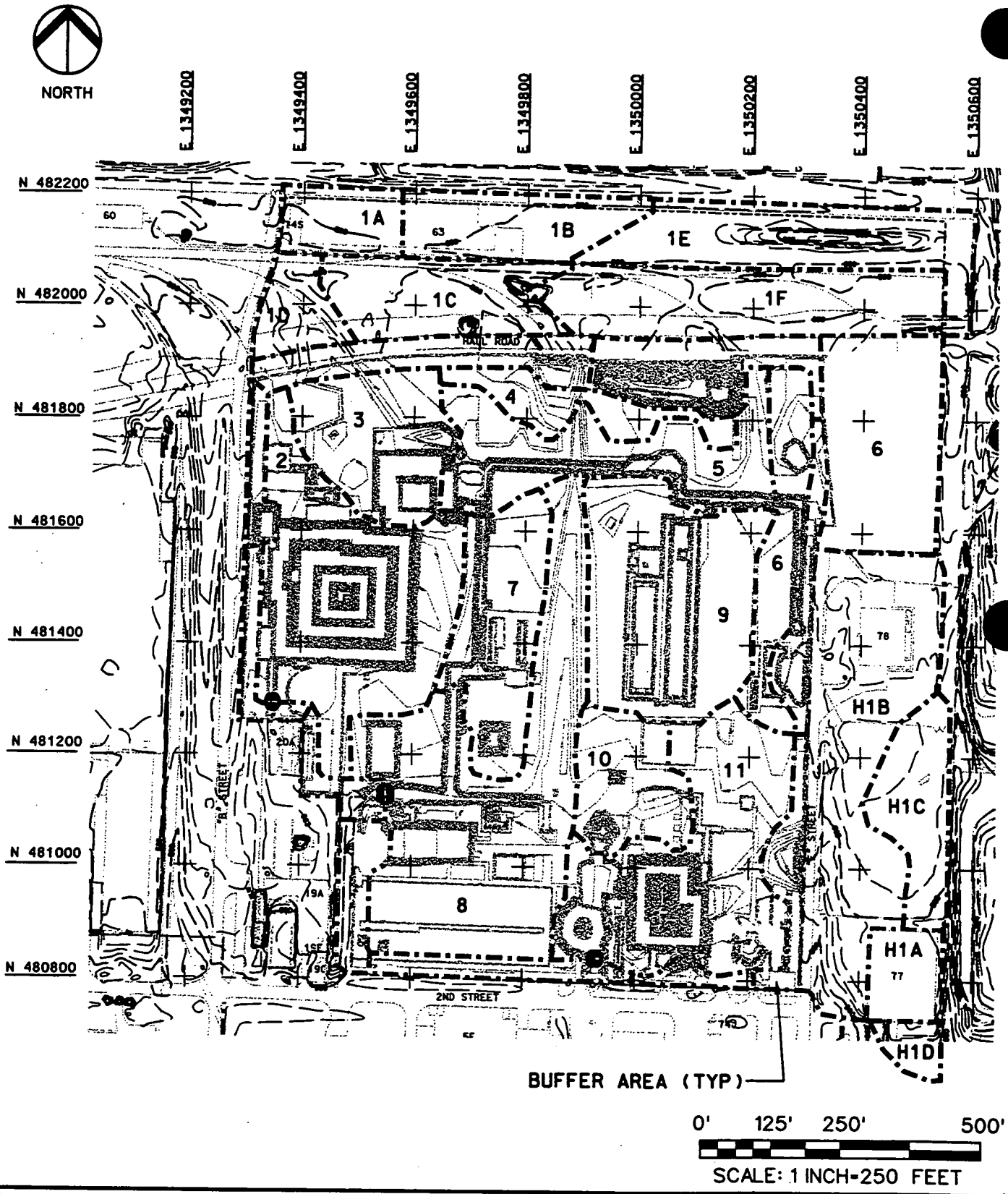

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FIGURE A-2
WATERSHED KEY MAP
AREA 3A FINAL EXCAVATION

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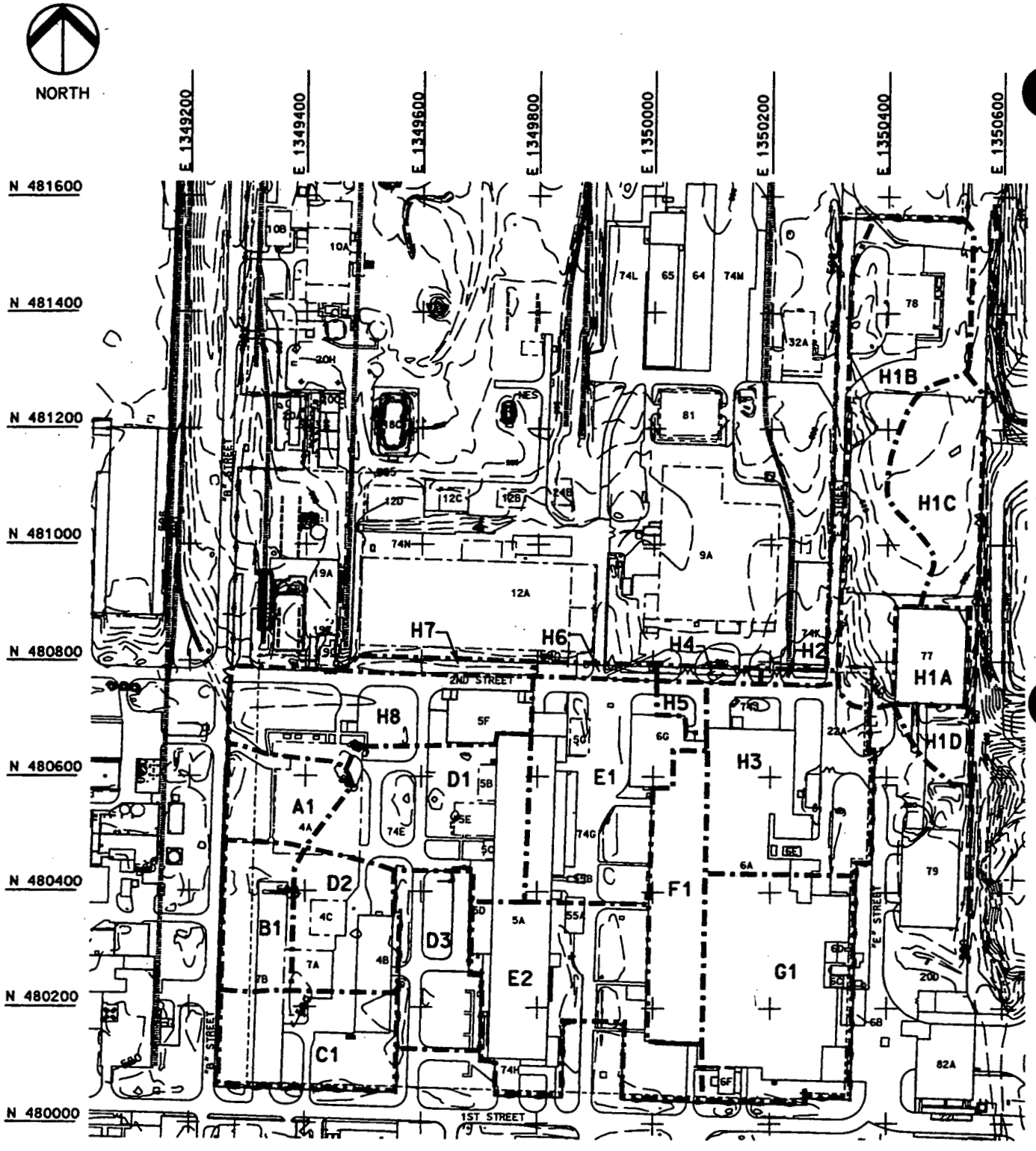
Table A-5: Area 4A Initial Excavation Hydrologic Calculation Summary[1]

Watershed/ Structure	Drainage Area (acres/miles^2)	Curve No. (I_a/P)	Runoff (inches)	Time of Concentration (hours)	Peak Discharge (cfs)
A1/CB26	0.67/0.0010	90 (0.05)	3.02	0.05[2]	3.02
B1/CB72	0.76/0.0012	90 (0.05)	3.02	0.06[2]	3.62
C1/CB28	1.14/0.0018	90 (0.05)	3.02	0.04[2]	5.44[3]
D1/CB37	1.78/0.0028	90 (0.05)	3.02	0.06[2]	8.46[3]
D2/CB215	0.92/0.0014	90 (0.05)	3.02	0.06[2]	4.23
D3/CB38	0.99/0.0015	90 (0.05)	3.02	0.09[2]	4.53[3]
E1/CB33	2.04/0.0032	90 (0.05)	3.02	0.10	9.66[3]
E2/CB34	2.15/0.0034	90 (0.05)	3.02	0.02[2]	10.27[3]
F1/basement	1.03/0.0016	95 (0.02)	3.53	0.02[2]	5.65
G1/CB31	2.27/0.0035	95 (0.02)	3.53	0.05[2]	12.36[3]
H1A/MH84	0.48/0.0007	95 (0.02)	3.53	0.02[2]	2.47
H1B/CB64	2.70/0.0042	90 (0.05)	3.02	0.06[2]	12.68
H1C/trench	1.19/0.0019	90 (0.05)	3.02	0.04[2]	5.74
H1D/trench	0.30/0.0005	90 (0.05)	3.02	0.02[2]	1.51
H2/CB65	0.08/0.0001	90 (0.05)	3.02	0.05[2]	0.30[3]
H3/CB153	2.10/0.0033	90 (0.05)	3.02	0.04[2]	9.97[3]
H4/CB66	0.13/0.0002	90 (0.05)	3.02	0.02[2]	0.60
H5/CB20	0.13/0.0002	90 (0.05)	3.02	0.02[2]	0.60[3]
H6/CB21	0.13/0.0002	90 (0.05)	3.02	0.03[2]	0.60
H7/CB23	0.20/0.0003	90 (0.05)	3.02	0.04[2]	0.91
H8/MH20	1.60/0.0025	90 (0.05)	3.02	0.06[2]	7.55

1. See Figure A-3: Watershed Key Map for Area 4A Initial Excavation and Appendix E for detailed calculations.
2. Use minimum time of concentration equal to 0.1 hours.
3. Individual peak discharges computed using *TR-55*. Design discharges using the existing storm sewer system may vary. Refer to detailed calculations for clarification.



0' 125' 250' 500'

SCALE: 1 INCH=250 FEET

TITLE

FIGURE A-3

WATERSHED KEY MAP

AREA 4A INITIAL EXCAVATION

FLUOR FERNALD

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Table A-6: Area 4A Final Excavation Hydrologic Calculation Summary[1]

Watershed	Drainage Area (acres/miles^2)	Curve No. (I_a/P)	Runoff (inches)	Time of Concentration (hours)	Peak Discharge (cfs)[3]
A	2.07/0.0032	90 (0.05)	3.02	0.04[2]	9.66
B	2.81/0.0044	90 (0.05)	3.02	0.04[2]	13.29
C	0.74/0.0012	90 (0.05)	3.02	0.04[2]	3.62
D	3.64/0.0057	90 (0.05)	3.02	0.03[2]	17.21
E	1.66/0.0026	90 (0.05)	3.02	0.03[2]	7.85
F	1.67/0.0026	90 (0.05)	3.02	0.04[2]	7.85
G	1.89/0.0030	90 (0.05)	3.02	0.04[2]	9.06
H	3.84/0.0060	90 (0.05)	3.02	0.03[2]	18.12
11 (modified)	3.96/0.0062	90 (0.05)	3.02	0.07[2]	18.72

1. See Figure A-4: Watershed Key Map for Area 4A Final Excavation and Appendix F for detailed calculations.
2. Use minimum time of concentration equal to 0.1 hours.
3. Individual peak discharges computed using *TR-55*. Design discharges using the existing storm sewer system may vary. Refer to detailed calculations for clarification.

Table A-7: Area 4A Final Excavation Pumping Calculation Summary[1]

Watershed	Drainage Area (acres)	Volume (acre-feet)	Pump Rate (gpm)[2]	Pump Head (feet)[3]	Pump Distance (feet)[4]
A	2.07	0.71	55	18	280
B	2.81	0.96	75	21	730
C	0.74	0.25	20	20	180
D	3.64	1.24	95	24	460
E	1.66	0.57	45	18	770
F	1.67	0.57	45	24	740
G	1.89	0.65	50	24	840
H	3.84	1.31	100	24	830
Buffer area	0.9	--	75	24	400

1. See Figure A-4: Watershed Key Map for Area 4A Final Excavation and Appendix F for detailed calculations.
2. Based on maximum 3-day pump down period.
3. Difference between the bottom of an excavation dewatering sump and the top of the sediment trap. Note that the bottom of an excavation dewatering sump shall not extend to within 5 feet of the GMA (approximate elevation of GMA is 555 feet); excavations below this elevation will be limited to dry periods.
4. Minimum horizontal distance between pump and sediment trap; actual distance may vary depending on field routing of pump lines.

Table A-8: Area 4A Final Excavation Pump Data Summary[1]

Pump No.	Suction Pipe Diam. (in)	Suction Pipe Length (ft)	Discharge Pipe Diam. (in)	Discharge Pipe Length (ft)	Flow Rate (gpm)	Total Head (ft)	NPSH Avail. (ft)	Suction Static Lift (ft)
P-111	3	15	3	280	55	26	22.27	10
P-112	3	15	3	730	75	41	21.96	10
P-113	2	15	2	180	20	27	22.33	10
P-114	3	15	3	460	95	45	21.57	10
P-115	2	15	2	770	45	65	21.15	10
P-116	2	15	2	740	45	70	21.15	10
P-117	3	15	3	840	50	38	22.34	10
P-118	3	15	3	830	100	58	21.46	10
P-119	3	15	3	400	75	45	21.96	10

1. See Figure A-4: Watershed Key Map for Area 4A Final Excavation and Appendix G for detailed calculations.

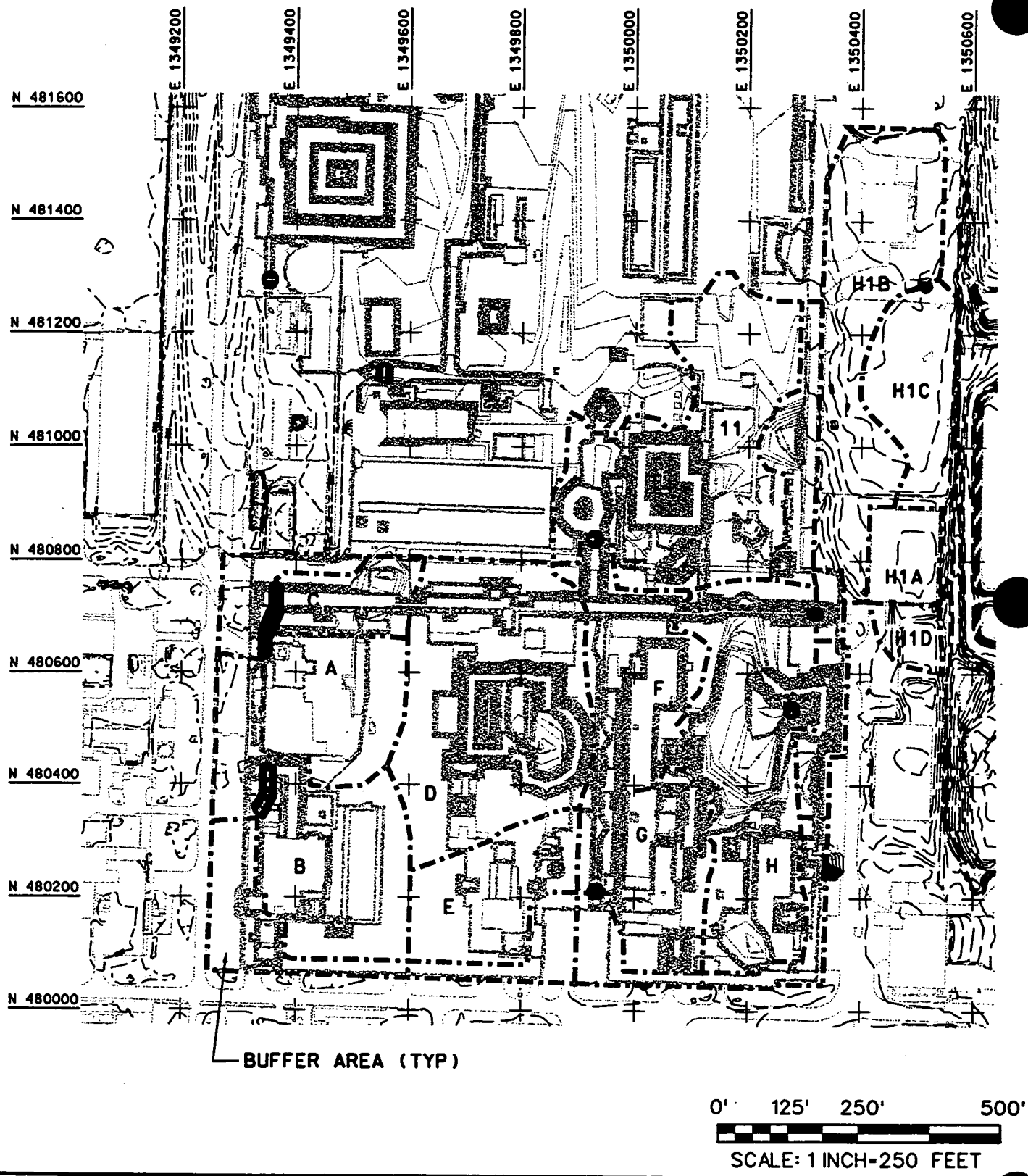

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FIGURE A-4

WATERSHED KEY MAP

AREA 4A FINAL EXCAVATION

FLUOR FERNALD

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APPENDIX B

HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 3A INITIAL EXCAVATION

Calculation/Document Title

Total No. of pages: 54

Department:	Civil	Originated By:	N. Roberts	Date:	01/11/00
Calculation No.	C-1	Checked By:	M. Jerald	Date:	01/22/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title Soil and Disposal Facility Project – Areas 3A/4A

Subject: Surface Water Management Plan for the Remediation of Areas 3A and 4A
Hydrologic and Hydraulic Calculations for Area 3A Initial Excavation

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Registration Stamp

Signature:_____

Number:_____

APPENDIX B – HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 3A INITIAL EXCAVATION

(Refer to Figure A-1 in Appendix A for watershed key map)

Watershed 1A:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.62 ac, A_m = 0.0010 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 110 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.02 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 1A drains to existing concrete trench. Check capacity of concrete trench using *FlowMaster*. Concrete trench drains into a 6-inch diameter outlet pipe. Check capacity of outlet pipe using *FlowMaster*. According to the following *FlowMaster* calculations, the concrete trench is adequately sized to convey the peak discharge from Watershed 1A. However, the outlet pipe capacity is less than the peak discharge and will limit the discharge from this area to 0.52 cfs.

Area 3A - capacity of trench drain
Worksheet for Rectangular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of trench drain
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.005000	ft/ft
Depth	1.00	ft
Bottom Width	1.00	ft

Results		
Discharge	3.89	cfs
Flow Area	1.00	ft^2
Wetted Perimeter	3.00	ft
Top Width	1.00	ft
Critical Depth	0.78	ft
Critical Slope	0.009352	ft/ft
Velocity	3.89	ft/s
Velocity Head	0.23	ft
Specific Energy	1.23	ft
Froude Number	0.00	

Notes:

Watersheds 1A and 1B drains into concrete trench drain which empties into 6-inch outlet pipes at either end. Peak discharge from Watershed 1A is 3.02 cfs; peak discharge from Watershed 1B is 4.53 cfs. Check capacity of trench drain to convey peak discharge.

Trench capacity is greater than the peak discharge for Watershed 1A. However, trench capacity is less than the peak discharge for Watershed 1B.

Area 3A - capacity of trench outlet pipe
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of trench outlets
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.010	
Channel Slope	0.005000	ft/ft
Diameter	6.00	in

Results		
Depth	0.50	ft
Discharge	0.52	cfs
Flow Area	0.20	ft^2
Wetted Perimeter	1.57	ft
Top Width	0.00	ft
Critical Depth	0.37	ft
Percent Full	100.00	
Critical Slope	0.006362	ft/ft
Velocity	2.63	ft/s
Velocity Head	0.11	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	0.55	cfs
Full Flow Capacity	0.52	cfs
Full Flow Slope	0.005000	ft/ft

Notes:

Watersheds 1A and 1B drain into concrete trench drain which empties into 6-inch outlet pipes at either end. Peak discharge from Watershed 1A is 3.02 cfs; peak discharge from Watershed 1B is 4.53 cfs. Check capacity of outlet pipes to convey peak discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watersheds 1A and 1B.

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Watershed 1B:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.99 ac, A_m = 0.0015 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 110 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 4.53 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 1B drains to existing concrete trench. Check capacity of concrete trench using *FlowMaster*. Concrete trench drains into 6-inch diameter outlet pipe. According to the *FlowMaster* calculations for Watershed 1A, the concrete trench capacity is less than the peak discharge from Watershed 1B. Further, the outlet pipe capacity is less than the peak discharge and will limit the discharge from this area to 0.52 cfs.

Watershed 1C:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.26 ac, A_m = 0.0020 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 270 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration,	T_t = 0.05 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 6.04 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 1C drains to existing catch basin CB71. Add discharge from the outlet pipe from Watershed 1B to the peak discharge from Watershed 1C. Design control measures to intercept surface runoff and convey it to the existing storm sewer system west of B Street.

To intercept the surface runoff, the outlet pipe from CB71 may be plugged with a mechanical plug and a new storm drain installed between CB71 and CB313. Further, the drainage from Watershed 1E and 1F will be directed to existing manhole MH51 and conveyed to CB71 via the existing 10-inch diameter storm sewer. According to the following *FlowMaster* calculations, the outflow from MH51 will be limited to 2.77 cfs (i.e., the capacity of the existing 10-inch diameter storm sewer). Also, according to the following *FlowMaster* calculations, a 10-inch diameter CMP on slope of 0.7% will carry the total peak discharge of 0.99 cfs from CB71 to CB313.

Area 3A - capacity of outlet from MH51
Worksheet for Circular Channel

F-2888

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from MH51
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.016000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	2.77	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.73	ft
Percent Full	100.00	
Critical Slope	0.014445	ft/ft
Velocity	5.08	ft/s
Velocity Head	0.40	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.98	cfs
Full Flow Capacity	2.77	cfs
Full Flow Slope	0.016000	ft/ft

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Area 3A - new pipe from CB71 to CB313
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Design drain pipe from CB71 to CB313
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.024	
Channel Slope	0.007000	ft/ft
Diameter	10.00	in

Results		
Depth	10.0	in
Discharge	0.99	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.44	ft
Percent Full	100.00	
Critical Slope	0.022879	ft/ft
Velocity	1.82	ft/s
Velocity Head	0.05	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	1.07	cfs
Full Flow Capacity	0.99	cfs
Full Flow Slope	0.007000	ft/ft

Notes:

Watershed 1C drains into existing catch basin CB71, which also carries discharge from Watershed 1B. Peak discharge from Watershed 1C is 6.04 cfs; peak discharge from Watershed 1B is 0.52 cfs.

Design drain pipe from CB71 to existing catch basin CB313 to carry surface drainage. New drain pipe will be a 10-inch diameter CMP on a 0.7% slope to carry a peak discharge of 0.99 cfs.

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Watershed 1D:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.47 ac, A_m = 0.0008 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 120 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration, T_t = 0.03 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 2.42 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 1D drains to existing catch basin CB313. Add discharge from the outlet pipes from Watersheds 1A and 1C to the peak discharge from Watershed 1D. Design control measures to intercept surface runoff and convey it to the existing storm sewer system to the west side of B Street.

To intercept surface runoff, the outlet pipe from CB313 may be plugged with a mechanical plug and a new storm drain installed between CB313 and CB311. According to the following *FlowMaster* calculations, a 10-inch diameter CMP on slope of 0.5% will carry the total peak discharge of 0.84 cfs from CB313 to CB311.

Area 3A - new pipe from CB313 to CB311
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Design drain pipe from CB313 to CB311
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.024	
Channel Slope	0.005000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	0.84	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.41	ft
Percent Full	100.00	
Critical Slope	0.021990	ft/ft
Velocity	1.54	ft/s
Velocity Head	0.04	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	0.90	cfs
Full Flow Capacity	0.84	cfs
Full Flow Slope	0.005000	ft/ft

Notes:

Watershed 1D drains into existing catch basin CB313, which also carries discharge from Watersheds 1A and 1C.

New drain pipe will be a 10-inch diameter CMP on a 0.5% slope.

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Watershed 1E:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.84 ac, A_m = 0.0029 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 110 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 8.76 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 1E drains to existing concrete trench. The concrete trench drains into a 6-inch diameter outlet pipe. Check capacity of outlet pipe using *FlowMaster*. According to the *FlowMaster* calculations for Watershed 1A and 1B (storm sewer systems for Watersheds 1A, 1B, and 1E are similar), the concrete trench is not adequately sized to convey the peak discharge from Watershed 1E. Further, the outlet pipe capacity is less than the peak discharge and will limit the discharge from this area to 0.52 cfs. Design control measures to intercept surface runoff and convey it to the existing storm sewer system to the west of B Street.

To intercept surface runoff, the outlet from the concrete trench may be air-gapped (or the concrete trench backfilled). Thereafter, the surface runoff may be directed to a new drainage ditch along the north side of the haul road and conveyed to existing manhole MH47 via a new storm sewer pipe.

Watershed 1F:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.99 ac, A_m = 0.0031 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 180 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.025 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.03 hr
Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 9.36 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 1F probably drained to existing catch basin CB67 under the original design of the plant storm sewer system. However, this catch basin has since been covered (probably to facilitate construction of the haul road). Existing manhole MH47 drains surface runoff from the drain tiles in the watershed area and probably drains other surface runoff from Watershed 1F. Design control measures to intercept surface runoff and convey it to the existing storm sewer system to the west of B Street.

To intercept surface runoff, the outlet pipe from MH47 may be plugged with a mechanical plug. Thereafter, the surface runoff may be directed to a new drainage ditch and conveyed to MH47 via a new storm sewer pipe. The ditch configuration is dependent on the surface topography in the drainage area. According to the following *FlowMaster* calculations, the drainage ditch on a 0.5% slope will convey the peak discharge to the new 10-inch diameter CMP on a 0.5% slope. (For the CMP design, refer to *FlowMaster* calculations for Watershed 1D.)

Based on Rational Method, peak discharge from the north side of the Impacted Material Haul Road is 1.3 cfs. Also, the discharge from the nearby portable wheel wash is 0.4 cfs. The proposed modifications to the storm sewer system will collect the surface runoff.

Area 3A - new ditch north of haul road
Worksheet for Trapezoidal Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Design new ditch north of haul road
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Mannings Coefficient	0.030	
Channel Slope	0.005000	ft/ft
Left Side Slope	3.000000	H : V
Right Side Slope	3.000000	H : V
Bottom Width	6.00	ft
Discharge	10.00	cfs

Results		
Depth	0.60	ft
Flow Area	4.67	ft^2
Wetted Perimeter	9.79	ft
Top Width	9.60	ft
Critical Depth	0.41	ft
Critical Slope	0.018978	ft/ft
Velocity	2.14	ft/s
Velocity Head	0.07	ft
Specific Energy	0.67	ft
Froude Number	0.54	
Flow is subcritical.		

Notes:

New drainage ditch will carry total peak discharge and provide temporary detention during larger storm events.

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Watershed 2A:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.15 ac, A_m = 0.0018 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 180 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.03 hr
Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 5.44 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 2A drains to existing catch basin CB105. Add discharge from outlet of Watershed 2A to discharge from Watershed 1D and check capacity of outlet pipe from CB105 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet pipe capacity from CB105 is less than the peak discharge from Watershed 2A. Therefore, the outlet pipe capacity will limit the discharge to 6.13 cfs.

Area 3A - capacity of outlet from CB105
Worksheet for Circular Channel

2888

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB105
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.009000	ft/ft
Diameter	15.00	in

Results		
Depth	1.25	ft
Discharge	6.13	cfs
Flow Area	1.23	ft^2
Wetted Perimeter	3.93	ft
Top Width	0.00	ft
Critical Depth	1.00	ft
Percent Full	100.00	
Critical Slope	0.009415	ft/ft
Velocity	4.99	ft/s
Velocity Head	0.39	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	6.59	cfs
Full Flow Capacity	6.13	cfs
Full Flow Slope	0.009000	ft/ft

Notes:

Watershed 2A drains into CB105, which also carries discharge from outlet of Watershed 1D. Peak discharge from Watershed 2A is 5.44 cfs; discharge of outlet from Watershed 1D is 1.83 cfs. Check capacity of outlet from CB105 to carry 7.27 cfs.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 2A.

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Watershed 2B:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.83 ac, A_m = 0.0029 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 150 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.007 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Surface description,	paved (gravel ditch)
Flow length,	L = 380 ft
Watercourse slope,	s = 0.008 ft/ft
Average velocity,	V = 1.8 fps (Figure 3-1, *TR-55*)

Compute $T_t = \frac{L}{3600\ V}$ T_t = 0.06 hr

Time of concentration, T_t = 0.10 hr

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 8.76 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 2B drains to existing ditch. Check capacity of ditch using *FlowMaster*. According to the following *FlowMaster* calculations, the 1 ft. deep ditch with 2 ft. bottom width and 3H:1V side slopes is adequate to carry the peak discharge from Watershed 2B.

Area 3A - existing ditch (west)
Worksheet for Trapezoidal Channel

2888

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of existing ditch (west)
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Mannings Coefficient	0.030	
Channel Slope	0.008000	ft/ft
Left Side Slope	3.000000	H : V
Right Side Slope	3.000000	H : V
Bottom Width	2.00	ft
Discharge	8.76	cfs

Results		
Depth	0.76	ft
Flow Area	3.24	ft^2
Wetted Perimeter	6.79	ft
Top Width	6.55	ft
Critical Depth	0.62	ft
Critical Slope	0.018367	ft/ft
Velocity	2.70	ft/s
Velocity Head	0.11	ft
Specific Energy	0.87	ft
Froude Number	0.68	
Flow is subcritical.		

Notes:

Watershed 2B drains into existing ditch line along west boundary. Check ditch dimensions against peak discharge According to peak velocity computed for aforementioned conditions, grass provides suitable protection against erosion.

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Watershed 2C:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 2.35 ac, A_m = 0.0037 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 300 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.07 hr
Surface description,	paved (gravel ditch)
Flow length,	L = 160 ft
Watercourse slope,	s = 0.016 ft/ft
Average velocity,	V = 2.6 fps (Figure 3-1, *TR-55*)
Compute $T_t = \frac{L}{3600\ V}$	T_t = 0.02 hr
Time of concentration,	T_t = 0.09 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 11.17 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 2C drains to an existing sump down-gradient from catch basin CB87. Check capacity of outlet pipe from this sump using *FlowMaster*. According to the following *FlowMaster* calculations, outlet pipe capacity from existing sump will control the peak discharge from Watershed 2C. Therefore, the peak discharge from Watershed 2C will be limited to 8.73 cfs.

Area 3A - capacity of outlet from CB87
Worksheet for Circular Channel

2888

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB87
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.060000	ft/ft
Diameter	12.00	in

Results		
Depth	1.00	ft
Discharge	8.73	cfs
Flow Area	0.79	ft²
Wetted Perimeter	3.14	ft
Top Width	0.00	ft
Critical Depth	0.99	ft
Percent Full	100.00	
Critical Slope	0.055171	ft/ft
Velocity	11.11	ft/s
Velocity Head	1.92	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	9.39	cfs
Full Flow Capacity	8.73	cfs
Full Flow Slope	0.060000	ft/ft

Notes:

Watershed 2C drains into existing sump. Peak discharge from Watershed 2C is 11.17 cfs. Check capacity of outlet from sump down-gradient from CB87 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 2C.

000340

Watershed 2D:

Cover description,	combination gravel and concrete pad
Curve number,	CN = 90
Area,	A = 2.42 ac, A_m = 0.0038 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.035 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.03 hr
Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 11.48 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 2D drains to existing catch basin CB79. Check capacity of outlet pipe from CB79 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB79 will control the peak discharge from Watershed 2D. Therefore, the peak discharge from Watershed 2D will be limited to 2.26 cfs.

000341

2888

Area 3A - capacity of outlet from CB79
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB79
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.035000	ft/ft
Diameter	8.00	in

Results		
Depth	0.67	ft
Discharge	2.26	cfs
Flow Area	0.35	ft^2
Wetted Perimeter	2.09	ft
Top Width	0.00	ft
Critical Depth	0.64	ft
Percent Full	100.00	
Critical Slope	0.030522	ft/ft
Velocity	6.48	ft/s
Velocity Head	0.65	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.43	cfs
Full Flow Capacity	2.26	cfs
Full Flow Slope	0.035000	ft/ft

Notes:

Watershed 2D drains into CB79. Peak discharge from Watershed 2D is 11.48 cfs. Check capacity of outlet from CB79 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 2D.

000342

Watershed 2E:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 3.05 ac, A_m = 0.0048 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.015 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 14.50 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 2E drains to an existing sump; there is no gravity outlet to the sump. Based on contractor-supplied pumps to decant the sump, the Contractor shall determine peak pump rate from Watershed 2E using the available storage capacity of the existing sump.

2888

Watershed 3A:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 2.26 ac, A_m = 0.0035 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.06 hr

Surface description,	paved (gravel ditch)
Flow length,	L = 1130 ft
Watercourse slope,	s = 0.009 ft/ft
Average velocity,	V = 1.9 fps (Figure 3-1, *TR-55*)

Compute $T_t = \frac{L}{3600\ V}$ T_t = 0.17 hr

Time of concentration, T_t = 0.23 hr

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 750 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.93 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 3A drains to existing catch basin CB21. Check capacity of outlet pipe from CB21 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet pipe capacity from CB21 is less than the peak discharge from Watershed 3A. Therefore, the outlet pipe capacity will limit the discharge to 1.88 cfs.

Area 3A - capacity of outlet from CB21
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB21
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.007400	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	1.88	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.62	ft
Percent Full	100.00	
Critical Slope	0.009207	ft/ft
Velocity	3.46	ft/s
Velocity Head	0.19	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.03	cfs
Full Flow Capacity	1.88	cfs
Full Flow Slope	0.007400	ft/ft

Notes:

Watershed 3A drains to CB21. Peak discharge from Watershed 3A is 7.93 cfs. Check capacity of outlet from CB21.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 3A.

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Watershed 3B:

Cover description,	combination gravel and concrete pad
Curve number,	CN = 90
Area,	A = 0.65 ac, A_m = 0.0010 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	concrete pad (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 90 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Surface description,	paved (gravel ditch)
Flow length,	L = 360 ft
Watercourse slope,	s = 0.005 ft/ft
Average velocity,	V = 1.4 fps (Figure 3-1, *TR-55*)

Compute $T_t = \dfrac{L}{3600\ V}$ T_t = 0.07 hr

Time of concentration, T_t = 0.1 hr

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.02 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 3B drains to existing catch basins CB22 and CB23. Check capacity of outlet pipes from CB22 and CB23 using *FlowMaster*. According to the following *FlowMaster* calculations, the combined outlet pipe capacity from CB22 and CB23 is greater than the peak discharge from Watershed 3B of 3.02 cfs.

000346

Area 3A - capacity of outlet CB22 & CB23
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet CB22 and CB23
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.006900	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	1.82	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.61	ft
Percent Full	100.00	
Critical Slope	0.008955	ft/ft
Velocity	3.34	ft/s
Velocity Head	0.17	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	1.96	cfs
Full Flow Capacity	1.82	cfs
Full Flow Slope	0.006900	ft/ft

Notes:

Watershed 3B drains into CB22 and CB23. Peak discharge from Watershed 3B is 3.02. Check capacity of outlets from both catch basins to carry peak discharge.

Pipe capacity of both outlets is 3.64 cfs. Therefore, the outlet pipe capacity less greater than the peak discharge.

000347

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Watershed 4A:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.76 ac, A_m = 0.0012 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 210 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.07 hr

Time of concentration, T_t = 0.07 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.62 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4A will drain to existing catch basin CB68. Check capacity of outlet pipe from CB68 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet pipe capacity from CB68 is less than the peak discharge from Watershed 4A. Therefore, the outlet pipe capacity will limit the discharge to 3.19 cfs.

Area 3A - capacity of outlet from CB68
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB68
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.008000	ft/ft
Diameter	12.00	in

Results		
Depth	1.00	ft
Discharge	3.19	cfs
Flow Area	0.79	ft^2
Wetted Perimeter	3.14	ft
Top Width	0.00	ft
Critical Depth	0.76	ft
Percent Full	100.00	
Critical Slope	0.009204	ft/ft
Velocity	4.06	ft/s
Velocity Head	0.26	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	3.43	cfs
Full Flow Capacity	3.19	cfs
Full Flow Slope	0.008000	ft/ft

Notes:

Watershed 4A drains into CB68. Peak discharge from Watershed 4A is 3.62 cfs. Check capacity of outlet from CB68.

Outlet pipe capacity is less than the peak discharge from Watershed 4A. Therefore, outlet pipe capacity controls the discharge from Watershed 4A.

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Watershed 4B:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.64 ac, A_m = 0.0010 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 180 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration, T_t = 0.03 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.02 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4B will drain to existing catch basin CB205. Add discharge from outlet of Watershed 4B to discharge from Watershed 4A and check capacity of outlet pipe from CB205 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB205 will control the peak discharge from Watershed 4B. Therefore, the peak discharge from Watershed 4B will be limited to 3.56 cfs.

Area 3A - capacity of outlet from CB205
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB205
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.010000	ft/ft
Diameter	12.00	in

Results		
Depth	1.00	ft
Discharge	3.56	cfs
Flow Area	0.79	ft²
Wetted Perimeter	3.14	ft
Top Width	0.00	ft
Critical Depth	0.81	ft
Percent Full	100.00	
Critical Slope	0.010318	ft/ft
Velocity	4.54	ft/s
Velocity Head	0.32	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	3.83	cfs
Full Flow Capacity	3.56	cfs
Full Flow Slope	0.010000	ft/ft

Notes:

Watershed 4B drains into CB205, which also carries discharge from outlet of Watershed 4A. Peak discharge from Watershed 4B is 3.02 cfs; discharge from Watershed 4A is 3.19 cfs. Check capacity of outlet from CB205 to carry discharge of 6.21 cfs.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 4B.

Watershed 4C:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.45 ac, A_m = 0.0007 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 130 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration, T_t = 0.02 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 2.11 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4C will drain to existing catch basin CB206. Check capacity of outlet pipe from CB206 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB206 will control the peak discharge from Watershed 4C. Therefore, the peak discharge from Watershed 4C will be limited to 0.85 cfs.

Area 3A - capacity of outlet from CB206
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB206
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.005000	ft/ft
Diameter	8.00	in

Results		
Depth	0.67	ft
Discharge	0.85	cfs
Flow Area	0.35	ft^2
Wetted Perimeter	2.09	ft
Top Width	0.00	ft
Critical Depth	0.44	ft
Percent Full	100.00	
Critical Slope	0.008483	ft/ft
Velocity	2.45	ft/s
Velocity Head	0.09	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	0.92	cfs
Full Flow Capacity	0.85	cfs
Full Flow Slope	0.005000	ft/ft

Notes:

Watershed 4C drains into CB206. Peak discharge from Watershed 4C is 2.11 cfs. Check capacity of outlet from CB206 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 4C.

000353

Watershed 4D:

Cover description,	concrete pads
Curve number,	CN = 95
Area,	A = 2.25 ac, A_m = 0.0035 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.53 in (Table 2-1, *TR-55*)
Surface description,	concrete pad (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 300 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.002 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.13 hr

Time of concentration,	T_t = 0.13 hr
Initial abstraction,	I_a = 0.105 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.02
Unit peak discharge,	q_u = 950 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 11.73 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4D will drain to existing catch basin CB139. Add discharge from outlet of Watershed 4D to discharge from Watersheds 4B and 4C and check capacity of outlet pipe from CB139 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB139 will control the peak discharge from Watershed 4D. Therefore, the peak discharge from Watershed 4D will be limited to 9.14 cfs.

Area 3A - capacity of outlet from CB139
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB139
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.020000	ft/ft
Diameter	15.00	in

Results		
Depth	1.25	ft
Discharge	9.14	cfs
Flow Area	1.23	ft²
Wetted Perimeter	3.93	ft
Top Width	0.00	ft
Critical Depth	1.16	ft
Percent Full	100.00	
Critical Slope	0.017309	ft/ft
Velocity	7.44	ft/s
Velocity Head	0.86	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	9.83	cfs
Full Flow Capacity	9.14	cfs
Full Flow Slope	0.020000	ft/ft

Notes:

Watershed 4D drains into CB139, which also carries discharge from outlet of Watersheds 4B and 4C. Peak discharge from Watershed 4D is 13.87 cfs; peak discharge from Watershed 4B is 3.56 cfs; peak discharge from Watershed 4C is 0.85 cfs. Check capacity of outlet to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 4D.

000355

Watershed 4E:

Cover description,	combination of gravel and concrete pad
Curve number,	CN = 90
Area,	A = 1.51 ac, A_m = 0.0024 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 220 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.04 hr
Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.25 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4E will drain to existing catch basin CB147. Add discharge from outlet of Watershed 4E to discharge from Watershed 4D and check capacity of outlet pipe from CB147 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB147 will control the peak discharge from Watershed 4E. Therefore, the total peak discharge will be limited to 7.79 cfs.

Area 3A - capacity of outlet from CB147
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB147
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.005500	ft/ft
Diameter	18.00	in

Results		
Depth	1.50	ft
Discharge	7.79	cfs
Flow Area	1.77	ft^2
Wetted Perimeter	4.71	ft
Top Width	0.00	ft
Critical Depth	1.08	ft
Percent Full	100.00	
Critical Slope	0.007276	ft/ft
Velocity	4.41	ft/s
Velocity Head	0.30	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	8.38	cfs
Full Flow Capacity	7.79	cfs
Full Flow Slope	0.005500	ft/ft

Notes:

Watershed 4E drains into CB147, which also carries discharge from outlet of Watershed 4D. Peak discharge from Watershed 4E is 7.25 cfs; peak discharge from Watershed 4D is 9.14 cfs. Check capacity of outlet from CB147 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 4E.

000357

Watershed 4F:

Cover description,	combination of gravel and concrete pad
Curve number,	CN = 90
Area,	A = 1.00 ac, A_m = 0.0016 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 240 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.08 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration,	T_t = 0.02 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 4.83 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4F drains to existing manhole MH50. Add discharge from Watershed 4F to discharge from Watershed 4E and check capacity of outlet pipe from MH50 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from MH50 will not control the peak discharge of 12.62 cfs.

Area 3A - capacity of outlet from MH50
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from MH50
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.021000	ft/ft
Diameter	18.00	in

Results		
Depth	1.50	ft
Discharge	15.22	cfs
Flow Area	1.77	ft²
Wetted Perimeter	4.71	ft
Top Width	0.00	ft
Critical Depth	1.41	ft
Percent Full	100.00	
Critical Slope	0.018149	ft/ft
Velocity	8.61	ft/s
Velocity Head	1.15	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	16.37	cfs
Full Flow Capacity	15.22	cfs
Full Flow Slope	0.021000	ft/ft

Notes:

Watershed 4F drains to MH50, which also carries discharge from outlet of Watershed 4E. Peak discharge from Watershed 4F is 4.83 cfs; peak discharge from Watershed 4E is 7.79 cfs. Check capacity of outlet from MH50 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

000359

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Watershed 5A:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.88 ac, A_m = 0.0014 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 240 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.500 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.11
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 4.23 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 5A will drain to existing catch basin CB56. Check capacity of outlet pipe down-gradient from CB56 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB56 will limit the peak discharge to 2.19 cfs.

Area 3A - capacity of outlet from CB56
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB56
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.010000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	2.19	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.66	ft
Percent Full	100.00	
Critical Slope	0.010604	ft/ft
Velocity	4.02	ft/s
Velocity Head	0.25	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.36	cfs
Full Flow Capacity	2.19	cfs
Full Flow Slope	0.010000	ft/ft

Notes:

Watershed 5A drains into pipe down gradient from CB56. Peak discharge from Watershed 5A is 4.23 cfs. Check capacity of pipe downgradient from CB56 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 5A.

000361

Watershed 5B:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 2.84 ac, A_m = 0.0044 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 140 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration,	T_t = 0.05 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 13.29 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 5B will drain to existing catch basin CB91. Add discharge from outlet of Watershed 5B to discharge from Watershed 5A and check capacity of outlet pipe from CB91 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB91 will limit the peak discharge to 5.00 cfs.

Area 3A - capacity of outlet from CB91
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB91
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.006000	ft/ft
Diameter	15.00	in

Results		
Depth	1.25	ft
Discharge	5.00	cfs
Flow Area	1.23	ft^2
Wetted Perimeter	3.93	ft
Top Width	0.00	ft
Critical Depth	0.91	ft
Percent Full	100.00	
Critical Slope	0.007809	ft/ft
Velocity	4.08	ft/s
Velocity Head	0.26	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	5.38	cfs
Full Flow Capacity	5.00	cfs
Full Flow Slope	0.006000	ft/ft

Notes:

Watershed 5B drains into CB91 which also carries discharge from Watershed 5A. Peak discharge from Watershed 5B is 13.29 cfs; peak discharge from Watershed 5A is 2.19 cfs. Check capacity of outlet to CB91 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed 5B.

000363

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Watershed 5C:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.08 ac, A_m = 0.0017 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 190 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration,	T_t = 0.05 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 5.13 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 5C will drain to existing catch basin CB62. Add discharge from outlet of Watershed 5C to discharge from Watershed 5B and check capacity of outlet pipe from CB62 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB62 will not control the peak discharge of 10.13 cfs.

Area 3A - capacity of outlet from CB62
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB62
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.018000	ft/ft
Diameter	21.00	in

Results		
Depth	1.75	ft
Discharge	21.26	cfs
Flow Area	2.41	ft^2
Wetted Perimeter	5.50	ft
Top Width	0.00	ft
Critical Depth	1.63	ft
Percent Full	100.00	
Critical Slope	0.015575	ft/ft
Velocity	8.84	ft/s
Velocity Head	1.21	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	22.87	cfs
Full Flow Capacity	21.26	cfs
Full Flow Slope	0.018000	ft/ft

Notes:

Watershed 5C drains into CB62 which also carries discharge from Watershed 5B. Peak discharge from Watershed 5C is 5.13 cfs; peak discharge from Watershed 5B is 5.00 cfs. Check capacity of outlet from CB62 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

000365

2888

Watershed 5D:

Cover description,	combination of gravel and concrete pad
Curve number,	CN = 90
Area,	A = 1.60 ac, A_m = 0.0025 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 170 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.018 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.55 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 5D will drain to existing catch basin CB208. Add discharge from outlet of Watershed 5D to discharge from Watershed 5C and check capacity of outlet pipe from CB208 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB208 will not control the peak discharge of 17.68 cfs.

000366

Area 3A - capacity of outlet from CB208
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB208
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.090000	ft/ft
Diameter	21.00	in

Results		
Depth	1.75	ft
Discharge	47.53	cfs
Flow Area	2.41	ft²
Wetted Perimeter	5.50	ft
Top Width	0.00	ft
Critical Depth	1.74	ft
Percent Full	100.00	
Critical Slope	0.085786	ft/ft
Velocity	19.76	ft/s
Velocity Head	6.07	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	51.13	cfs
Full Flow Capacity	47.53	cfs
Full Flow Slope	0.090000	ft/ft

Notes:

Watershed 5D drains into CB208, which also carries discharge from Watershed 5C. Peak discharge from Watershed 5D is 7.55 cfs; peak discharge from Watershed 5C is 10.13 cfs. Check capacity of outlet from CB208 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

000367

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Watershed 5E:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.22 ac, A_m = 0.0003 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 190 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration, T_t = 0.05 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 0.91 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 5E will drain to existing catch basin CB64 that drains into CB65. Add discharge from outlet of Watershed 5E to discharge from Watershed 5D. Also, add the combined peak discharge off-site Watersheds H1A through H1D (refer to computations included in Appendix D for Watersheds H1A through H1D). Finally, add the peak discharge from Watershed H2. Check capacity of outlet pipe from CB 64 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB64 will limit the combined peak discharge to 18.75 cfs.

Area 3A - capacity of outlet from CB64
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Check capacity of outlet from CB64
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.014000	ft/ft
Diameter	21.00	in

Results		
Depth	1.75	ft
Discharge	18.75	cfs
Flow Area	2.41	ft^2
Wetted Perimeter	5.50	ft
Top Width	0.00	ft
Critical Depth	1.57	ft
Percent Full	100.00	
Critical Slope	0.012382	ft/ft
Velocity	7.79	ft/s
Velocity Head	0.94	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	20.17	cfs
Full Flow Capacity	18.75	cfs
Full Flow Slope	0.014000	ft/ft

Notes:

Watershed H1A through H1D, H2 and 5E drain into CB64 that drains into CB65.

Outlet pipe capacity is less than the combined peak discharge. Outlet pipe will limit discharge to 18.75 cfs.

000369

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Watershed H1A:

Cover description,	concrete pad
Curve number,	CN = 95
Area,	A = 0.48 ac, A_m = 0.0007 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.53 in (Table 2-1, *TR-55*)
Surface description,	concrete (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 60 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration,	T_t = 0.02 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.105 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.02
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 2.47 cfs (where $q_p = q_u A_m Q F_p$)

Watersheds H1A, H1B, H1C and H1D drain to the existing catch basin CB64. No modifications are required during Area 3A remediation, since the outlet from CB64 drains into the existing storm sewer system.

Watershed H1B:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 2.70 ac, A_m = 0.0042 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.06 hr

Time of concentration,	T_t = 0.06 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 12.68 cfs (where $q_p = q_u A_m Q F_p$)

Watersheds H1A, H1B, H1C and H1D drain to the existing catch basin CB64. No modifications are required during Area 3A remediation, since the outlet from CB64 drains into the existing storm sewer system.

000371

Watershed H1C:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 1.19 ac, A_m = 0.0019 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 180 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.017 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 5.74 cfs (where $q_p = q_u A_m Q F_p$)

Watersheds H1A, H1B, H1C and H1D drain to the existing catch basin CB64. No modifications are required during Area 3A remediation, since the outlet from CB64 drains into the existing storm sewer system.

Watershed H1D:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.30 ac, A_m = 0.0005 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 120 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.042 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration,	T_t = 0.02 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 1.51 cfs (where $q_p = q_u A_m Q F_p$)

Watersheds H1A, H1B, H1C and H1D drain to the existing catch basin CB64. No modifications are required during Area 3A remediation, since the outlet from CB64 drains into the existing storm sewer system.

Tank Farm Settling Basin:

Design outlet pipe from Tank Farm Settling Basin assuming final excavation is complete and precertification buffer areas have been established for both Areas 3A and 4A. To determine the peak discharge to use for design, the pump rates from each watershed within Areas 3A and 4A will be combined. Based on information provided in Tables A-3 and A-7 of Appendix A, the combined pump rate from Area 3A is 685 gpm (1.5 cfs) and the combined pump rate from Area 4A is 485 gpm (1.1 cfs). Therefore, the outlet pipe from the Tank Farm Settling Basin will be designed for peak discharge of 2.6 cfs.

According to the following *FlowMaster* calculations, an 18-inch diameter CMP will carry the total peak discharge from the Tank Farm Settling Basin. The 6% design slope for the proposed outlet pipe was selected to avoid interference with other utilities.

Settling Basin - design outlet
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area3a^1.fm2
Worksheet	Design outlet to settling basin
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Mannings Coefficient	0.024	
Channel Slope	0.060000	ft/ft
Diameter	18.00	in
Discharge	2.60	cfs

Results		
Depth	5.3	in
Flow Area	0.43	ft^2
Wetted Perimeter	1.71	ft
Top Width	1.36	ft
Critical Depth	0.61	ft
Percent Full	29.26	
Critical Slope	0.017188	ft/ft
Velocity	6.04	ft/s
Velocity Head	0.57	ft
Specific Energy	1.01	ft
Froude Number	1.89	
Maximum Discharge	14.99	cfs
Full Flow Capacity	13.94	cfs
Full Flow Slope	0.002088	ft/ft
Flow is supercritical.		

Notes:

Size outlet pipe to carry pumped discharge from both Areas 3A and 4A. According to calculations provided, the total pumped discharge from Area 3A is 685 gpm (1.5 CFS) and from Area 4A is 485 gpm (1.1 CFS). Use 18-inch diameter storm drain on 6% slope (to avoid interference with firewater line).

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APPENDIX C

HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 3A FINAL EXCAVATION

000376

Date: 03/31/00

Rev.: J

2888

Calculation/Document Title

Total No. of pages: 12

Department:	Civil	Originated By:	N. Roberts	Date:	01/11/00
Calculation No.	C-2	Checked By:	W. Clark	Date:	01/22/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title Soil and Disposal Facility Project – Areas 3A/4A

Subject: Surface Water Management Plan for the Remediation of Areas 3A and 4A
Hydrologic and Hydraulic Calculations for Area 3A Final Excavation

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Registration Stamp

Signature:_____

Number:_____

000377

APPENDIX C – HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 3A FINAL EXCAVATION

(Refer to Figure A-2 in Appendix A for watershed key map)

Watersheds 1A through 1F:

(Refer to calculations included in Appendix B for discharge from Watersheds 1A through 1F.)

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Watershed 2:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 4.07 ac, A_m = 0.0064 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 220 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Surface description,	unpaved
Flow length,	L = 180 ft
Watercourse slope,	s = 0.1 ft/ft
Average velocity,	V = 5.1 fps (Figure 3-1, *TR-55*)

Compute $T_t = \dfrac{L}{3600\ V}$ T_t = 0.01 hr

Time of concentration, T_t = 0.05 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 19.33 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 2 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 1.39 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 105 gpm.

Watershed 3:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.73 ac, A_m = 0.0027 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 240 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.046 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration, T_t = 0.03 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 8.15 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 3 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.59 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 45 gpm.

Watershed 4:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.55 ac, A_m = 0.0024 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 150 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Surface description,	unpaved
Flow length,	L = 320 ft
Watercourse slope,	s = 0.04 ft/ft
Average velocity,	V = 3.2 fps (Figure 3-1, *TR-55*)

Compute $T_t = \frac{L}{3600\ V}$ T_t = 0.03 hr

Time of concentration, T_t = 0.05 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.25 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 4 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.53 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 40 gpm.

Watershed 5:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 2.08 ac, A_m = 0.0032 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 260 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.019 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration, T_t = 0.05 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 9.66 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 5 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.71 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 55 gpm.

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Watershed 6:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 3.36 ac, A_m = 0.0053 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 170 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.05 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Surface description,	unpaved
Flow length,	L = 150 ft
Watercourse slope,	s = 0.02 ft/ft
Average velocity,	V = 2.2 fps (Figure 3-1, *TR-55*)

Compute $T_t = \frac{L}{3600\ V}$ T_t = 0.02 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 16.01 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 6 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 1.15 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 85 gpm.

Watershed 7:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.54 ac, A_m = 0.0024 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 300 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.07 hr

Surface description,	unpaved
Flow length,	L = 135 ft
Watercourse slope,	s = 0.07 ft/ft
Average velocity,	V = 4.3 fps (Figure 3-1, *TR-55*)

Compute $T_t = \dfrac{L}{3600\ V}$ T_t = 0.01 hr

Time of concentration, T_t = 0.08 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.25 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 7 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.53 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 40 gpm.

Watershed 8:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 4.90 ac, A_m = 0.0077 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 300 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.07 hr

Surface description,	unpaved
Flow length,	L = 560 ft
Watercourse slope,	s = 0.02 ft/ft
Average velocity,	V = 2.2 fps (Figure 3-1, *TR-55*)

Compute $T_t = \frac{L}{3600\ V}$ T_t = 0.07 hr

Time of concentration, T_t = 0.14 hr

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 920 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 21.39 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 8 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 1.67 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 125 gpm.

Watershed 9:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 2.71 ac, A_m = 0.0042 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 145 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration, T_t = 0.02 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 12.68 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 9 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.93 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 70 gpm.

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Watershed 10:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.01 ac, A_m = 0.0016 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 190 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration, T_t = 0.03 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 4.83 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 10 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.35 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 25 gpm.

Watershed 11:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 3.75 ac, A_m = 0.0059 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 240 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.07 hr

Time of concentration, T_t = 0.07 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 17.82 cfs (where $q_p = q_u A_m Q F_p$)

Watershed 11 drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 1.28 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 95 gpm.

(During Area 4A remediation, this excavation will be enlarged and additional drainage area will be added. Refer to Appendix F calculations for Watershed 11 final excavation.)

APPENDIX D

PUMP DATA
FOR AREA 3A FINAL EXCAVATION

Date: 03/31/00
Rev.: J

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-101	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed 2					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	105 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 # /in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

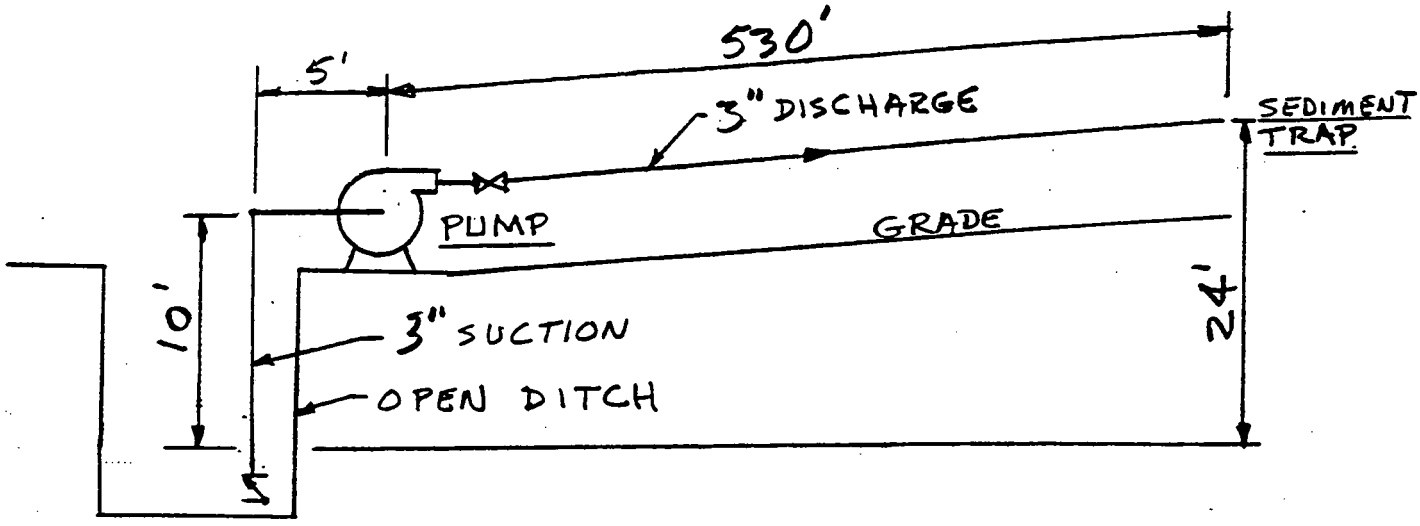
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-101

Checked by RAP



LOCKWOOD GREENE
ENGINEERS

Date 1-8-00
Sheet 3 of 6
Computed by JCR
Checked by NAP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-101

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 105 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELBOW = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT OF PIPE + FTGS.
15' + 29.59' = 44.59'

4. HD. LOSS /100' = 3.04 VEL. = 5.06 FT/SEC.

$\frac{44.59'}{100'} \times 3.04' = 1.36'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-101

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.36$$

$$= 21.34'$$

LOCKWOOD GREENE

Date 1-8-00
Sheet 5 of 6
Computed by JCR
Checked by MAP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-101

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 530'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS
530' + 14.31' = 544.31

4. HD. LOSS/100' = 3.04

$\frac{544.31}{100} \times 3.04 = 16.55'$ FRICT. LOSS

LOCKWOOD GREENE
ENGINEERS

Date 1-8-00
Sheet 6 of 6
Computed by TCR
Checked by MP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-101

PUMP REQUIREMENT

SUCTION LOSSES = 1.36'
DISCHARGE LOSSES = 16.55'
STATIC HEAD = 24'

41.91'

ADD 20% FOR FIELD ROUTING OF PIPE

41.91' x .20 = 8.38'

TOTAL HEAD REQ'D

41.91' + 8.38' = 50.29 OR 50'

CONCLUSION

USE PUMP CAPABLE OF 105 GPM WITH 50' HEAD AND NPSHR OF 21.34' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-102	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed 3

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	45 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 # /in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

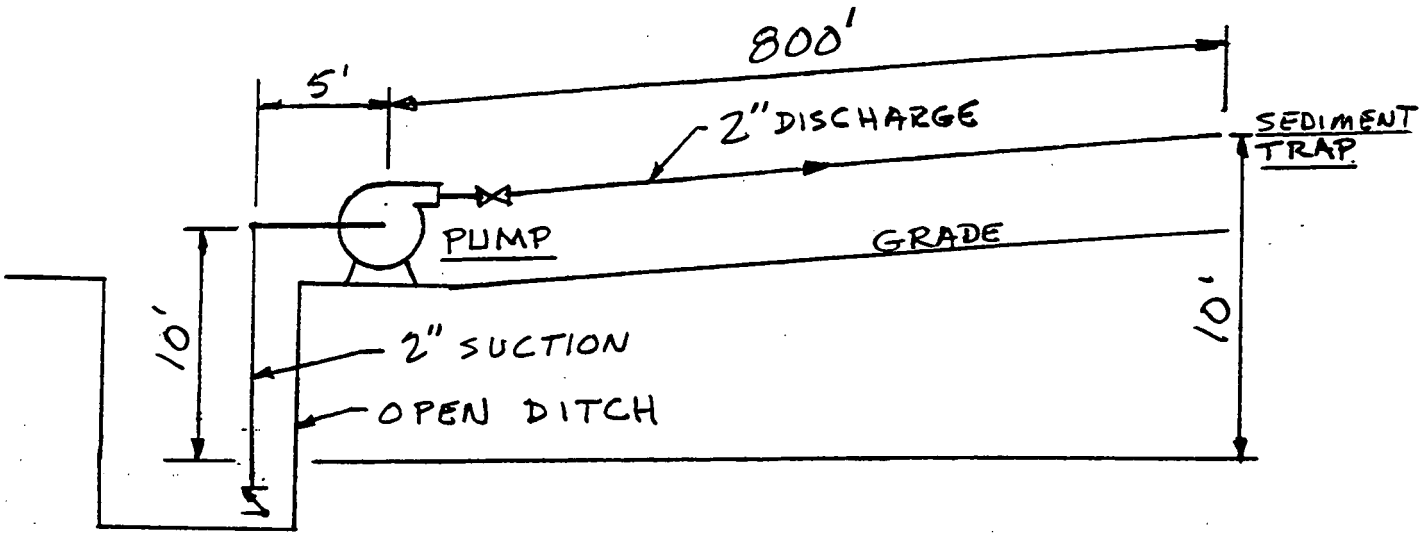
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-102

Checked by



LOCKWOOD GREENE
ENGINEERS

Date 1-8-00
Sheet 3 of 6
Computed by JCR
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject Pump P-102

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
2" PIPE, 45 GPM

2. EQUIV, LGT OF VALVES & FITTINGS

1 - 90° ELL = 2.76
1 - FOOT VALVE (CHECK) = 17.2
19.96

3. TOTAL EQUIV, LGT OF PIPE + FTGS.
15' + 19.96' = 34.96

4. HD LOSS/100' = 4.42 (VEL. = 4.79 FT/SEC)

$\frac{34.96}{100} \times 4.42 = 1.55'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-102

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.55$$

$$= 21.15'$$

LOCKWOOD GREENE

Date 1-8-00
Sheet 5 of 6
Computed by JCR
Checked by NAP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-102

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 800'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.
1 - GATE = 1.38
3 - 90° ELLS = 8.28
9.66'

3. EQUIV. LGT. OF PIPE + FTGS.
800' + 9.66' = 809.66'

4. HD. LOSS/100' = 4.42

$\frac{809.66'}{100} \times 4.42 = 35.78'$ FRICT. LOSS

LOCKWOOD GREENE
ENGINEERS

Date 1-8-00
Sheet 6 of 6
Computed by JER
Checked by RLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-102

PUMP REQUIREMENT

SUCTION LOSSES = 1.55'
DISCHARGE LOSSES = 35.78
STATIC HEAD = 10'
47.33'

ADD 20% FOR FIELD ROUTING OF PIPE

47.33' X .20 = 9.47'

TOTAL HEAD REQ'D

47.33' + 9.47' = 56.8 OR 57'

CONCLUSION

USE PUMP CAPABLE OF 45 GPM WITH 57' HEAD AND NPSHR OF 21.15' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-103	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed 4					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	40 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 #/in2	(.25611 x 2.31= .59′)

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

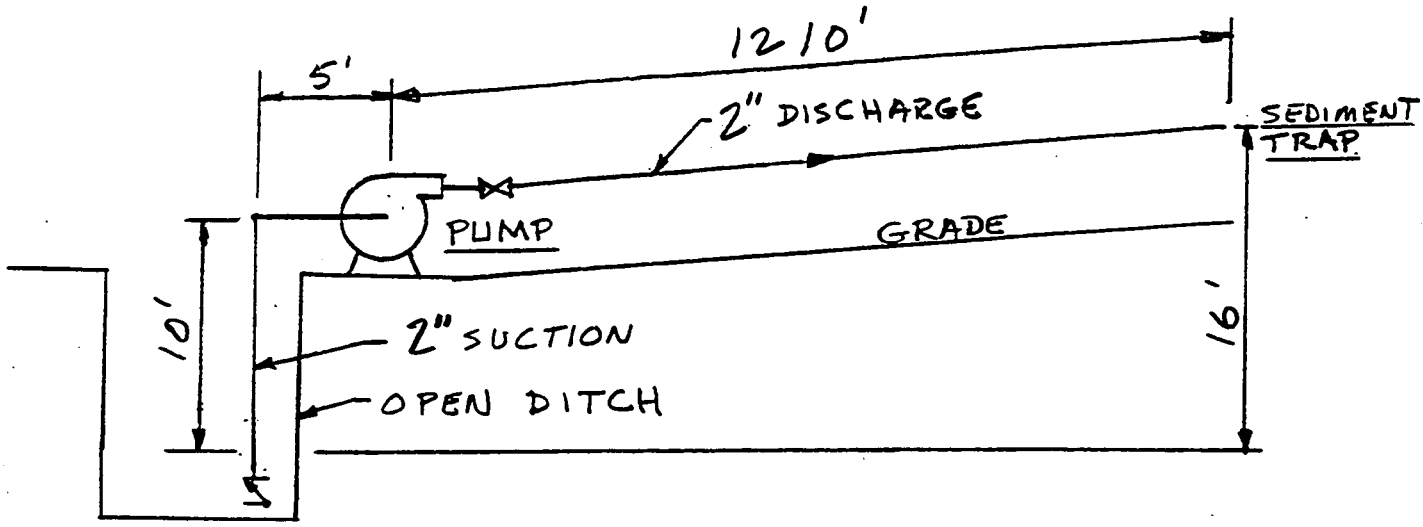
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-103

Checked by NLP



LOCKWOOD GREENE

Date 1-8-00
Sheet 3 of 6
Computed by JEP
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-103

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
2" PIPE, 40 GPM

2. EQUIV. LGT. OF VALVES + FTGS.
1 - 90° ELL. = 2.76
1 - FOOT VALVE (CHECK) = 17.2
19.96'

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.
15' + 19.96' = 34.96

4. HD LOSS/100' = 3.58 (VEL. = 4.26 FT/SEC)

$\frac{34.96}{100} \times 3.58 = 1.25'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by LC

Subject NPSH AVAILABLE - P-103

Checked by MA

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.25$$

$$= 21.45'$$

LOCKWOOD GREENE

Date 1-8-00
Sheet 5 of 6
Computed by LCR
Checked by MJP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-103

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 1210'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 1.38
3 - 90° ELLS = 8.28
9.66'

3. EQUIV. LGT OF PIPE + FTGS.

1210' + 9.66' = 1219.66'

4. HD LOSS/100' = 3.58

$\frac{1219.66}{100} \times 3.58 = 43.66$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 6 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by LER

Subject PUMP P-103

Checked by MP

PUMP REQUIREMENT

SUCTION LOSSES = 1.25'
DISCHARGE LOSSES = 43.66'
STATIC HEAD = 16'

60.91'

ADD 20% FOR FIELD ROUTING OF PIPE

60.91' X .20 = 12.18'

TOTAL HEAD REQ'D

60.19' + 12.18' = 72.37 OR 72'

CONCLUSION

USE PUMP CAPABLE OF 40 GPM WITH 72' HEAD AND NPSHR OF 21.45' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-104	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed 5

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	55 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 # /in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

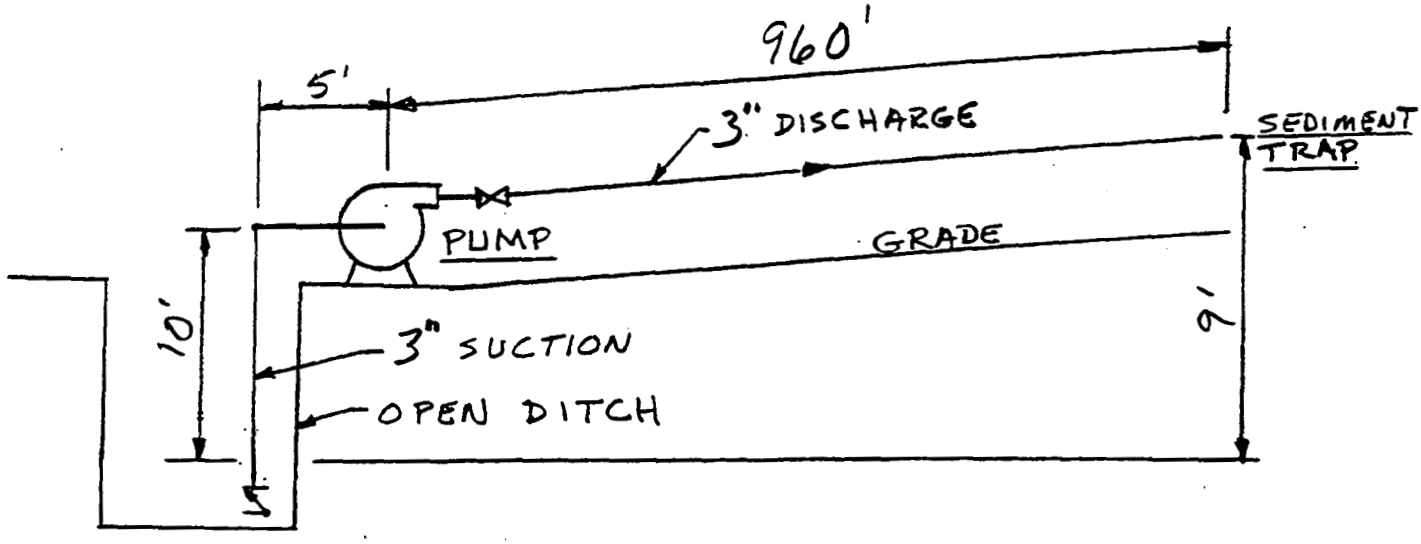
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-104

Checked by RDL



LOCKWOOD GREENE

Date 1-8-00
Sheet 3 of 6
Computed by JCR
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-104

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 55 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1-90° ELL = 4.09
1-FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT OF PIPE + FTGS.

15' + 29.59' = 44.59'

4. HD LOSS /100' = .965 (VEL. = 2.65 FT/SEC)

$\frac{44.59}{100} \times .965 = .43'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by LE

Subject NPSH AVAILABLE - P-104

Checked by DLP

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .43'$$

$$= 22.27'$$

LOCKWOOD GREENE

Date 1-8-00
Sheet 5 of 6
Computed by JCR
Checked by MJP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-104

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 960'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

960' + 14.31' = 974.31'

4. HD LOSS /100' = .965

$\frac{974.31'}{100} \times .965 = 9.4'$ FRICTION LOSS

LOCKWOOD GREENE
ENGINEERS

Date 1-8-00
Sheet 6 of 6
Computed by JCR
Checked by RDP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-104

PUMP REQUIREMENT

SUCTION LOSSES = .43'
DISCHARGE LOSSES = 9.4
STATIC HEAD = 10'
19.83'

ADD 20% FOR FIELD ROUTING OF PIPE

19.83' x .20 = 3.97'

TOTAL HEAD REQ'D

19.83' + 3.97' = 23.8' OR 24'

CONCLUSION

USE PUMP CAPABLE OF 55 GPM WITH 24' HEAD AND NPSHR OF 22.27' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-105	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed 6

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	85 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 #/in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

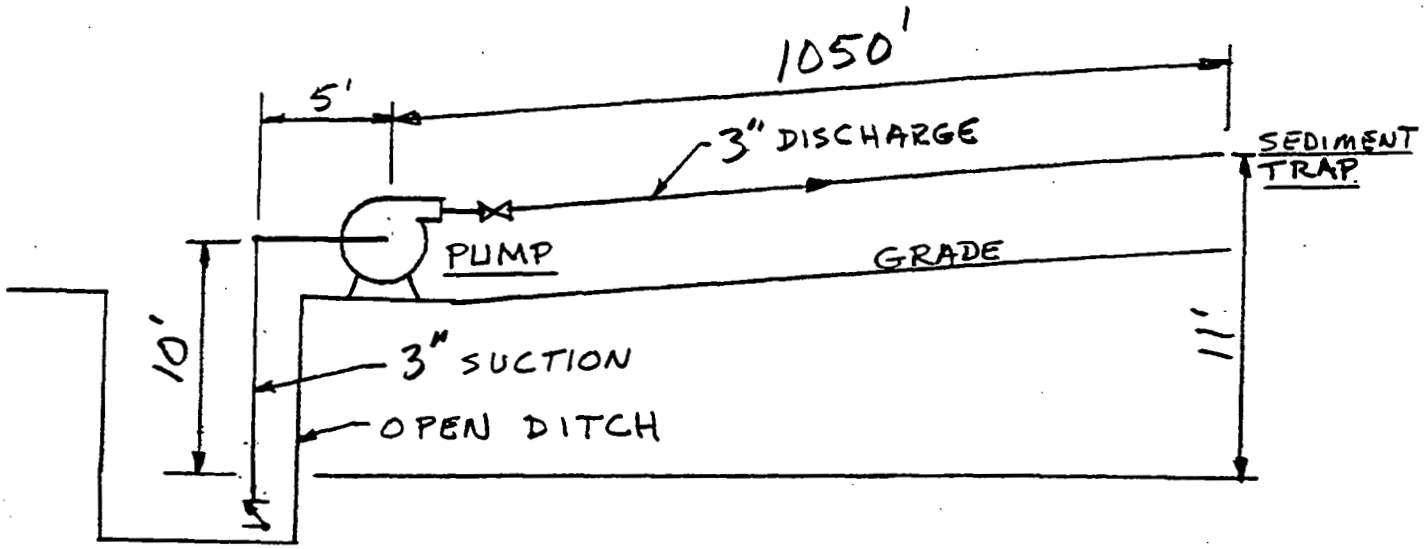
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-105

Checked by [illegible]



LOCKWOOD GREENE

Date 1-9-00
Sheet 3 of 6
Computed by JCR
Checked by MAP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-105

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 85 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT OF PIPE + FTGS.
15' + 29.59' = 44.59'

4. HD LOSS/100' = 2.09 (VEL. = 4.1 FT/SEC)

$\frac{44.59}{100} \times 2.09 = .93'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-80

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-105

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .93$$

$$= 21.77'$$

LOCKWOOD GREENE
ENGINEERS CONSULTANTS

2888

Date 1-9-00
Sheet 5 of 6
Computed by DOR
Checked by [illegible]

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-105

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 1050'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.
1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.
1050' + 14.31' = 1064.31'

4. HD LOSS/100' = 2.09

$\frac{1064.31'}{100} \times 2.09 = 22.24'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-9-00
Sheet 6 of 6
Computed by LR
Checked by DLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-105

PUMP REQUIREMENT

SUCTION LOSSES = .93'
DISCHARGE LOSSES = 22.24'
STATIC HEAD = 11'
34.17'

ADD 20% FOR FIELD ROUTING OF PIPE

34.17' X .20 = 6.83'

TOTAL HEAD REQ'D

34.17' + 6.83' = 41'

CONCLUSION

USE PUMP CAPABLE OF 85 GPM WITH 41' HEAD AND NPSHR OF 21.77' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-106	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed 7					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	40 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 #/in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

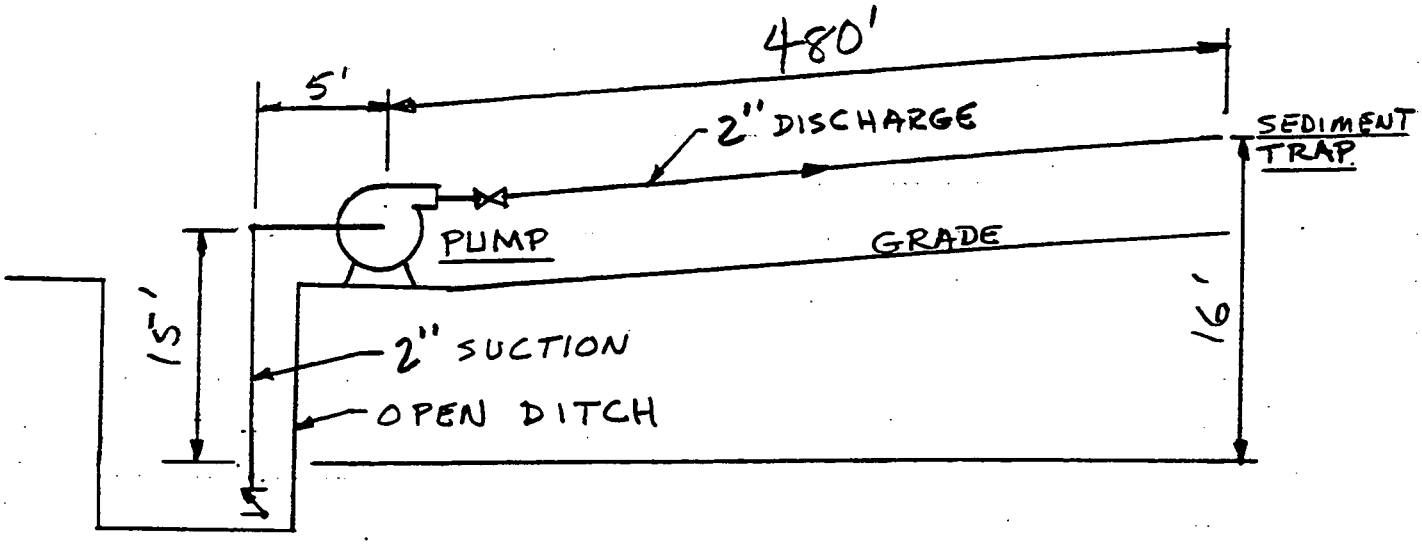
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-106

Checked by RLP



LOCKWOOD GREENE

Date 7-9-00

Sheet 3 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject PUMP P-106

Checked by NLP

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 20'
2" PIPE, 40 GPM

2. EQUIV. LGT OF VALVES + FTGS

1 - 90° ELL = 2.76
1 - FOOT VALVE (CHECK) = 17.2
19.96

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.

20' + 19.96' = 39.96'

4. HD LOSS/100' = 3.58' (VEL. 4.26 FT/SEC)

$\frac{39.96'}{100} \times 3.58' = 1.43'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by LC

Subject NPSH AVAILABLE - P-106

Checked by NWP

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 15 - 1.43$$

$$= 16.27'$$

LOCKWOOD GREENE

Date 12-9-00

Sheet 5 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject PUMP P-106

Checked by

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 480'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 1.38
3 - 90° ELLS = 8.28
9.66

3. EQUIV. LGT. OF PIPE + FTGS.

480' + 9.66' = 489.66

4. HD LOSS/100' = 3.58

$\frac{489.66'}{100} \times 3.58 = 17.53'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-9-00

Sheet 6 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCP

Subject PUMP P-106

Checked by [illegible]

PUMP REQUIREMENT

SUCTION LOSSES = 1.43'
DISCHARGE LOSSES = 17.53'
STATIC HEAD = 16'
34.96

ADD 20% FOR FIELD ROUTING OF PIPE

34.96' X .20 = 6.99'

TOTAL HEAD REQ'D

34.96' + 6.99' = 41.95 OR 42'

CONCLUSION

USE PUMP CAPABLE OF 40 GPM WITH 42' HEAD AND NPSHR OF 16.27' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-107	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed - 8					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	125 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 #/in2	(.25611 x 2.31= .59′)

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

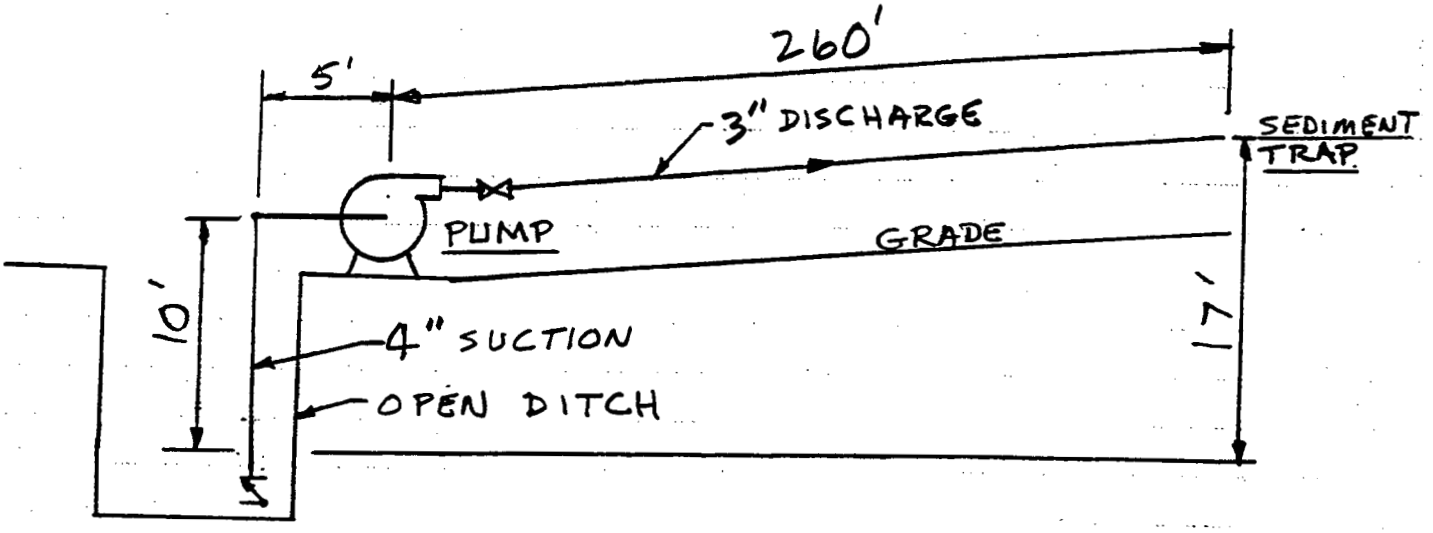
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-107

Checked by MAP



LOCKWOOD GREENE
ENGINEERS

Date 2888 -17-9-00
Sheet 3 of 6
Computed by JCR
Checked by MDP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-107

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
4" PIPE, 125 GPM

2. EQUIV. LENGTH OF VALVES + FTGS.

1 - 90° ELL = 5.37
1 - FOOT VALVE (CHECK) = 33.6
38.97

3. TOTAL EQUIV. LGT OF PIPE + FTGS.

15' + 38.97' = 53.97'

4. HD LOSS /100' = 1.07 (VEL = 3.43 FT/SEC)

$\frac{53.97}{100} \times 1.07 = .58'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00
Sheet 4 of 6
Computed by [illegible]
Checked by [illegible]

Job Name FLUOR Fernald
Job Number 008919.01
Subject NPSH AVAILABLE - P-107

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .58'$$

$$= 22.12'$$

LOCKWOOD GREENE
ENGINEERS CONSTRUCTORS

Date 1-9-00
Sheet 5 of 6
Computed by JCR
Checked by [illegible]

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-107

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 260'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

260' + 14.31' = 271.31'

4. HD LOSS/100' = 4.16

$\frac{271.31'}{100} \times 4.16 = 11.41'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-9-00

Sheet 6 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject PUMP P-107

Checked by RWP

PUMP REQUIREMENT

SUCTION LOSSES = .58'
DISCHARGE LOSSES = 11.41'
STATIC HEAD = 17'
28.99'

ADD 20% FOR FIELD ROUTING OF PIPE

28.99' X .20 = 5.8'

TOTAL HEAD

28.99' + 5.8 = 34.79' OR 35'

CONCLUSION

USE PUMP CAPABLE OF 125 GPM WITH 36' HEAD AND NPSHR OF 22.12' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-108	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed 9					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	70 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 #/in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics - General reference
Friction losses
Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

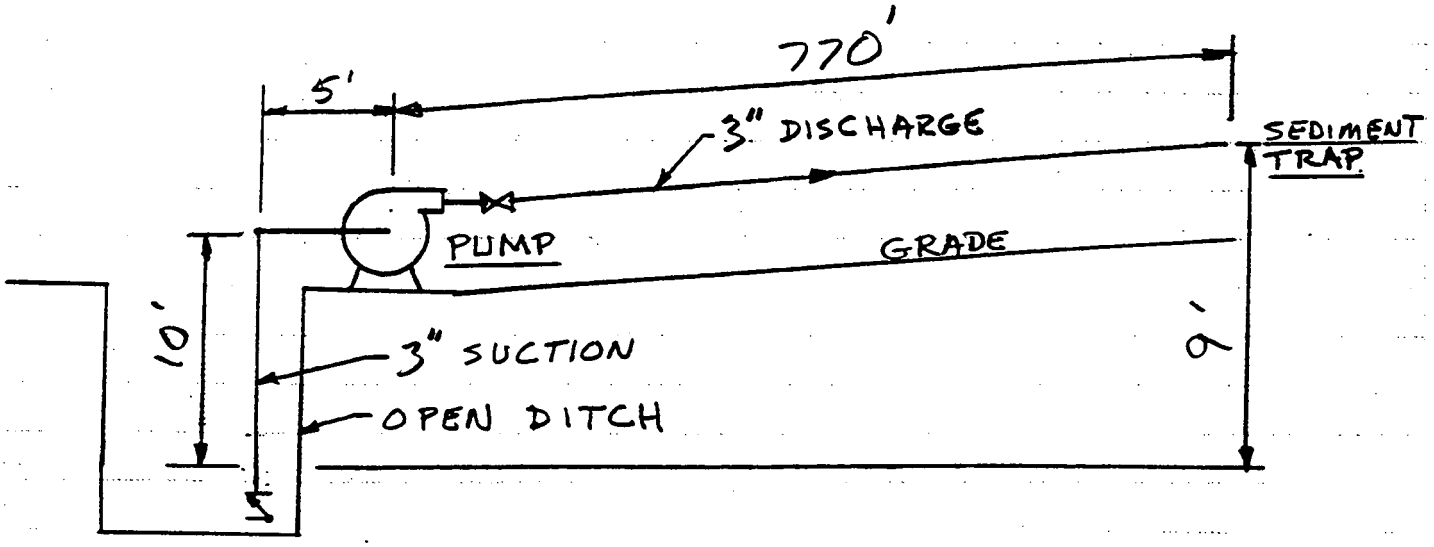
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-108

Checked by



2888

LOCKWOOD GREENE
ENGINEERS

Date 9-9-00
Sheet 3 of 6
Computed by JCR
Checked by [illegible]

Job Name FLUOR Fernald
Job Number 008919.01
Subject Pump P-108

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 70 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT. OF PIPE + FTGS

15' + 29.59' = 44.59'

4. HD LOSS/100' = 1.47 (VEL. = 3.38 FT/SEC)

$\frac{44.59'}{100} \times 1.47 = .66'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-108

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .66$$

$$= 22.04'$$

LOCKWOOD GREENE
ENGINEERS

Date 7-9-00
Sheet 5 of 6
Computed by DR
Checked by

Job Name FLUOR Fernald
Job Number 008919.01
Subject Pump P-108

DISCHARGE LOSSES

1. PIPE LENGTH = 770'
3" PLASTIC PIPE

2. EQUIV. LGT OF VALVES + FTGS.

1- GATE = 2.04
3- 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

770' + 14.31' = 784.31'

4. HD LOSS/100' = 1.47

$\frac{784.31}{100} \times 1.47 = 11.53'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-9-00

Sheet 6 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by LCR

Subject PUMP P-108

Checked by NLP

PUMP REQUIREMENT

SUCTION LOSSES	=	.66'
DISCHARGE LOSSES	=	11.53'
STATIC HEAD	=	10'
		22.19'

ADD 20% FOR FIELD ROUTING OF PIPE

22.19' x .20 = 4.44'

TOTAL HEAD REQ'D

22.19' + 4.44' = 26.63' OR 27'

CONCLUSION

USE PUMP CAPABLE OF 70 GPM WITH 27' HEAD AND NPSHR OF 22.04' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-109	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed 10

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	25 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 #/in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics - General reference
Friction losses
Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

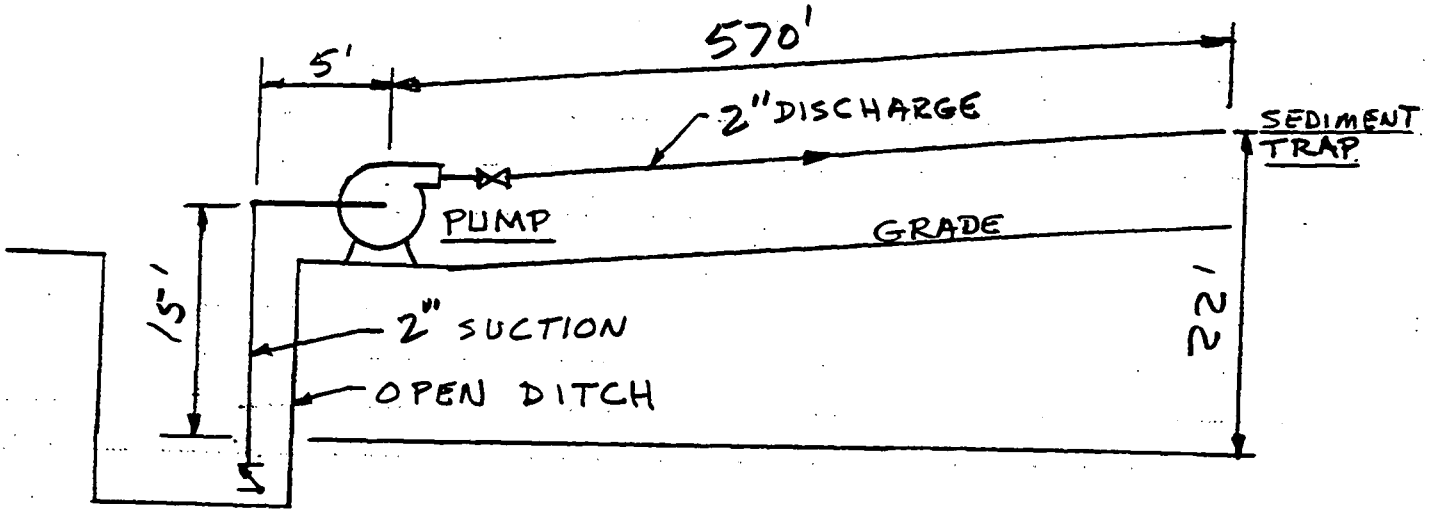
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-109

Checked by MU



LOCKWOOD GREENE

Date 1-9-00
Sheet 3 of 6
Computed by JER
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-109

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 20'
2" PIPE, 25 GPM

2. EQUIV. LGT. OF VALVES + FTGS.
1- 90° ELBOW = 2.76
1- FOOT VALVE (CHECK) = 17.2
19.96

3. TOTAL EQUIV. LGT. OF PIPE + FTGS
20' + 19.96' = 39.96'

4. HD LOSS/100' = 1.55 (VEL. = 2.66 FT/SEC)
$\frac{39.96'}{100} \times 1.55 = .62'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-8-00
Sheet 4 of 6
Computed by [illegible]
Checked by [illegible]

Job Name FLUOR Fernald
Job Number 008919.01
Subject NPSH AVAILABLE - P-109

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 15 - .62$$

$$= 17.08'$$

LOCKWOOD GREENE

Date 12-9-88

Sheet 5 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JER

Subject PUMP P-109

Checked by TWP

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 570'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 1.38
3 - 90° ELLS = 8.28
9.66'

3. EQUIV. LGT. OF PIPE + FTGS.

570' + 9.66 = 579.66'

4. HD LOSS / 100' = 1.55

$\frac{579.66'}{100} \times 1.55 =$ 8.98' FRICTION LOSS

LOCKWOOD GREENE
TECHNOLOGIES

Date 1-9-00
Sheet 6 of 6
Computed by LER
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-109

PUMP REQUIREMENT

SUCTION LOSSES = .62'
DISCHARGE LOSSES = 8.98
STATIC HEAD = 22'
31.6'

ADD 20% FOR FIELD ROUTING OF PIPE

31.6' X .20 = 6.32'

TOTAL HEAD REQ'D

31.6' + 6.32' = 37.92' OR 38'

CONCLUSION

USE PUMP CAPABLE OF 25 GPM WITH 38' HEAD AND NPSHR OF 17.08' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-110	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed 11					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	95 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 # /in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

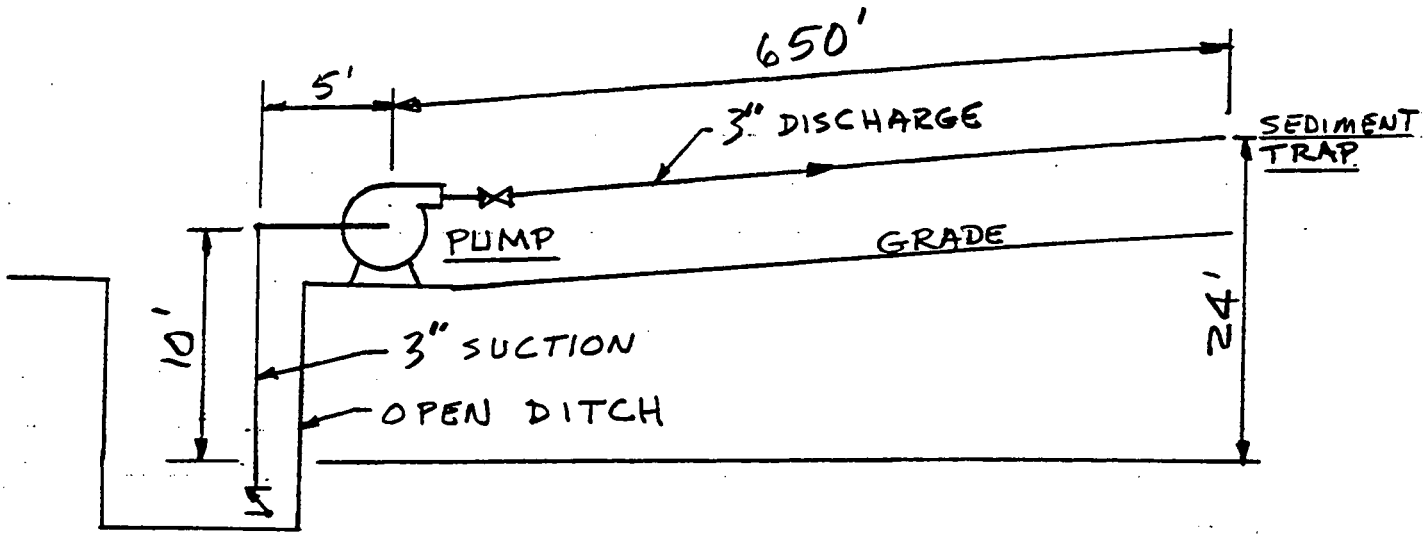
Sheet 2 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-110

Checked by



LOCKWOOD GREENE

Date 1-9-00
Sheet 3 of 6
Computed by JCR
Checked by RJP
2888

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-110

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 95 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.

15' + 29.59' = 44.59'

4. HD LOSS/100' = 2.54 (VEL. = 4.58)

$\frac{44.59}{100} \times 2.54 = 1.13'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-110

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.13$$

$$= 21.57'$$

LOCKWOOD GREENE

Date 1-9-00
Sheet 5 of 6
Computed by JER
Checked by MP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-110

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 650'
3" PLASTIC PIPE, 95 GPM

2. EQUIV. LGT. OF VALVES & FTGS

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

650' + 14.31' = 664.31'

4. HD LOSS/100' = 2.54

$\frac{664.31}{100} \times 2.54 = 16.87'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-9-00
Sheet 6 of 6
Computed by LPR
Checked by

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-110

PUMP REQUIREMENT

SUCTION LOSSES = 1.13'
DISCHARGE LOSSES = 16.87'
STATIC HEAD = 24'
42'

ADD 20% FOR FIELD ROUTING OF PIPE

42' X .20 = 8.4'

TOTAL HEAD

42' + 8.4' = 50.4' OR 50'

CONCLUSION

USE PUMP CAPABLE OF 95 GPM WITH 50' HEAD AND NPSHR OF 21.57' OR LESS

APPENDIX E

HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 4A INITIAL EXCAVATION

Calculation/Document Title

Total No. of pages: 33

Department:	Civil	Originated By:	N. Roberts	Date:	01/11/00
Calculation No.	C-3	Checked By:	M. Jerald	Date:	01/22/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title Soil and Disposal Facility Project – Areas 3A/4A

Subject: Surface Water Management Plan for the Remediation of Areas 3A and 4A
Hydrologic and Hydraulic Calculations for Area 4A Initial Excavation

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Registration Stamp

Signature:_____

Number:_____

APPENDIX E – HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 4A INITIAL EXCAVATION

(Refer to Figure A-3 in Appendix A for watershed key map)

Watershed A1:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 0.67 ac, A_m = 0.0010 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	concrete area (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration,	T_t = 0.05 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.02 cfs (where $q_p = q_u A_m Q F_p$)

Watershed A1 drains to existing catch basin CB26. Check capacity of outlet pipe from CB26 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet pipe capacity from CB26 is greater than the peak discharge from Watershed A1 of 3.02 cfs.

Area 4A - capacity of outlet from CB26
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB26
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.074000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	5.96	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.83	ft
Percent Full	100.00	
Critical Slope	0.068772	ft/ft
Velocity	10.93	ft/s
Velocity Head	1.86	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	6.41	cfs
Full Flow Capacity	5.96	cfs
Full Flow Slope	0.074000	ft/ft

Notes:

Watershed A1 drains into CB26. Peak discharge from Watershed A1 is 3.02 cfs. Check capacity of outlet from CB26 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

Watershed B1:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 0.76 ac, A_m = 0.0012 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	concrete area (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.06 hr
Time of concentration,	T_t = 0.06 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.62 cfs (where $q_p = q_u A_m Q F_p$)

Watershed B1 drains to existing catch basin CB72. Check capacity of outlet pipe from CB72 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet pipe capacity from CB72 is greater than the peak discharge from Watershed B1 of 3.62 cfs.

Area 4A - capacity of outlet from CB72
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB72
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.039200	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	4.34	cfs
Flow Area	0.55	ft²
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.81	ft
Percent Full	100.00	
Critical Slope	0.034650	ft/ft
Velocity	7.95	ft/s
Velocity Head	0.98	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	4.67	cfs
Full Flow Capacity	4.34	cfs
Full Flow Slope	0.039200	ft/ft

Notes:

Watershed B1 drains into CB72. Peak discharge from Watershed B1 is 3.62 cfs. Check capacity of outlet from CB72 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

Watershed C1:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 1.14 ac, A_m = 0.0018 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	concrete area (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 140 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.007 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 5.44 cfs (where $q_p = q_u A_m Q F_p$)

Watershed C1 drains to existing catch basin CB28. Check capacity of outlet pipe from CB28 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB28 will limit the peak discharge from Watershed C1 to 5.25 cfs.

Area 4A - capacity of outlet from CB28
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB28
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.057500	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	5.25	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.82	ft
Percent Full	100.00	
Critical Slope	0.052453	ft/ft
Velocity	9.63	ft/s
Velocity Head	1.44	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	5.65	cfs
Full Flow Capacity	5.25	cfs
Full Flow Slope	0.057500	ft/ft

Notes:

Watershed C1 drains into CB28. Peak discharge from Watershed C1 is 5.44 cfs. Check capacity of outlet from CB28 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed C1.

Watershed D1:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 1.78 ac, A_m = 0.0028 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	concrete area (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.06 hr
Time of concentration,	T_t = 0.06 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 8.46 cfs (where $q_p = q_u A_m Q F_p$)

Watershed D1 drains to existing catch basin CB37. Check capacity of outlet from CB37 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB37 will limit the peak discharge from Watershed D1 to 3.10 cfs.

Area 4A - capacity of outlet from CB37
Worksheet for Circular Channel

2888

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB37
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.020000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	3.10	cfs
Flow Area	0.55	ft²
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.76	ft
Percent Full	100.00	
Critical Slope	0.017456	ft/ft
Velocity	5.68	ft/s
Velocity Head	0.50	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	3.33	cfs
Full Flow Capacity	3.10	cfs
Full Flow Slope	0.020000	ft/ft

Notes:

Watershed D1 drains into CB37. Peak discharge from Watershed D1 is 8.46 cfs. Check capacity of outlet from CB37 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed D1.

000459

Watershed D2:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 0.92 ac, A_m = 0.0014 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	concrete (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 160 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.003 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.06 hr
Time of concentration,	T_t = 0.06 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 4.23 cfs (where $q_p = q_u A_m Q F_p$)

Watershed D2 drains to existing catch basin CB215. Check capacity of outlet pipe from CB215 using *FlowMaster*. According to the following *FlowMaster* calculations, outlet pipe capacity from CB215 is greater than the peak discharge from Watershed D2.

Area 4A - capacity of outlet from CB215
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB215
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.040000	ft/ft
Diameter	12.00	in

Results		
Depth	1.00	ft
Discharge	7.13	cfs
Flow Area	0.79	ft^2
Wetted Perimeter	3.14	ft
Top Width	0.00	ft
Critical Depth	0.98	ft
Percent Full	100.00	
Critical Slope	0.035592	ft/ft
Velocity	9.07	ft/s
Velocity Head	1.28	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	7.66	cfs
Full Flow Capacity	7.13	cfs
Full Flow Slope	0.040000	ft/ft

Notes:

Watershed D2 drains into CB215. Peak discharge from Watershed D2 is 4.23 cfs. Check capacity of outlet from CB215 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

Watershed D3:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 0.99 ac, A_m = 0.0015 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	concrete (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 200 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.002 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.09 hr

Time of concentration,	T_t = 0.09 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 4.53 cfs (where $q_p = q_u A_m Q F_p$)

Watershed D3 drains to existing catch basin CB38. Check capacity of outlet pipe from CB38 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet CB38 will limit the discharge from Watershed D3 to 2.08 cfs.

Area 4A - capacity of outlet from CB38
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB38
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.009000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	2.08	cfs
Flow Area	0.55	ft²
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.65	ft
Percent Full	100.00	
Critical Slope	0.010049	ft/ft
Velocity	3.81	ft/s
Velocity Head	0.23	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.24	cfs
Full Flow Capacity	2.08	cfs
Full Flow Slope	0.009000	ft/ft

Notes:

Watershed D3 drains into CB38. Peak discharge from Watershed D3 is 4.53 cfs. Check capacity of outlet from CB38 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed D3.

Watershed E1:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 2.04 ac, A_m = 0.0032 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	concrete (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 240 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.002 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.10 hr

Time of concentration, T_t = 0.10 hr

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 9.66 cfs (where $q_p = q_u A_m Q F_p$)

Watershed E1 drains to existing catch basin CB33 that drains into MH28. Check capacity of outlet pipe from MH28 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from MH28 will limit discharge from Watershed E1 to 2.52 cfs.

Area 4A - capacity of outlet from MH28
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from MH28
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.005000	ft/ft
Diameter	12.00	in

Results		
Depth	1.00	ft
Discharge	2.52	cfs
Flow Area	0.79	ft^2
Wetted Perimeter	3.14	ft
Top Width	0.00	ft
Critical Depth	0.68	ft
Percent Full	100.00	
Critical Slope	0.007704	ft/ft
Velocity	3.21	ft/s
Velocity Head	0.16	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.71	cfs
Full Flow Capacity	2.52	cfs
Full Flow Slope	0.005000	ft/ft

Notes:

Watershed E1 drains into CB33 which empties into MH28. Peak discharge from Watershed E1 is 9.66 cfs. Check capacity of outlet from MH28 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed E1.

Watershed E2:

Cover description,	combination of gravel and impervious areas
Curve number,	CN = 90
Area,	A = 2.15 ac, A_m = 0.0034 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 120 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.04 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.02 hr
Time of concentration,	T_t = 0.02 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 10.27 (where $q_p = q_u A_m Q F_p$)

Watershed E2 drains to existing catch basin CB34. Check capacity of outlet pipe from CB34 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB34 will limit the discharge from Watershed E2 to 0.97 cfs.

Area 4A - capacity of outlet from CB34
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB34
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.030000	ft/ft
Diameter	6.00	in

Results		
Depth	0.50	ft
Discharge	0.97	cfs
Flow Area	0.20	ft²
Wetted Perimeter	1.57	ft
Top Width	0.00	ft
Critical Depth	0.47	ft
Percent Full	100.00	
Critical Slope	0.025926	ft/ft
Velocity	4.95	ft/s
Velocity Head	0.38	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	1.05	cfs
Full Flow Capacity	0.97	cfs
Full Flow Slope	0.030000	ft/ft

Notes:

Watershed E2 drains into CB34. Peak discharge from Watershed E2 is 10.27 cfs. Check capacity of outlet from CB34 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed E2.

Watershed F1:

Cover description,	concrete pad
Curve number,	CN = 95
Area,	A = 1.03 ac, A_m = 0.0016 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.53 in (Table 2-1, *TR-55*)

Surface description,	concrete (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 150 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.15 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration, T_t = 0.02 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.105 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.02
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 5.65 cfs (where $q_p = q_u A_m Q F_p$)

Watershed F1 drains to existing basement of Plant 6 that contains VOC contaminated water. An existing sump and pump removes the VOC contaminated water that is collected in this area.

2888

Watershed G1:

Cover description,	concrete pad
Curve number,	CN = 95
Area,	A = 2.27 ac, A_m = 0.0035 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.53 in (Table 2-1, *TR-55*)

Surface description,	concrete (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 120 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.004 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.05 hr

Time of concentration, T_t = 0.05 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.105 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.02
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 12.36 cfs (where $q_p = q_u A_m Q F_p$)

Watershed G1 drains to existing catch basin CB31. Check capacity of outlet pipe from CB31 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet from CB31 will limit the discharge from Watershed G1 to 3.60 cfs.

000469

Area 4A - capacity of outlet from CB31
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB31
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.027000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	3.60	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.79	ft
Percent Full	100.00	
Critical Slope	0.023354	ft/ft
Velocity	6.60	ft/s
Velocity Head	0.68	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	3.87	cfs
Full Flow Capacity	3.60	cfs
Full Flow Slope	0.027000	ft/ft

Notes:

Watershed G1 drains into CB31. Peak discharge from Watershed G1 is 12.36 cfs. Check capacity of outlet from CB31 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed CB31.

000470

Watersheds H1A through H1D: Refer to calculations included in Appendix B 2888

Watershed H2:

Cover description,	gravel
Curve number,	CN = 90
Area,	$A = 0.08\ A_m = 0.0001 mi^2$
10-yr., 24-hr. storm,	$P_{10} = 4.1$ in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 25 ft
2-yr., 24-hr. storm,	$P_2 = 3.0$ in
Land slope,	s = 0.002 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\ s^{0.4}}$ $T_t = 0.05$ hr

Time of concentration, $T_t = 0.05$ hr (use minimum value of 0.1 hr)

Initial abstraction,	$I_a = 0.222$ (Table 4-1, *TR-55*)
Compute I_a/P_{10},	$I_a/P_{10} = 0.05$
Unit peak discharge,	$q_u = 1000$ csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	$F_p = 1$
Peak discharge,	$q_p = 0.30$ cfs (where $q_p = q_u A_m Q F_p$)

Watershed H2 drains to existing catch basin CB64 that drains into CB65. CB65 also carries the discharge from Watersheds H1A through H1D. Prior to Area 4A remediation, redirection of the surface drainage downgradient of CB65 will be done by others.

Watershed H3:

Cover description,	combination gravel and concrete pad
Curve number,	CN = 90
Area,	A = 2.10 ac, A_m = 0.0033 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 150 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 9.97 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H3 drains to existing catch basin CB153. Check capacity of outlet pipe from CB153 using *FlowMaster*. According to the following *FlowMaster* calculations, outlet pipe capacity from CB153 is less than the peak discharge from Watershed H3. Therefore, the peak discharge from Watershed H3 will be limited to 4.36 cfs.

Area 4A - capacity of outlet from CB153
Worksheet for Circular Channel

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Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB153
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.015000	ft/ft
Diameter	12.00	in

Results		
Depth	1.00	ft
Discharge	4.36	cfs
Flow Area	0.79	ft^2
Wetted Perimeter	3.14	ft
Top Width	0.00	ft
Critical Depth	0.88	ft
Percent Full	100.00	
Critical Slope	0.013553	ft/ft
Velocity	5.56	ft/s
Velocity Head	0.48	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	4.69	cfs
Full Flow Capacity	4.36	cfs
Full Flow Slope	0.015000	ft/ft

Notes:

Watershed H3 drains into CB153. Peak discharge from Watershed H3 is 9.97 cfs. Check capacity of outlet from CB153 to carry discharge.

Outlet pipe capacity is less than the peak discharge. Therefore, outlet pipe capacity controls the discharge from Watershed H3.

000473

Watershed H4:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.13 ac, A_m = 0.0002 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 25 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.002 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.02 hr

Time of concentration,	T_t = 0.02 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 0.60 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H4 will drain to an existing catch basin CB66. Check capacity of outlet pipe from CB66 using *FlowMaster*. According to the following *FlowMaster* calculations, outlet pipe capacity from CB66 is greater than the peak discharge from Watershed H4.

000474

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Area 4A - capacity of outlet from CB66
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB66
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.035000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	4.10	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.81	ft
Percent Full	100.00	
Critical Slope	0.030673	ft/ft
Velocity	7.51	ft/s
Velocity Head	0.88	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	4.41	cfs
Full Flow Capacity	4.10	cfs
Full Flow Slope	0.035000	ft/ft

Notes:

Watershed H4 drains into CB66. Peak discharge from Watershed H4 is 0.60 cfs. Check capacity of outlet from CB66 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

000475

Date: 03/31/00
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Watershed H5:

Cover description,	combination gravel and concrete pad
Curve number,	CN = 90
Area,	A = 0.13 ac, A_m = 0.0002 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 25 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.002 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.02 hr
Time of concentration,	T_t = 0.02 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 0.60 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H5 will drain to existing catch basin CB20. Add discharge from Watersheds H3 and H4 to discharge from Watershed H5 to check outlet pipe capacity from CB20 using *FlowMaster*. According to the following *FlowMaster* calculations, the capacity of the outlet from CB20 is greater than the peak discharge from Watersheds H3 through H5.

Area 4A - capacity of outlet from CB20
Worksheet for Circular Channel

2888

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB20
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.002000	ft/ft
Diameter	30.00	in

Results		
Depth	2.50	ft
Discharge	18.34	cfs
Flow Area	4.91	ft²
Wetted Perimeter	7.85	ft
Top Width	0.00	ft
Critical Depth	1.45	ft
Percent Full	100.00	
Critical Slope	0.004910	ft/ft
Velocity	3.74	ft/s
Velocity Head	0.22	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	19.73	cfs
Full Flow Capacity	18.34	cfs
Full Flow Slope	0.002000	ft/ft

Notes:

Watershed H5 drains into CB20. The outlet pipe from CB20 also carries discharge from Watersheds H3 and H4. Peak discharges from; peak discharge from Watershed H3 is 4.36 cfs, peak discharge from Watershed H4 is 0.60 cfs, and peak discharge from Watershed H5 is 0.60 cfs. Check capacity of outlet from CB20 to carry discharge.

Outlet pipe discharge is greater than the peak discharge.

000477

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Watershed H6:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.13 ac, A_m = 0.0002 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 90 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.005 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 0.60 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H6 will drain to existing catch basin CB21. Check capacity of outlet pipe from CB21 using *FlowMaster*. According to the following *FlowMaster* calculations, outlet pipe capacity from CB21 is greater than the peak discharge from Watershed H6.

Area 4A - capacity of outlet from CB21
Worksheet for Circular Channel

2888

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB21
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.010000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	2.19	cfs
Flow Area	0.55	ft²
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.66	ft
Percent Full	100.00	
Critical Slope	0.010604	ft/ft
Velocity	4.02	ft/s
Velocity Head	0.25	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	2.36	cfs
Full Flow Capacity	2.19	cfs
Full Flow Slope	0.010000	ft/ft

Notes:

Watershed H6 drains into CB21. Peak discharge from Watershed H6 is 0.60 cfs. Check capacity of outlet from CB21 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

000479

Watershed H7:

Cover description,	gravel
Curve number,	CN = 90
Area,	A = 0.20 ac, A_m = 0.0003 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 100 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.003 ft/ft
Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$	T_t = 0.04 hr
Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 0.91 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H7 will drain to existing catch basin CB23. Check capacity of outlet pipe from CB23 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet pipe capacity from CB23 is greater than the peak discharge from Watershed H7.

Area 4A - capacity of outlet from CB23
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from CB23
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.060000	ft/ft
Diameter	10.00	in

Results		
Depth	0.83	ft
Discharge	5.37	cfs
Flow Area	0.55	ft^2
Wetted Perimeter	2.62	ft
Top Width	0.00	ft
Critical Depth	0.82	ft
Percent Full	100.00	
Critical Slope	0.054916	ft/ft
Velocity	9.84	ft/s
Velocity Head	1.50	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	5.77	cfs
Full Flow Capacity	5.37	cfs
Full Flow Slope	0.060000	ft/ft

Notes:

Watershed H7 drains into CB23. Peak discharge from Watershed H7 is 0.91 cfs. Check capacity of outlet from CB23 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

Watershed H8:

Cover description,	combination gravel and concrete pad
Curve number,	CN = 90
Area,	A = 1.60 ac, A_m = 0.0025 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	gravel (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 150 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.003 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.06 hr

Time of concentration,	T_t = 0.06 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.55 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H8 will drain to existing manhole MH20. Add discharge from Watersheds H3 through H7 to discharge from Watershed H8 to check capacity of outlet pipe from MH20 using *FlowMaster*. According to the following *FlowMaster* calculations, the outlet capacity from MH20 is greater than the combined peak discharge from Watersheds H3 through H8 of 14.62 cfs.

000482

Area 4A - capacity of outlet from MH20
Worksheet for Circular Channel

Project Description	
Project File	p:\35\flowmaster files\area4a^1.fm2
Worksheet	Check capacity of outlet from MH20
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.010000	ft/ft
Diameter	36.00	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.07	ft^2
Wetted Perimeter	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.00	
Critical Slope	0.009116	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energy	FULL	ft
Froude Number	FULL	
Maximum Discharge	71.74	cfs
Full Flow Capacity	66.69	cfs
Full Flow Slope	0.010000	ft/ft

Notes:

Watershed H8 drains into MH19. The outlet pipe from MH19 also carries discharge from Watersheds H3, H4, H5, H6 and H7. Peak discharges from Watershed H3 is limited to 4.36 cfs; peak discharge from Watershed H4 is 0.60 cfs; peak discharge from Watershed H5 is 0.60 cfs; peak discharge from Watershed H6 is 0.60 cfs; peak discharge from Watershed H7 is 0.91 cfs; peak discharge from Watershed H8 is 7.55 cfs. Check capacity of outlet from MH20 to carry discharge.

Outlet pipe capacity is greater than the peak discharge.

APPENDIX F

HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 4A FINAL EXCAVATION

Calculation/Document Title

Total No. of pages: 11

Department:	Civil	Originated By:	N. Roberts	Date:	01/11/00
Calculation No.	C-4	Checked By:	M. Jerald	Date:	01/22/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title Soil and Disposal Facility Project – Areas 3A/4A

Subject: Surface Water Management Plan for the Remediation of Areas 3A and 4A
Hydrologic and Hydraulic Calculations for Area 4A Final Excavation

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Registration Stamp

Signature:_____

Number:_____

APPENDIX F – HYDROLOGIC AND HYDRAULIC CALCULATIONS FOR AREA 4A FINAL EXCAVATION

(Refer to Figure A-4 in Appendix A for watershed key map)

Watershed A:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 2.07 ac, A_m = 0.0032 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 250 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.024 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration,	T_t = 0.04 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 9.66 cfs (where $q_p = q_u A_m Q F_p$)

Watershed A drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.71 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 55 gpm.

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Watershed B:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 2.81 ac, A_m = 0.0044 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 280 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.032 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 13.29 cfs (where $q_p = q_u A_m Q F_p$)

Watershed B drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.96 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 75 gpm.

Watershed C:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 0.74 ac, A_m = 0.0012 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 250 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 3.62 cfs (where $q_p = q_u A_m Q F_p$)

Watershed C drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.25 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 20 gpm.

2888

Watershed D:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 3.64 ac, A_m = 0.0057 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 300 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.06 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration, T_t = 0.03 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 17.21 cfs (where $q_p = q_u A_m Q F_p$)

Watershed D drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 1.24 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 95 gpm.

Watershed E:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.66 ac, A_m = 0.0026 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 220 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.03 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.85 cfs (where $q_p = q_u A_m Q F_p$)

Watershed E drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.57 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 45 gpm.

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Watershed F:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.67 ac, A_m = 0.0026 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)

Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 60 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft

Compute $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.01 hr

Surface description,	unpaved (bare soil)
Flow length,	L = 350 ft
Watercourse slope,	s = 0.03 ft/ft
Average velocity,	V = 2.8 fps (Figure 3-1, *TR-55*)

Compute $T_t = \dfrac{L}{3600\ V}$ T_t = 0.03 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 7.85 cfs (where $q_p = q_u A_m Q F_p$)

Watershed F drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.57 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 45 gpm.

000491

Watershed G:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 1.89 ac, A_m = 0.0030 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 150 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.04 hr

Time of concentration, T_t = 0.04 hr (use minimum value of 0.1 hr)

Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 9.06 cfs (where $q_p = q_u A_m Q F_p$)

Watershed G drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 0.65 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 50 gpm.

000492

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Watershed H:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 3.84 ac, A_m = 0.0060 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 100 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.01 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.03 hr

Time of concentration,	T_t = 0.03 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 18.12 cfs (where $q_p = q_u A_m Q F_p$)

Watershed H drains to a sump at the bottom of the excavation. Size adequate pump to carry discharge to the sediment trap. Compute volume of runoff as follows:

Volume, $V = AP_{10}$ V = 1.31 ac-ft

Assuming maximum 3-day pump down period, pump rate will be 100 gpm.

Watershed 11:

Cover description,	bare soil
Curve number,	CN = 90
Area,	A = 3.96 ac, A_m = 0.0062 mi^2
10-yr., 24-hr. storm,	P_{10} = 4.1 in
Runoff,	Q = 3.02 in (Table 2-1, *TR-55*)
Surface description,	bare soil (overland flow)
Manning's coefficient,	n = 0.011 (Table 3-1, *TR-55*)
Flow length,	L = 240 ft
2-yr., 24-hr. storm,	P_2 = 3.0 in
Land slope,	s = 0.02 ft/ft

Compute $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}\, s^{0.4}}$ T_t = 0.07 hr

Time of concentration,	T_t = 0.07 hr (use minimum value of 0.1 hr)
Initial abstraction,	I_a = 0.222 (Table 4-1, *TR-55*)
Compute I_a/P_{10},	I_a/P_{10} = 0.05
Unit peak discharge,	q_u = 1000 csm/in (Exhibit 4-II, *TR-55*)
Pond/swamp factor,	F_p = 1
Peak discharge,	q_p = 18.72 cfs (where $q_p = q_u A_m Q F_p$)

During remediation of Area 4A, the excavation in Watershed 11 of Area 3A will be slightly enlarged. Based on very small increase in drainage area due to Area 4A remediation, pump sized to carry discharge from Watershed 11 in Area 3A is adequate.

Precertification Buffer Area:

2888

Use Rational Method (Q = ciA) to determine runoff from drainage areas within the precertification buffer areas of Area 3A and 4A. As shown on the watershed key map for Area 3A (Figure A-2 of Appendix A) and watershed key map for Area 4A (Figure A-4 of Appendix A), individual drainage areas within the precertification buffer areas varies in size from 0.1 to 0.9 acres. For the maximum drainage area, the peak discharge is 0.17 cfs (75 gpm).

APPENDIX G

PUMP DATA
FOR AREA 4A FINAL EXCAVATION

Date: 03/31/00
Rev.: J

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-111	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed A

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	55 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 #/in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

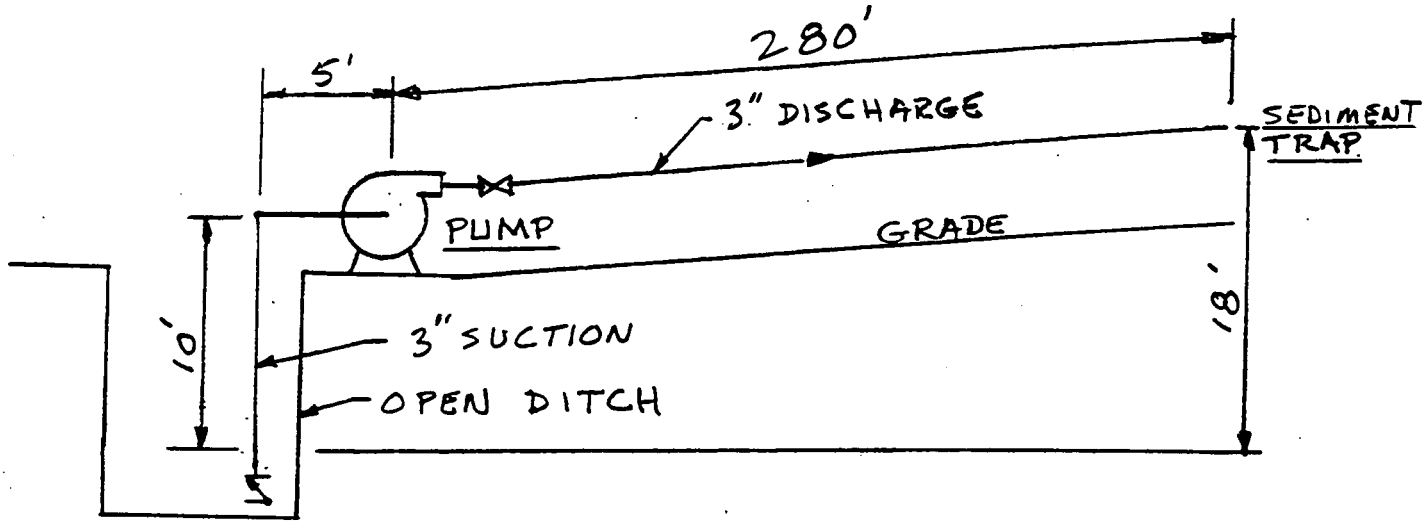
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-111

Checked by [illegible]



LOCKWOOD GREENE

2888

Date 1-11-00

Sheet 3 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject Pump P-111

Checked by

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 55 GPM

2. EQUIV. LGT. OF VALVES + FTGS
1 - 90° ELL = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.
15' + 29.59' = 44.59'

4. HD LOSS/100' = .97 (VEL. = 2.65 FT/SEC)

$\frac{44.59}{100} \times .97 = .43'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-111

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .43$$

$$= 22.27'$$

LOCKWOOD GREENE

2888

Date 1-11-00

Sheet 5 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JEP

Subject PUMP P-111

Checked by NLP

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 280'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1- GATE = 2.04
3- 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

280' + 14.31' = 294.31'

4. HD LOSS /100' = .97

$\frac{294.31}{100} \times .97 = 2.85'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-11-00

Sheet 6 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject PUMP P-111

Checked by [illegible]

PUMP REQUIREMENT

SUCTION LOSSES = .43'
DISCHARGE LOSSES = 2.85'
STATIC HEAD = 18'

21.28'

ADD 20% FOR FIELD ROUTING OF PIPE

21.28' x .20 = 4.26'

TOTAL HEAD REQ'D

21.28' + 4.26' = 25.54' OR 26'

CONCLUSION

USE PUMP CAPABLE OF 55 GPM WITH 26' HEAD AND NPSHR OF 22.27' OR LESS.

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-112	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed B					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	75 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 # /in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

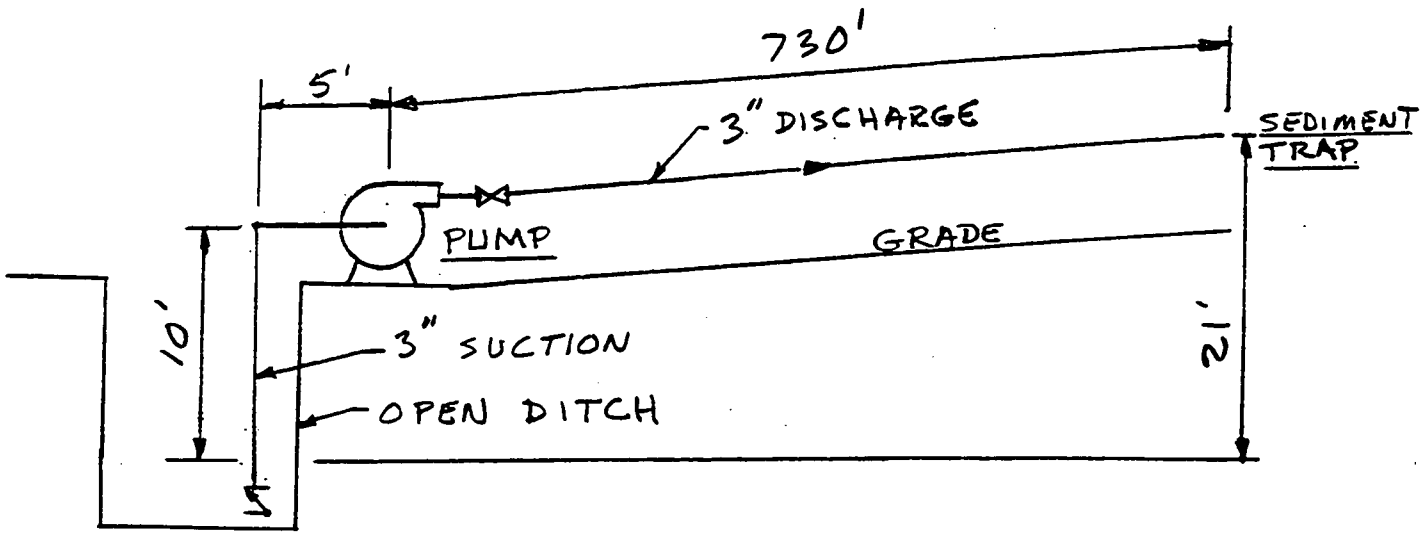
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-112

Checked by



2888

LOCKWOOD GREENE

Date 12-11-00

Sheet 3 of 6

Computed by JER

Checked by MR

Job Name FLUOR Fernald

Job Number 008919.01

Subject PUMP P-112

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 75 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.

15' + 29.59' = 44.59'

4. HD LOSS/100' = 1.67 (VEL. = 3.62 FT/SEC)

$\frac{44.59'}{100} \times 1.67 = .74'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-112

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .74$$

$$= 21.96'$$

LOCKWOOD GREENE
ENGINEERS

Date 1-11-00
Sheet 5 of 6
Computed by JEK
Checked by RDP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-112

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 730'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS

730' + 14.31' = 744.31'

4. HD LOSS/100' = 1.67

$\frac{744.31'}{100} \times 1.67 = 12.43'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-11-00
Sheet 6 of 6
Computed by ZCR
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-112

PUMP REQUIREMENT

SUCTION LOSSES = .74'
DISCHARGE LOSSES = 12.43
STATIC HEAD = 21'

34.17'

ADD 20% FOR FIELD ROUTING OF PIPE

34.17' x .20 = 6.83'

TOTAL HEAD REQ'D

34.17' + 6.83' = 41'

CONCLUSION

USE PUMP CAPABLE OF 75 GPM WITH 41' HEAD AND NPSHR OF 21.96' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-113	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed C

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	20 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 #/in2 (.25611 x 2.31= .59′)

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

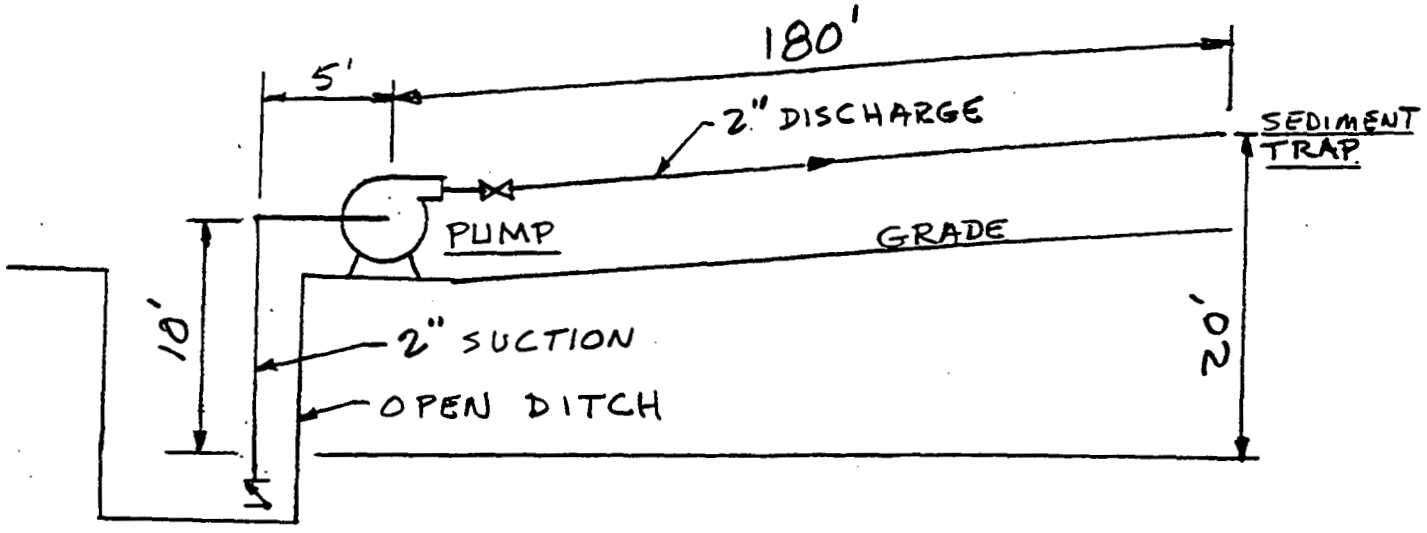
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-113

Checked by



2888

LOCKWOOD GREENE
ENGINEERS CONSTRUCTORS

Date 1-11-00
Sheet 3 of 6
Computed by JER
Checked by RAP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-113

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
2" PIPE, 20 GPM

2. EQUIV. LGT. OF VALVES + FTGS

1 - 90° ELL = 2.76
1 - FOOT VALVE (CHECK) = 17.2
19.96

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.

15' + 19.96' = 34.96'

4. HD LOSS/100' = 1.05 (VEL = 2.13 FT/SEC)

$\frac{34.96}{100} \times 1.05 = .37'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-113

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .37$$

$$= 22.33'$$

000512

LOCKWOOD GREENE
TECHNOLOGIES

Date 1-28-88
Sheet 5 of 6
Computed by Jen
Checked by RLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-113

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 180'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1- GATE = 1.38
3- 90° ELLS = 8.28
9.66

3. EQUIV. LGT OF PIPE + FTGS
180' + 9.66' = 189.66'

4. HD LOSS/100' = 1.05

$\frac{189.66}{100} \times 1.05 = 1.99$ FRICT. LOSS

LOCKWOOD GREENE
TECHNOLOGIES

Date 1-11-00
Sheet 6 of 6
Computed by LR
Checked by NLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-113

PUMP REQUIREMENT

SUCTION LOSSES = .37'
DISCHARGE LOSSES = 1.99
STATIC HEAD = 20'
22.36'

ADD 20% FOR FIELD ROUTING OF PIPE

22.36 X .20 = 4.47'

TOTAL HEAD REQ'D

22.36' + 4.47' = 26.83' OR 27'

CONCLUSION

USE PUMP CAPABLE OF 20 GPM WITH 27' HEAD AND NPSHR OF 22.33' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-114	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed D					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	95 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 #/in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

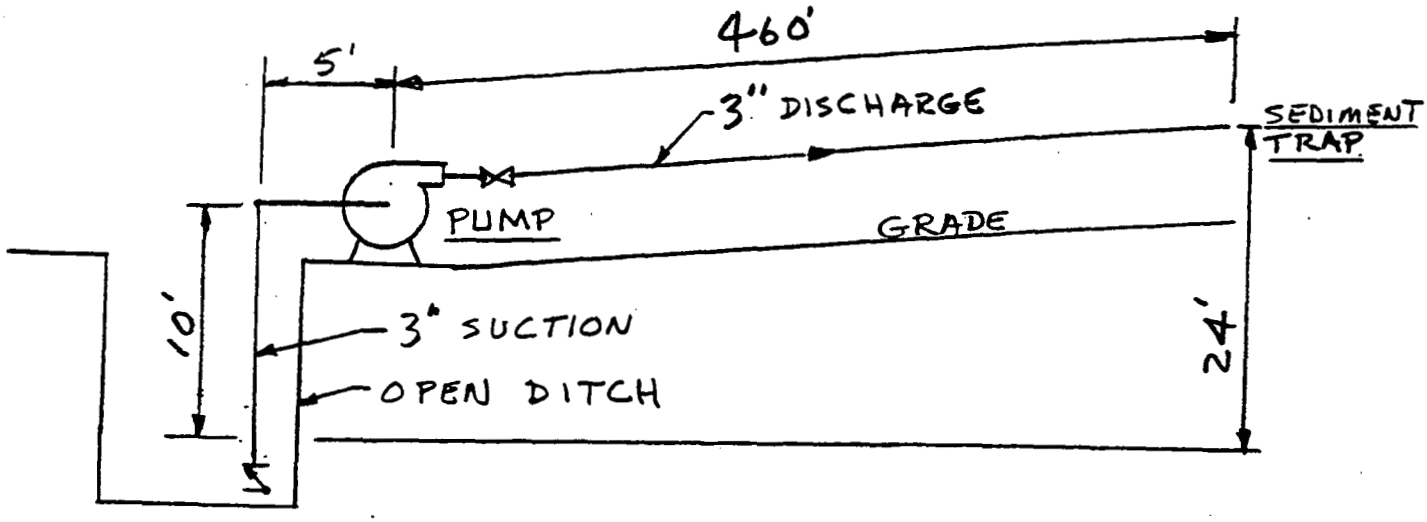
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-114

Checked by



LOCKWOOD GREENE
TECHNOLOGIES

Date 1-12-00
Sheet 3 of 6
Computed by KR
Checked by RJP

Job Name FLUOR Fernald
Job Number 008919.01
Subject Pump P-114

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 95 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL. = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT. OF PIPE + FTGS

15' + 29.59' = 44.59

4. HD LOSS/100' = 2.54 (VEL. 4.58 FT/SEC)

$\frac{44.59'}{100} \times 2.54 = 1.13'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-114

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.13$$

$$= 21.57'$$

000518

LOCKWOOD GREENE
TECHNOLOGIES

2888

Date 1-12-00
Sheet 5 of 6
Computed by [illegible]
Checked by [illegible]

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-114

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 460'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS

1 - GATE = 2.04
3 - 90° ELL = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

460' + 14.31' = 474.31'

4. HD LOSS /100' = 2.54

$\frac{474.31}{100} \times 2.54 = 12.05'$ FRICT. LOSS

LOCKWOOD GREENE
ENGINEERS

Date 1-12-00
Sheet 6 of 6
Computed by LR
Checked by NP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-101

PUMP REQUIREMENT

SUCTION LOSSES = 1.13'
DISCHARGE LOSSES = 12.05'
STATIC HEAD = 24'
37.18'

ADD 20% FOR FIELD ROUTING OF PIPE

37.18' x .20 = 7.44'

TOTAL HEAD REQ'D

37.18' + 7.44' = 44.62' OR 45'

CONCLUSION

USE PUMP CAPABLE OF 95 GPM WITH 45' HEAD AND NPSHR OF 21.57 OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-115	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed E					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	45 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 #/in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics - General reference
Friction losses
Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

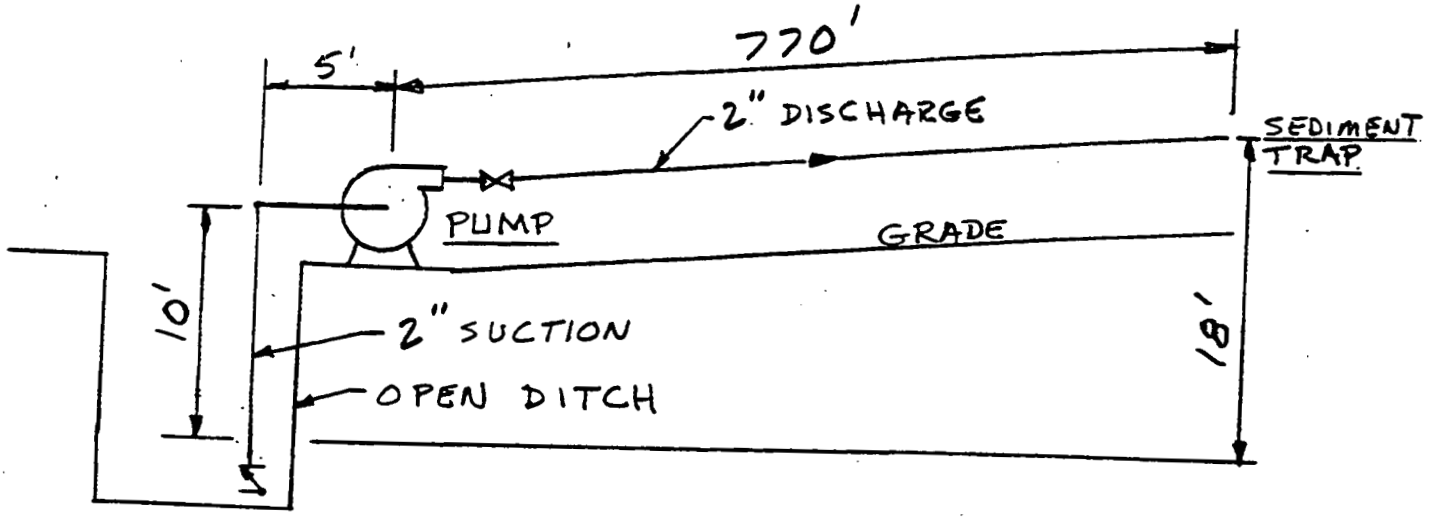
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-115

Checked by MAP



LOCKWOOD GREENE
ENGINEERS

Date 7-12-00 2888
Sheet 3 of 6
Computed by JER
Checked by MP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-115

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
2" PIPE, 45 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL = 2.76
1 - FOOT VALVE (CHECK) = 17.2
19.96

3. TOTAL EQUIV. LGT. OF PIPE + FTGS.

15' + 19.96' = 34.96'

4. HD LOSS/100' = 4.42 (VEL. 4.79 FT/SEC)

$\frac{34.96}{100} \times 4.42 = 1.55'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by

Subject NPSH AVAILABLE - P-115

Checked by

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.55$$

$$= 21.15'$$

LOCKWOOD GREENE

2888

Date 1-12-00

Sheet 5 of 6

Job Name FDF

Job Number 008919.01

Computed by JCR

Subject PUMP P-115

Checked by MLP

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 770'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 1.38
3 - 90° ELS = 8.28
9.66'

3. EQUIV. LGT. OF PIPE + FTGS.

770' + 9.66 = 779.66'

4. HD LOSS /100' = 4.42

$\frac{779.66'}{100} \times 4.42 = 34.46'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-12-00

Sheet 6 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by JER

Subject PUMP P-115

Checked by NKP

PUMP REQUIREMENT

SUCTION LOSSES = 1.55'
DISCHARGE LOSSES = 34.46'
STATIC HEAD = 18'
54.01'

ADD 20% FOR FIELD ROUTING OF PIPE

54.01' X .20 = 10.8'

TOTAL HEAD REQ'D

54.01' + 10.8' = 64.81' OR 65'

CONCLUSION

USE PUMP CAPABLE OF 45 GPM WITH 65' HEAD AND NPSHR OF 21.15' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-116	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed F

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period,

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	45 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 #/in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

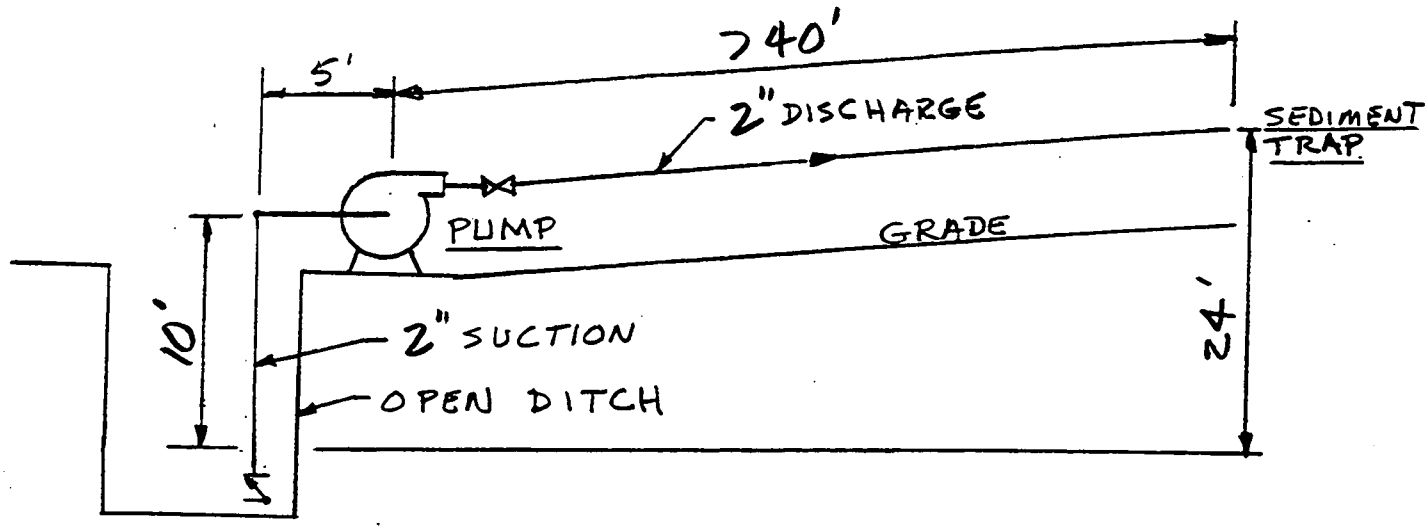
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCR

Subject DEWATERING PUMP P-116

Checked by RLP



LOCKWOOD GREENE
ENGINEERS CONSTRUCTORS

Date 1-12-00
Sheet 3 of 6
Computed by JEP
Checked by RKP

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-116

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
2" PIPE, 45 GPM

2. EQUIV. LGT. OF VALVES + FITTINGS

1 - 90° ELL = 2.76
1 - FOOT VALVE (CHECK) = 17.2
19.96'

3. TOTAL EQUIV. LGT OF PIPE + FTGS.

15' + 19.96' = 34.96'

4. HD LOSS /100' = 4.42 (VEL. = 4.79 FT/SEC)

$\frac{34.96}{100} \times 4.42 = 1.55'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-116

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.55$$

$$= 21.15'$$

LOCKWOOD GREENE
ENGINEERS

Date 1-12-00
Sheet 5 of 6
Computed by JCK
Checked by DAP

Job Name FLUOR Fernald
Job Number C0089.19
Subject PUMP P-116

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 740'
2" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 1.38
3 - 90° ELLS = 8.28
9.66'

3. EQUIV. LGT. OF PIPE + FTGS.

740' + 9.66' = 749.66

4. HD LOSS /100' = 4.42

$\frac{749.66}{100} \times 4.42 = 33.13'$ FRICT LOSS

LOCKWOOD GREENE
ENGINEERS

Date 1-12-00
Sheet 6 of 6
Computed by JCK
Checked by TWP

Job Name FLUOR Fernald
Job Number 0089.19
Subject PUMP P-116

PUMP REQUIREMENT

SUCTION LOSSES = 1.55
DISCHARGE LOSSES = 33.13
STATIC HEAD = 24'
58.68'

ADD 20% FOR FIELD ROUTING OF PIPE

58.68' X .20 = 11.74'

TOTAL HEAD REQ'D

58.68' + 11.74' = 70.42 OR 70'

CONCLUSION

USE PUMP CAPABLE OF 45 GPM WITH 70' HEAD AND NPSHR OF 21.15' OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-117	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump – Watershed G					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water	
Flow rate	-	50 gpm	
Pumping temperature	-	60 Degrees F	
Viscosity	-	1.12	
Specific gravity	-	.9991	
Vapor pressure	-	.25611 # /in2	(.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

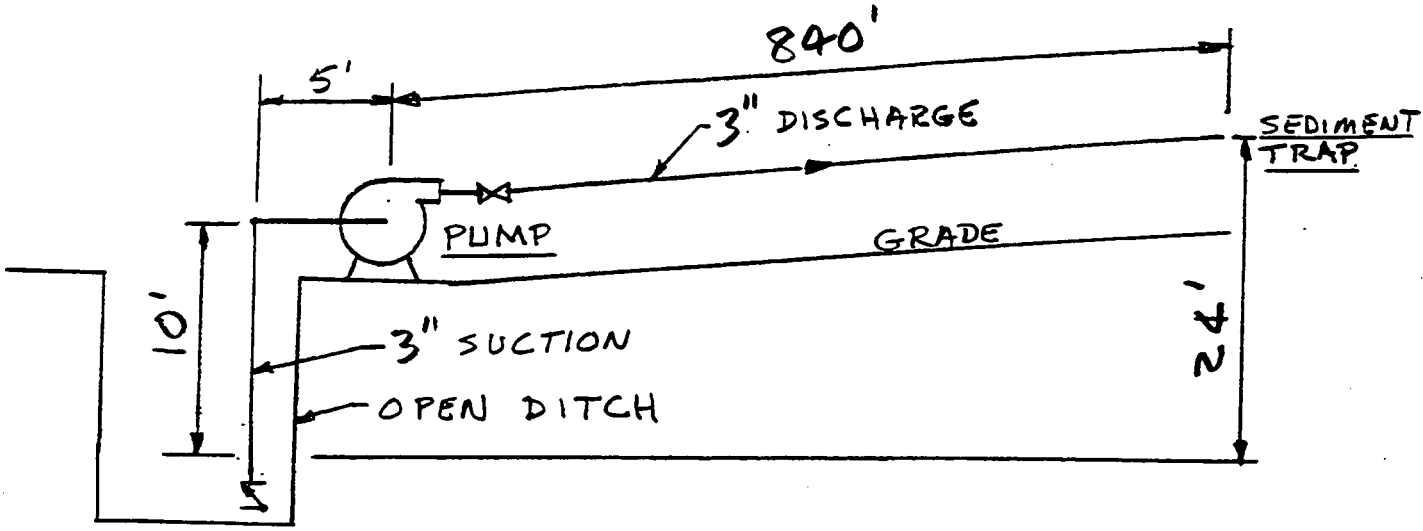
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCT

Subject DEWATERING PUMP P-117

Checked by MJ



LOCKWOOD GREENE
ENGINEERS

Date 1-13-00
Sheet 3 of 6
Computed by JCR
Checked by DLP

Job Name FLUOR Fernald
Job Number 008919.01
Subject Pump P-117

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 50 GPM

2. EQUIV. LGT. OF VALVES + FTGS.

1 - 90° ELL. = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59

3. TOTAL EQUIV. LGT. OF PIPE + FTGS

15' + 29.59' = 44.59'

4. HD LOSS/100' = .81 (VEL. = 2.41 FT/SEC)

$\frac{44.59}{100} \times .81 = .36'$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-117

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .36$$

$$= 22.34$$

LOCKWOOD GREENE
ENGINEERS

Date 1-13-00
Sheet 5 of 6
Computed by JCR
Checked by TLP

Job Name FLUOR Fernald
Job Number 0089A.01
Subject PUMP P-117

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 840'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS

840' + 14.31' = 854.31'

4. HD LOSS/100' = .81

$\frac{854.31'}{100} \times .81 = 6.92$ FRICT. LOSS

LOCKWOOD GREENE
TECHNOLOGIES

Date 1 - 13 - 00
Sheet 6 of 6
Computed by JRR
Checked by

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-117

PUMP REQUIREMENT

SUCTION LOSSES = .36'
DISCHARGE LOSSES = 6.92'
STATIC HEAD = 24'
31.28'

ADD 20% FOR FIELD ROUTING OF PIPE

31.28 X .20 = 6.26'

TOTAL HEAD REQ'D

31.28' + 6.26' = 37.54' OR 38'

CONCLUSION

USE PUMP CAPABLE OF 50 GPM WITH 38' HEAD AND NPSHR OF 22.34 OR LESS

Calculation/Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	1/8/00
Calculation No.	P-118	Checked By:	R.S. Powell	Date:	1/17/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	

Project Title FLUOR Fernald

Subject: Dewatering Pump – Watershed H

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it to the sediment trap.

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	100 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 #/in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

Sheet 2 of 6

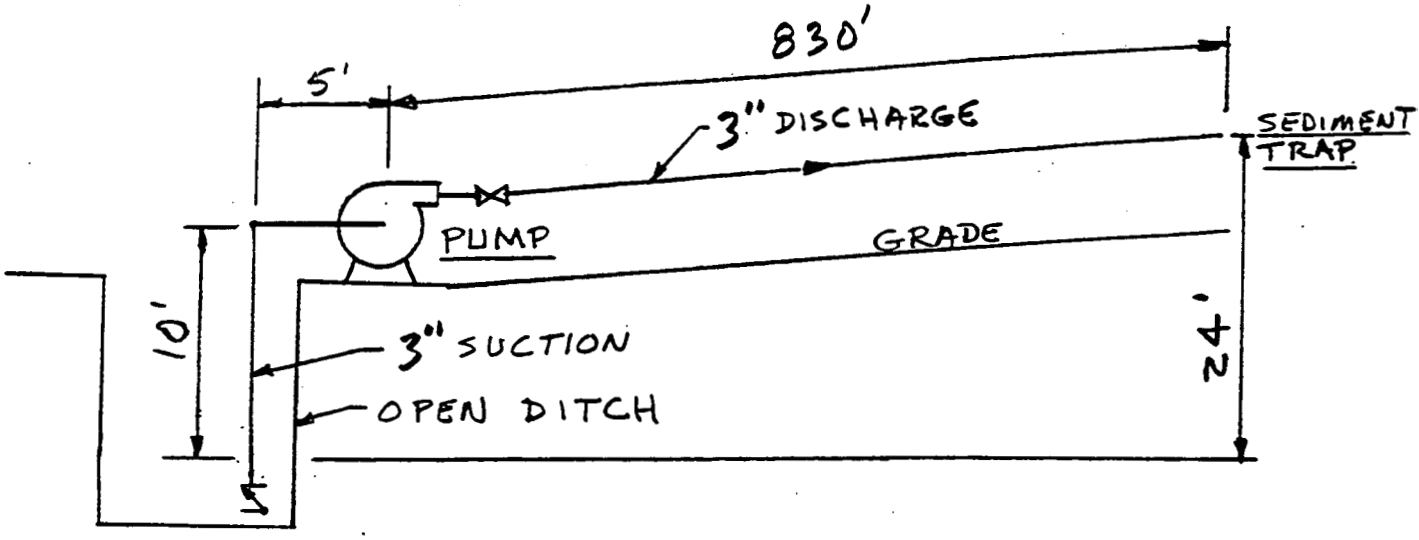
Job Name FLUOR Fernald

Job Number 008919.01

Computed by JCP

Subject DEWATERING PUMP P-118

Checked by BSP by RR



LOCKWOOD GREENE
ENGINEERS

Date 1-13-00
Sheet 3 of 6
Computed by JeR
Checked by RSP & RJR

Job Name FLUOR Fernald
Job Number 058919.01
Subject PUMP P-118

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 100 GPM

2. EQUIV. LGT. OF VALVES + FTGS.
1 - 90° ELL = 4.09
1 - FOOT VALVE (CHECK) = 25.5
29.59'

3. TOTAL EQUIV. LGT OF PIPE + FTGS.
15' + 29.59' = 44.59'

4. HD LOSS / 100' = 2.78 (VEL. = 4.82 FT/SEC)
$\frac{44.59}{100} \times 2.78 = 1.24'$ FRICT. LOSS

LOCKWOOD GREENE

Date 1-8-00

Sheet 4 of 6

Job Name FLUOR Fernald

Job Number 008919.01

Computed by [illegible]

Subject NPSH AVAILABLE - P-118

Checked by [illegible]

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 FT.

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - 1.24$$

$$= 21.46'$$

LOCKWOOD GREENE
ENGINEERS

Date 1-13-00
Sheet 5 of 6
Computed by JCR
Checked by RSP RJR

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-118

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 830'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES + FTGS.

1 - GATE = 2.04
3 - 90° ELS = 12.27
14.31

3. EQUIV. LGT. OF PIPE + FTGS.

830' + 14.31' = 844.31'

4. HD LOSS/100' = 2.78

$\frac{844.31}{100} \times 2.78 = 23.47'$ FRICT. LOSS

LOCKWOOD GREENE
ENGINEERS

Date 1-13-00
Sheet 6 of 6
Computed by SCR
Checked by RSP by RJR

Job Name FLUOR Fernald
Job Number 008919.01
Subject PUMP P-118

PUMP REQUIREMENT

SUCTION LOSSES = 1.24'
DISCHARGE LOSSES = 23.47'
STATIC HEAD = 24'
48.71'

ADD 20% FOR FIELD ROUTING OF PIPE

48.71 x .20 = 9.74'

TOTAL HEAD REQ'D

48.71' + 9.74' = 58.45' OR 58'

CONCLUSION

USE PUMP CAPABLE OF 100 GPM WITH 58' HEAD AND NPSHR OF 21.46' OR LESS

Calculation/ Document Title

Total No. of pages: 6

Department:	Mechanical	Originated By:	Jim Reynolds	Date:	3/15/00
Calculation No.	P-119	Checked By:	Randy J. Rodeans	Date:	3/20/00
Area:		Revised:		Date:	
Project No.	008919.01	Approved By:		Date:	
Project Title FLUOR Fernald					
Subject: Dewatering Pump					

Record of Revisions

NO.	REASON FOR REVISION	DATE	ORIG.	INDEPENDENT REVIEWER	APPROVER

Purpose:

A pump is required to remove the storm water from the sump & transfer it .

Given Information:

1. The flow rate is derived based on a 3-day pump down period.

Assumptions:

Fluid being pumped	-	water
Flow rate	-	75 gpm
Pumping temperature	-	60 Degrees F
Viscosity	-	1.12
Specific gravity	-	.9991
Vapor pressure	-	.25611 # /in2 (.25611 x 2.31= .59')

References:

Cameron Hydraulics	-	General reference
		Friction losses
		Pipe sizes

Registration Stamp

Signature:_____

Number:_____

LOCKWOOD GREENE

Date 1-9-00

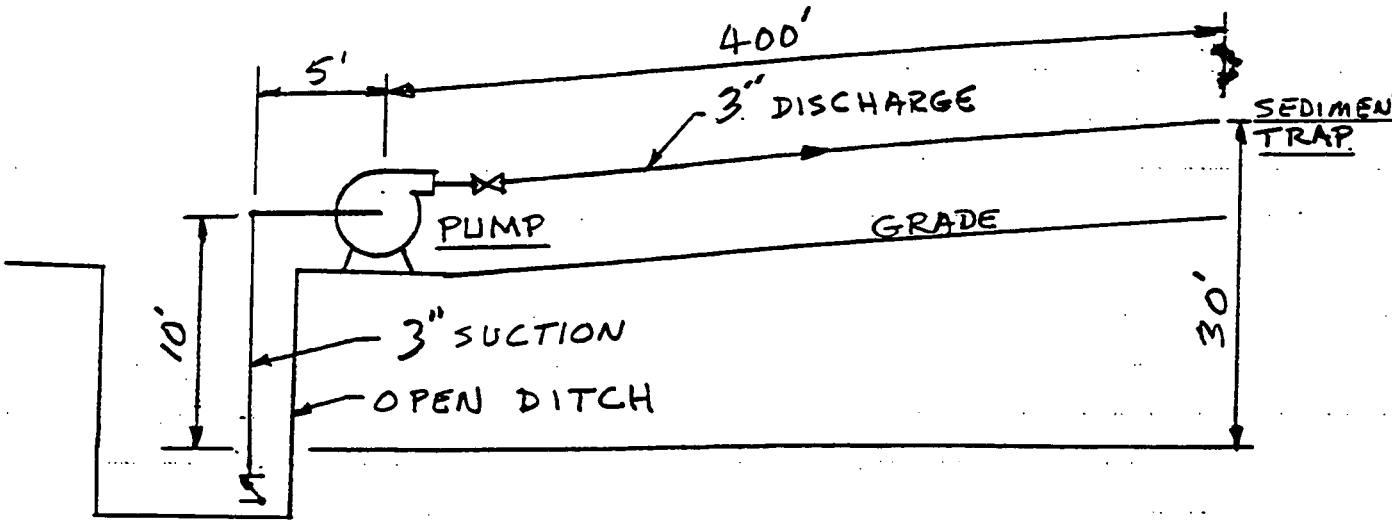
Sheet 2 of 6

Job Name FLUOR FERNALD Job Number 008919.01

Computed by J[illegible]

Subject DEWATERING PUMP P-119

Checked by [illegible]



LOCKWOOD GREENE

Date 3-15-00
Sheet 3 of 6
Computed by [illegible]
Checked by [illegible]

Job Name FLUOR FERNALD Job Number 008919.01
Subject PUMP P-119

2888

CALCULATIONS

SUCTION LOSSES

1. PIPE LENGTH = 15'
3" PIPE, 75 GPM

2. EQUIV. LGT. of VALVES & FTGS.
1 - 90° ELL = 4.09
1 - FOOT VALVE/CHECK = 25.59
29.59

3. TOTAL EQUIV. LGT. of PIPE & FTGS.

15' + 29.59' = 44.59'

4. HD LOSS/100' = 1.67 (VEL. = 3.62 FT/SEC)

$\frac{44.59}{100} \times 1.67 = .74$ FRICTION LOSS

LOCKWOOD GREENE

Date 1-8-80
Sheet 4 of 6
Computed by
Checked by

Job Name FLUOR FERNALD Job Number 008919.01
Subject NPSH AVAILABLE - P-119

$NPSH = h_a - h_{vpa} - h_{st} - h_{fs}$

h_a = ABSOLUTE PRESS. (IN FT. OF LIQUID) - APPROX. ELEV = 555 ft

h_{vpa} = HEAD IN FT CORRESPONDING TO THE VAPOR PRESSURE OF THE LIQUID AT THE TEMP. BEING PUMPED

h_{st} - STATIC HEIGHT IN FT.

h_{fs} - ALL SUCTION LINE LOSSES

SUCTION PRESSURE

$$\text{LIQUID HEAD IN FEET} = \frac{PSI \times 2.31}{SPGR}$$

$$= \frac{14.4 \times 2.31}{.9991}$$

$$= 33.29 \text{ FT ABS}$$

$$NPSHA = h_a - h_{vpa} - h_{st} - h_{fs}$$

$$= 33.29 - .59 - 10 - .74$$

$$= 21.96'$$

000548

LOCKWOOD GREENE

Date 3-15-00

Sheet 5 of 6

Job Name FLUOR FERNALD

Job Number 008919.01

Computed by JLR

Subject PUMP P-119

Checked by [illegible]

2888

DISCHARGE HEAD LOSSES

1. PIPE LENGTH = 400'
3" PLASTIC PIPE

2. EQUIV. LGT. OF VALVES & FTGS.

1 - GATE = 2.04
3 - 90° ELLS = 12.27
14.31

3. EQUIV. LGT. OF PIPE & FTGS.

400' + 14.31' = 414.31'

4. HD LOSS/100' = 1.67

$\frac{414.31}{100} \times 1.67 = 6.92'$ FRICT. LOSS

000549

LOCKWOOD GREENE

Date 3-16-00
Sheet 6 of 6
Job Name FLUOR FERNALD Job Number 008919.01 Computed by JER
Subject PUMP P-119 Checked by [illegible]

PUMP REQUIREMENT

SUCTION LOSSES = .74
DISCHARGE LOSSES = 6.92
STATIC HEAD = 30'
37.66'

ADD 20% FOR FIELD ROUTING OF PIPE

37.66' X .20 = 7.53'

TOTAL HEAD REQ'D

37.66' + 7.53' = 45.19' OR 45'

CONCLUSION

USE PUMP CAPABLE OF 75 GPM WITH 45' HEAD AND NPSHR OF 21.96' OR LESS

E-2888

APPENDIX C

PREDESIGN CHARACTERIZATION DATA

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12242	A3NECOR-12242-1	1/6/98	0	1	Uranium, Total	122	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-2	1/6/98	1	2	Uranium, Total	1.51	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-4	1/6/98	3	4	Uranium, Total	1.02	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-6	1/6/98	5	6	Uranium, Total	1.15	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-8	1/6/98	7	8	Uranium, Total	1.18	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-12	1/6/98	11	12	Uranium, Total	1.88	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-16	1/6/98	15	16	Uranium, Total	1.34	ppm dry	NV	481550.68	1350425.2
12242	A3NECOR-12242-20	1/6/98	19	20	Uranium, Total	1.49	ppm dry	NV	481550.68	1350425.2
12243	A3NECOR-12243-1	1/20/98	0	0.5	Uranium, Total	15.6	ppm dry	NV	481464.12	1350579.1
12243	A3NECOR-12243-2	1/20/98	1	1.5	Uranium, Total	33	ppm dry	NV	481464.12	1350579.1
12243	A3NECOR-12243-4	1/20/98	3	3.5	Uranium, Total	1.42	ppm dry	NV	481464.12	1350579.1
12243	A3NECOR-12243-6	1/20/98	5	5.5	Uranium, Total	1.2	ppm dry	NV	481464.12	1350579.1
12243	A3NECOR-12243-8	1/20/98	7	7.5	Uranium, Total	1.34	ppm dry	NV	481464.12	1350579.1
12243	A3NECOR-12243-12	1/20/98	11.2	11.8	Uranium, Total	1.38	ppm dry	NV	481464.12	1350579.1
12243	A3NECOR-12243-16	1/20/98	15	15.5	Uranium, Total	1.26	ppm dry	NV	481464.12	1350579.1
12243A	A3NECOR-12243A-20	1/20/98	19	19.5	Uranium, Total	1.37	ppm dry	NV	481460.2	1350565.5
12243A	A3NECOR-12243A-24	1/20/98	23	23.5	Uranium, Total	2.06	ppm dry	NV	481460.2	1350565.5
12244	A3NECOR-12244-1	12/31/97	0	0.5	Uranium, Total	43.3	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-2	12/31/97	1	1.5	Uranium, Total	120	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-4	12/31/97	3	3.5	Uranium, Total	4.19	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-6	12/31/97	5	5.5	Uranium, Total	1.91	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-8	12/31/97	7	7.5	Uranium, Total	1.48	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-11	12/31/97	10.5	11	Uranium, Total	1.5	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-12	12/31/97	11.5	12	Uranium, Total	1.6	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-16	12/31/97	15	15.5	Uranium, Total	1.72	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-20	12/31/97	19	19.5	Uranium, Total	1.96	ppm dry	NV	481580	1350568
12244	A3NECOR-12244-24	12/31/97	23	23.5	Uranium, Total	1.85	ppm dry	NV	481580	1350568
12245	A3NECOR-12245-1	12/29/97	0	0.5	Uranium, Total	186	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-2	12/29/97	1	1.5	Uranium, Total	122	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-4	12/29/97	3	3.5	Uranium, Total	2.27	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-6	12/29/97	5	5.5	Uranium, Total	2.01	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-8	12/29/97	7	7.5	Uranium, Total	1.72	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-12	12/29/97	11	11.5	Uranium, Total	1.9	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-16	12/29/97	15	15.5	Uranium, Total	2.12	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-20	12/29/97	19	19.5	Uranium, Total	1.56	ppm dry	NV	481800	1350553
12245	A3NECOR-12245-24	12/29/97	23	23.5	Uranium, Total	1.66	ppm dry	NV	481800	1350553
12246	A3NECOR-12246-1	12/23/97	0.2	0.8	Uranium, Total	502	ppm dry	NV	481900.43	1350556

000552

2888

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12246	A3NECOR-12246-2	12/23/97	1	1.5	Uranium, Total	11.3	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-4	12/23/97	3	3.5	Uranium, Total	1.6	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-6	12/23/97	5.5	6	Uranium, Total	1.74	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-8	12/23/97	7	7.5	Uranium, Total	2.1	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-12	12/23/97	11.5	12	Uranium, Total	6.62	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-16	12/23/97	15	15.5	Uranium, Total	5.24	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-20	12/23/97	19	19.5	Uranium, Total	8.72	ppm dry	NV	481900.43	1350556
12246	A3NECOR-12246-24	12/23/97	23	23.5	Uranium, Total	16.2	ppm dry	NV	481900.43	1350556
12247	A3NECOR-12247-1	12/16/97	0.9	1	Uranium, Total	125	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-2	12/16/97	1	1.5	Uranium, Total	47.7	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-4	12/16/97	3	3.5	Uranium, Total	2.74	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-6	12/16/97	5	5.5	Uranium, Total	2.75	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-8	12/16/97	7	7.5	Uranium, Total	1.76	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-12	12/16/97	11	11.5	Uranium, Total	1.89	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-16	12/16/97	15	15.5	Uranium, Total	1.67	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-20	12/16/97	19	19.5	Uranium, Total	1.85	ppm dry	NV	481986.8	1350555.5
12247	A3NECOR-12247-23	12/16/97	22	22.5	Uranium, Total	2.05	ppm dry	NV	481986.8	1350555.5
12247A	A3NECOR-12247A-1	12/18/97	0.5	1	Uranium, Total	560	ppm dry	NV	481995.2	1350545.6
12248	A3NECOR-12248-1	12/17/97	0	0.5	Uranium, Total	24.3	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-2	12/17/97	1	1.5	Uranium, Total	10.8	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-4	12/17/97	3	3.5	Uranium, Total	3.68	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-6	12/17/97	5	5.5	Uranium, Total	2.84	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-8	12/17/97	7	7.5	Uranium, Total	1.98	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-12	12/17/97	11	11.5	Uranium, Total	1.6	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-16	12/17/97	15	15.5	Uranium, Total	1.73	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-20	12/17/97	19	19.5	Uranium, Total	3.39	ppm dry	NV	482169.7	1350594.6
12248	A3NECOR-12248-21	12/17/97	20	20.5	Uranium, Total	1.66	ppm dry	NV	482169.7	1350594.6
12249	A3NECOR-12249-1	12/18/97	0	0.5	Uranium, Total	26	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-2	12/18/97	1	1.5	Uranium, Total	5.29	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-4	12/18/97	3	3.5	Uranium, Total	1.74	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-6	12/18/97	5	5.5	Uranium, Total	1.64	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-8	12/18/97	7	7.5	Uranium, Total	1.91	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-12	12/18/97	11	11.5	Uranium, Total	1.81	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-16	12/18/97	15	15.5	Uranium, Total	1.88	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-20	12/18/97	19	19.5	Uranium, Total	2.16	ppm dry	NV	482163.67	1350488.7
12249	A3NECOR-12249-24	12/18/97	23	23.5	Uranium, Total	1.95	ppm dry	NV	482163.67	1350488.7
12250	A3NECOR-12250-1	12/18/97	0.5	1	Uranium, Total	182	ppm dry	NV	482028.6	1350130.3

000553

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12250	A3NECOR-12250-2	12/18/97	1	1.5	Uranium, Total	97.8	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-4	12/19/97	3	3.5	Uranium, Total	1.68	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-6	12/19/97	5	5.5	Uranium, Total	1.63	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-8	12/19/97	7	7.5	Uranium, Total	1.63	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-12	12/19/97	11	11.5	Uranium, Total	1.64	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-16	12/19/97	15	15.5	Uranium, Total	1.56	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-20	12/19/97	19	19.5	Uranium, Total	1.47	ppm dry	NV	482028.6	1350130.3
12250	A3NECOR-12250-23	12/19/97	22.17	22.67	Uranium, Total	1.65	ppm dry	NV	482028.6	1350130.3
12251	A3NECOR-12251-1	1/13/98	0.5	1	Uranium, Total	7.81	ppm dry	NV	481842.09	1350301.6
12251	A3NECOR-12251-2	1/13/98	1	1.5	Uranium, Total	178	ppm dry	NV	481842.09	1350301.6
12251	A3NECOR-12251-4	1/13/98	3	3.5	Uranium, Total	35.1	ppm dry	NV	481842.09	1350301.6
12251	A3NECOR-12251-6	1/13/98	5	5.5	Uranium, Total	27.2	ppm dry	NV	481842.09	1350301.6
12251	A3NECOR-12251-8	1/14/98	7	7.5	Uranium, Total	9.47	ppm dry	NV	481842.09	1350301.6
12251	A3NECOR-12251-12	1/14/98	11.5	12	Uranium, Total	2.81	ppm dry	NV	481842.09	1350301.6
12251	A3NECOR-12251-16	1/14/98	15	15.5	Uranium, Total	2.02	ppm dry	NV	481842.09	1350301.6
12252	A3NECOR-12252-1	1/14/98	0	0.5	Uranium, Total	258	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-2	1/14/98	1	1.5	Uranium, Total	45.4	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-4	1/14/98	3	3.5	Uranium, Total	5.7	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-6	1/14/98	5.5	6	Uranium, Total	3.41	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-8	1/14/98	7.5	8	Uranium, Total	1.42	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-12	1/14/98	11	11.5	Uranium, Total	1.07	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-16	1/14/98	15	15.5	Uranium, Total	1.1	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-20	1/14/98	19	19.5	Uranium, Total	1.06	ppm dry	NV	481761.3	1350446.4
12252	A3NECOR-12252-24	1/14/98	23	23.5	Uranium, Total	1.16	ppm dry	NV	481761.3	1350446.4
12253	A3NECOR-12253-1	1/15/98	0	0.5	Uranium, Total	89.3	ppm dry	NV	481812.2	1350475.4
12253	A3NECOR-12253-2	1/15/98	1	1.5	Uranium, Total	51.6	ppm dry	NV	481812.2	1350475.4
12253	A3NECOR-12253-4	1/15/98	3	3.5	Uranium, Total	20.7	ppm dry	NV	481812.2	1350475.4
12253	A3NECOR-12253-6	1/15/98	5	5.5	Uranium, Total	44.9	ppm dry	NV	481812.2	1350475.4
12253	A3NECOR-12253-8	1/15/98	7	7.5	Uranium, Total	1.66	ppm dry	NV	481812.2	1350475.4
12253	A3NECOR-12253-12	1/15/98	11.17	11.67	Uranium, Total	1.16	ppm dry	NV	481812.2	1350475.4
12254	A3NECOR-12254-1	1/16/98	0	0.5	Uranium, Total	596	ppm dry	NV	481769.2	1350493.4
12254	A3NECOR-12254-2	1/16/98	1	1.5	Uranium, Total	13.3	ppm dry	NV	481769.2	1350493.4
12254	A3NECOR-12254-4	1/16/98	3	3.5	Uranium, Total	1.86	ppm dry	NV	481769.2	1350493.4
12254	A3NECOR-12254-6	1/16/98	5	5.5	Uranium, Total	2.87	ppm dry	NV	481769.2	1350493.4
12254	A3NECOR-12254-8	1/16/98	7.25	7.75	Uranium, Total	1.61	ppm dry	NV	481769.2	1350493.4
12254	A3NECOR-12254-12	1/16/98	11	11.5	Uranium, Total	1.57	ppm dry	NV	481769.2	1350493.4
12255	A3NECOR-12255-1	1/13/98	0	0.5	Uranium, Total	106	ppm dry	NV	481718.5	1350408.3

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12255	A3NECOR-12255-2	1/13/98	1	1.5	Uranium, Total	28.8	ppm dry	NV	481718.5	1350408.3
12255	A3NECOR-12255-4	1/13/98	3.17	3.67	Uranium, Total	8.18	ppm dry	NV	481718.5	1350408.3
12255	A3NECOR-12255-6	1/13/98	5	5.5	Uranium, Total	1.13	ppm dry	NV	481718.5	1350408.3
12255	A3NECOR-12255-8	1/13/98	7.5	8	Uranium, Total	1.11	ppm dry	NV	481718.5	1350408.3
12255	A3NECOR-12255-12	1/13/98	11	11.5	Uranium, Total	1.05	ppm dry	NV	481718.5	1350408.3
12256	A3NECOR-12256-8	1/16/98	7	7.5	Uranium, Total	2.19	ppm dry	NV	481699.4	1350481.4
12256	A3NECOR-12256-12	1/16/98	11	11.5	Uranium, Total	1.6	ppm dry	NV	481699.4	1350481.4
12256A	A3NECOR-12256A-1	1/16/98	0	0.5	Uranium, Total	787	ppm dry	NV	481700.5	1350484.4
12256A	A3NECOR-12256A-2	1/16/98	1.17	1.58	Uranium, Total	210	ppm dry	NV	481700.5	1350484.4
12256A	A3NECOR-12256A-4	1/16/98	3	3.5	Uranium, Total	9.88	ppm dry	NV	481700.5	1350484.4
12256A	A3NECOR-12256A-6	1/16/98	5	5.5	Uranium, Total	11.9	ppm dry	NV	481700.5	1350484.4
12257	A3NECOR-12257-1	1/13/98	0	0.5	Uranium, Total	58.5	ppm dry	NV	481656.28	1350420
12257	A3NECOR-12257-2	1/13/98	1	1.5	Uranium, Total	5.61	ppm dry	NV	481656.28	1350420
12257	A3NECOR-12257-4	1/13/98	3	3.5	Uranium, Total	1.13	ppm dry	NV	481656.28	1350420
12257	A3NECOR-12257-6	1/13/98	5.17	5.67	Uranium, Total	0.973	ppm dry	NV	481656.28	1350420
12257	A3NECOR-12257-8	1/13/98	7	7.5	Uranium, Total	1.05	ppm dry	NV	481656.28	1350420
12257	A3NECOR-12257-12	1/13/98	11	11.5	Uranium, Total	1.11	ppm dry	NV	481656.28	1350420
12258	A3NECOR-12258-1	1/6/98	0	1	Uranium, Total	37.2	ppm dry	NV	481622.4	1350409.4
12258	A3NECOR-12258-2	1/6/98	1	2	Uranium, Total	14.1	ppm dry	NV	481622.4	1350409.4
12258	A3NECOR-12258-4	1/6/98	3	4	Uranium, Total	1.23	ppm dry	NV	481622.4	1350409.4
12258	A3NECOR-12258-6	1/6/98	5	6	Uranium, Total	1.8	ppm dry	NV	481622.4	1350409.4
12258	A3NECOR-12258-8	1/6/98	7	8	Uranium, Total	1.31	ppm dry	NV	481622.4	1350409.4
12258	A3NECOR-12258-12	1/6/98	11	12	Uranium, Total	1.37	ppm dry	NV	481622.4	1350409.4
12259	A3NECOR-12259-1	1/5/98	0	0.5	Uranium, Total	141	ppm dry	NV	481616.3	1350437.5
12259	A3NECOR-12259-2	1/5/98	1	1.5	Uranium, Total	49.5	ppm dry	NV	481616.3	1350437.5
12259	A3NECOR-12259-4	1/5/98	3	3.5	Uranium, Total	18.9	ppm dry	NV	481616.3	1350437.5
12259	A3NECOR-12259-6	1/5/98	5	5.5	Uranium, Total	1.5	ppm dry	NV	481616.3	1350437.5
12259	A3NECOR-12259-8	1/5/98	7	7.5	Uranium, Total	1.69	ppm dry	NV	481616.3	1350437.5
12259	A3NECOR-12259-12	1/5/98	11	11.5	Uranium, Total	7.04	ppm dry	NV	481616.3	1350437.5
12260	A3NECOR-12260-1	12/29/97	0.2	0.8	Uranium, Total	456	ppm dry	NV	481667.6	1350537.4
12260	A3NECOR-12260-2	12/29/97	1	1.5	Uranium, Total	68.7	ppm dry	NV	481667.6	1350537.4
12260	A3NECOR-12260-4	12/29/97	3.3	3.9	Uranium, Total	125	ppm dry	NV	481667.6	1350537.4
12260	A3NECOR-12260-6	12/29/97	5	5.5	Uranium, Total	1.82	ppm dry	NV	481667.6	1350537.4
12260	A3NECOR-12260-8	12/29/97	7	7.5	Uranium, Total	1.6	ppm dry	NV	481667.6	1350537.4
12260	A3NECOR-12260-12	12/29/97	11	11.5	Uranium, Total	1.65	ppm dry	NV	481667.6	1350537.4
12261	A3NECOR-12261-1	12/30/97	0	0.5	Uranium, Total	200	ppm dry	NV	481642	1350537
12261	A3NECOR-12261-2	12/30/97	1	1.5	Uranium, Total	6.25	ppm dry	NV	481642	1350537

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12261	A3NECOR-12261-4	12/30/97	3	3.5	Uranium, Total	47.3	ppm dry	NV	481642	1350537
12261	A3NECOR-12261-6	12/30/97	5	5.5	Uranium, Total	29.3	ppm dry	NV	481642	1350537
12261	A3NECOR-12261-8	12/30/97	7	7.5	Uranium, Total	1.71	ppm dry	NV	481642	1350537
12261	A3NECOR-12261-12	12/30/97	11	11.5	Uranium, Total	1.71	ppm dry	NV	481642	1350537
12262	A3NECOR-12262-1	12/30/97	0	0.5	Uranium, Total	283	ppm dry	NV	481594	1350512
12262	A3NECOR-12262-2	12/30/97	1	1.5	Uranium, Total	13.5	ppm dry	NV	481594	1350512
12262	A3NECOR-12262-4	12/30/97	3	3.5	Uranium, Total	2.49	ppm dry	NV	481594	1350512
12262	A3NECOR-12262-6	12/30/97	5	5.5	Uranium, Total	2.07	ppm dry	NV	481594	1350512
12262	A3NECOR-12262-8	12/30/97	7	7.5	Uranium, Total	1.51	ppm dry	NV	481594	1350512
12262	A3NECOR-12262-12	12/30/97	11	11.5	Uranium, Total	2.01	ppm dry	NV	481594	1350512
12263	A3NECOR-12263-1	1/15/98	0	0.5	Uranium, Total	263	ppm dry	NV	481854.6	1350488.8
12263	A3NECOR-12263-2	1/15/98	1	1.5	Uranium, Total	97.6	ppm dry	NV	481854.6	1350488.8
12263	A3NECOR-12263-4	1/15/98	3	3.5	Uranium, Total	4.44	ppm dry	NV	481854.6	1350488.8
12263	A3NECOR-12263-6	1/15/98	5.5	6	Uranium, Total	1.14	ppm dry	NV	481854.6	1350488.8
12263	A3NECOR-12263-8	1/15/98	7	7.5	Uranium, Total	1.64	ppm dry	NV	481854.6	1350488.8
12263	A3NECOR-12263-12	1/15/98	11	11.5	Uranium, Total	0.532	ppm dry	NV	481854.6	1350488.8
12392	A3-12392-2	10/23/98	0.58	1.08	Technetium-99	22.5	pCi/g dry	-	480957.36	1350104.8
12392	A3-12392-2	10/23/98	0.58	1.08	Thorium, Total	8.34	ug/g dry	-	480957.36	1350104.8
12392	A3-12392-2	10/23/98	0.58	1.08	Uranium, Total	128	ug/g dry	-	480957.36	1350104.8
12392	A3-12392-8	10/23/98	3.42	3.92	Thorium, Total	1.78	ug/g dry	-	480957.36	1350104.8
12392	A3-12392-8	10/23/98	3.42	3.92	Uranium, Total	55.9	ug/g dry	-	480957.36	1350104.8
12392	A3-12392-12	10/23/98	5.42	5.92	Thorium, Total	6.15	ug/g dry	-	480957.36	1350104.8
12392	A3-12392-12	10/23/98	5.42	5.92	Uranium, Total	162	ug/g dry	-	480957.36	1350104.8
12392	A3-12392-14	10/23/98	6.42	6.92	1,1-Dichloroethene	260	ug/kg	JN	480957.36	1350104.8
12392	A3-12392-14	10/23/98	6.42	6.92	Trichloroethene	80	ug/kg	JN	480957.36	1350104.8
12392	A3-12392-16	11/19/98	7.42	7.92	Thorium, Total	5.1	ug/g dry	NV	480957.36	1350104.8
12392	A3-12392-16	11/19/98	7.42	7.92	Uranium, Total	3.04	ug/g dry	NV	480957.36	1350104.8
12392	A3-12392-17	10/23/98	7.92	8.42	1,1-Dichloroethene	740	ug/kg	JN	480957.36	1350104.8
12392	A3-12392-17	10/23/98	7.92	8.42	Trichloroethene	12	ug/kg	JN	480957.36	1350104.8
12392	A3-12392-20	11/19/98	9.42	9.92	Thorium, Total	4.95	ug/g dry	NV	480957.36	1350104.8
12392	A3-12392-20	11/19/98	9.42	9.92	Uranium, Total	1.87	ug/g dry	NV	480957.36	1350104.8
12392	A3-12392-21	10/23/98	9.92	10.42	1,1-Dichloroethene	100	ug/kg	JN	480957.36	1350104.8
12392	A3-12392-22	11/19/98	10.42	10.92	Thorium, Total	4.54	ug/g dry	NV	480957.36	1350104.8
12392	A3-12392-22	11/19/98	10.42	10.92	Uranium, Total	1.56	ug/g dry	NV	480957.36	1350104.8
12393	A3-12393-2	10/23/98	0.71	1.21	Technetium-99	3.5	pCi/g dry	NV	480905.57	1350061.4
12393	A3-12393-2	10/23/98	0.71	1.21	Thorium, Total	25.7	ug/g dry	NV	480905.57	1350061.4
12393	A3-12393-2	10/23/98	0.71	1.21	Uranium, Total	123	ug/g dry	NV	480905.57	1350061.4

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12393	A3-12393-7	10/23/98	3.21	3.71	Thorium, Total	5.54	ug/g dry	NV	480905.57	1350061.4
12393	A3-12393-7	10/23/98	3.21	3.71	Uranium, Total	108	ug/g dry	NV	480905.57	1350061.4
12394	A3-12394-3	10/24/98	1	1.5	Technetium-99	1.6	pCi/g dry	NV	481007.27	1350017.5
12394	A3-12394-3	10/24/98	1	1.5	Thorium, Total	6.64	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-3	10/24/98	1	1.5	Uranium, Total	8.62	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-7	10/24/98	3	3.5	Thorium, Total	7.24	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-7	10/24/98	3	3.5	Uranium, Total	2.68	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-11	10/24/98	4.83	5.33	Thorium, Total	5.8	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-11	10/24/98	4.83	5.33	Uranium, Total	2.24	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-20	11/24/98	9.67	9.83	Thorium, Total	5.32	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-20	11/24/98	9.67	9.83	Uranium, Total	1.49	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-32	11/24/98	15.5	16	Thorium, Total	5.11	ug/g dry	NV	481007.27	1350017.5
12394	A3-12394-32	11/24/98	15.5	16	Uranium, Total	1.83	ug/g dry	NV	481007.27	1350017.5
12395	A3-12395-2	10/24/98	0.58	1.08	Trichloroethene	2	ug/kg	JN	480927.79	1350043.4
12395	A3-12395-3	10/23/98	1.08	1.58	Technetium-99	0.166	pCi/g dry	U	480927.79	1350043.4
12395	A3-12395-3	10/23/98	1.08	1.58	Thorium, Total	2.14	ug/g dry	-	480927.79	1350043.4
12395	A3-12395-3	10/23/98	1.08	1.58	Uranium, Total	3.1	ug/g dry	-	480927.79	1350043.4
12395	A3-12395-7	10/23/98	3.08	3.58	Thorium, Total	4.97	ug/g dry	-	480927.79	1350043.4
12395	A3-12395-7	10/23/98	3.08	3.58	Uranium, Total	5.45	ug/g dry	-	480927.79	1350043.4
12395	A3-12395-8	10/24/98	3.5	4	Uranium, Total	5.09	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-9	10/28/98	4	4.5	1,1-Dichloroethene	6	ug/kg	JN	480927.79	1350043.4
12395	A3-12395-9	10/28/98	4	4.5	Tetrachloroethene	6	ug/kg	JN	480927.79	1350043.4
12395	A3-12395-9	10/28/98	4	4.5	Trichloroethene	2	ug/kg	JN	480927.79	1350043.4
12395	A3-12395-10	10/24/98	4.5	5	Uranium, Total	1.61	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-11	10/23/98	5	5.5	Thorium, Total	6.47	ug/g dry	-	480927.79	1350043.4
12395	A3-12395-11	10/23/98	5	5.5	Uranium, Total	3.17	ug/g dry	-	480927.79	1350043.4
12395	A3-12395-12	10/24/98	5.5	6	Uranium, Total	1.19	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-13	10/24/98	6	6.5	Uranium, Total	1.45	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-50	11/23/98	24.5	25	Thorium, Total	5.8	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-50	11/23/98	24.5	25	Uranium, Total	1.73	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-53	11/23/98	26	26.5	Thorium, Total	6.04	ug/g dry	NV	480927.79	1350043.4
12395	A3-12395-53	11/23/98	26	26.5	Uranium, Total	1.8	ug/g dry	NV	480927.79	1350043.4
12396	A3-12396-3	10/28/98	1	1.5	Technetium-99	0.99	pCi/g dry	U NV	481011.01	1350030.08
12396	A3-12396-3	10/28/98	1	1.5	Thorium, Total	6.05	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-3	10/28/98	1	1.5	Uranium, Total	26.2	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-31	11/25/98	1.25	15.5	Thorium, Total	4.6	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-31	11/25/98	1.25	15.5	Uranium, Total	1.39	ug/g dry	NV	481011.01	1350030.08

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12396	A3-12396-7	10/28/98	3	3.5	Thorium, Total	6.83	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-7	10/28/98	3	3.5	Uranium, Total	4.57	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-11	10/28/98	5	5.5	Thorium, Total	5.44	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-11	10/28/98	5	5.5	Uranium, Total	1.55	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-20	11/24/98	9.5	10	Thorium, Total	5.33	ug/g dry	NV	481011.01	1350030.08
12396	A3-12396-20	11/24/98	9.5	10	Uranium, Total	1.78	ug/g dry	NV	481011.01	1350030.08
12397A	A3-12397A-3	10/28/98	1	1.5	Technetium-99	0.62	pCi/g dry	U NV	480997.71	1350102.84
12397A	A3-12397A-3	10/28/98	1	1.5	Thorium, Total	8.41	ug/g dry	NV	480997.71	1350102.84
12397A	A3-12397A-3	10/28/98	1	1.5	Uranium, Total	1.38	ug/g dry	NV	480997.71	1350102.84
12397A	A3-12397A-7	10/28/98	3	3.5	Thorium, Total	8.58	ug/g dry	NV	480997.71	1350102.84
12397A	A3-12397A-7	10/28/98	3	3.5	Uranium, Total	1.42	ug/g dry	NV	480997.71	1350102.84
12397A	A3-12397A-11	10/28/98	5	5.5	Thorium, Total	6.02	ug/g dry	NV	480997.71	1350102.84
12397A	A3-12397A-11	10/28/98	5	5.5	Uranium, Total	1.81	ug/g dry	NV	480997.71	1350102.84
12398	A3-12398-3	10/28/98	1	1.5	Technetium-99	4.43	pCi/g dry	-	481005.21	1350004.65
12398	A3-12398-3	10/28/98	1	1.5	Thorium, Total	5.96	ug/g dry	-	481005.21	1350004.65
12398	A3-12398-3	10/28/98	1	1.5	Uranium, Total	2.29	ug/g dry	-	481005.21	1350004.65
12398	A3-12398-4	10/28/98	1.5	2	Uranium, Total	1.44	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-5	10/28/98	2	2.5	Uranium, Total	1.35	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-6	10/28/98	2.5	3	Uranium, Total	1.24	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-7	10/28/98	3	3.5	Thorium, Total	5.98	ug/g dry	-	481005.21	1350004.65
12398	A3-12398-7	10/28/98	3	3.5	Uranium, Total	1.38	ug/g dry	-	481005.21	1350004.65
12398	A3-12398-8	10/28/98	3.5	4	Uranium, Total	1.75	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-11	10/28/98	5	5.5	Thorium, Total	5.63	ug/g dry	-	481005.21	1350004.65
12398	A3-12398-11	10/28/98	5	5.5	Uranium, Total	17.5	ug/g dry	-	481005.21	1350004.65
12398	A3-12398-14	11/23/98	6.5	7	Thorium, Total	1.33	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-14	11/23/98	6.5	7	Uranium, Total	1.33	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-18	11/23/98	8.5	9	Thorium, Total	1.49	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-18	11/23/98	8.5	9	Uranium, Total	0.503	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-24	11/23/98	12.5	12.1	Thorium, Total	4.2	ug/g dry	NV	481005.21	1350004.65
12398	A3-12398-24	11/23/98	12.5	12.1	Uranium, Total	1.42	ug/g dry	NV	481005.21	1350004.65
12454	12454-1-S	8/9/99	0	0.5	4-Nitroaniline	830	ug/kg	U	482091.36	1349503.94
12455	12455-1-S	8/3/99	0	0.5	4-Nitroaniline	830	ug/kg	U	482098	1349503.54
12456	12456-1-S	8/9/99	0	0.5	4-Nitroaniline	830	ug/kg	U	482090.92	1349510.03
12457	12457-1-S	8/9/99	0	0.5	4-Nitroaniline	830	ug/kg	U	482085.04	1349503.01
12458	12458-1-S	8/9/99	0	0.5	4-Nitroaniline	830	ug/kg	U	482091.55	1349495.96
12459	12459-1-S	8/3/99	0	0.5	bis(2-Chloroisopropyl) ether	330	ug/kg	U	481396.9	1349597.34
12460	12460-1-S	8/3/99	0	0.5	bis(2-Chloroisopropyl) ether	330	ug/kg	U	481408.03	1349597

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12461	12461-1-S	8/3/99	0	0.5	bis(2-Chloroisopropyl) ether	330	ug/kg	U	481396.82	1349608.99
12462	12462-1-S	8/3/99	0	0.5	bis(2-Chloroisopropyl) ether	330	ug/kg	U	481385.97	1349595.94
12463	12463-1-S	8/3/99	0	0.5	bis(2-Chloroisopropyl) ether	330	ug/kg	U	481396.02	1349586.4
12465	12465-1-R	9/17/99	0	0.5	Uranium, Total	10.8	ug/g dry	NV	480916.44	1349643.13
12466	12466-1-R	9/17/99	0	0.5	Uranium, Total	15.7	ug/g dry	NV	480813.68	1349724.97
12467	12467-1-R	8/10/99	0	0.5	Uranium, Total	8.83	ug/g dry	-	481887.54	1349865.39
12467	12467-2-R	8/10/99	0.5	1	Uranium, Total	9.26	ug/g dry	-	481887.54	1349865.39
12467	12467-3-R	8/10/99	1	1.5	Uranium, Total	39.8	ug/g dry	-	481887.54	1349865.39
12468	12468-1-R	8/10/99	0	0.5	Uranium, Total	7.43	ug/g dry	-	481904.77	1349866.59
12468	12468-2-R	8/10/99	0.5	1	Uranium, Total	7.97	ug/g dry	-	481904.77	1349866.59
12468	12468-3-R	8/10/99	1	1.5	Uranium, Total	8.94	ug/g dry	-	481904.77	1349866.59
12469	12469-1-R	8/10/99	0	0.5	Uranium, Total	6.66	ug/g dry	-	481887.35	1349841.65
12469	12469-2-R	8/10/99	0.5	1	Uranium, Total	19.8	ug/g dry	-	481887.35	1349841.65
12469	12469-3-R	8/10/99	1	1.5	Uranium, Total	11.3	ug/g dry	-	481887.35	1349841.65
12470	12470-1-R	8/10/99	0	0.5	Uranium, Total	79.3	ug/g dry	-	481857.8	1349866.6
12470	12470-2-R	8/10/99	0.5	1	Uranium, Total	44.1	ug/g dry	-	481857.8	1349866.6
12470	12470-3-R	8/10/99	1	1.5	Uranium, Total	14.2	ug/g dry	-	481857.8	1349866.6
12472	12472-1-R	8/25/99	0	1	Thorium	7.97	ug/g dry	-	481894.7	1349793.5
12472	12472-1-R	8/25/99	0	1	Uranium, Total	37.1	ug/g dry	J	481894.7	1349793.5
12472	12472-4-R	8/25/99	3	4	Thorium	9.84	ug/g dry	-	481894.7	1349793.5
12472	12472-4-R	8/25/99	3	4	Uranium, Total	2.97	ug/g dry	-	481894.7	1349793.5
12472	12472-6-R	8/25/99	5	6	Thorium	7.98	ug/g dry	-	481894.7	1349793.5
12472	12472-6-R	8/25/99	5	6	Uranium, Total	1.81	ug/g dry	-	481894.7	1349793.5
12473	12473-1-R	8/25/99	0	1	Thorium	8.91	ug/g dry	-	481841.8	1350037.3
12473	12473A-1-R	9/20/99	0	1	Thorium	12.6	ug/g dry	J	481841.8	1350037.3
12473	12473A-1-R	9/20/99	0	1	Uranium, Total	201	ug/g dry	-	481841.8	1350037.3
12473	12473-1-R	8/25/99	0	1	Uranium, Total	12.5	ug/g dry	-	481841.8	1350037.3
12473	12473-4-R	8/25/99	3	4	Thorium	6.06	ug/g dry	-	481841.8	1350037.3
12473	12473-4-R	8/25/99	3	4	Uranium, Total	11.	ug/g dry	-	481841.8	1350037.3
12473	12473-7-R	8/26/99	6	7	Thorium	17.6	ug/g dry	-	481841.8	1350037.3
12473	12473A-4-R	9/20/99	3	4	Thorium	9.06	ug/g dry	J	481841.8	1350037.3
12473	12473-7-R	8/26/99	6	7	Uranium, Total	172.	ug/g dry	-	481841.8	1350037.3
12473	12473A-4-R	9/20/99	3	4	Uranium, Total	1.46	ug/g dry	J	481841.8	1350037.3
12473	12473-10-R	8/26/99	9	10	Thorium	11.1	ug/g dry	-	481841.8	1350037.3
12473	12473-10-R	8/26/99	9	10	Uranium, Total	293.	ug/g dry	-	481841.8	1350037.3
12473	12473-12-R	8/26/99	11	12	Thorium	5.	ug/g dry	-	481841.8	1350037.3
12473	12473-12-R	8/26/99	11	12	Uranium, Total	2.65	ug/g dry	-	481841.8	1350037.3

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12473	12473A-7-R	9/20/99	6	7	Thorium	4.81	ug/g dry	J	481841.8	1350037.3
12473	12473A-7-R	9/20/99	6	7	Uranium, Total	1.36	ug/g dry	J	481841.8	1350037.3
12473	12473A-10-R	9/20/99	9	10	Thorium	5.06	pCi/g dry	J	481841.8	1350037.3
12473	12473A-10-R	9/20/99	9	10	Uranium, Total	1.32	pCi/g dry	J	481841.8	1350037.3
12473	12473A-12-R	9/20/99	11	12	Thorium	5.19	ug/g dry	J	481841.8	1350037.3
12473	12473A-12-R	9/20/99	11	12	Uranium, Total	1.54	ug/g dry	J	481841.8	1350037.3
12474	12474-1-R	9/2/99	0	1	Thorium	8.37	ug/g dry		481729.26	1349752.86
12474	12474-1-R	9/2/99	0	1	Uranium, Total	38.9	ug/g dry		481729.26	1349752.86
12474	12474-4-R	9/2/99	3	4	Thorium	6.76	ug/g dry		481729.26	1349752.86
12474	12474-4-R	9/2/99	3	4	Uranium, Total	3.36	ug/g dry		481729.26	1349752.86
12474	12474-7-R	9/2/99	6	7	Thorium	6.26	ug/g dry		481729.26	1349752.86
12474	12474-7-R	9/2/99	6	7	Uranium, Total	1.60	ug/g dry		481729.26	1349752.86
12474	12474-9-R	9/2/99	8	9	Thorium	5.18	ug/g dry		481729.26	1349752.86
12474	12474-9-R	9/2/99	8	9	Uranium, Total	1.31	ug/g dry		481729.26	1349752.86
12475	12475-1-R	8/31/99	0	1	Thorium	3.65	ug/g dry	-	481667.9	1349551.51
12475	12475-1-R	8/31/99	0	1	Uranium, Total	50	ug/g dry	-	481667.9	1349551.51
12475	12475-4-R	8/31/99	3	4	Thorium	9.43	ug/g dry	-	481667.9	1349551.51
12475	12475-4-R	8/31/99	3	4	Uranium, Total	1.99	ug/g dry	-	481667.9	1349551.51
12475	12475-6-R	8/31/99	5	6	Thorium	8.16	ug/g dry	-	481667.9	1349551.51
12475	12475-6-R	8/31/99	5	6	Uranium, Total	3.48	ug/g dry	-	481667.9	1349551.51
12476	12476-1B-R	8/31/99	0	1	Thorium	19.3	ug/g dry	-	481667.14	1349660.26
12476	12476-1B-R	8/31/99	0	1	Uranium, Total	5150	ug/g dry	-	481667.14	1349660.26
12476	12476-3-R	8/31/99	2	3	Thorium	8.41	ug/g dry	-	481667.14	1349660.26
12476	12476-3-R	8/31/99	2	3	Uranium, Total	2.21	ug/g dry	-	481667.14	1349660.26
12476	12476-5-R	8/31/99	4	5	Thorium	8.89	ug/g dry	-	481667.14	1349660.26
12476	12476-5-R	8/31/99	4	5	Uranium, Total	2.04	ug/g dry	-	481667.14	1349660.26
12476	12476-8-R	8/31/99	7	8	Thorium	4.97	ug/g dry	-	481667.14	1349660.26
12476	12476-8-R	8/31/99	7	8	Uranium, Total	1.24	ug/g dry	-	481667.14	1349660.26
12476	12476-10-R	8/31/99	9	10	Thorium	5.2	ug/g dry	-	481667.14	1349660.26
12476	12476-10-R	8/31/99	9	10	Uranium, Total	1.39	ug/g dry	-	481667.14	1349660.26
12476	12476-12-R	8/31/99	11	12	Thorium	4.96	ug/g dry	J	481667.14	1349660.26
12476	12476-12-R	8/31/99	11	12	Uranium, Total	1.35	ug/g dry	J	481667.14	1349660.26
12477	12477-3-R	8/31/99	2	3	Thorium	9.14	ug/g dry	-	481667.8	1349749.11
12477	12477-3-R-D	8/31/99	2	3	Thorium	9.14	ug/g dry	J	481667.8	1349749.11
12477	12477-3-R	8/31/99	2	3	Uranium, Total	4.26	ug/g dry	-	481667.8	1349749.11
12477	12477-3-R-D	8/31/99	2	3	Uranium, Total	4.39	ug/g dry	J	481667.8	1349749.11
12477	12477-6-R	8/31/99	5	6	Thorium	7.83	ug/g dry	J	481667.8	1349749.11

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12477	12477-6-R	8/31/99	5	6	Uranium, Total	10.3	ug/g dry	J	481667.8	1349749.11
12477	12477-9-R	8/31/99	8	9	Thorium	0.83	ug/g dry	J	481667.8	1349749.11
12477	12477-9-R	8/31/99	8	9	Uranium, Total	10	ug/g dry	J	481667.8	1349749.11
12478	12478-2-R	8/30/99	1	2	Thorium	8.89	ug/g dry	-	481694.14	1349792.92
12478	12478-2-R	8/30/99	1	2	Uranium, Total	3.11	ug/g dry	-	481694.14	1349792.92
12478	12478-5-R	8/30/99	4	5	Thorium	5.29	ug/g dry	J	481694.14	1349792.92
12478	12478-5-R	8/30/99	4	5	Uranium, Total	2.39	ug/g dry	J	481694.14	1349792.92
12478	12478-7-R	8/30/99	6	7	Thorium	4.88	ug/g dry	J	481694.14	1349792.92
12478	12478-7-R	8/30/99	6	7	Uranium, Total	1.39	ug/g dry	J	481694.14	1349792.92
12478	12478-9-R	8/30/99	8	9	Thorium	5.54	ug/g dry	J	481694.14	1349792.92
12478	12478-9-R	8/30/99	8	9	Uranium, Total	1.66	ug/g dry	J	481694.14	1349792.92
12479	12479-12-R	9/7/99	11	12	Thorium	4.43	ug/g dry		481145.96	1349923.44
12479	12479-12-R	9/7/99	11	12	Uranium, Total	1.44	ug/g dry		481145.96	1349923.44
12479	12479-14-R	9/7/99	13	14	Thorium	5.83	ug/g dry		481145.96	1349923.44
12479	12479-14-R	9/7/99	13	14	Uranium, Total	1.69	ug/g dry		481145.96	1349923.44
12479	12479-16-R	9/7/99	15	16	Thorium	4.71	ug/g dry		481145.96	1349923.44
12479	12479-16-R	9/7/99	15	16	Uranium, Total	1.48	ug/g dry		481145.96	1349923.44
12480	12480-1-R	9/9/99	0	1	Thorium	10.4	ug/g dry		481146.04	1350270.05
12480	12480-1-R	9/9/99	0	1	Uranium, Total	60.4	ug/g dry		481146.04	1350270.05
12480	12480-4-R	9/9/99	3	4	Thorium	7.15	ug/g dry		481146.04	1350270.05
12480	12480-4-R	9/9/99	3	4	Uranium, Total	7.05	ug/g dry		481146.04	1350270.05
12480	12480-7-R	9/9/99	6	7	Thorium	4.90	ug/g dry		481146.04	1350270.05
12480	12480-7-R	9/9/99	6	7	Uranium, Total	1.27	ug/g dry		481146.04	1350270.05
12480	12480-10-R	9/9/99	9	10	Thorium	5.91	ug/g dry		481146.04	1350270.05
12480	12480-10-R	9/9/99	9	10	Uranium, Total	1.43	ug/g dry		481146.04	1350270.05
12480	12480-12-R	9/9/99	11	12	Thorium	5.16	ug/L		481146.04	1350270.05
12480	12480-12-R	9/9/99	11	12	Uranium, Total	1.38	ug/L		481146.04	1350270.05
12481	12481-5B-L	9/8/99	4	5	1,1,1-Trichloroethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	1,1,2-Trichloroethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	1,1-Dichloroethane	2	ug/kg	J	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	1,1-Dichloroethene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	1,2-Dichloroethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	1,2-Dichloropropane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	2-Butanone	4	ug/kg	JB	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	2-Hexanone	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	4-Methyl-2-Pentanone	10	ug/kg	U	481062.41	1349919.57

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12481	12481-5B-L	9/8/99	4	5	Acetone	12	ug/kg	B	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Benzene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	BromodiChloromethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Bromoform	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Bromomethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Carbon Disulfide	2	ug/kg	J	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Carbon Tetrachloride	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Chlorobenzene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Chloroethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Chloroform	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Chloromethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	cis-1,2-Dichloroethene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	cis-1,3-Dichloropropene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Dibromochloromethane	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Ethylbenzene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Methylene Chloride	51	ug/kg	B	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Styrene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Tetrachloroethene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Toluene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	trans-1,2-Dichloroethene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	trans-1,3-Dichloropropene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Trichloroethene	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Vinyl Chloride	10	ug/kg	U	481062.41	1349919.57
12481	12481-5B-L	9/8/99	4	5	Xylenes (Total)	10	ug/kg	U	481062.41	1349919.57
12481	12481-9-R	9/8/99	8	9	Thorium	4.52	ug/g dry		481062.41	1349919.57
12481	12481-9-R	9/8/99	8	9	Uranium, Total	1.50	ug/g dry		481062.41	1349919.57
12481	12481-12-R	9/8/99	11	12	Thorium	4.67	ug/g dry		481062.41	1349919.57
12481	12481-12-R	9/8/99	11	12	Uranium, Total	1.78	ug/g dry		481062.41	1349919.57
12482	12482-8-R	9/9/99	7	8	Thorium	4.90	ug/g dry		481046.02	1350113.8
12482	12482-8-R	9/9/99	7	8	Uranium, Total	1.48	ug/g dry		481046.02	1350113.8
12482	12482-10-R	9/9/99	9	10	Thorium	5.27	ug/g dry		481046.02	1350113.8
12482	12482-10-R	9/9/99	9	10	Uranium, Total	1.44	ug/g dry		481046.02	1350113.8
12482	12482-12-R	9/9/99	11	12	Thorium	5.14	ug/g dry		481046.02	1350113.8
12482	12482-12-R	9/9/99	11	12	Uranium, Total	1.75	ug/g dry		481046.02	1350113.8
12483	12483-6B-L	9/13/99	5	6	1,1,1-Trichloroethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	1,1,2,2-Tetrachloroethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	1,1,2-Trichloroethane	10.0	ug/kg	U	480999.99	1350169.97

000562

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12483	12483-6B-L	9/13/99	5	6	1,1-Dichloroethane	4.0	ug/kg	J	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	1,1-Dichloroethene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	1,2-Dichloroethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	1,2-Dichloropropane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	2-Butanone	4.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	2-Hexanone	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	4-Methyl-2-Pentanone	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Acetone	18.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Benzene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	BromodiChloromethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Bromoform	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Bromomethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Carbon Disulfide	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Carbon Tetrachloride	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Chlorobenzene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Chloroethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Chloroform	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Chloromethane	1.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	cis-1,2-Dichloroethene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	cis-1,3-Dichloropropene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Dibromochloromethane	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Ethylbenzene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Methylene Chloride	15.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Styrene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Tetrachloroethene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6-R	9/13/99	5	6	Thorium	3.64	ug/g dry		480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Toluene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	trans-1,2-Dichloroethene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	trans-1,3-Dichloropropene	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Trichloroethene	5.0	ug/kg	J	480999.99	1350169.97
12483	12483-6-GW-R	9/13/99	5	6	Uranium, Total	4524.416	ug/L	-	480999.99	1350169.97
12483	12483-6-R	9/13/99	5	6	Uranium, Total	3.56	ug/g dry		480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Vinyl Chloride	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-6B-L	9/13/99	5	6	Xylenes (Total)	10.0	ug/kg	U	480999.99	1350169.97
12483	12483-8-R	9/13/99	7	8	Thorium	3.27	ug/g dry		480999.99	1350169.97
12483	12483-8-R-D	9/13/99	7	8	Thorium	3.40	ug/g dry		480999.99	1350169.97
12483	12483-8-R	9/13/99	7	8	Uranium, Total	18.2	ug/g dry		480999.99	1350169.97

000563

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12483	12483-8-R-D	9/13/99	7	8	Uranium, Total	18.1	ug/g dry		480999.99	1350169.97
12483	12483-10-R	9/13/99	9	10	Thorium	5.51	ug/g dry		480999.99	1350169.97
12483	12483-10-R	9/13/99	9	10	Uranium, Total	2.73	ug/g dry		480999.99	1350169.97
12483	12483-12-R	9/13/99	11	12	Thorium	3.99	ug/g dry		480999.99	1350169.97
12483	12483-12-R	9/13/99	11	12	Uranium, Total	1.31	ug/g dry		480999.99	1350169.97
12484	12484-1-R	9/7/99	0	1	Thorium	11.2	ug/g dry		480977.58	1350553.12
12484	12484-1-R	9/7/99	0	1	Uranium, Total	48.6	ug/g dry		480977.58	1350553.12
12484	12484-4-R	9/7/99	3	4	Thorium	9.69	ug/g dry		480977.58	1350553.12
12484	12484-4-R	9/7/99	3	4	Uranium, Total	9.60	ug/g dry		480977.58	1350553.12
12484	12484-12-R-D	9/7/99	11	12	Thorium	5.31	ug/g dry		480977.58	1350553.12
12484	12484-12-R	9/7/99	11	12	Uranium, Total	1.46	ug/g dry		480977.58	1350553.12
12484	12484-12-R-D	9/7/99	11	12	Uranium, Total	1.45	ug/g dry		480977.58	1350553.12
12484	12484-7-R	9/7/99	6	7	Thorium	8.82	ug/g dry		480977.58	1350553.12
12484	12484-7-R	9/7/99	6	7	Uranium, Total	6.15	ug/g dry		480977.58	1350553.12
12484	12484-10-R	9/7/99	9	10	Thorium	5.05	ug/g dry		480977.58	1350553.12
12484	12484-10-R	9/7/99	9	10	Uranium, Total	1.42	ug/g dry		480977.58	1350553.12
12484	12484-12-R	9/7/99	10	12	Thorium	5.65	ug/g dry		480977.58	1350553.12
12485	12485-18-R	9/13/99	17	18	Thorium	3.59	ug/g dry		480846.03	1350013.76
12485	12485-18-R	9/13/99	17	18	Uranium, Total	1.28	ug/g dry		480846.03	1350013.76
12485	12485-20-R	9/13/99	19	20	Thorium	5.02	ug/g dry		480846.03	1350013.76
12485	12485-20-R	9/13/99	19	20	Uranium, Total	1.17	ug/g dry		480846.03	1350013.76
12485	12485-22-R	9/13/99	21	22	Thorium	4.27	ug/g dry		480846.03	1350013.76
12485	12485-22-R	9/13/99	21	22	Uranium, Total	1.10	ug/g dry		480846.03	1350013.76
12486	12486-18-R	9/14/99	17	18	Thorium	5.64	ug/g dry		480846	1350113.77
12486	12486-18-R	9/14/99	17	18	Uranium, Total	1.34	ug/g dry		480846	1350113.77
12486	12486-20-R	9/14/99	19	20	Thorium	5.46	ug/g dry		480846	1350113.77
12486	12486-20-R	9/14/99	19	20	Uranium, Total	1.35	ug/g dry		480846	1350113.77
12486	12486-22-R	9/14/99	21	22	Thorium	5.46	ug/g dry		480846	1350113.77
12486	12486-22-R	9/14/99	21	22	Uranium, Total	1.48	ug/g dry		480846	1350113.77
12487	12487-2-R	10/18/99	1	2	Thorium	5.10	ug/g dry		480752.47	1349670.53
12487	12487-2-R	10/18/99	1	2	Uranium, Total	1.14	ug/g dry		480752.47	1349670.53
12487	12487-5-R	10/18/99	4	5	Thorium	5.60	ug/g dry		480752.47	1349670.53
12487	12487-5-R	10/18/99	4	5	Uranium, Total	1.41	ug/g dry		480752.47	1349670.53
12488	12488-1-R	10/18/99	0	1	Thorium	6.66	ug/g dry		480750.14	1349770.51
12488	12488-1-R	10/18/99	0	1	Uranium, Total	3.27	ug/g dry		480750.14	1349770.51
12488	12488-3-R	10/18/99	2	3	Thorium	6.21	ug/g dry		480750.14	1349770.51
12488	12488-3-R	10/18/99	2	3	Uranium, Total	1.41	ug/g dry		480750.14	1349770.51

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12488	12488-5-R	10/18/99	4	5	Thorium	5.82	ug/g dry		480750.14	1349770.51
12488	12488-5-R	10/18/99	4	5	Uranium, Total	1.56	ug/g dry		480750.14	1349770.51
12489	12489-6-R	9/8/99	5	6	Thorium	5.45	ug/g dry		480743.75	1350070.37
12489	12489-6-R	9/8/99	5	6	Uranium, Total	1.79	ug/g dry		480743.75	1350070.37
12489	12489-14-R	9/8/99	13	14	Thorium	5.23	ug/g dry		480743.75	1350070.37
12489	12489-14-R	9/8/99	13	14	Uranium, Total	1.59	ug/g dry		480743.75	1350070.37
12489	12489-17-R	9/8/99	16	17	Thorium	5.13	ug/g dry		480743.75	1350070.37
12489	12489-17-R	9/8/99	16	17	Uranium, Total	1.42	ug/g dry		480743.75	1350070.37
12489	12489-20-R	9/8/99	19	20	Thorium	5.01	ug/g dry		480743.75	1350070.37
12489	12489-20-R	9/8/99	19	20	Uranium, Total	1.48	ug/g dry		480743.75	1350070.37
12490	12490-7-R	9/9/99	6	7	Thorium	4.83	ug/g dry		480743.63	1350170.34
12490	12490-7-R	9/9/99	6	7	Uranium, Total	1.32	ug/g dry		480743.63	1350170.34
12490	12490-14-R	9/9/99	13	14	Thorium	5.14	ug/g dry		480743.63	1350170.34
12490	12490-14-R	9/9/99	13	14	Uranium, Total	1.53	ug/g dry		480743.63	1350170.34
12490	12490-17-R	9/9/99	16	17	Thorium	5.76	ug/g dry		480743.63	1350170.34
12490	12490-17-R	9/9/99	16	17	Uranium, Total	1.82	ug/g dry		480743.63	1350170.34
12490	12490-20-R	9/9/99	19	20	Thorium	5.38	ug/g dry		480743.63	1350170.34
12490	12490-20-R	9/9/99	19	20	Uranium, Total	1.61	ug/g dry		480743.63	1350170.34
12491	12491-1-R	10/18/99	0	1	Thorium	5.67	ug/g dry		480656.3	1349596.18
12491	12491-1-R	10/18/99	0	1	Uranium, Total	1.70	ug/g dry		480656.3	1349596.18
12491	12491-4-R	10/18/99	3	4	Thorium	5.83	ug/g dry		480656.3	1349596.18
12491	12491-4-R	10/18/99	3	4	Uranium, Total	1.43	ug/g dry		480656.3	1349596.18
12492	12492-2-R	10/18/99	1	2	Thorium	6.09	ug/g dry		480643.67	1349670.04
12492	12492-2-R	10/18/99	1	2	Uranium, Total	1.44	ug/g dry		480643.67	1349670.04
12492	12492-5-R	10/18/99	4	5	Thorium	6.15	ug/g dry		480643.67	1349670.04
12492	12492-5-R	10/18/99	4	5	Uranium, Total	1.44	ug/g dry		480643.67	1349670.04
12493	12493-2-R	10/19/99	1	2	Thorium	5.18	ug/g dry		480630.04	1349894.62
12493	12493-2-R	10/19/99	1	2	Uranium, Total	1.42	ug/g dry		480630.04	1349894.62
12493	12493-5-R	10/19/99	4	5	Thorium	5.30	ug/g dry		480630.04	1349894.62
12493	12493-5-R	10/19/99	4	5	Uranium, Total	1.30	ug/g dry		480630.04	1349894.62
12493	12493-8-R	10/19/99	7	8	Thorium	4.61	ug/g dry		480630.04	1349894.62
12493	12493-8-R	10/19/99	7	8	Uranium, Total	1.37	ug/g dry		480630.04	1349894.62
12494	12494B-25-R	9/27/99	48	50	Thorium	3.71	ug/g dry		480640.47	1349955.9
12494	12494B-25-R-D	9/27/99	48	50	Thorium	3.6	ug/g dry		480640.47	1349955.9
12494	12494B-25-R	9/27/99	48	50	Uranium, Total	1.49	ug/g dry		480640.47	1349955.9
12494	12494B-25-R-D	9/27/99	48	50	Uranium, Total	1.51	ug/g dry		480640.47	1349955.9
12494	12494B-28-R	9/27/99	54	56	Thorium	4.0	ug/g dry		480640.47	1349955.9

000565

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12494	12494B-28-R	9/27/99	54	56	Uranium, Total	1.56	ug/g dry		480640.47	1349955.9
12495	12495-2-R	9/21/99	1	2	Thorium	8.24	ug/g dry		480643.77	1350261.37
12495	12495-2-R-D	9/21/99	1	2	Thorium	8.91	ug/g dry		480643.77	1350261.37
12495	12495-2-R	9/21/99	1	2	Uranium, Total	3.80	ug/g dry		480643.77	1350261.37
12495	12495-2-R-D	9/21/99	1	2	Uranium, Total	4.19	ug/g dry		480643.77	1350261.37
12495	12495-5-R	9/21/99	4	5	Thorium	5.11	ug/g dry		480643.77	1350261.37
12495	12495-5-R	9/21/99	4	5	Uranium, Total	1.71	ug/g dry		480643.77	1350261.37
12495	12495-8-R	9/21/99	7	8	Thorium	5.13	ug/g dry		480643.77	1350261.37
12495	12495-8-R	9/21/99	7	8	Uranium, Total	1.48	ug/g dry		480643.77	1350261.37
12495	12495-11-R	9/21/99	10	11	Thorium	6.13	ug/g dry		480643.77	1350261.37
12495	12495-11-R	9/21/99	10	11	Uranium, Total	2.18	ug/g dry		480643.77	1350261.37
12495	12495-14-R	9/21/99	13	14	Thorium	6.94	ug/g dry		480643.77	1350261.37
12495	12495-14-R	9/21/99	13	14	Uranium, Total	1.61	ug/g dry		480643.77	1350261.37
12495	12495-17-R	9/21/99	16	17	Thorium	6.34	ug/g dry		480643.77	1350261.37
12495	12495-17-R	9/21/99	16	17	Uranium, Total	1.57	ug/g dry		480643.77	1350261.37
12495	12495-20-R	9/21/99	19	20	Thorium	5.49	ug/g dry		480643.77	1350261.37
12495	12495-20-R	9/21/99	19	20	Uranium, Total	1.43	ug/g dry		480643.77	1350261.37
12496	12496-1-R	9/7/99	0	1	Thorium	9.89	ug/g dry		480574.04	1350524.13
12496	12496-1-R	9/7/99	0	1	Uranium, Total	57.3	ug/g dry		480574.04	1350524.13
12496	12496-4-R	9/7/99	3	4	Thorium	10.8	ug/g dry		480574.04	1350524.13
12496	12496-4-R	9/7/99	3	4	Uranium, Total	49.5	ug/g dry		480574.04	1350524.13
12496	12496-7-R	9/7/99	6	7	Thorium	5.61	ug/g dry		480574.04	1350524.13
12496	12496-7-R	9/7/99	6	7	Uranium, Total	4.04	ug/g dry		480574.04	1350524.13
12496	12496-10-R	9/7/99	9	10	Thorium	5.76	ug/g dry		480574.04	1350524.13
12496	12496-10-R	9/7/99	9	10	Uranium, Total	1.79	ug/g dry		480574.04	1350524.13
12496	12496-12-R	9/7/99	11	12	Thorium	5.44	ug/g dry		480574.04	1350524.13
12496	12496-12-R	9/7/99	11	12	Uranium, Total	1.88	ug/g dry		480574.04	1350524.13
12497	12497-1-R	10/19/99	0	1	Thorium	5.40	ug/g dry		480543.68	1349891.43
12497	12497-1-R	10/19/99	0	1	Uranium, Total	2.24	ug/g dry		480543.68	1349891.43
12497	12497-4-R	10/19/99	3	4	Thorium	4.74	ug/g dry		480543.68	1349891.43
12497	12497-4-R	10/19/99	3	4	Uranium, Total	1.93	ug/g dry		480543.68	1349891.43
12497	12497-7-R	10/19/99	6	7	Thorium	5.11	ug/g dry		480543.68	1349891.43
12497	12497-7-R	10/19/99	6	7	Uranium, Total	1.43	ug/g dry		480543.68	1349891.43
12497	12497-10-R	10/19/99	9	10	Thorium	4.69	ug/g dry		480543.68	1349891.43
12497	12497-10-R	10/19/99	9	10	Uranium, Total	1.55	ug/g dry		480543.68	1349891.43
12497	12497-15-R	10/19/99	14	15	Thorium	4.85	ug/g dry		480543.68	1349891.43
12497	12497-15-R	10/19/99	14	15	Uranium, Total	1.26	ug/g dry		480543.68	1349891.43

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12497	12497-18-R	10/19/99	17	18	Thorium	5.02	ug/g dry		480543.68	1349891.43
12497	12497-18-R	10/19/99	17	18	Uranium, Total	1.42	ug/g dry		480543.68	1349891.43
12497	12497-20-R	10/19/99	19	20	Thorium	4.87	ug/g dry		480543.68	1349891.43
12497	12497-20-R	10/19/99	19	20	Uranium, Total	1.34	ug/g dry		480543.68	1349891.43
12498	12498-25-R	10/4/99	24	25	Thorium	2.25	ug/g dry		480554.76	1349953.85
12498	12498-25-R-D	10/4/99	24	25	Thorium	2.20	ug/g dry		480554.76	1349953.85
12498	12498-25-R	10/4/99	24	25	Uranium, Total	1.54	ug/g dry		480554.76	1349953.85
12498	12498-25-R-D	10/4/99	24	25	Uranium, Total	1.84	ug/g dry		480554.76	1349953.85
12498	12498-28-R	10/4/99	27	28	Thorium	1.97	ug/g dry		480554.76	1349953.85
12498	12498-28-R	10/4/99	27	28	Uranium, Total	1.60	ug/g dry		480554.76	1349953.85
12499	12499-1B-R	9/22/99	0	1	Thorium	10.8	ug/g dry		480525.2	1350284.44
12499	12499-1B-R	9/22/99	0	1	Uranium, Total	489	ug/g dry		480525.2	1350284.44
12499	12499-2-R	9/22/99	1	2	Thorium	12.1	ug/g dry		480525.2	1350284.44
12499	12499-2-R	9/22/99	1	2	Uranium, Total	16.0	ug/g dry		480525.2	1350284.44
12499	12499-3B-R	9/22/99	2	3	Thorium	12.1	ug/g dry		480525.2	1350284.44
12499	12499-3B-R	9/22/99	2	3	Uranium, Total	115	ug/g dry		480525.2	1350284.44
12499	12499-5-R	9/22/99	4	5	Thorium	6.14	ug/g dry		480525.2	1350284.44
12499	12499-5-R	9/22/99	4	5	Uranium, Total	10.1	ug/g dry		480525.2	1350284.44
12499	12499-8-R	9/22/99	7	8	Thorium	3.27	ug/g dry		480525.2	1350284.44
12499	12499-8-R	9/22/99	7	8	Uranium, Total	1.65	ug/g dry		480525.2	1350284.44
12499	12499-11-R	9/22/99	10	11	Thorium	5.65	ug/g dry		480525.2	1350284.44
12499	12499-11-R	9/22/99	10	11	Uranium, Total	1.74	ug/g dry		480525.2	1350284.44
12499	12499-14-R	9/22/99	13	14	Thorium	4.85	ug/g dry		480525.2	1350284.44
12499	12499-14-R	9/22/99	13	14	Uranium, Total	1.33	ug/g dry		480525.2	1350284.44
12499	12499-17-R	9/22/99	16	17	Thorium	5.39	ug/g dry		480525.2	1350284.44
12499	12499-17-R	9/22/99	16	17	Uranium, Total	3.14	ug/g dry		480525.2	1350284.44
12499	12499-20-R	9/22/99	19	20	Thorium	5.60	ug/g dry		480525.2	1350284.44
12499	12499-20-R	9/22/99	19	20	Uranium, Total	21.4	ug/g dry		480525.2	1350284.44
12500	12500-1-R	10/19/99	0	1	Thorium	4.66	ug/g dry		480443.5	1349888
12500	12500-1-R	10/19/99	0	1	Uranium, Total	2.94	ug/g dry		480443.5	1349888
12500	12500-4-R	10/19/99	3	4	Thorium	5.63	ug/g dry		480443.5	1349888
12500	12500-4-R	10/19/99	3	4	Uranium, Total	1.58	ug/g dry		480443.5	1349888
12500	12500-7-R	10/19/99	6	7	Thorium	5.84	ug/g dry		480443.5	1349888
12500	12500-7-R	10/19/99	6	7	Uranium, Total	2.18	ug/g dry		480443.5	1349888
12500	12500-9-R	10/19/99	8	9	Thorium	4.88	ug/g dry		480443.5	1349888
12500	12500-9-R	10/19/99	8	9	Uranium, Total	1.64	ug/g dry		480443.5	1349888
12501	12501-7B-L	10/5/99	6	7	1,1,1-Trichloroethane	10	ug/kg	U	480442.29	1349971.47

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12501	12501-7B-L	10/5/99	6	7	1,1,2,2-Tetrachloroethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	1,1,2-Trichloroethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	1,1-Dichloroethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	1,1-Dichloroethene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	1,2-Dichloroethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	1,2-Dichloropropane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	2-Butanone	4	ug/kg	BJ	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	2-Hexanone	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	4-Methyl-2-Pentanone	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Acetone	12	ug/kg	B	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Benzene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	BromodiChloromethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Bromoform	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Bromomethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Carbon Disulfide	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Carbon Tetrachloride	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Chlorobenzene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Chloroethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Chloroform	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Chloromethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	cis-1,2-Dichloroethene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	cis-1,3-Dichloropropene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Dibromochloromethane	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Ethylbenzene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Methylene Chloride	21	ug/kg		480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Styrene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Tetrachloroethene	2	ug/kg	J	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Toluene	3	ug/kg	J	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	trans-1,2-Dichloroethene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	trans-1,3-Dichloropropene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Trichloroethene	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Vinyl Chloride	10	ug/kg	U	480442.29	1349971.47
12501	12501-7B-L	10/5/99	6	7	Xylenes (Total)	10	ug/kg	U	480442.29	1349971.47
12501	12501-25-R	10/5/99	24	25	Thorium	3.13	ug/g dry		480442.29	1349971.47
12501	12501-25-R	10/5/99	24	25	Uranium, Total	1.46	ug/g dry		480442.29	1349971.47
12501	12501-28-R	10/5/99	27	28	Thorium	1.83	ug/g dry		480442.29	1349971.47
12501	12501-28-R	10/5/99	27	28	Uranium, Total	1.53	ug/g dry		480442.29	1349971.47

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12502	12502-2-R	10/19/99	1	2	Thorium	7.35	ug/g dry		480320.83	1349885.09
12502	12502-2-R	10/19/99	1	2	Uranium, Total	1.35	ug/g dry		480320.83	1349885.09
12502	12502-5-R	10/19/99	4	5	Thorium	5.51	ug/g dry		480320.83	1349885.09
12502	12502-5-R	10/19/99	4	5	Uranium, Total	1.18	ug/g dry		480320.83	1349885.09
12502	12502-8-R	10/19/99	7	8	Thorium	5.84	ug/g dry		480320.83	1349885.09
12502	12502-8-R	10/19/99	7	8	Uranium, Total	1.30	ug/g dry		480320.83	1349885.09
12503	12503-25-R	10/4/99	24	25	Thorium	2.34	ug/g dry		480334.49	1349970.87
12503	12503-25-R	10/4/99	24	25	Uranium, Total	1.42	ug/g dry		480334.49	1349970.87
12503	12503-28-R	10/4/99	27	28	Thorium	1.64	ug/g dry		480334.49	1349970.87
12503	12503-28-R	10/4/99	27	28	Uranium, Total	1.13	ug/g dry		480334.49	1349970.87
12504	12504-3-R	9/21/99	2	3	Thorium	9.64	ug/g dry		480333.68	1350385.25
12504	12504-3-R	9/21/99	2	3	Uranium, Total	1.71	ug/g dry		480333.68	1350385.25
12504	12504-5-R	9/21/99	4	5	Thorium	8.80	ug/g dry		480333.68	1350385.25
12504	12504-5-R	9/21/99	4	5	Uranium, Total	1.53	ug/g dry		480333.68	1350385.25
12504	12504-7-R	9/21/99	6	7	Thorium	8.94	ug/g dry		480333.68	1350385.25
12504	12504-7-R	9/21/99	6	7	Uranium, Total	2.09	ug/g dry		480333.68	1350385.25
12505	12505-1-R	9/14/99	0	0.5	Technetium 99	0.57	pCi/g dry	U	480882.97	1350200.19
12505	12505-1-R	9/14/99	0	0.5	Thorium	1.46	ug/g dry		480882.97	1350200.19
12505	12505-1-R	9/14/99	0	0.5	Uranium, Total	29.1	ug/g dry		480882.97	1350200.19
12505	12505-3-R	9/14/99	1	1.5	Technetium 99	8.6	pCi/g dry		480882.97	1350200.19
12505	12505-3-R	9/14/99	1	1.5	Thorium	23.8	ug/g dry		480882.97	1350200.19
12505	12505-3-R	9/14/99	1	1.5	Uranium, Total	278	ug/g dry		480882.97	1350200.19
12505	12505-5-R	9/14/99	2	2.5	Technetium 99	2.3	pCi/g dry		480882.97	1350200.19
12505	12505-5-R	9/14/99	2	2.5	Thorium	8.21	ug/g dry		480882.97	1350200.19
12505	12505-5-R	9/14/99	2	2.5	Uranium, Total	27.6	ug/g dry		480882.97	1350200.19
12505	12505-7-R	9/14/99	3	3.5	Technetium 99	1.6	pCi/g dry		480882.97	1350200.19
12505	12505-7-R	9/14/99	3	3.5	Thorium	5.14	ug/g dry		480882.97	1350200.19
12505	12505-7-R	9/14/99	3	3.5	Uranium, Total	1.92	ug/g dry		480882.97	1350200.19
12505	12505-9-R	9/14/99	4	4.5	Technetium 99	0.93	pCi/g dry	U	480882.97	1350200.19
12505	12505-9-R	9/14/99	4	4.5	Thorium	6.47	ug/g dry		480882.97	1350200.19
12505	12505-9-R	9/14/99	4	4.5	Uranium, Total	132	ug/g dry		480882.97	1350200.19
12505	12505-11-R	9/14/99	5	5.5	Technetium 99	1.6	pCi/g dry		480882.97	1350200.19
12505	12505-11-R	9/14/99	5	5.5	Thorium	4.78	ug/g dry		480882.97	1350200.19
12505	12505-11-R	9/14/99	5	5.5	Uranium, Total	199	ug/g dry		480882.97	1350200.19
12505	12505-13-R	9/14/99	6	6.5	Technetium 99	3.6	pCi/g dry		480882.97	1350200.19
12505	12505-13-R	9/14/99	6	6.5	Thorium	4.95	ug/g dry		480882.97	1350200.19
12505	12505-13-R	9/14/99	6	6.5	Uranium, Total	168	ug/g dry		480882.97	1350200.19

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12505	12505-15-R	9/14/99	7	7.5	Thorium	6.01	ug/g dry		480882.97	1350200.19
12505	12505-15-R	9/14/99	7	7.5	Uranium, Total	2.53	ug/g dry		480882.97	1350200.19
12505	12505-17-R	9/14/99	8	8.5	Thorium	7.19	ug/g dry		480882.97	1350200.19
12505	12505-17-R	9/14/99	8	8.5	Uranium, Total	1.66	ug/g dry		480882.97	1350200.19
12505	12505-20-R	9/14/99	9.5	10	Thorium	5.14	ug/g dry		480882.97	1350200.19
12505	12505-20-R	9/14/99	9.5	10	Uranium, Total	1.69	ug/g dry		480882.97	1350200.19
12506	12506-1-R	9/14/99	0	0.5	Technetium 99	1.6	pCi/g dry		480872.06	1350189.19
12506	12506-1-R	9/14/99	0	0.5	Thorium	1.85	ug/g dry		480872.06	1350189.19
12506	12506-1-R	9/14/99	0	0.5	Uranium, Total	7.09	ug/g dry		480872.06	1350189.19
12506	12506-3-R	9/14/99	1	1.5	Technetium 99	11	pCi/g dry		480872.06	1350189.19
12506	12506-3-R	9/14/99	1	1.5	Thorium	7.16	ug/g dry		480872.06	1350189.19
12506	12506-3-R	9/14/99	1	1.5	Uranium, Total	323	ug/g dry		480872.06	1350189.19
12506	12506-5-R	9/14/99	2	2.5	Technetium 99	1.3	pCi/g dry		480872.06	1350189.19
12506	12506-5-R	9/14/99	2	2.5	Thorium	8.54	ug/g dry		480872.06	1350189.19
12506	12506-5-R	9/14/99	2	2.5	Uranium, Total	33.3	ug/g dry		480872.06	1350189.19
12506	12506-7-R	9/14/99	3	3.5	Technetium 99	1.9	pCi/g dry		480872.06	1350189.19
12506	12506-7-R	9/14/99	3	3.5	Thorium	7.07	ug/g dry		480872.06	1350189.19
12506	12506-7-R	9/14/99	3	3.5	Uranium, Total	1.46	ug/g dry		480872.06	1350189.19
12506	12506-9-R	9/14/99	4	4.5	Technetium 99	1.4	pCi/g dry		480872.06	1350189.19
12506	12506-9-R	9/14/99	4	4.5	Thorium	9.35	ug/g dry		480872.06	1350189.19
12506	12506-9-R	9/14/99	4	4.5	Uranium, Total	1.33	ug/g dry		480872.06	1350189.19
12506	12506-11-R	9/14/99	5	5.5	Technetium 99	0.37	pCi/g dry	U	480872.06	1350189.19
12506	12506-11-R	9/14/99	5	5.5	Thorium	6.70	ug/g dry		480872.06	1350189.19
12506	12506-11-R	9/14/99	5	5.5	Uranium, Total	1.75	ug/g dry		480872.06	1350189.19
12506	12506-13-R	9/14/99	6	6.5	Technetium 99	-0.22	pCi/g dry	U	480872.06	1350189.19
12506	12506-13-R	9/14/99	6	6.5	Thorium	6.41	ug/g dry		480872.06	1350189.19
12506	12506-13-R	9/14/99	6	6.5	Uranium, Total	2.14	ug/g dry		480872.06	1350189.19
12506	12506-15-R	9/14/99	7	7.5	Thorium	4.13	ug/g dry		480872.06	1350189.19
12506	12506-15-R	9/14/99	7	7.5	Uranium, Total	2.11	ug/g dry		480872.06	1350189.19
12506	12506-17-R	9/14/99	8	8.5	Thorium	5.82	ug/g dry		480872.06	1350189.19
12506	12506-17-R	9/14/99	8	8.5	Uranium, Total	1.55	ug/g dry		480872.06	1350189.19
12506	12506-20-R	9/14/99	9.5	10	Thorium	5.22	ug/g dry		480872.06	1350189.19
12506	12506-20-R	9/14/99	9.5	10	Uranium, Total	1.60	ug/g dry		480872.06	1350189.19
12507	12507-1-R	9/14/99	0	0.5	Technetium 99	1.3	pCi/g dry		480871.9	1350200.16
12507	12507-1-R	9/14/99	0	0.5	Thorium	1.96	ug/g dry		480871.9	1350200.16
12507	12507-1-R	9/14/99	0	0.5	Uranium, Total	147	ug/g dry		480871.9	1350200.16
12507	12507-2B-R	9/14/99	0.5	1	Thorium	3.32	ug/g dry		480871.9	1350200.16

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12507	12507-2B-R	9/14/99	0.5	1	Uranium, Total	28600	ug/g dry		480871.9	1350200.16
12507	12507-3-R	9/14/99	1	1.5	Technetium 99	660	pCi/g dry		480871.9	1350200.16
12507	12507-3-R	9/14/99	1	1.5	Thorium	3.50	ug/g dry		480871.9	1350200.16
12507	12507-3-R	9/14/99	1	1.5	Uranium, Total	76400	ug/g dry		480871.9	1350200.16
12507	12507-4B-R	9/14/99	1.5	2	Thorium	7.27	ug/g dry		480871.9	1350200.16
12507	12507-4B-R	9/14/99	1.5	2	Uranium, Total	1250	ug/g dry		480871.9	1350200.16
12507	12507-5-R	9/14/99	2	2.5	Technetium 99	5.2	pCi/g dry		480871.9	1350200.16
12507	12507-5-R	9/14/99	2	2.5	Thorium	6.71	ug/g dry		480871.9	1350200.16
12507	12507-5-R	9/14/99	2	2.5	Uranium, Total	368	ug/g dry		480871.9	1350200.16
12507	12507-7-R	9/14/99	3	3.5	Technetium 99	1.1	pCi/g dry		480871.9	1350200.16
12507	12507-7-R	9/14/99	3	3.5	Thorium	6.42	ug/g dry		480871.9	1350200.16
12507	12507-7-R	9/14/99	3	3.5	Uranium, Total	289	ug/g dry		480871.9	1350200.16
12507	12507-9-R	9/14/99	4	4.5	Technetium 99	2.1	pCi/g dry		480871.9	1350200.16
12507	12507-9-R	9/14/99	4	4.5	Thorium	3.12	ug/g dry		480871.9	1350200.16
12507	12507-9-R	9/14/99	4	4.5	Uranium, Total	149	ug/g dry		480871.9	1350200.16
12507	12507-11-R	9/14/99	5	5.5	Technetium 99	25	pCi/g dry		480871.9	1350200.16
12507	12507-11-R	9/14/99	5	5.5	Thorium	5.97	ug/g dry		480871.9	1350200.16
12507	12507-11-R	9/14/99	5	5.5	Uranium, Total	63.1	ug/g dry		480871.9	1350200.16
12507	12507-13-R	9/14/99	6	6.5	Technetium 99	1.8	pCi/g dry		480871.9	1350200.16
12507	12507-13-R	9/14/99	6	6.5	Thorium	5.21	ug/g dry		480871.9	1350200.16
12507	12507-13-R	9/14/99	6	6.5	Uranium, Total	2.84	ug/g dry		480871.9	1350200.16
12507	12507-15-R	9/14/99	7	7.5	Thorium	5.14	ug/g dry		480871.9	1350200.16
12507	12507-15-R	9/14/99	7	7.5	Uranium, Total	2.02	ug/g dry		480871.9	1350200.16
12507	12507-17-R	9/14/99	8	8.5	Thorium	4.43	ug/g dry		480871.9	1350200.16
12507	12507-17-R	9/14/99	8	8.5	Uranium, Total	10.7	ug/g dry		480871.9	1350200.16
12507	12507-20-R	9/14/99	9.5	10	Thorium	6.13	ug/g dry		480871.9	1350200.16
12507	12507-20-R	9/14/99	9.5	10	Uranium, Total	1.94	ug/g dry		480871.9	1350200.16
12508	12508-1-R	9/15/99	0	0.5	Technetium 99	11	pCi/g dry		480870.9	1350211.2
12508	12508-1-R	9/15/99	0	0.5	Thorium	6.25	ug/g dry		480870.9	1350211.2
12508	12508-1-R	9/15/99	0	0.5	Uranium, Total	514	ug/g dry		480870.9	1350211.2
12508	12508-3-R	9/15/99	1	1.5	Technetium 99	20	pCi/g dry		480870.9	1350211.2
12508	12508-3-R	9/15/99	1	1.5	Thorium	3.60	ug/g dry		480870.9	1350211.2
12508	12508-3-R	9/15/99	1	1.5	Uranium, Total	381	ug/g dry		480870.9	1350211.2
12508	12508-5-R	9/15/99	2	2.5	Technetium 99	55	pCi/g dry		480870.9	1350211.2
12508	12508-5-R	9/15/99	2	2.5	Thorium	4.89	ug/g dry		480870.9	1350211.2
12508	12508-5-R	9/15/99	2	2.5	Uranium, Total	369	ug/g dry		480870.9	1350211.2
12508	12508-7-R	9/15/99	3	3.5	Technetium 99	1000	pCi/g dry		480870.9	1350211.2

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12508	12508-7-R	9/15/99	3	3.5	Thorium	6.01	ug/g dry		480870.9	1350211.2
12508	12508-7-R	9/15/99	3	3.5	Uranium, Total	345	ug/g dry		480870.9	1350211.2
12508	12508-9-R	9/15/99	4	4.5	Technetium 99	310	pCi/g dry		480870.9	1350211.2
12508	12508-9-R	9/15/99	4	4.5	Thorium	5.96	ug/g dry		480870.9	1350211.2
12508	12508-9-R	9/15/99	4	4.5	Uranium, Total	495	ug/g dry		480870.9	1350211.2
12508	12508-11-R	9/15/99	5	5.5	Technetium 99	0.0070	pCi/g dry	U	480870.9	1350211.2
12508	12508-11-R	9/15/99	5	5.5	Thorium	5.60	ug/g dry		480870.9	1350211.2
12508	12508-11-R	9/15/99	5	5.5	Uranium, Total	179	ug/g dry		480870.9	1350211.2
12508	12508-13-R	9/15/99	6	6.5	Technetium 99	0.28	pCi/g dry	U	480870.9	1350211.2
12508	12508-13-R	9/15/99	6	6.5	Thorium	5.40	ug/g dry		480870.9	1350211.2
12508	12508-13-R	9/15/99	6	6.5	Uranium, Total	129	ug/g dry		480870.9	1350211.2
12508	12508-15-R	9/15/99	7	7.5	Thorium	5.77	ug/g dry		480870.9	1350211.2
12508	12508-15-R	9/15/99	7	7.5	Uranium, Total	95.0	ug/g dry		480870.9	1350211.2
12508	12508-17-R	9/15/99	8	8.5	Thorium	5.52	ug/g dry		480870.9	1350211.2
12508	12508-17-R	9/15/99	8	8.5	Uranium, Total	36.3	ug/g dry		480870.9	1350211.2
12508	12508-20-R	9/17/99	9.5	10	Thorium	5.08	ug/g dry		480870.9	1350211.2
12508	12508-20-R	9/17/99	9.5	10	Uranium, Total	25.4	ug/g dry		480870.9	1350211.2
12509	12509-1-R	9/15/99	0	0.5	Technetium 99	1.230	pCi/g dry	J	480850.08	1350199.18
12509	12509-1-R	9/15/99	0	0.5	Thorium	5.8	ug/g dry	-	480850.08	1350199.18
12509	12509-1-R	9/15/99	0	0.5	Uranium, Total	297	ug/g dry	-	480850.08	1350199.18
12509	12509-3-R	9/15/99	1	1.5	Technetium 99	0.658	pCi/g dry	U	480850.08	1350199.18
12509	12509-3-R	9/15/99	1	1.5	Thorium	7.6	ug/g dry	-	480850.08	1350199.18
12509	12509-3-R	9/15/99	1	1.5	Uranium, Total	470	ug/g dry	-	480850.08	1350199.18
12509	12509-5-R	9/15/99	2	2.5	Technetium 99	0.836	pCi/g dry	U	480850.08	1350199.18
12509	12509-5-R	9/15/99	2	2.5	Thorium	3.03	ug/g dry	-	480850.08	1350199.18
12509	12509-5-R	9/15/99	2	2.5	Uranium, Total	249	ug/g dry	-	480850.08	1350199.18
12509	12509-7-R	9/15/99	3	3.5	Technetium 99	1.600	pCi/g dry	J	480850.08	1350199.18
12509	12509-7-R	9/15/99	3	3.5	Thorium	6.53	ug/g dry	-	480850.08	1350199.18
12509	12509-7-R	9/15/99	3	3.5	Uranium, Total	374	ug/g dry	-	480850.08	1350199.18
12509	12509-9-R	9/15/99	4	4.5	Technetium 99	2.460	pCi/g dry	-	480850.08	1350199.18
12509	12509-9-R	9/15/99	4	4.5	Thorium	6.93	ug/g dry	J	480850.08	1350199.18
12509	12509-9-R	9/15/99	4	4.5	Uranium, Total	343	ug/g dry	-	480850.08	1350199.18
12509	12509-11-R	9/15/99	5	5.5	Technetium 99	4.940	pCi/g dry	-	480850.08	1350199.18
12509	12509-11-R	9/15/99	5	5.5	Thorium	6.12	ug/g dry	-	480850.08	1350199.18
12509	12509-11-R	9/15/99	5	5.5	Uranium, Total	312	ug/g dry	-	480850.08	1350199.18
12509	12509-13-R	9/15/99	6	6.5	Technetium 99	254.000	pCi/g dry	-	480850.08	1350199.18
12509	12509-13-R	9/15/99	6	6.5	Thorium	6.27	ug/g dry	J	480850.08	1350199.18

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12509	12509-13-R	9/15/99	6	6.5	Uranium, Total	291	ug/g dry	-	480850.08	1350199.18
12509	12509-15-R	9/15/99	7	7.5	Technetium 99	4.500	pCi/g dry	-	480850.08	1350199.18
12509	12509-15-R	9/15/99	7	7.5	Thorium	2.21	ug/g dry	J	480850.08	1350199.18
12509	12509-15-R	9/15/99	7	7.5	Uranium, Total	340	ug/g dry	-	480850.08	1350199.18
12509	12509-17-R	9/15/99	8	8.5	Technetium 99	27.300	pCi/g dry	-	480850.08	1350199.18
12509	12509-17-R	9/15/99	8	8.5	Thorium	6.03	ug/g dry	J	480850.08	1350199.18
12509	12509-17-R	9/15/99	8	8.5	Uranium, Total	357	ug/g dry	-	480850.08	1350199.18
12509	12509-20-R	9/15/99	9.5	10	Technetium 99	0.747	pCi/g dry	U	480850.08	1350199.18
12509	12509-20-R	9/15/99	9.5	10	Thorium	5.97	ug/g dry	J	480850.08	1350199.18
12509	12509-20-R	9/15/99	9.5	10	Uranium, Total	238	ug/g dry	-	480850.08	1350199.18
12510	12510-1-R	9/15/99	0	0.5	Thorium	5.1	ug/g dry	J	480823.58	1350210.82
12510	12510-1-R	9/15/99	0	0.5	Uranium, Total	368	ug/g dry	-	480823.58	1350210.82
12510	12510-3-R	9/15/99	1	1.5	Thorium	6.11	ug/g dry	J	480823.58	1350210.82
12510	12510-3-R	9/15/99	1	1.5	Uranium, Total	97.4	ug/g dry	-	480823.58	1350210.82
12510	12510-5-R	9/15/99	2	2.5	Thorium	6.33	ug/g dry	J	480823.58	1350210.82
12510	12510-5-R	9/15/99	2	2.5	Uranium, Total	2.97	ug/g dry	J	480823.58	1350210.82
12510	12510-7-R	9/15/99	3	3.5	Thorium	2.83	ug/g dry	-	480823.58	1350210.82
12510	12510-7-R	9/15/99	3	3.5	Uranium, Total	0.881	ug/g dry	-	480823.58	1350210.82
12510	12510-10-R	9/15/99	4.5	5	Thorium	6.16	ug/g dry	J	480823.58	1350210.82
12510	12510-10-R	9/15/99	4.5	5	Uranium, Total	2.23	ug/g dry	J	480823.58	1350210.82
12511	12511-1-R	9/16/99	0	0.5	Thorium	7.10	ug/g dry		480813.59	1350200.74
12511	12511-1-R	9/16/99	0	0.5	Uranium, Total	947	ug/g dry		480813.59	1350200.74
12511	12511-3-R	9/16/99	1	1.5	Thorium	8.41	ug/g dry		480813.59	1350200.74
12511	12511-3-R	9/16/99	1	1.5	Uranium, Total	3.82	ug/g dry		480813.59	1350200.74
12511	12511-5-R	9/16/99	2	2.5	Thorium	4.81	ug/g dry		480813.59	1350200.74
12511	12511-5-R	9/16/99	2	2.5	Uranium, Total	11.7	ug/g dry		480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,1,1-Trichloroethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,1,2,2-Tetrachloroethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,1,2-Trichloroethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,1-Dichloroethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,1-Dichloroethene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,2-Dichloroethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	1,2-Dichloropropane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	2-Butanone	3	ug/L	JB	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	2-Hexanone	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	4-Methyl-2-Pentanone	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Acetone	11	ug/L	B	480813.59	1350200.74

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12511	12511-7B-L	9/16/99	3	3.5	Benzene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	BromodiChloromethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Bromoform	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Bromomethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Carbon Disulfide	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Carbon Tetrachloride	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Chlorobenzene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Chloroethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Chloroform	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Chloromethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	cis-1,2-Dichloroethene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	cis-1,3-Dichloropropene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Dibromochloromethane	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Ethylbenzene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Methylene Chloride	16	ug/L	B	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Styrene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Tetrachloroethene	10	ug/L	U	480813.59	1350200.74
12511	12511-7-R	9/16/99	3	3.5	Thorium	3.74	ug/g dry		480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Toluene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	trans-1,2-Dichloroethene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	trans-1,3-Dichloropropene	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Trichloroethene	10	ug/L	U	480813.59	1350200.74
12511	12511-7-R	9/16/99	3	3.5	Uranium, Total	17.9	ug/g dry		480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Vinyl Chloride	10	ug/L	U	480813.59	1350200.74
12511	12511-7B-L	9/16/99	3	3.5	Xylenes (Total)	10	ug/L	U	480813.59	1350200.74
12511	12511-10-R	9/16/99	4.5	5	Thorium	5.90	ug/g dry		480813.59	1350200.74
12511	12511-10-R	9/16/99	4.5	5	Uranium, Total	1.68	ug/g dry		480813.59	1350200.74
12512	12512-1-R	9/16/99	0	0.5	Thorium	5.82	ug/g dry		480803.56	1350210.79
12512	12512-1-R	9/16/99	0	0.5	Uranium, Total	37.8	ug/g dry		480803.56	1350210.79
12512	12512-3-R	9/16/99	1	1.5	Thorium	5.28	ug/g dry		480803.56	1350210.79
12512	12512-3-R	9/16/99	1	1.5	Uranium, Total	1.50	ug/g dry		480803.56	1350210.79
12512	12512-5-R	9/16/99	2	2.5	Thorium	5.68	ug/g dry		480803.56	1350210.79
12512	12512-5-R	9/16/99	2	2.5	Uranium, Total	1.27	ug/g dry		480803.56	1350210.79
12512	12512-7-R	9/16/99	3	3.5	Thorium	5.96	ug/g dry		480803.56	1350210.79
12512	12512-7-R	9/16/99	3	3.5	Uranium, Total	1.45	ug/g dry		480803.56	1350210.79
12512	12512-10-R	9/16/99	4.5	5	Thorium	6.04	ug/g dry		480803.56	1350210.79
12512	12512-10-R	9/16/99	4.5	5	Uranium, Total	1.66	ug/g dry		480803.56	1350210.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12513	12513-1-R	9/15/99	0	0.5	Thorium	5.66	ug/g dry	J	480813.48	1350219.67
12513	12513-1-R	9/15/99	0	0.5	Uranium, Total	2460	ug/g dry	J	480813.48	1350219.67
12513	12513-3-R	9/15/99	1	1.5	Thorium	7.15	ug/g dry	J	480813.48	1350219.67
12513	12513-3-R	9/15/99	1	1.5	Uranium, Total	8.09	ug/g dry	J	480813.48	1350219.67
12513	12513-5-R	9/15/99	2	2.5	Thorium	6.83	ug/g dry	J	480813.48	1350219.67
12513	12513-5-R	9/15/99	2	2.5	Uranium, Total	1.96	ug/g dry	J	480813.48	1350219.67
12513	12513-7-R	9/15/99	3	3.5	Thorium	6.25	ug/g dry	-	480813.48	1350219.67
12513	12513-7-R	9/15/99	3	3.5	Uranium, Total	1.94	ug/g dry	-	480813.48	1350219.67
12513	12513-10-R	9/15/99	4.5	5	Thorium	7.05	ug/g dry	-	480813.48	1350219.67
12513	12513-10-R	9/15/99	4.5	5	Uranium, Total	1.87	ug/g dry	-	480813.48	1350219.67
12519	12519-1-R	11/9/99	0	0.5	Thorium	6.31	ug/g dry		480537.65	1350097.09
12519	12519-1-R	11/9/99	0	0.5	Uranium, Total	192	ug/g dry		480537.65	1350097.09
12519	12519-3-R	11/9/99	1	1.5	Thorium	5.55	ug/g dry		480537.65	1350097.09
12519	12519-3-R	11/9/99	1	1.5	Uranium, Total	554	ug/g dry		480537.65	1350097.09
12519	12519-5-R	11/9/99	2	2.5	Thorium	5.90	ug/g dry		480537.65	1350097.09
12519	12519-5-R	11/9/99	2	2.5	Uranium, Total	778	ug/g dry		480537.65	1350097.09
12519	12519-7-R	11/9/99	3	3.5	Thorium	5.31	ug/g dry		480537.65	1350097.09
12519	12519-7-R	11/9/99	3	3.5	Uranium, Total	382	ug/g dry		480537.65	1350097.09
12519	12519-9-R	11/9/99	4	4.5	Thorium	6.28	ug/g dry		480537.65	1350097.09
12519	12519-9-R	11/9/99	4	4.5	Uranium, Total	54.7	ug/g dry		480537.65	1350097.09
12519	12519-11-R	11/9/99	5	5.5	Thorium	6.14	ug/g dry		480537.65	1350097.09
12519	12519-11-R	11/9/99	5	5.5	Uranium, Total	1.68	ug/g dry		480537.65	1350097.09
12519	12519-13-R	11/9/99	6	6.5	Thorium	5.34	ug/g dry		480537.65	1350097.09
12519	12519-13-R	11/9/99	6	6.5	Uranium, Total	1.46	ug/g dry		480537.65	1350097.09
12519	12519-15-R	11/9/99	7	7.5	Thorium	5.69	ug/g dry		480537.65	1350097.09
12519	12519-15-R	11/9/99	7	7.5	Uranium, Total	1.51	ug/g dry		480537.65	1350097.09
12519	12519-17-R	11/10/99	8	8.5	Thorium	5.49	ug/g dry		480537.65	1350097.09
12519	12519-17-R	11/10/99	8	8.5	Uranium, Total	1.43	ug/g dry		480537.65	1350097.09
12520	12520-1-R	11/9/99	0	0.5	Thorium	4.83	ug/g dry		480517.65	1350097.09
12520	12520-1-R	11/9/99	0	0.5	Uranium, Total	336	ug/g dry		480517.65	1350097.09
12520	12520-3-R	11/9/99	1	1.5	Thorium	7.02	ug/g dry		480517.65	1350097.09
12520	12520-3-R	11/9/99	1	1.5	Uranium, Total	134	ug/g dry		480517.65	1350097.09
12520	12520-5-R	11/9/99	2	2.5	Thorium	5.83	ug/g dry		480517.65	1350097.09
12520	12520-5-R	11/9/99	2	2.5	Uranium, Total	3.08	ug/g dry		480517.65	1350097.09
12520	12520-7-R	11/9/99	3	3.5	Thorium	5.34	ug/g dry		480517.65	1350097.09
12520	12520-7-R	11/9/99	3	3.5	Uranium, Total	2.16	ug/g dry		480517.65	1350097.09
12520	12520-9-R	11/9/99	4	4.5	Thorium	6.24	ug/g dry		480517.65	1350097.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12520	12520-9-R	11/9/99	4	4.5	Uranium, Total	1.78	ug/g dry		480517.65	1350097.09
12520	12520-11-R	11/9/99	5	5.5	Thorium	5.80	ug/g dry		480517.65	1350097.09
12520	12520-11-R	11/9/99	5	5.5	Uranium, Total	1.46	ug/g dry		480517.65	1350097.09
12520	12520-13-R	11/9/99	6	6.5	Thorium	5.62	ug/g dry		480517.65	1350097.09
12520	12520-13-R	11/9/99	6	6.5	Uranium, Total	1.18	ug/g dry		480517.65	1350097.09
12520	12520-15-R	11/9/99	7	7.5	Thorium	5.79	ug/g dry		480517.65	1350097.09
12520	12520-15-R	11/9/99	7	7.5	Uranium, Total	1.47	ug/g dry		480517.65	1350097.09
12520	12520-17-R	11/9/99	8	8.5	Thorium	5.41	ug/g dry		480517.65	1350097.09
12520	12520-17-R	11/9/99	8	8.5	Uranium, Total	1.35	ug/g dry		480517.65	1350097.09
12521	12521-1-R	11/9/99	0	0.5	Thorium	7.27	ug/g dry		480517.65	1350117.09
12521	12521-1-R	11/9/99	0	0.5	Uranium, Total	1.87	ug/g dry		480517.65	1350117.09
12521	12521-3-R	11/9/99	1	1.5	Thorium	3.96	ug/g dry		480517.65	1350117.09
12521	12521-3-R	11/9/99	1	1.5	Uranium, Total	65.7	ug/g dry		480517.65	1350117.09
12521	12521-5-R	11/9/99	2	2.5	Thorium	4.49	ug/g dry		480517.65	1350117.09
12521	12521-5-R	11/9/99	2	2.5	Uranium, Total	236	ug/g dry		480517.65	1350117.09
12521	12521-7-R	11/9/99	3	3.5	Thorium	7.90	ug/g dry		480517.65	1350117.09
12521	12521-7-R	11/9/99	3	3.5	Uranium, Total	255	ug/g dry		480517.65	1350117.09
12521	12521-9-R	11/9/99	4	4.5	Thorium	5.25	ug/g dry		480517.65	1350117.09
12521	12521-9-R	11/9/99	4	4.5	Uranium, Total	229	ug/g dry		480517.65	1350117.09
12521	12521-11-R	11/9/99	5	5.5	Thorium	5.73	ug/g dry		480517.65	1350117.09
12521	12521-11-R	11/9/99	5	5.5	Uranium, Total	63.1	ug/g dry		480517.65	1350117.09
12521	12521-13-R	11/9/99	6	6.5	Thorium	5.76	ug/g dry		480517.65	1350117.09
12521	12521-13-R	11/9/99	6	6.5	Uranium, Total	1.74	ug/g dry		480517.65	1350117.09
12521	12521-15-R	11/9/99	7	7.5	Thorium	6.00	ug/g dry		480517.65	1350117.09
12521	12521-15-R	11/9/99	7	7.5	Uranium, Total	1.38	ug/g dry		480517.65	1350117.09
12521	12521-17-R	11/9/99	8	8.5	Thorium	5.05	ug/g dry		480517.65	1350117.09
12521	12521-17-R	11/9/99	8	8.5	Uranium, Total	1.43	ug/g dry		480517.65	1350117.09
12523	12523-1-R	9/23/99	0	0.5	Technetium 99	5.2	pCi/g dry	U	480490.06	1350214.42
12523	12523-1-R	9/23/99	0	0.5	Thorium	7.97	ug/g dry		480490.06	1350214.42
12523	12523-1-R	9/23/99	0	0.5	Uranium, Total	431	ug/g dry		480490.06	1350214.42
12523	12523-3-R	9/23/99	1	1.5	Technetium 99	-0.29	pCi/g dry	U	480490.06	1350214.42
12523	12523-3-R	9/23/99	1	1.5	Thorium	9.71	ug/g dry		480490.06	1350214.42
12523	12523-3-R	9/23/99	1	1.5	Uranium, Total	73.5	ug/g dry		480490.06	1350214.42
12523	12523-5-R	9/23/99	2	2.5	Technetium 99	3.5	pCi/g dry		480490.06	1350214.42
12523	12523-5-R	9/23/99	2	2.5	Thorium	9.96	ug/g dry		480490.06	1350214.42
12523	12523-5-R	9/23/99	2	2.5	Uranium, Total	479	ug/g dry		480490.06	1350214.42
12523	12523-7-R	9/23/99	3	3.5	Technetium 99	4.0	pCi/g dry		480490.06	1350214.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12523	12523-7-R	9/23/99	3	3.5	Thorium	10.4	ug/g dry		480490.06	1350214.42
12523	12523-7-R	9/23/99	3	3.5	Uranium, Total	299	ug/g dry		480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,1,1-Trichloroethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,1,2,2-Tetrachloroethane	1	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,1,2-Trichloroethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,1-Dichloroethane	3	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,1-Dichloroethene	2	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,2-Dichloroethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	1,2-Dichloropropane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	2-Butanone	6	ug/kg	UJ	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	2-Hexanone	11	ug/kg	UJ	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	4-Methyl-2-Pentanone	11	ug/kg	UJ	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Acetone	29	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Benzene	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	BromodiChloromethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Bromoform	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Bromomethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Carbon Disulfide	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Carbon Tetrachloride	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Chlorobenzene	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Chloroethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Chloroform	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Chloromethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	cis-1,2-Dichloroethene	860	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	cis-1,3-Dichloropropene	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Dibromochloromethane	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Ethylbenzene	2	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Methylene Chloride	7	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Styrene	11	ug/kg	U	480490.06	1350214.42
12523	12523-10-R	9/23/99	4.5	5	Technetium 99	3.2	pCi/g dry		480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Tetrachloroethene	380000	ug/kg	-	480490.06	1350214.42
12523	12523-10-R	9/23/99	4.5	5	Thorium	8.79	ug/g dry		480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Toluene	4	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	trans-1,2-Dichloroethene	4	ug/kg	J	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	trans-1,3-Dichloropropene	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Trichloroethene	3800	ug/kg	J	480490.06	1350214.42
12523	12523-10-R	9/23/99	4.5	5	Uranium, Total	551	ug/g dry		480490.06	1350214.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12523	12523-10B-L	9/23/99	4.5	5	Vinyl Chloride	11	ug/kg	U	480490.06	1350214.42
12523	12523-10B-L	9/23/99	4.5	5	Xylenes (Total)	5	ug/kg	J	480490.06	1350214.42
12526	12526-1-R	9/23/99	0	0.5	Technetium 99	210	pCi/g dry		480484.47	1350224.42
12526	12526-1-R	9/23/99	0	0.5	Thorium	7.41	ug/g dry		480484.47	1350224.42
12526	12526-1-R	9/23/99	0	0.5	Uranium, Total	336	ug/g dry		480484.47	1350224.42
12526	12526-3-R	9/23/99	1	1.5	Technetium 99	3.3	pCi/g dry		480484.47	1350224.42
12526	12526-3-R	9/23/99	1	1.5	Thorium	9.24	ug/g dry		480484.47	1350224.42
12526	12526-3-R	9/23/99	1	1.5	Uranium, Total	10.6	ug/g dry		480484.47	1350224.42
12526	12526-5-R	9/23/99	2	2.5	Technetium 99	4.0	pCi/g dry	U	480484.47	1350224.42
12526	12526-5-R	9/23/99	2	2.5	Thorium	8.75	ug/g dry		480484.47	1350224.42
12526	12526-5-R	9/23/99	2	2.5	Uranium, Total	83.5	ug/g dry		480484.47	1350224.42
12526	12526-7-R	9/23/99	3	3.5	Technetium 99	35	pCi/g dry		480484.47	1350224.42
12526	12526-7-R	9/23/99	3	3.5	Thorium	9.22	ug/g dry		480484.47	1350224.42
12526	12526-7-R	9/23/99	3	3.5	Uranium, Total	286	ug/g dry		480484.47	1350224.42
12526	12526-10-R	9/23/99	4.5	5	Technetium 99	1.1	pCi/g dry		480484.47	1350224.42
12526	12526-10-R	9/23/99	4.5	5	Thorium	8.27	ug/g dry		480484.47	1350224.42
12526	12526-10-R	9/23/99	4.5	5	Uranium, Total	359	ug/g dry		480484.47	1350224.42
12528	12528-1-R	9/22/99	0	0.5	Technetium 99	0.67	pCi/g dry	U	480478.77	1350216.02
12528	12528-1-R	9/22/99	0	0.5	Thorium	5.28	ug/g dry		480478.77	1350216.02
12528	12528-1-R	9/22/99	0	0.5	Uranium, Total	207	ug/g dry		480478.77	1350216.02
12528	12528-3-R	9/22/99	1	1.5	Technetium 99	65	pCi/g dry		480478.77	1350216.02
12528	12528-3-R	9/22/99	1	1.5	Thorium	5.66	ug/g dry		480478.77	1350216.02
12528	12528-3-R	9/22/99	1	1.5	Uranium, Total	347	ug/g dry		480478.77	1350216.02
12528	12528-5-R	9/22/99	2	2.5	Technetium 99	29	pCi/g dry		480478.77	1350216.02
12528	12528-5-R	9/22/99	2	2.5	Thorium	9.93	ug/g dry		480478.77	1350216.02
12528	12528-5-R	9/22/99	2	2.5	Uranium, Total	251	ug/g dry		480478.77	1350216.02
12528	12528-7-R	9/22/99	3	3.5	Technetium 99	5.0	pCi/g dry		480478.77	1350216.02
12528	12528-7-R	9/22/99	3	3.5	Thorium	10.1	ug/g dry		480478.77	1350216.02
12528	12528-7-R	9/22/99	3	3.5	Uranium, Total	510	ug/g dry		480478.77	1350216.02
12528	12528-10-R	9/22/99	4.5	5	Technetium 99	1.7	pCi/g dry	U	480478.77	1350216.02
12528	12528-10-R	9/22/99	4.5	5	Thorium	8.96	ug/g dry		480478.77	1350216.02
12528	12528-10-R	9/22/99	4.5	5	Uranium, Total	373	ug/g dry		480478.77	1350216.02
12529	12529-1-R	11/15/99	0	0.5	Thorium	1.16	ug/g dry		480129.7	1350213.97
12529	12529-1-R	11/15/99	0	0.5	Uranium, Total	9340	ug/g dry		480129.7	1350213.97
12529	12529-2B-R	11/15/99	0.5	1	Thorium	7.04	ug/g dry		480129.7	1350213.97
12529	12529-2B-R	11/15/99	0.5	1	Uranium, Total	82000	ug/g dry		480129.7	1350213.97
12529	12529-3-R	11/15/99	1	1.5	Thorium	2.66	ug/g dry		480129.7	1350213.97

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12529	12529-3-R	11/15/99	1	1.5	Uranium, Total	125000	ug/g dry		480129.7	1350213.97
12529	12529-4B-R	11/15/99	1.5	2	Thorium	6.41	ug/g dry		480129.7	1350213.97
12529	12529-4B-R	11/15/99	1.5	2	Uranium, Total	4990	ug/g dry		480129.7	1350213.97
12529	12529-5-R	11/15/99	2	2.5	Thorium	6.81	ug/g dry		480129.7	1350213.97
12529	12529-5-R	11/15/99	2	2.5	Uranium, Total	7640	ug/g dry		480129.7	1350213.97
12529	12529-6B-R	11/15/99	2.5	3	Thorium	46.3	ug/g dry		480129.7	1350213.97
12529	12529-6B-R	11/15/99	2.5	3	Uranium, Total	871	ug/g dry		480129.7	1350213.97
12529	12529-7-R	11/15/99	3	3.5	Thorium	8.67	ug/g dry		480129.7	1350213.97
12529	12529-7-R	11/15/99	3	3.5	Uranium, Total	1330	ug/g dry		480129.7	1350213.97
12529	12529-8B-R	11/15/99	3.5	4	Thorium	11.7	ug/g dry		480129.7	1350213.97
12529	12529-8B-R	11/15/99	3.5	4	Uranium, Total	811	ug/g dry		480129.7	1350213.97
12529	12529-9-R	11/15/99	4	4.5	Thorium	6.27	ug/g dry		480129.7	1350213.97
12529	12529-9-R	11/15/99	4	4.5	Uranium, Total	728	ug/g dry		480129.7	1350213.97
12529	12529-11-R	11/15/99	5	5.5	Thorium	10.8	ug/g dry		480129.7	1350213.97
12529	12529-11-R	11/15/99	5	5.5	Uranium, Total	1330	ug/g dry		480129.7	1350213.97
12529	12529-12B-R	11/15/99	5.5	6	Thorium	26.2	ug/g dry		480129.7	1350213.97
12529	12529-12B-R	11/15/99	5.5	6	Uranium, Total	911	ug/g dry		480129.7	1350213.97
12529	12529-13-R	11/15/99	6	6.5	Thorium	5.47	ug/g dry		480129.7	1350213.97
12529	12529-13-R	11/15/99	6	6.5	Uranium, Total	890	ug/g dry		480129.7	1350213.97
12529	12529-15-R	11/15/99	7	7.5	Thorium	5.67	ug/g dry		480129.7	1350213.97
12529	12529-15-R	11/15/99	7	7.5	Uranium, Total	665	ug/g dry		480129.7	1350213.97
12529	12529-17-R	11/15/99	8	8.5	Thorium	5.81	ug/g dry		480129.7	1350213.97
12529	12529-17-R	11/15/99	8	8.5	Uranium, Total	498	ug/g dry		480129.7	1350213.97
12529	12529-19-R	11/15/99	9	9.5	Thorium	6.88	ug/g dry		480129.7	1350213.97
12529	12529-19-R	11/15/99	9	9.5	Uranium, Total	296	ug/g dry		480129.7	1350213.97
12529	12529-21-R	11/15/99	10	10.5	Thorium	4.98	ug/g dry		480129.7	1350213.97
12529	12529-21-R	11/15/99	10	10.5	Uranium, Total	170	ug/g dry		480129.7	1350213.97
12529	12529-24-R	11/15/99	11.5	12	Thorium	5.95	ug/g dry		480129.7	1350213.97
12529	12529-24-R	11/15/99	11.5	12	Uranium, Total	6.41	ug/g dry		480129.7	1350213.97
12530	12530-1-R	11/15/99	0	0.5	Thorium	6.74	ug/g dry		480107.7	1350203.97
12530	12530-1-R	11/15/99	0	0.5	Uranium, Total	410	ug/g dry		480107.7	1350203.97
12530	12530-3-R	11/15/99	1	1.5	Thorium	6.68	ug/g dry		480107.7	1350203.97
12530	12530-3-R	11/15/99	1	1.5	Uranium, Total	370	ug/g dry		480107.7	1350203.97
12530	12530-5-R	11/15/99	2	2.5	Thorium	9.20	ug/g dry		480107.7	1350203.97
12530	12530-5-R	11/15/99	2	2.5	Uranium, Total	484	ug/g dry		480107.7	1350203.97
12530	12530-7-R	11/15/99	3	3.5	Thorium	9.31	ug/g dry		480107.7	1350203.97
12530	12530-7-R	11/15/99	3	3.5	Uranium, Total	659	ug/g dry		480107.7	1350203.97

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12530	12530-9-R	11/15/99	4	4.5	Thorium	8.48	ug/g dry		480107.7	1350203.97
12530	12530-9-R	11/15/99	4	4.5	Uranium, Total	529	ug/g dry		480107.7	1350203.97
12530	12530-11-R	11/15/99	5	5.5	Thorium	5.67	ug/g dry		480107.7	1350203.97
12530	12530-11-R	11/15/99	5	5.5	Uranium, Total	383	ug/g dry		480107.7	1350203.97
12530	12530-13-R	11/15/99	6	6.5	Thorium	5.44	ug/g dry		480107.7	1350203.97
12530	12530-13-R	11/15/99	6	6.5	Uranium, Total	339	ug/g dry		480107.7	1350203.97
12530	12530-15-R	11/15/99	7	7.5	Thorium	6.46	ug/g dry		480107.7	1350203.97
12530	12530-15-R	11/15/99	7	7.5	Uranium, Total	279	ug/g dry		480107.7	1350203.97
12530	12530-17-R	11/15/99	8	8.5	Thorium	5.98	ug/g dry		480107.7	1350203.97
12530	12530-17-R	11/15/99	8	8.5	Uranium, Total	275	ug/g dry		480107.7	1350203.97
12530	12530-19-R	11/15/99	9	9.5	Thorium	6.19	ug/g dry		480107.7	1350203.97
12530	12530-19-R	11/15/99	9	9.5	Uranium, Total	155	ug/g dry		480107.7	1350203.97
12530	12530-21-R	11/15/99	10	10.5	Thorium	5.71	ug/g dry		480107.7	1350203.97
12530	12530-21-R	11/15/99	10	10.5	Uranium, Total	60.9	ug/g dry		480107.7	1350203.97
12530	12530-24-R	11/15/99	11.5	12	Thorium	5.71	ug/g dry		480107.7	1350203.97
12530	12530-24-R	11/15/99	11.5	12	Uranium, Total	34.8	ug/g dry		480107.7	1350203.97
12531	12531-5-R	8/26/99	2	2.5	Thorium	9.44	ug/g dry	-	481873.41	1350395.3
12531	12531-5-R	8/26/99	2	2.5	Uranium, Total	50.3	ug/g dry	-	481873.41	1350395.3
12531	12531-7-R	8/26/99	3	3.5	Thorium	7.53	ug/g dry	-	481873.41	1350395.3
12531	12531-7-R	8/26/99	3	3.5	Uranium, Total	4.64	ug/g dry	-	481873.41	1350395.3
12531	12531-9-R	8/26/99	4	4.5	Thorium	6.97	ug/g dry	J	481873.41	1350395.3
12531	12531-9-R	8/26/99	4	4.5	Uranium, Total	11.4	ug/g dry	J	481873.41	1350395.3
12531	12531-11-R	8/26/99	5	5.5	Thorium	7.84	ug/g dry	J	481873.41	1350395.3
12531	12531-11-R	8/26/99	5	5.5	Uranium, Total	21.4	ug/g dry	J	481873.41	1350395.3
12531	12531-13-R	8/26/99	6	6.5	Thorium	6.04	ug/g dry	J	481873.41	1350395.3
12531	12531-13-R	8/26/99	6	6.5	Uranium, Total	12.2	ug/g dry	J	481873.41	1350395.3
12531	12531-15-R	8/26/99	7	7.5	Thorium	5.94	ug/g dry	J	481873.41	1350395.3
12531	12531-15-R	8/26/99	7	7.5	Uranium, Total	3.49	ug/g dry	J	481873.41	1350395.3
12531	12531-17-R	8/26/99	8	8.5	Thorium	3.27	ug/g dry	J	481873.41	1350395.3
12531	12531-17-R	8/26/99	8	8.5	Uranium, Total	2.82	ug/g dry	J	481873.41	1350395.3
12531	12531-19-R	8/26/99	9	9.5	Thorium	2.73	ug/g dry	J	481873.41	1350395.3
12531	12531-19-R	8/26/99	9	9.5	Uranium, Total	2.02	ug/g dry	J	481873.41	1350395.3
12532	12532-5-R	10/26/99	2	2.5	Thorium	11.0	ug/g dry		481879.41	1350395.3
12532	12532-5-R	10/26/99	2	2.5	Uranium, Total	4.34	ug/g dry		481879.41	1350395.3
12532	12532-7-R	10/26/99	3	3.5	Thorium	10.8	ug/g dry		481879.41	1350395.3
12532	12532-7-R	10/26/99	3	3.5	Uranium, Total	2.50	ug/g dry		481879.41	1350395.3
12532	12532-9-R	10/26/99	4	4.5	Thorium	8.44	ug/g dry		481879.41	1350395.3

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12532	12532-9-R	10/26/99	4	4.5	Uranium, Total	2.28	ug/g dry		481879.41	1350395.3
12532	12532-11-R	10/26/99	5	5.5	Thorium	6.36	ug/g dry		481879.41	1350395.3
12532	12532-11-R	10/26/99	5	5.5	Uranium, Total	2.19	ug/g dry		481879.41	1350395.3
12532	12532-13-R	10/26/99	6	6.5	Thorium	5.65	ug/g dry		481879.41	1350395.3
12532	12532-13-R	10/26/99	6	6.5	Uranium, Total	3.63	ug/g dry		481879.41	1350395.3
12532	12532-15-R	10/26/99	7	7.5	Thorium	5.53	ug/g dry		481879.41	1350395.3
12532	12532-15-R	10/26/99	7	7.5	Uranium, Total	3.25	ug/g dry		481879.41	1350395.3
12532	12532-17-R	10/26/99	8	8.5	Thorium	6.47	ug/g dry		481879.41	1350395.3
12532	12532-17-R	10/26/99	8	8.5	Uranium, Total	2.08	ug/g dry		481879.41	1350395.3
12532	12532-19-R	10/26/99	9	9.5	Thorium	3.47	ug/g dry		481879.41	1350395.3
12532	12532-19-R	10/26/99	9	9.5	Uranium, Total	1.60	ug/g dry		481879.41	1350395.3
12533	12533-5-R	10/26/99	2	2.5	Thorium	8.71	ug/g dry		481867.41	1350395.3
12533	12533-5-R	10/26/99	2	2.5	Uranium, Total	3.51	ug/g dry		481867.41	1350395.3
12533	12533-7-R	10/26/99	3	3.5	Thorium	7.69	ug/g dry		481867.41	1350395.3
12533	12533-7-R	10/26/99	3	3.5	Uranium, Total	1.80	ug/g dry		481867.41	1350395.3
12533	12533-9-R	10/26/99	4	4.5	Thorium	7.27	ug/g dry		481867.41	1350395.3
12533	12533-9-R	10/26/99	4	4.5	Uranium, Total	1.42	ug/g dry		481867.41	1350395.3
12533	12533-11-R	10/26/99	5	5.5	Thorium	4.84	ug/g dry		481867.41	1350395.3
12533	12533-11-R	10/26/99	5	5.5	Uranium, Total	10.4	ug/g dry		481867.41	1350395.3
12533	12533-13-R	10/26/99	6	6.5	Thorium	5.42	ug/g dry		481867.41	1350395.3
12533	12533-13-R	10/26/99	6	6.5	Uranium, Total	12.7	ug/g dry		481867.41	1350395.3
12533	12533-15-R	10/26/99	7	7.5	Thorium	4.08	ug/g dry		481867.41	1350395.3
12533	12533-15-R	10/26/99	7	7.5	Uranium, Total	2.87	ug/g dry		481867.41	1350395.3
12533	12533-17-R	10/26/99	8	8.5	Thorium	2.40	ug/g dry		481867.41	1350395.3
12533	12533-17-R	10/26/99	8	8.5	Uranium, Total	3.37	ug/g dry		481867.41	1350395.3
12533	12533-19-R	10/26/99	9	9.5	Thorium	3.32	ug/g dry		481867.41	1350395.3
12533	12533-19-R	10/26/99	9	9.5	Uranium, Total	1.70	ug/g dry		481867.41	1350395.3
12534	12534-5-R	10/26/99	2	2.5	Thorium	9.06	ug/g dry		481873.41	1350389.3
12534	12534-5-R	10/26/99	2	2.5	Uranium, Total	9.07	ug/g dry		481873.41	1350389.3
12534	12534-7-R	10/26/99	3	3.5	Thorium	8.51	ug/g dry		481873.41	1350389.3
12534	12534-7-R	10/26/99	3	3.5	Uranium, Total	2.51	ug/g dry		481873.41	1350389.3
12534	12534-9-R	10/26/99	4	4.5	Thorium	7.52	ug/g dry		481873.41	1350389.3
12534	12534-9-R	10/26/99	4	4.5	Uranium, Total	1.84	ug/g dry		481873.41	1350389.3
12534	12534-11-R	10/26/99	5	5.5	Thorium	5.55	ug/g dry		481873.41	1350389.3
12534	12534-11-R	10/26/99	5	5.5	Uranium, Total	9.57	ug/g dry		481873.41	1350389.3
12534	12534-13-R	10/26/99	6	6.5	Thorium	4.80	ug/g dry		481873.41	1350389.3
12534	12534-13-R	10/26/99	6	6.5	Uranium, Total	12.7	ug/g dry		481873.41	1350389.3

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12534	12534-15-R	10/26/99	7	7.5	Thorium	5.18	ug/g dry		481873.41	1350389.3
12534	12534-15-R	10/26/99	7	7.5	Uranium, Total	5.78	ug/g dry		481873.41	1350389.3
12534	12534-17-R	10/26/99	8	8.5	Thorium	5.81	ug/g dry		481873.41	1350389.3
12534	12534-17-R	10/26/99	8	8.5	Uranium, Total	6.26	ug/g dry		481873.41	1350389.3
12534	12534-19-R	10/26/99	9	9.5	Thorium	4.44	ug/g dry		481873.41	1350389.3
12534	12534-19-R	10/26/99	9	9.5	Uranium, Total	1.88	ug/g dry		481873.41	1350389.3
12535	12535-5-R	10/26/99	2	2.5	Thorium	9.21	ug/g dry		481873.41	1350401.3
12535	12535-5-R	10/26/99	2	2.5	Uranium, Total	6.67	ug/g dry		481873.41	1350401.3
12535	12535-7-R	10/26/99	3	3.5	Thorium	8.55	ug/g dry		481873.41	1350401.3
12535	12535-7-R	10/26/99	3	3.5	Uranium, Total	4.78	ug/g dry		481873.41	1350401.3
12535	12535-9-R	10/26/99	4	4.5	Thorium	6.09	ug/g dry		481873.41	1350401.3
12535	12535-9-R	10/26/99	4	4.5	Uranium, Total	1.93	ug/g dry		481873.41	1350401.3
12535	12535-11-R	10/26/99	5	5.5	Thorium	5.37	ug/g dry		481873.41	1350401.3
12535	12535-11-R	10/26/99	5	5.5	Uranium, Total	6.57	ug/g dry		481873.41	1350401.3
12535	12535-13-R	10/26/99	6	6.5	Thorium	5.51	ug/g dry		481873.41	1350401.3
12535	12535-13-R	10/26/99	6	6.5	Uranium, Total	4.64	ug/g dry		481873.41	1350401.3
12535	12535-15-R	10/26/99	7	7.5	Thorium	3.36	ug/g dry		481873.41	1350401.3
12535	12535-15-R	10/26/99	7	7.5	Uranium, Total	4.60	ug/g dry		481873.41	1350401.3
12535	12535-17-R	10/26/99	8	8.5	Thorium	2.24	ug/g dry		481873.41	1350401.3
12535	12535-17-R	10/26/99	8	8.5	Uranium, Total	1.41	ug/g dry		481873.41	1350401.3
12535	12535-19-R	10/26/99	9	9.5	Thorium	2.59	ug/g dry		481873.41	1350401.3
12535	12535-19-R	10/26/99	9	9.5	Uranium, Total	1.79	ug/g dry		481873.41	1350401.3
12536	12536-3-M	8/30/99	1	1.5	Beryllium	0.997	ug/g dry	J	481798.51	1349531.77
12536	12536-3-M	8/30/99	1	1.5	Thorium	7.28	ug/g dry	J	481798.51	1349531.77
12536	12536-3-M	8/30/99	1	1.5	Uranium, Total	22	ug/g dry	J	481798.51	1349531.77
12536	12536-5-M	8/30/99	2	2.5	Beryllium	0.849	ug/g dry	J	481798.51	1349531.77
12536	12536-5-M	8/30/99	2	2.5	Thorium	6.02	ug/g dry	-	481798.51	1349531.77
12536	12536-5-M	8/30/99	2	2.5	Uranium, Total	2.16	ug/g dry	-	481798.51	1349531.77
12536	12536-7-M	8/30/99	3	3.5	Beryllium	1.03	ug/g dry	J	481798.51	1349531.77
12536	12536-7-M	8/30/99	3	3.5	Thorium	6.27	ug/g dry	-	481798.51	1349531.77
12536	12536-7-M	8/30/99	3	3.5	Uranium, Total	1.51	ug/g dry	-	481798.51	1349531.77
12536	12536-9-M	8/30/99	4	4.5	Beryllium	0.823	ug/g dry	J	481798.51	1349531.77
12536	12536-9-M	8/30/99	4	4.5	Thorium	5.33	ug/g dry	-	481798.51	1349531.77
12536	12536-9-M	8/30/99	4	4.5	Uranium, Total	1.41	ug/g dry	-	481798.51	1349531.77
12536	12536-11-M	8/30/99	5	5.5	Beryllium	0.916	ug/g dry	J	481798.51	1349531.77
12536	12536-11-M	8/30/99	5	5.5	Thorium	5.39	ug/g dry	-	481798.51	1349531.77
12536	12536-11-M	8/30/99	5	5.5	Uranium, Total	1.48	ug/g dry	-	481798.51	1349531.77

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12536	12536-13-M	8/30/99	6	6.5	Beryllium	0.842	ug/g dry	-	481798.51	1349531.77
12536	12536-13-M	8/30/99	6	6.5	Thorium	5.1	ug/g dry	-	481798.51	1349531.77
12536	12536-13-M	8/30/99	6	6.5	Uranium, Total	1.48	ug/g dry	-	481798.51	1349531.77
12536	12536-15-M	8/30/99	7	7.5	Beryllium	0.741	ug/g dry	-	481798.51	1349531.77
12536	12536-15-M	8/30/99	7	7.5	Thorium	4.83	ug/g dry	-	481798.51	1349531.77
12536	12536-15-M	8/30/99	7	7.5	Uranium, Total	2.07	ug/g dry	-	481798.51	1349531.77
12536	12536-17-M	8/30/99	8	8.5	Beryllium	0.953	ug/g dry	-	481798.51	1349531.77
12536	12536-17-M	8/30/99	8	8.5	Thorium	5.78	ug/g dry	-	481798.51	1349531.77
12536	12536-17-M	8/30/99	8	8.5	Uranium, Total	1.55	ug/g dry	-	481798.51	1349531.77
12536	12536-19-M	8/30/99	9	9.5	Beryllium	0.636	ug/g dry	-	481798.51	1349531.77
12536	12536-19-M	8/30/99	9	9.5	Thorium	4.1	ug/g dry	J	481798.51	1349531.77
12536	12536-19-M	8/30/99	9	9.5	Uranium, Total	1.58	ug/g dry	J	481798.51	1349531.77
12536	12536-21-M	8/30/99	10	10.5	Beryllium	0.717	ug/g dry	-	481798.51	1349531.77
12536	12536-21-M	8/30/99	10	10.5	Thorium	4.5	ug/g dry	J	481798.51	1349531.77
12536	12536-21-M	8/30/99	10	10.5	Uranium, Total	1.69	ug/g dry	J	481798.51	1349531.77
12536	12536-23-M	8/30/99	11	11.5	Beryllium	0.731	ug/g dry	-	481798.51	1349531.77
12536	12536-23-M	8/30/99	11	11.5	Thorium	4.38	ug/g dry	J	481798.51	1349531.77
12536	12536-23-M	8/30/99	11	11.5	Uranium, Total	1.36	ug/g dry	J	481798.51	1349531.77
12536	12536-25-M	8/30/99	12	12.5	Beryllium	0.748	ug/g dry	-	481798.51	1349531.77
12536	12536-25-M	8/30/99	12	12.5	Thorium	4.49	ug/g dry	J	481798.51	1349531.77
12536	12536-25-M	8/30/99	12	12.5	Uranium, Total	1.45	ug/g dry	J	481798.51	1349531.77
12537	12537-3-M	11/1/99	1	1.5	Beryllium	1.12	ug/g dry		481805.61	1349536.13
12537	12537-3-M	11/1/99	1	1.5	Thorium	7.62	ug/g dry		481805.61	1349536.13
12537	12537-3-M	11/1/99	1	1.5	Uranium, Total	36.1	ug/g dry		481805.61	1349536.13
12537	12537-5-M	11/1/99	2	2.5	Beryllium	0.599	ug/g dry		481805.61	1349536.13
12537	12537-5-M	11/1/99	2	2.5	Thorium	4.36	ug/g dry		481805.61	1349536.13
12537	12537-5-M	11/1/99	2	2.5	Uranium, Total	1.68	ug/g dry		481805.61	1349536.13
12537	12537-7-M	11/1/99	3	3.5	Beryllium	0.523	ug/g dry		481805.61	1349536.13
12537	12537-7-M	11/1/99	3	3.5	Thorium	3.71	ug/g dry		481805.61	1349536.13
12537	12537-7-M	11/1/99	3	3.5	Uranium, Total	1.76	ug/g dry		481805.61	1349536.13
12537	12537-9-M	11/1/99	4	4.5	Beryllium	0.677	ug/g dry		481805.61	1349536.13
12537	12537-9-M	11/1/99	4	4.5	Thorium	4.56	ug/g dry		481805.61	1349536.13
12537	12537-9-M	11/1/99	4	4.5	Uranium, Total	1.47	ug/g dry		481805.61	1349536.13
12537	12537-11-M	11/1/99	5	5.5	Beryllium	0.577	ug/g dry		481805.61	1349536.13
12537	12537-11-M	11/1/99	5	5.5	Thorium	5.14	ug/g dry		481805.61	1349536.13
12537	12537-11-M	11/1/99	5	5.5	Uranium, Total	1.40	ug/g dry		481805.61	1349536.13
12537	12537-13-M	11/1/99	6	6.5	Beryllium	0.664	ug/g dry		481805.61	1349536.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12537	12537-13-M	11/1/99	6	6.5	Thorium	4.34	ug/g dry		481805.61	1349536.13
12537	12537-13-M	11/1/99	6	6.5	Uranium, Total	1.37	ug/g dry		481805.61	1349536.13
12537	12537-15-M	11/1/99	7	7.5	Beryllium	0.686	ug/g dry		481805.61	1349536.13
12537	12537-15-M	11/1/99	7	7.5	Thorium	5.13	ug/g dry		481805.61	1349536.13
12537	12537-15-M	11/1/99	7	7.5	Uranium, Total	2.77	ug/g dry		481805.61	1349536.13
12537	12537-17-M	11/1/99	8	8.5	Beryllium	0.501	ug/g dry		481805.61	1349536.13
12537	12537-17-M	11/1/99	8	8.5	Thorium	3.91	ug/g dry		481805.61	1349536.13
12537	12537-17-M	11/1/99	8	8.5	Uranium, Total	4.11	ug/g dry		481805.61	1349536.13
12537	12537-19-M	11/1/99	9	9.5	Beryllium	0.329	ug/g dry	U	481805.61	1349536.13
12537	12537-19-M	11/1/99	9	9.5	Thorium	2.63	ug/g dry		481805.61	1349536.13
12537	12537-19-M	11/1/99	9	9.5	Uranium, Total	1.71	ug/g dry		481805.61	1349536.13
12537	12537-21-M	11/1/99	10	10.5	Beryllium	0.387	ug/g dry		481805.61	1349536.13
12537	12537-21-M	11/1/99	10	10.5	Thorium	2.96	ug/g dry		481805.61	1349536.13
12537	12537-21-M	11/1/99	10	10.5	Uranium, Total	1.22	ug/g dry		481805.61	1349536.13
12537	12537-23-M	11/1/99	11	11.5	Beryllium	0.545	ug/g dry		481805.61	1349536.13
12537	12537-23-M	11/1/99	11	11.5	Thorium	3.49	ug/g dry		481805.61	1349536.13
12537	12537-23-M	11/1/99	11	11.5	Uranium, Total	2.02	ug/g dry		481805.61	1349536.13
12537	12537-25-M	11/1/99	12	12.5	Beryllium	0.761	ug/g dry		481805.61	1349536.13
12537	12537-25-M	11/1/99	12	12.5	Thorium	4.97	ug/g dry		481805.61	1349536.13
12537	12537-25-M	11/1/99	12	12.5	Uranium, Total	1.67	ug/g dry		481805.61	1349536.13
12538	12538-3-M	11/1/99	1	1.5	Beryllium	1.04	ug/g dry		481791.47	1349528.69
12538	12538-3-M	11/1/99	1	1.5	Thorium	7.16	ug/g dry		481791.47	1349528.69
12538	12538-3-M	11/1/99	1	1.5	Uranium, Total	39.2	ug/g dry		481791.47	1349528.69
12538	12538-5-M	11/1/99	2	2.5	Beryllium	0.781	ug/g dry		481791.47	1349528.69
12538	12538-5-M	11/1/99	2	2.5	Thorium	5.62	ug/g dry		481791.47	1349528.69
12538	12538-5-M	11/1/99	2	2.5	Uranium, Total	20.6	ug/g dry		481791.47	1349528.69
12538	12538-7-M	11/1/99	3	3.5	Beryllium	1.11	ug/g dry		481791.47	1349528.69
12538	12538-7-M	11/1/99	3	3.5	Thorium	8.02	ug/g dry		481791.47	1349528.69
12538	12538-7-M	11/1/99	3	3.5	Uranium, Total	18.5	ug/g dry		481791.47	1349528.69
12538	12538-9-M	11/1/99	4	4.5	Beryllium	0.344	ug/g dry		481791.47	1349528.69
12538	12538-9-M	11/1/99	4	4.5	Thorium	2.86	ug/g dry		481791.47	1349528.69
12538	12538-9-M	11/1/99	4	4.5	Uranium, Total	3.62	ug/g dry		481791.47	1349528.69
12538	12538-11-M	11/1/99	5	5.5	Beryllium	0.500	ug/g dry		481791.47	1349528.69
12538	12538-11-M	11/1/99	5	5.5	Thorium	3.89	ug/g dry		481791.47	1349528.69
12538	12538-11-M	11/1/99	5	5.5	Uranium, Total	2.90	ug/g dry		481791.47	1349528.69
12538	12538-13-M	11/1/99	6	6.5	Beryllium	0.495	ug/g dry		481791.47	1349528.69
12538	12538-13-M	11/1/99	6	6.5	Thorium	3.82	ug/g dry		481791.47	1349528.69

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12538	12538-13-M	11/1/99	6	6.5	Uranium, Total	2.69	ug/g dry		481791.47	1349528.69
12538	12538-15-M	11/1/99	7	7.5	Beryllium	0.588	ug/g dry		481791.47	1349528.69
12538	12538-15-M	11/1/99	7	7.5	Thorium	4.71	ug/g dry		481791.47	1349528.69
12538	12538-15-M	11/1/99	7	7.5	Uranium, Total	2.19	ug/g dry		481791.47	1349528.69
12538	12538-17-M	11/1/99	8	8.5	Beryllium	0.670	ug/g dry		481791.47	1349528.69
12538	12538-17-M	11/1/99	8	8.5	Thorium	5.42	ug/g dry		481791.47	1349528.69
12538	12538-17-M	11/1/99	8	8.5	Uranium, Total	2.16	ug/g dry		481791.47	1349528.69
12538	12538-19-M	11/1/99	9	9.5	Beryllium	0.651	ug/g dry		481791.47	1349528.69
12538	12538-19-M	11/1/99	9	9.5	Thorium	4.66	ug/g dry		481791.47	1349528.69
12538	12538-19-M	11/1/99	9	9.5	Uranium, Total	1.57	ug/g dry		481791.47	1349528.69
12538	12538-21-M	11/1/99	10	10.5	Beryllium	0.648	ug/g dry		481791.47	1349528.69
12538	12538-21-M	11/1/99	10	10.5	Thorium	4.94	ug/g dry		481791.47	1349528.69
12538	12538-21-M	11/1/99	10	10.5	Uranium, Total	1.49	ug/g dry		481791.47	1349528.69
12538	12538-23-M	11/1/99	11	11.5	Beryllium	0.471	ug/g dry		481791.47	1349528.69
12538	12538-23-M	11/1/99	11	11.5	Thorium	3.50	ug/g dry		481791.47	1349528.69
12538	12538-23-M	11/1/99	11	11.5	Uranium, Total	1.35	ug/g dry		481791.47	1349528.69
12538	12538-25-M	11/1/99	12	12.5	Beryllium	0.485	ug/g dry		481791.47	1349528.69
12538	12538-25-M	11/1/99	12	12.5	Thorium	3.77	ug/g dry		481791.47	1349528.69
12538	12538-25-M	11/1/99	12	12.5	Uranium, Total	1.48	ug/g dry		481791.47	1349528.69
12539	12539-3-M	10/28/99	1	1.5	Beryllium	0.661	ug/g dry		481802.56	1349523.61
12539	12539-3-M	10/28/99	1	1.5	Thorium	3.81	ug/g dry		481802.56	1349523.61
12539	12539-3-M	10/28/99	1	1.5	Uranium, Total	10.3	ug/g dry		481802.56	1349523.61
12539	12539-5-M	10/28/99	2	2.5	Beryllium	0.537	ug/g dry		481802.56	1349523.61
12539	12539-5-M	10/28/99	2	2.5	Thorium	3.78	ug/g dry		481802.56	1349523.61
12539	12539-5-M	10/28/99	2	2.5	Uranium, Total	2.39	ug/g dry		481802.56	1349523.61
12539	12539-7-M	10/28/99	3	3.5	Beryllium	0.537	ug/g dry		481802.56	1349523.61
12539	12539-7-M	10/28/99	3	3.5	Thorium	3.71	ug/g dry		481802.56	1349523.61
12539	12539-7-M	10/28/99	3	3.5	Uranium, Total	1.57	ug/g dry		481802.56	1349523.61
12539	12539A-9-M	10/28/99	4	4.5	Beryllium	0.784	ug/g dry		481802.56	1349523.61
12539	12539A-9-M	10/28/99	4	4.5	Thorium	5.09	ug/g dry		481802.56	1349523.61
12539	12539A-9-M	10/28/99	4	4.5	Uranium, Total	1.64	ug/g dry		481802.56	1349523.61
12539	12539A-11-M	10/28/99	5	5.5	Beryllium	0.584	ug/g dry		481802.56	1349523.61
12539	12539A-11-M	10/28/99	5	5.5	Thorium	4.50	ug/g dry		481802.56	1349523.61
12539	12539A-11-M	10/28/99	5	5.5	Uranium, Total	1.39	ug/g dry		481802.56	1349523.61
12539	12539A-13-M	10/28/99	6	6.5	Beryllium	0.575	ug/g dry		481802.56	1349523.61
12539	12539A-13-M	10/28/99	6	6.5	Thorium	4.19	ug/g dry		481802.56	1349523.61
12539	12539A-13-M	10/28/99	6	6.5	Uranium, Total	1.18	ug/g dry		481802.56	1349523.61

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12539	12539A-15-M	10/28/99	7	7.5	Beryllium	0.595	ug/g dry		481802.56	1349523.61
12539	12539A-15-M	10/28/99	7	7.5	Thorium	4.60	ug/g dry		481802.56	1349523.61
12539	12539A-15-M	10/28/99	7	7.5	Uranium, Total	1.14	ug/g dry		481802.56	1349523.61
12539	12539A-17-M	10/28/99	8	8.5	Beryllium	0.567	ug/g dry		481802.56	1349523.61
12539	12539A-17-M	10/28/99	8	8.5	Thorium	4.33	ug/g dry		481802.56	1349523.61
12539	12539A-17-M	10/28/99	8	8.5	Uranium, Total	1.10	ug/g dry		481802.56	1349523.61
12539	12539A-19-M	10/28/99	9	9.5	Beryllium	0.618	ug/g dry		481802.56	1349523.61
12539	12539A-19-M	10/28/99	9	9.5	Thorium	4.60	ug/g dry		481802.56	1349523.61
12539	12539A-19-M	10/28/99	9	9.5	Uranium, Total	1.55	ug/g dry		481802.56	1349523.61
12539	12539A-21-M	10/28/99	10	10.5	Beryllium	0.521	ug/g dry		481802.56	1349523.61
12539	12539A-21-M	10/28/99	10	10.5	Thorium	3.89	ug/g dry		481802.56	1349523.61
12539	12539A-21-M	10/28/99	10	10.5	Uranium, Total	1.85	ug/g dry		481802.56	1349523.61
12539	12539A-23-M	10/28/99	11	11.5	Beryllium	0.417	ug/g dry		481802.56	1349523.61
12539	12539A-23-M	10/28/99	11	11.5	Thorium	3.30	ug/g dry		481802.56	1349523.61
12539	12539A-23-M	10/28/99	11	11.5	Uranium, Total	1.34	ug/g dry		481802.56	1349523.61
12539	12539A-25-M	10/28/99	12	12.5	Beryllium	0.386	ug/g dry		481802.56	1349523.61
12539	12539A-25-M	10/28/99	12	12.5	Thorium	2.97	ug/g dry		481802.56	1349523.61
12539	12539A-25-M	10/28/99	12	12.5	Uranium, Total	1.32	ug/g dry		481802.56	1349523.61
12540	12540-3-M	11/1/99	1	1.5	Beryllium	0.858	ug/g dry		481790.49	1349542.48
12540	12540-3-M	11/1/99	1	1.5	Thorium	6.00	ug/g dry		481790.49	1349542.48
12540	12540-3-M	11/1/99	1	1.5	Uranium, Total	15.8	ug/g dry		481790.49	1349542.48
12540	12540-5-M	11/1/99	2	2.5	Beryllium	0.819	ug/g dry		481790.49	1349542.48
12540	12540-5-M	11/1/99	2	2.5	Thorium	5.91	ug/g dry		481790.49	1349542.48
12540	12540-5-M	11/1/99	2	2.5	Uranium, Total	5.57	ug/g dry		481790.49	1349542.48
12540	12540-7-M	11/1/99	3	3.5	Beryllium	0.982	ug/g dry		481790.49	1349542.48
12540	12540-7-M	11/1/99	3	3.5	Thorium	6.15	ug/g dry		481790.49	1349542.48
12540	12540-7-M	11/1/99	3	3.5	Uranium, Total	1.81	ug/g dry		481790.49	1349542.48
12540	12540-9-M	11/1/99	4	4.5	Beryllium	0.917	ug/g dry		481790.49	1349542.48
12540	12540-9-M	11/1/99	4	4.5	Thorium	5.68	ug/g dry		481790.49	1349542.48
12540	12540-9-M	11/1/99	4	4.5	Uranium, Total	1.50	ug/g dry		481790.49	1349542.48
12540	12540-11-M	11/1/99	5	5.5	Beryllium	0.937	ug/g dry		481790.49	1349542.48
12540	12540-11-M	11/1/99	5	5.5	Thorium	5.85	ug/g dry		481790.49	1349542.48
12540	12540-11-M	11/1/99	5	5.5	Uranium, Total	1.70	ug/g dry		481790.49	1349542.48
12540	12540-13-M	11/1/99	6	6.5	Beryllium	0.723	ug/g dry		481790.49	1349542.48
12540	12540-13-M	11/1/99	6	6.5	Thorium	5.03	ug/g dry		481790.49	1349542.48
12540	12540-13-M	11/1/99	6	6.5	Uranium, Total	2.07	ug/g dry		481790.49	1349542.48
12540	12540-15-M	11/1/99	7	7.5	Beryllium	0.615	ug/g dry		481790.49	1349542.48

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12540	12540-15-M	11/1/99	7	7.5	Thorium	4.85	ug/g dry		481790.49	1349542.48
12540	12540-15-M	11/1/99	7	7.5	Uranium, Total	1.59	ug/g dry		481790.49	1349542.48
12540	12540-17-M	11/1/99	8	8.5	Beryllium	0.658	ug/g dry		481790.49	1349542.48
12540	12540-17-M	11/1/99	8	8.5	Thorium	4.33	ug/g dry		481790.49	1349542.48
12540	12540-17-M	11/1/99	8	8.5	Uranium, Total	1.65	ug/g dry		481790.49	1349542.48
12540	12540-19-M	11/1/99	9	9.5	Beryllium	0.699	ug/g dry		481790.49	1349542.48
12540	12540-19-M	11/1/99	9	9.5	Thorium	4.54	ug/g dry		481790.49	1349542.48
12540	12540-19-M	11/1/99	9	9.5	Uranium, Total	2.23	ug/g dry		481790.49	1349542.48
12540	12540-21-M	11/1/99	10	10.5	Beryllium	0.519	ug/g dry		481790.49	1349542.48
12540	12540-21-M	11/1/99	10	10.5	Thorium	3.24	ug/g dry		481790.49	1349542.48
12540	12540-21-M	11/1/99	10	10.5	Uranium, Total	1.27	ug/g dry		481790.49	1349542.48
12540	12540-23-M	11/1/99	11	11.5	Beryllium	0.592	ug/g dry		481790.49	1349542.48
12540	12540-23-M	11/1/99	11	11.5	Thorium	3.91	ug/g dry		481790.49	1349542.48
12540	12540-23-M	11/1/99	11	11.5	Uranium, Total	1.22	ug/g dry		481790.49	1349542.48
12540	12540-25-M	11/1/99	12	12.5	Beryllium	0.689	ug/g dry		481790.49	1349542.48
12540	12540-25-M	11/1/99	12	12.5	Thorium	4.50	ug/g dry		481790.49	1349542.48
12540	12540-25-M	11/1/99	12	12.5	Uranium, Total	1.45	ug/g dry		481790.49	1349542.48
12541	12541-7-L	8/31/99	3	3.5	1,1,1-Trichloroethane	13	ug/kg	-	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	1,1-Dichloroethane	30	ug/kg	-	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	1,1-Dichloroethene	2	ug/kg	J	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	1,2-Dichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	1,2-Dichloropropane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	2-Butanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	2-Hexanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Acetone	28	ug/kg	U	481705.37	1349575.84
12541	12541-7-P	8/31/99	3	3.5	Aroclor 1254	33	ug/kg	U	481705.37	1349575.84
12541	12541-7-P	8/31/99	3	3.5	Aroclor 1260	33	ug/kg	U	481705.37	1349575.84
12541	12541-7-M	8/31/99	3	3.5	Arsenic	2.93	ug/g dry	-	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Benzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	BromodiChloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Bromoform	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Bromomethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Carbon Disulfide	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Carbon Tetrachloride	10	ug/kg	U	481705.37	1349575.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12541	12541-7-L	8/31/99	3	3.5	Chlorobenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Chloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Chloroform	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Chloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	cis-1,2-Dichloroethene	54	ug/kg	-	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Dibromochloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Ethylbenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Methylene Chloride	27	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Styrene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Tetrachloroethene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-M	8/31/99	3	3.5	Thorium	9.34	ug/g dry	J	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Toluene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	trans-1,2-Dichloroethene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Trichloroethene	5	ug/kg	J	481705.37	1349575.84
12541	12541-7-M	8/31/99	3	3.5	Uranium, Total	3.3	ug/g dry	J	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Vinyl Chloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-7-L	8/31/99	3	3.5	Xylenes (Total)	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,1,1-Trichloroethane	35	ug/kg	-	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,1-Dichloroethane	43	ug/kg	-	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,1-Dichloroethene	4	ug/kg	J	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,2-Dichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	1,2-Dichloropropane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	2-Butanone	11	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	2-Hexanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Acetone	25	ug/kg	U	481705.37	1349575.84
12541	12541-9-P	8/31/99	4	4.5	Aroclor 1254	33	ug/kg	U	481705.37	1349575.84
12541	12541-9-P	8/31/99	4	4.5	Aroclor 1260	33	ug/kg	U	481705.37	1349575.84
12541	12541-9-M	8/31/99	4	4.5	Arsenic	7.63	ug/g dry	-	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Benzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	BromodiChloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Bromoform	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Bromomethane	10	ug/kg	U	481705.37	1349575.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12541	12541-9-L	8/31/99	4	4.5	Carbon Disulfide	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Carbon Tetrachloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Chlorobenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Chloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Chloroform	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Chloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	cis-1,2-Dichloroethene	71	ug/kg	-	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Dibromochloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Ethylbenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Methylene Chloride	29	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Styrene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Tetrachloroethene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-M	8/31/99	4	4.5	Thorium	9.11	ug/g dry	J	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Toluene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	trans-1,2-Dichloroethene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Trichloroethene	19	ug/kg	-	481705.37	1349575.84
12541	12541-9-M	8/31/99	4	4.5	Uranium, Total	11.9	ug/g dry	J	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Vinyl Chloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-9-L	8/31/99	4	4.5	Xylenes (Total)	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,1,1-Trichloroethane	95	ug/kg	-	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,1-Dichloroethane	97	ug/kg	-	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,1-Dichloroethene	30	ug/kg	-	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,2-Dichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	1,2-Dichloropropane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	2-Butanone	11	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	2-Hexanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Acetone	23	ug/kg	U	481705.37	1349575.84
12541	12541-11-P	8/31/99	5	5.5	Aroclor 1254	32	ug/kg	U	481705.37	1349575.84
12541	12541-11-P	8/31/99	5	5.5	Aroclor 1260	32	ug/kg	U	481705.37	1349575.84
12541	12541-11-M	8/31/99	5	5.5	Arsenic	5.06	ug/g dry	-	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Benzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	BromodiChloromethane	10	ug/kg	U	481705.37	1349575.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12541	12541-11-L	8/31/99	5	5.5	Bromoform	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Bromomethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Carbon Disulfide	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Carbon Tetrachloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Chlorobenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Chloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Chloroform	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Chloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	cis-1,2-Dichloroethene	330	ug/kg	J	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Dibromochloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Ethylbenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Methylene Chloride	27	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Styrene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Tetrachloroethene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-M	8/31/99	5	5.5	Thorium	8.55	ug/g dry	J	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Toluene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	trans-1,2-Dichloroethene	3	ug/kg	J	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Trichloroethene	110	ug/kg	-	481705.37	1349575.84
12541	12541-11-M	8/31/99	5	5.5	Uranium, Total	14.8	ug/g dry	J	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Vinyl Chloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-11-L	8/31/99	5	5.5	Xylenes (Total)	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,1,1-Trichloroethane	120	ug/kg	-	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,1-Dichloroethane	57	ug/kg	-	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,1-Dichloroethene	7	ug/kg	J	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,2-Dichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	1,2-Dichloropropane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	2-Butanone	13	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	2-Hexanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Acetone	47	ug/kg	U	481705.37	1349575.84
12541	12541-13-P	8/31/99	6	6.5	Aroclor 1254	66	ug/kg	-	481705.37	1349575.84
12541	12541-13-P	8/31/99	6	6.5	Aroclor 1260	33	ug/kg	U	481705.37	1349575.84
12541	12541-13-M	8/31/99	6	6.5	Arsenic	2.88	ug/g dry	-	481705.37	1349575.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12541	12541-13-L	8/31/99	6	6.5	Benzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	BromodiChloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Bromoform	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Bromomethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Carbon Disulfide	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Carbon Tetrachloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Chlorobenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Chloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Chloroform	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Chloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	cis-1,2-Dichloroethene	110	ug/kg	-	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Dibromochloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Ethylbenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Methylene Chloride	36	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Styrene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Tetrachloroethene	1	ug/kg	J	481705.37	1349575.84
12541	12541-13-M	8/31/99	6	6.5	Thorium	8.48	ug/g dry	J	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Toluene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	trans-1,2-Dichloroethene	1	ug/kg	J	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Trichloroethene	140	ug/kg	-	481705.37	1349575.84
12541	12541-13-M	8/31/99	6	6.5	Uranium, Total	4.44	ug/g dry	J	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Vinyl Chloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-13-L	8/31/99	6	6.5	Xylenes (Total)	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,1,1-Trichloroethane	94	ug/kg	-	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,1-Dichloroethane	120	ug/kg	-	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,1-Dichloroethene	48	ug/kg	-	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,2-Dichloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	1,2-Dichloropropane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	2-Butanone	12	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	2-Hexanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Acetone	50	ug/kg	U	481705.37	1349575.84
12541	12541-15-P	8/31/99	7	7.5	Aroclor 1254	33	ug/kg	U	481705.37	1349575.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12541	12541-15-P	8/31/99	7	7.5	Aroclor 1260	33	ug/kg	U	481705.37	1349575.84
12541	12541-15-M	8/31/99	7	7.5	Arsenic	7.21	ug/g dry	-	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Benzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	BromodiChloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Bromoform	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Bromomethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Carbon Disulfide	1	ug/kg	J	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Carbon Tetrachloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Chlorobenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Chloroethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Chloroform	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Chloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	cis-1,2-Dichloroethene	360	ug/kg	J	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Dibromochloromethane	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Ethylbenzene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Methylene Chloride	56	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Styrene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Tetrachloroethene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-M	8/31/99	7	7.5	Thorium	8.82	ug/g dry	J	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Toluene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	trans-1,2-Dichloroethene	5	ug/kg	J	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Trichloroethene	170	ug/kg	-	481705.37	1349575.84
12541	12541-15-M	8/31/99	7	7.5	Uranium, Total	82.9	ug/g dry	J	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Vinyl Chloride	10	ug/kg	U	481705.37	1349575.84
12541	12541-15-L	8/31/99	7	7.5	Xylenes (Total)	10	ug/kg	U	481705.37	1349575.84
12542	12542-1B-R	9/1/99	0	0.5	Thorium	7.41	ug/g dry		481711.45	1349575.9
12542	12542-1B-R	9/1/99	0	0.5	Uranium, Total	1250	ug/g dry		481711.45	1349575.9
12542	12542-2-R	9/1/99	0.5	1	Thorium	6.94	ug/g dry		481711.45	1349575.9
12542	12542-2-R	9/1/99	0.5	1	Uranium, Total	163	ug/g dry		481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	1,1,1-Trichloroethane	100	ug/kg	-	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	1,1,2-Trichloroethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	1,1-Dichloroethane	44	ug/kg	-	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	1,1-Dichloroethene	10	ug/kg	J	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	1,2-Dichloroethane	11	ug/kg	U	481711.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12542	12542-7-L	9/1/99	3	3.5	1,2-Dichloropropane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	2-Butanone	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	2-Hexanone	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	4-Methyl-2-Pentanone	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Acetone	6	ug/kg	UJ	481711.45	1349575.9
12542	12542-7-P	9/1/99	3	3.5	Aroclor 1254	32	ug/kg	U	481711.45	1349575.9
12542	12542-7-P	9/1/99	3	3.5	Aroclor 1260	32	ug/kg	U	481711.45	1349575.9
12542	12542-7-M	9/1/99	3	3.5	Arsenic	5.22	ug/g dry		481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Benzene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	BromodiChloromethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Bromoform	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Bromomethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Carbon Disulfide	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Carbon Tetrachloride	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Chlorobenzene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Chloroethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Chloroform	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Chloromethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	cis-1,2-Dichloroethene	120	ug/kg	-	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	cis-1,3-Dichloropropene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Dibromochloromethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Ethylbenzene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Methylene Chloride	42	ug/kg	UJ	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Styrene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Tetrachloroethene	5	ug/kg	U	481711.45	1349575.9
12542	12542-7-M	9/1/99	3	3.5	Thorium	7.61	ug/g dry		481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Toluene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	trans-1,2-Dichloroethene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	trans-1,3-Dichloropropene	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Trichloroethene	50	ug/kg	-	481711.45	1349575.9
12542	12542-7-M	9/1/99	3	3.5	Uranium, Total	31.2	ug/g dry		481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Vinyl Chloride	11	ug/kg	U	481711.45	1349575.9
12542	12542-7-L	9/1/99	3	3.5	Xylenes (Total)	11	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	1,1,1-Trichloroethane	120	ug/kg	-	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	1,1,2-Trichloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	1,1-Dichloroethane	68	ug/kg	-	481711.45	1349575.9

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12542	12542-9-L	9/1/99	4	4.5	1,1-Dichloroethene	16	ug/kg	-	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	1,2-Dichloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	1,2-Dichloropropane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	2-Butanone	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	2-Hexanone	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	4-Methyl-2-Pentanone	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Acetone	31	ug/kg	UJ	481711.45	1349575.9
12542	12542-9-P	9/1/99	4	4.5	Aroclor 1254	33	ug/kg	U	481711.45	1349575.9
12542	12542-9-P	9/1/99	4	4.5	Aroclor 1260	33	ug/kg	U	481711.45	1349575.9
12542	12542-9-M	9/1/99	4	4.5	Arsenic	11.0	ug/g dry		481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Benzene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	BromodiChloromethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Bromoform	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Bromomethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Carbon Disulfide	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Carbon Tetrachloride	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Chlorobenzene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Chloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Chloroform	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Chloromethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	cis-1,2-Dichloroethene	210	ug/kg	J	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	cis-1,3-Dichloropropene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Dibromochloromethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Ethylbenzene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Methylene Chloride	30	ug/kg	UJ	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Styrene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Tetrachloroethene	3	ug/kg	J	481711.45	1349575.9
12542	12542-9-M	9/1/99	4	4.5	Thorium	8.07	ug/g dry		481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Toluene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	trans-1,2-Dichloroethene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	trans-1,3-Dichloropropene	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Trichloroethene	63	ug/kg	-	481711.45	1349575.9
12542	12542-9-M	9/1/99	4	4.5	Uranium, Total	53.6	ug/g dry		481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Vinyl Chloride	10	ug/kg	U	481711.45	1349575.9
12542	12542-9-L	9/1/99	4	4.5	Xylenes (Total)	10	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	1,1,1-Trichloroethane	320	ug/kg	J	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	1,1,2,2-Tetrachloroethane	11	ug/kg	UJ	481711.45	1349575.9

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APPENDIX C
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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12542	12542-11-L	9/1/99	5	5.5	1,1,2-Trichloroethane	1	ug/kg	J	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	1,1-Dichloroethane	150	ug/kg	-	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	1,1-Dichloroethene	89	ug/kg	-	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	1,2-Dichloroethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	1,2-Dichloropropane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	2-Butanone	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	2-Hexanone	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	4-Methyl-2-Pentanone	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Acetone	28	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-P	9/1/99	5	5.5	Aroclor 1254	33	ug/kg	U	481711.45	1349575.9
12542	12542-11-P	9/1/99	5	5.5	Aroclor 1260	33	ug/kg	U	481711.45	1349575.9
12542	12542-11-M	9/1/99	5	5.5	Arsenic	5.08	ug/g dry		481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Benzene	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	BromodiChloromethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Bromoform	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Bromomethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Carbon Disulfide	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Carbon Tetrachloride	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Chlorobenzene	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Chloroethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Chloroform	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Chloromethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	cis-1,2-Dichloroethene	560	ug/kg	J	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	cis-1,3-Dichloropropene	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Dibromochloromethane	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Ethylbenzene	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Methylene Chloride	37	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Styrene	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Tetrachloroethene	1	ug/kg	J	481711.45	1349575.9
12542	12542-11-M	9/1/99	5	5.5	Thorium	8.20	ug/g dry		481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Toluene	11	ug/kg	UJ	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	trans-1,2-Dichloroethene	8	ug/kg	J	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	trans-1,3-Dichloropropene	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Trichloroethene	210	ug/kg	J	481711.45	1349575.9
12542	12542-11-M	9/1/99	5	5.5	Uranium, Total	226	ug/g dry		481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Vinyl Chloride	11	ug/kg	U	481711.45	1349575.9
12542	12542-11-L	9/1/99	5	5.5	Xylenes (Total)	11	ug/kg	UJ	481711.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12542	12542-13-L	9/1/99	6	6.5	1,1,1-Trichloroethane	240	ug/kg	J	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	1,1,2,2-Tetrachloroethane	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	1,1,2-Trichloroethane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	1,1-Dichloroethane	130	ug/kg	-	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	1,1-Dichloroethene	73	ug/kg	-	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	1,2-Dichloroethane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	1,2-Dichloropropane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	2-Butanone	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	2-Hexanone	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	4-Methyl-2-Pentanone	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Acetone	26	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-P	9/1/99	6	6.5	Aroclor 1254	33	ug/kg	U	481711.45	1349575.9
12542	12542-13-P	9/1/99	6	6.5	Aroclor 1260	33	ug/kg	U	481711.45	1349575.9
12542	12542-13-M	9/1/99	6	6.5	Arsenic	4.46	ug/g dry		481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Benzene	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	BromodiChloromethane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Bromoform	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Bromomethane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Carbon Disulfide	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Carbon Tetrachloride	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Chlorobenzene	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Chloroethane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Chloroform	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Chloromethane	1	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	cis-1,2-Dichloroethene	420	ug/kg	J	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	cis-1,3-Dichloropropene	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Dibromochloromethane	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Ethylbenzene	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Methylene Chloride	34	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Styrene	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Tetrachloroethene	15	ug/kg	J	481711.45	1349575.9
12542	12542-13-M	9/1/99	6	6.5	Thorium	4.32	ug/g dry		481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Toluene	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	trans-1,2-Dichloroethene	5	ug/kg	J	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	trans-1,3-Dichloropropene	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Trichloroethene	130	ug/kg	-	481711.45	1349575.9
12542	12542-13-M	9/1/99	6	6.5	Uranium, Total	23.7	ug/g dry		481711.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12542	12542-13-L	9/1/99	6	6.5	Vinyl Chloride	9	ug/kg	U	481711.45	1349575.9
12542	12542-13-L	9/1/99	6	6.5	Xylenes (Total)	9	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,1,1-Trichloroethane	88	ug/kg	-	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,1,2,2-Tetrachloroethane	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,1,2-Trichloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,1-Dichloroethane	110	ug/kg	-	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,1-Dichloroethene	27	ug/kg	-	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,2-Dichloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	1,2-Dichloropropane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	2-Butanone	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	2-Hexanone	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Acetone	24	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-P	9/1/99	7	7.5	Aroclor 1254	33	ug/kg	U	481711.45	1349575.9
12542	12542-15-P	9/1/99	7	7.5	Aroclor 1260	33	ug/kg	U	481711.45	1349575.9
12542	12542-15-M	9/1/99	7	7.5	Arsenic	4.58	ug/g dry		481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Benzene	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	BromodiChloromethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Bromoform	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Bromomethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Carbon Disulfide	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Carbon Tetrachloride	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Chlorobenzene	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Chloroethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Chloroform	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Chloromethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	cis-1,2-Dichloroethene	330	ug/kg	J	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	cis-1,3-Dichloropropene	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Dibromochloromethane	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Ethylbenzene	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Methylene Chloride	33	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Styrene	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Tetrachloroethene	20	ug/kg	J	481711.45	1349575.9
12542	12542-15-M	9/1/99	7	7.5	Thorium	4.12	ug/g dry		481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Toluene	10	ug/kg	UJ	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	trans-1,2-Dichloroethene	5	ug/kg	J	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	trans-1,3-Dichloropropene	10	ug/kg	U	481711.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12542	12542-15-L	9/1/99	7	7.5	Trichloroethene	61	ug/kg	-	481711.45	1349575.9
12542	12542-15-M	9/1/99	7	7.5	Uranium, Total	5.96	ug/g dry		481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Vinyl Chloride	10	ug/kg	U	481711.45	1349575.9
12542	12542-15-L	9/1/99	7	7.5	Xylenes (Total)	10	ug/kg	UJ	481711.45	1349575.9
12543	12543-1B-R	9/1/99	0	0.5	Thorium	6.02	ug/g dry		481699.45	1349575.9
12543	12543-1B-R	9/1/99	0	0.5	Uranium, Total	983	ug/g dry		481699.45	1349575.9
12543	12543-2B-R	9/1/99	0.5	1	Thorium	7.78	ug/g dry		481699.45	1349575.9
12543	12543-2B-R	9/1/99	0.5	1	Uranium, Total	202	ug/g dry		481699.45	1349575.9
12543	12543-5B-R	9/1/99	2	2.5	Thorium	7.92	ug/g dry		481699.45	1349575.9
12543	12543-5B-R	9/1/99	2	2.5	Uranium, Total	469	ug/g dry		481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,1,1-Trichloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,1,2-Trichloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,1-Dichloroethane	34	ug/kg	-	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,1-Dichloroethene	3	ug/kg	J	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,2-Dichloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	1,2-Dichloropropane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	2-Butanone	11	ug/kg	UJ	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	2-Hexanone	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	4-Methyl-2-Pentanone	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Acetone	33	ug/kg	UJ	481699.45	1349575.9
12543	12543-7-P	9/1/99	3	3.5	Aroclor 1254	33	ug/kg	U	481699.45	1349575.9
12543	12543-7-P	9/1/99	3	3.5	Aroclor 1260	33	ug/kg	U	481699.45	1349575.9
12543	12543-7-M	9/1/99	3	3.5	Arsenic	3.87	ug/g dry		481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Benzene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	BromodiChloromethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Bromoform	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Bromomethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Carbon Disulfide	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Carbon Tetrachloride	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Chlorobenzene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Chloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Chloroform	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Chloromethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	cis-1,2-Dichloroethene	76	ug/kg	-	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	cis-1,3-Dichloropropene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Dibromochloromethane	11	ug/kg	U	481699.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12543	12543-7-L	9/1/99	3	3.5	Ethylbenzene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Methylene Chloride	29	ug/kg	UJ	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Styrene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Tetrachloroethene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-M	9/1/99	3	3.5	Thorium	8.27	ug/g dry		481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Toluene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	trans-1,2-Dichloroethene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	trans-1,3-Dichloropropene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Trichloroethene	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-M	9/1/99	3	3.5	Uranium, Total	2.08	ug/g dry		481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Vinyl Chloride	11	ug/kg	U	481699.45	1349575.9
12543	12543-7-L	9/1/99	3	3.5	Xylenes (Total)	11	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,1,1-Trichloroethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,1,2-Trichloroethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,1-Dichloroethane	81	ug/kg	-	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,1-Dichloroethene	15	ug/kg	J	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,2-Dichloroethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	1,2-Dichloropropane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	2-Butanone	45	ug/kg	UJ	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	2-Hexanone	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	4-Methyl-2-Pentanone	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Acetone	63	ug/kg	UJ	481699.45	1349575.9
12543	12543-9-P	9/1/99	4	4.5	Aroclor 1254	480	ug/kg	-	481699.45	1349575.9
12543	12543-9-P	9/1/99	4	4.5	Aroclor 1260	160	ug/kg	U	481699.45	1349575.9
12543	12543-9-M	9/1/99	4	4.5	Arsenic	8.37	ug/g dry		481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Benzene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	BromodiChloromethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Bromoform	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Bromomethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Carbon Disulfide	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Carbon Tetrachloride	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Chlorobenzene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Chloroethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Chloroform	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Chloromethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	cis-1,2-Dichloroethene	270	ug/kg	-	481699.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12543	12543-9-L	9/1/99	4	4.5	cis-1,3-Dichloropropene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Dibromochloromethane	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Ethylbenzene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Methylene Chloride	120	ug/kg	UJ	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Styrene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Tetrachloroethene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-M	9/1/99	4	4.5	Thorium	8.41	ug/g dry		481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Toluene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	trans-1,2-Dichloroethene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	trans-1,3-Dichloropropene	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Trichloroethene	35	ug/kg	J	481699.45	1349575.9
12543	12543-9-M	9/1/99	4	4.5	Uranium, Total	3.57	ug/g dry		481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Vinyl Chloride	45	ug/kg	U	481699.45	1349575.9
12543	12543-9-L	9/1/99	4	4.5	Xylenes (Total)	45	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,1,1-Trichloroethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,1,2-Trichloroethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,1-Dichloroethane	160	ug/kg	-	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,1-Dichloroethene	54	ug/kg	-	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,2-Dichloroethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	1,2-Dichloropropane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	2-Butanone	50	ug/kg	UJ	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	2-Hexanone	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	4-Methyl-2-Pentanone	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Acetone	64	ug/kg	UJ	481699.45	1349575.9
12543	12543-11-P	9/1/99	5	5.5	Aroclor 1254	330	ug/kg	-	481699.45	1349575.9
12543	12543-11-P	9/1/99	5	5.5	Aroclor 1260	65	ug/kg	U	481699.45	1349575.9
12543	12543-11-M	9/1/99	5	5.5	Arsenic	6.24	ug/g dry		481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Benzene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	BromodiChloromethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Bromoform	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Bromomethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Carbon Disulfide	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Carbon Tetrachloride	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Chlorobenzene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Chloroethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Chloroform	50	ug/kg	U	481699.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12543	12543-11-L	9/1/99	5	5.5	Chloromethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	cis-1,2-Dichloroethene	680	ug/kg	-	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	cis-1,3-Dichloropropene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Dibromochloromethane	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Ethylbenzene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Methylene Chloride	41	ug/kg	UJ	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Styrene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Tetrachloroethene	7	ug/kg	J	481699.45	1349575.9
12543	12543-11-M	9/1/99	5	5.5	Thorium	7.64	ug/g dry		481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Toluene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	trans-1,2-Dichloroethene	5	ug/kg	J	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	trans-1,3-Dichloropropene	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Trichloroethene	340	ug/kg	-	481699.45	1349575.9
12543	12543-11-M	9/1/99	5	5.5	Uranium, Total	174	ug/g dry		481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Vinyl Chloride	50	ug/kg	U	481699.45	1349575.9
12543	12543-11-L	9/1/99	5	5.5	Xylenes (Total)	50	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,1,1-Trichloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,1,2-Trichloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,1-Dichloroethane	150	ug/kg	-	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,1-Dichloroethene	58	ug/kg	-	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,2-Dichloroethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	1,2-Dichloropropane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	2-Butanone	17	ug/kg	UJ	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	2-Hexanone	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	4-Methyl-2-Pentanone	6	ug/kg	J	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Acetone	61	ug/kg	UJ	481699.45	1349575.9
12543	12543-13-P	9/1/99	6	6.5	Aroclor 1254	33	ug/kg	U	481699.45	1349575.9
12543	12543-13-P	9/1/99	6	6.5	Aroclor 1260	33	ug/kg	U	481699.45	1349575.9
12543	12543-13-M	9/1/99	6	6.5	Arsenic	4.77	ug/g dry		481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Benzene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	BromodiChloromethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Bromoform	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Bromomethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Carbon Disulfide	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Carbon Tetrachloride	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Chlorobenzene	11	ug/kg	U	481699.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12543	12543-13-L	9/1/99	6	6.5	Chloroethane	6	ug/kg	J	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Chloroform	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Chloromethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	cis-1,2-Dichloroethene	580	ug/kg	J	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	cis-1,3-Dichloropropene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Dibromochloromethane	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Ethylbenzene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Methylene Chloride	28	ug/kg	UJ	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Styrene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Tetrachloroethene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-M	9/1/99	6	6.5	Thorium	7.76	ug/g dry		481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Toluene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	trans-1,2-Dichloroethene	9	ug/kg	J	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	trans-1,3-Dichloropropene	11	ug/kg	U	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Trichloroethene	3	ug/kg	J	481699.45	1349575.9
12543	12543-13-M	9/1/99	6	6.5	Uranium, Total	11.7	ug/g dry		481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Vinyl Chloride	2	ug/kg	J	481699.45	1349575.9
12543	12543-13-L	9/1/99	6	6.5	Xylenes (Total)	11	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,1,1-Trichloroethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,1,2-Trichloroethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,1-Dichloroethane	44	ug/kg	-	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,1-Dichloroethene	8	ug/kg	J	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,2-Dichloroethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	1,2-Dichloropropane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	2-Butanone	10	ug/kg	UJ	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	2-Hexanone	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	4-Methyl-2-Pentanone	11	ug/kg	-	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Acetone	8	ug/kg	UJ	481699.45	1349575.9
12543	12543-15-P	9/1/99	7	7.5	Aroclor 1254	33	ug/kg	U	481699.45	1349575.9
12543	12543-15-P	9/1/99	7	7.5	Aroclor 1260	33	ug/kg	U	481699.45	1349575.9
12543	12543-15-M	9/1/99	7	7.5	Arsenic	4.17	ug/g dry		481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Benzene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	BromodiChloromethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Bromoform	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Bromomethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Carbon Disulfide	10	ug/kg	U	481699.45	1349575.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12543	12543-15-L	9/1/99	7	7.5	Carbon Tetrachloride	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Chlorobenzene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Chloroethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Chloroform	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Chloromethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	cis-1,2-Dichloroethene	110	ug/kg	-	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	cis-1,3-Dichloropropene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Dibromochloromethane	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Ethylbenzene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Methylene Chloride	29	ug/kg	UJ	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Styrene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Tetrachloroethene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-M	9/1/99	7	7.5	Thorium	4.32	ug/g dry		481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Toluene	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	trans-1,2-Dichloroethene	3	ug/kg	J	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	trans-1,3-Dichloropropene	5	ug/kg	J	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Trichloroethene	1	ug/kg	J	481699.45	1349575.9
12543	12543-15-M	9/1/99	7	7.5	Uranium, Total	1.30	ug/g dry		481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Vinyl Chloride	10	ug/kg	U	481699.45	1349575.9
12543	12543-15-L	9/1/99	7	7.5	Xylenes (Total)	10	ug/kg	U	481699.45	1349575.9
12544	12544-1B-R	9/1/99	0	0.5	Thorium	9.54	ug/g dry		481705.45	1349569.9
12544	12544-1B-R	9/1/99	0	0.5	Uranium, Total	4870	ug/g dry		481705.45	1349569.9
12544	12544-2B-R	9/1/99	0.5	1	Thorium	7.40	ug/g dry		481705.45	1349569.9
12544	12544-2B-R	9/1/99	0.5	1	Uranium, Total	147	ug/g dry		481705.45	1349569.9
12544	12544-6B-R	9/1/99	2.5	3	Thorium	8.46	ug/g dry		481705.45	1349569.9
12544	12544-6B-R	9/1/99	2.5	3	Uranium, Total	651	ug/g dry		481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,1,1-Trichloroethane	33	ug/kg	-	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,1,2-Trichloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,1-Dichloroethane	33	ug/kg	-	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,1-Dichloroethene	14	ug/kg	-	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,2-Dichloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	1,2-Dichloropropane	1	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	2-Butanone	11	ug/kg	UJ	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	2-Hexanone	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	4-Methyl-2-Pentanone	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Acetone	13	ug/kg	UJ	481705.45	1349569.9

000603

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12544	12544-7-P	9/1/99	3	3.5	Aroclor 1254	33	ug/kg	U	481705.45	1349569.9
12544	12544-7-P	9/1/99	3	3.5	Aroclor 1260	33	ug/kg	U	481705.45	1349569.9
12544	12544-7-M	9/1/99	3	3.5	Arsenic	8.83	ug/g dry		481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Benzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	BromodiChloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Bromoform	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Bromomethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Carbon Disulfide	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Carbon Tetrachloride	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Chlorobenzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Chloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Chloroform	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Chloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	cis-1,2-Dichloroethene	130	ug/kg	-	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	cis-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Dibromochloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Ethylbenzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Methylene Chloride	48	ug/kg	UJ	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Styrene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Tetrachloroethene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-M	9/1/99	3	3.5	Thorium	7.73	ug/g dry		481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Toluene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	trans-1,2-Dichloroethene	2	ug/kg	J	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	trans-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Trichloroethene	22	ug/kg	-	481705.45	1349569.9
12544	12544-7-M	9/1/99	3	3.5	Uranium, Total	42.8	ug/g dry		481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Vinyl Chloride	11	ug/kg	U	481705.45	1349569.9
12544	12544-7-L	9/1/99	3	3.5	Xylenes (Total)	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,1,1-Trichloroethane	67	ug/kg	-	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,1,2-Trichloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,1-Dichloroethane	53	ug/kg	-	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,1-Dichloroethene	10	ug/kg	J	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,2-Dichloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	1,2-Dichloropropane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	2-Butanone	11	ug/kg	UJ	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	2-Hexanone	11	ug/kg	U	481705.45	1349569.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12544	12544-9-L	9/1/99	4	4.5	4-Methyl-2-Pentanone	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Acetone	34	ug/kg	UJ	481705.45	1349569.9
12544	12544-9-P	9/1/99	4	4.5	Aroclor 1254	33	ug/kg	U	481705.45	1349569.9
12544	12544-9-P	9/1/99	4	4.5	Aroclor 1260	33	ug/kg	U	481705.45	1349569.9
12544	12544-9-M	9/1/99	4	4.5	Arsenic	0.3	ug/g dry	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Benzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	BromodiChloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Bromoform	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Bromomethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Carbon Disulfide	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Carbon Tetrachloride	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Chlorobenzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Chloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Chloroform	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Chloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	cis-1,2-Dichloroethene	160	ug/kg	-	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	cis-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Dibromochloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Ethylbenzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Methylene Chloride	73	ug/kg	UJ	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Styrene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Tetrachloroethene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-M	9/1/99	4	4.5	Thorium	9.05	ug/g dry		481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Toluene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	trans-1,2-Dichloroethene	2	ug/kg	J	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	trans-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Trichloroethene	54	ug/kg	-	481705.45	1349569.9
12544	12544-9-M	9/1/99	4	4.5	Uranium, Total	46.9	ug/g dry		481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Vinyl Chloride	11	ug/kg	U	481705.45	1349569.9
12544	12544-9-L	9/1/99	4	4.5	Xylenes (Total)	11	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,1,1-Trichloroethane	190	ug/kg	J	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,1-Dichloroethane	84	ug/kg	-	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,1-Dichloroethene	47	ug/kg	-	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,2-Dichloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	1,2-Dichloropropane	10	ug/kg	U	481705.45	1349569.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12544	12544-11-L	9/1/99	5	5.5	2-Butanone	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	2-Hexanone	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Acetone	30	ug/kg	UJ	481705.45	1349569.9
12544	12544-11-P	9/1/99	5	5.5	Aroclor 1254	33	ug/kg	U	481705.45	1349569.9
12544	12544-11-P	9/1/99	5	5.5	Aroclor 1260	33	ug/kg	U	481705.45	1349569.9
12544	12544-11-M	9/1/99	5	5.5	Arsenic	3.97	ug/g dry		481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Benzene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	BromodiChloromethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Bromoform	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Bromomethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Carbon Disulfide	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Carbon Tetrachloride	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Chlorobenzene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Chloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Chloroform	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Chloromethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	cis-1,2-Dichloroethene	320	ug/kg	J	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Dibromochloromethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Ethylbenzene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Methylene Chloride	73	ug/kg	UJ	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Styrene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Tetrachloroethene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-M	9/1/99	5	5.5	Thorium	8.52	ug/g dry		481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Toluene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	trans-1,2-Dichloroethene	4	ug/kg	J	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Trichloroethene	150	ug/kg	J	481705.45	1349569.9
12544	12544-11-M	9/1/99	5	5.5	Uranium, Total	342	ug/g dry		481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Vinyl Chloride	10	ug/kg	U	481705.45	1349569.9
12544	12544-11-L	9/1/99	5	5.5	Xylenes (Total)	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	1,1,1-Trichloroethane	77	ug/kg	-	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	1,1-Dichloroethane	79	ug/kg	-	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	1,1-Dichloroethene	34	ug/kg	-	481705.45	1349569.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12544	12544-13-L	9/1/99	6	6.5	1,2-Dichloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	1,2-Dichloropropane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	2-Butanone	18	ug/kg	UJ	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	2-Hexanone	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Acetone	28	ug/kg	UJ	481705.45	1349569.9
12544	12544-13-P	9/1/99	6	6.5	Aroclor 1254	33	ug/kg	U	481705.45	1349569.9
12544	12544-13-P	9/1/99	6	6.5	Aroclor 1260	33	ug/kg	U	481705.45	1349569.9
12544	12544-13-M	9/1/99	6	6.5	Arsenic	4.44	ug/g dry		481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Benzene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	BromodiChloromethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Bromoform	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Bromomethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Carbon Disulfide	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Carbon Tetrachloride	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Chlorobenzene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Chloroethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Chloroform	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Chloromethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	cis-1,2-Dichloroethene	290	ug/kg	J	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Dibromochloromethane	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Ethylbenzene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Methylene Chloride	76	ug/kg	UJ	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Styrene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Tetrachloroethene	36	ug/kg	-	481705.45	1349569.9
12544	12544-13-M	9/1/99	6	6.5	Thorium	5.06	ug/g dry		481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Toluene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	trans-1,2-Dichloroethene	5	ug/kg	J	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Trichloroethene	75	ug/kg	-	481705.45	1349569.9
12544	12544-13-M	9/1/99	6	6.5	Uranium, Total	31.9	ug/g dry		481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Vinyl Chloride	10	ug/kg	U	481705.45	1349569.9
12544	12544-13-L	9/1/99	6	6.5	Xylenes (Total)	10	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	1,1,1-Trichloroethane	71	ug/kg	J	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	1,1,2-Trichloroethane	11	ug/kg	U	481705.45	1349569.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12544	12544-15-L	9/1/99	7	7.5	1,1-Dichloroethane	100	ug/kg	J	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	1,1-Dichloroethene	19	ug/kg	-	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	1,2-Dichloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	1,2-Dichloropropane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	2-Butanone	19	ug/kg	UJ	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	2-Hexanone	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	4-Methyl-2-Pentanone	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Acetone	27	ug/kg	UJ	481705.45	1349569.9
12544	12544-15-P	9/1/99	7	7.5	Aroclor 1254	33	ug/kg	U	481705.45	1349569.9
12544	12544-15-P	9/1/99	7	7.5	Aroclor 1260	33	ug/kg	U	481705.45	1349569.9
12544	12544-15-M	9/1/99	7	7.5	Arsenic	4.17	ug/g dry		481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Benzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	BromodiChloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Bromoform	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Bromomethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Carbon Disulfide	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Carbon Tetrachloride	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Chlorobenzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Chloroethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Chloroform	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Chloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	cis-1,2-Dichloroethene	340	ug/kg	J	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	cis-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Dibromochloromethane	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Ethylbenzene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Methylene Chloride	82	ug/kg	UJ	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Styrene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Tetrachloroethene	2	ug/kg	J	481705.45	1349569.9
12544	12544-15-M	9/1/99	7	7.5	Thorium	3.53	ug/g dry		481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Toluene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	trans-1,2-Dichloroethene	6	ug/kg	J	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	trans-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Trichloroethene	45	ug/kg	J	481705.45	1349569.9
12544	12544-15-M	9/1/99	7	7.5	Uranium, Total	2.69	ug/g dry		481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Vinyl Chloride	11	ug/kg	U	481705.45	1349569.9
12544	12544-15-L	9/1/99	7	7.5	Xylenes (Total)	11	ug/kg	U	481705.45	1349569.9
12545	12545-1B-R	9/1/99	0	0.5	Thorium	16.2	ug/g dry		481705.45	1349581.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12545	12545-1B-R	9/1/99	0	0.5	Uranium, Total	8860	ug/g dry		481705.45	1349581.9
12545	12545-2B-R	9/1/99	0.5	1	Thorium	6.78	ug/g dry		481705.45	1349581.9
12545	12545-2B-R	9/1/99	0.5	1	Uranium, Total	487	ug/g dry		481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,1,1-Trichloroethane	5	ug/kg	J	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,1-Dichloroethane	11	ug/kg	-	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,1-Dichloroethene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,2-Dichloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	1,2-Dichloropropane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	2-Butanone	11	ug/kg	UJ	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	2-Hexanone	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Acetone	38	ug/kg	UJ	481705.45	1349581.9
12545	12545-7-P	9/1/99	3	3.5	Aroclor 1254	33	ug/kg	U	481705.45	1349581.9
12545	12545-7-P	9/1/99	3	3.5	Aroclor 1260	33	ug/kg	U	481705.45	1349581.9
12545	12545-7-M	9/1/99	3	3.5	Arsenic	.832	ug/g dry		481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Benzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	BromodiChloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Bromoform	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Bromomethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Carbon Disulfide	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Carbon Tetrachloride	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Chlorobenzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Chloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Chloroform	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Chloromethane	1	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	cis-1,2-Dichloroethene	22	ug/kg	-	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Dibromochloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Ethylbenzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Methylene Chloride	44	ug/kg	UJ	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Styrene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Tetrachloroethene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-M	9/1/99	3	3.5	Thorium	7.79	ug/g dry		481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Toluene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	trans-1,2-Dichloroethene	10	ug/kg	U	481705.45	1349581.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12545	12545-7-L	9/1/99	3	3.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Trichloroethene	5	ug/kg	J	481705.45	1349581.9
12545	12545-7-M	9/1/99	3	3.5	Uranium, Total	7.90	ug/g dry		481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Vinyl Chloride	10	ug/kg	U	481705.45	1349581.9
12545	12545-7-L	9/1/99	3	3.5	Xylenes (Total)	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,1,1-Trichloroethane	47	ug/kg	-	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,1-Dichloroethane	51	ug/kg	-	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,1-Dichloroethene	3	ug/kg	J	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,2-Dichloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	1,2-Dichloropropane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	2-Butanone	10	ug/kg	UJ	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	2-Hexanone	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Acetone	24	ug/kg	UJ	481705.45	1349581.9
12545	12545-9-P	9/1/99	4	4.5	Aroclor 1254	33	ug/kg	U	481705.45	1349581.9
12545	12545-9-P	9/1/99	4	4.5	Aroclor 1260	33	ug/kg	U	481705.45	1349581.9
12545	12545-9-M	9/1/99	4	4.5	Arsenic	6.08	ug/g dry		481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Benzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	BromodiChloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Bromoform	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Bromomethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Carbon Disulfide	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Carbon Tetrachloride	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Chlorobenzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Chloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Chloroform	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Chloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	cis-1,2-Dichloroethene	83	ug/kg	-	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Dibromochloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Ethylbenzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Methylene Chloride	43	ug/kg	UJ	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Styrene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Tetrachloroethene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-M	9/1/99	4	4.5	Thorium	9.01	ug/g dry		481705.45	1349581.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12545	12545-9-L	9/1/99	4	4.5	Toluene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	trans-1,2-Dichloroethene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Trichloroethene	28	ug/kg	-	481705.45	1349581.9
12545	12545-9-M	9/1/99	4	4.5	Uranium, Total	16.5	ug/g dry		481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Vinyl Chloride	10	ug/kg	U	481705.45	1349581.9
12545	12545-9-L	9/1/99	4	4.5	Xylenes (Total)	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,1,1-Trichloroethane	30	ug/kg	-	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,1,2-Trichloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,1-Dichloroethane	20	ug/kg	-	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,1-Dichloroethene	4	ug/kg	J	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,2-Dichloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	1,2-Dichloropropane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	2-Butanone	10	ug/kg	UJ	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	2-Hexanone	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	4-Methyl-2-Pentanone	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Acetone	26	ug/kg	UJ	481705.45	1349581.9
12545	12545-11-P	9/1/99	5	5.5	Aroclor 1254	33	ug/kg	U	481705.45	1349581.9
12545	12545-11-P	9/1/99	5	5.5	Aroclor 1260	33	ug/kg	U	481705.45	1349581.9
12545	12545-11-M	9/1/99	5	5.5	Arsenic	5.03	ug/g dry		481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Benzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	BromodiChloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Bromoform	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Bromomethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Carbon Disulfide	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Carbon Tetrachloride	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Chlorobenzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Chloroethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Chloroform	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Chloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	cis-1,2-Dichloroethene	75	ug/kg	-	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	cis-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Dibromochloromethane	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Ethylbenzene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Methylene Chloride	48	ug/kg	UJ	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Styrene	10	ug/kg	U	481705.45	1349581.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12545	12545-11-L	9/1/99	5	5.5	Tetrachloroethene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-M	9/1/99	5	5.5	Thorium	7.87	ug/g dry		481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Toluene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	trans-1,2-Dichloroethene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	trans-1,3-Dichloropropene	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Trichloroethene	43	ug/kg	-	481705.45	1349581.9
12545	12545-11-M	9/1/99	5	5.5	Uranium, Total	8.19	ug/g dry		481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Vinyl Chloride	10	ug/kg	U	481705.45	1349581.9
12545	12545-11-L	9/1/99	5	5.5	Xylenes (Total)	10	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,1,1-Trichloroethane	74	ug/kg	-	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,1,2-Trichloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,1-Dichloroethane	47	ug/kg	-	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,1-Dichloroethene	8	ug/kg	J	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,2-Dichloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	1,2-Dichloropropane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	2-Butanone	11	ug/kg	UJ	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	2-Hexanone	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	4-Methyl-2-Pentanone	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Acetone	21	ug/kg	UJ	481705.45	1349581.9
12545	12545-13-P	9/1/99	6	6.5	Aroclor 1254	33	ug/kg	U	481705.45	1349581.9
12545	12545-13-P	9/1/99	6	6.5	Aroclor 1260	33	ug/kg	U	481705.45	1349581.9
12545	12545-13-M	9/1/99	6	6.5	Arsenic	5.55	ug/g dry		481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Benzene	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	BromodiChloromethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Bromoform	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Bromomethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Carbon Disulfide	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Carbon Tetrachloride	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Chlorobenzene	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Chloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Chloroform	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Chloromethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	cis-1,2-Dichloroethene	200	ug/kg	-	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	cis-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Dibromochloromethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Ethylbenzene	11	ug/kg	U	481705.45	1349581.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12545	12545-13-L	9/1/99	6	6.5	Methylene Chloride	26	ug/kg	UJ	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Styrene	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Tetrachloroethene	2	ug/kg	J	481705.45	1349581.9
12545	12545-13-M	9/1/99	6	6.5	Thorium	8.09	ug/g dry		481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Toluene	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	trans-1,2-Dichloroethene	2	ug/kg	J	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	trans-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Trichloroethene	160	ug/kg	-	481705.45	1349581.9
12545	12545-13-M	9/1/99	6	6.5	Uranium, Total	8.38	ug/g dry		481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Vinyl Chloride	11	ug/kg	U	481705.45	1349581.9
12545	12545-13-L	9/1/99	6	6.5	Xylenes (Total)	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,1,1-Trichloroethane	270	ug/kg	J	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,1,2,2-Tetrachloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,1,2-Trichloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,1-Dichloroethane	160	ug/kg	J	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,1-Dichloroethene	89	ug/kg	J	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,2-Dichloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	1,2-Dichloropropane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	2-Butanone	12	ug/kg	UJ	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	2-Hexanone	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	4-Methyl-2-Pentanone	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Acetone	35	ug/kg	UJ	481705.45	1349581.9
12545	12545-15-P	9/1/99	7	7.5	Aroclor 1254	32	ug/kg	U	481705.45	1349581.9
12545	12545-15-P	9/1/99	7	7.5	Aroclor 1260	32	ug/kg	U	481705.45	1349581.9
12545	12545-15-M	9/1/99	7	7.5	Arsenic	.839	ug/g dry		481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Benzene	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	BromodiChloromethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Bromoform	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Bromomethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Carbon Disulfide	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Carbon Tetrachloride	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Chlorobenzene	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Chloroethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Chloroform	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Chloromethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	cis-1,2-Dichloroethene	740	ug/kg	J	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	cis-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349581.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12545	12545-15-L	9/1/99	7	7.5	Dibromochloromethane	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Ethylbenzene	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Methylene Chloride	30	ug/kg	UJ	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Styrene	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Tetrachloroethene	5	ug/kg	J	481705.45	1349581.9
12545	12545-15-M	9/1/99	7	7.5	Thorium	6.74	ug/g dry		481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Toluene	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	trans-1,2-Dichloroethene	12	ug/kg	J	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	trans-1,3-Dichloropropene	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Trichloroethene	430	ug/kg	J	481705.45	1349581.9
12545	12545-15-M	9/1/99	7	7.5	Uranium, Total	6.04	ug/g dry		481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Vinyl Chloride	11	ug/kg	U	481705.45	1349581.9
12545	12545-15-L	9/1/99	7	7.5	Xylenes (Total)	11	ug/kg	U	481705.45	1349581.9
12546	12546-7-M	8/31/99	3	3.5	Beryllium	3.04	ug/g	-	481636.6	1349583.07
12546	12546-7-M	8/31/99	3	3.5	Thorium	4.12	ug/g dry	J	481636.6	1349583.07
12546	12546-7-M	8/31/99	3	3.5	Uranium, Total	31.7	ug/g dry	J	481636.6	1349583.07
12546	12546-9-M	8/31/99	4	4.5	Beryllium	2.11	ug/g dry	-	481636.6	1349583.07
12546	12546-9-M	8/31/99	4	4.5	Thorium	3.22	ug/g dry	J	481636.6	1349583.07
12546	12546-9-M	8/31/99	4	4.5	Uranium, Total	30.5	ug/g dry	J	481636.6	1349583.07
12546	12546-11-M	8/31/99	5	5.5	Beryllium	0.878	ug/g dry	-	481636.6	1349583.07
12546	12546-11-M	8/31/99	5	5.5	Thorium	5.59	ug/g dry	J	481636.6	1349583.07
12546	12546-11-M	8/31/99	5	5.5	Uranium, Total	3.58	ug/g dry	J	481636.6	1349583.07
12546	12546-13-M	8/31/99	6	6.5	Beryllium	0.59	ug/g dry	-	481636.6	1349583.07
12546	12546-13-M	8/31/99	6	6.5	Thorium	5	ug/g dry	-	481636.6	1349583.07
12546	12546-13-M	8/31/99	6	6.5	Uranium, Total	2.98	ug/g dry	-	481636.6	1349583.07
12546	12546-15-M	8/31/99	7	7.5	Beryllium	0.542	ug/g dry	-	481636.6	1349583.07
12546	12546-15-M	8/31/99	7	7.5	Thorium	4.36	ug/g dry	-	481636.6	1349583.07
12546	12546-15-M	8/31/99	7	7.5	Uranium, Total	1.46	ug/g dry	-	481636.6	1349583.07
12547	12547-1B-R	10/6/99	0	0.5	Thorium	8.35	ug/g dry		481642.56	1349583.05
12547	12547-1B-R	10/6/99	0	0.5	Uranium, Total	4380	ug/g dry		481642.56	1349583.05
12547	12547-7-M	10/6/99	3	3.5	Beryllium	0.962	ug/g dry		481642.56	1349583.05
12547	12547-7-M	10/6/99	3	3.5	Thorium	6.74	ug/g dry		481642.56	1349583.05
12547	12547-7-M	10/6/99	3	3.5	Uranium, Total	26.3	ug/g dry		481642.56	1349583.05
12547	12547-9-M	10/6/99	4	4.5	Beryllium	0.788	ug/g dry		481642.56	1349583.05
12547	12547-9-M	10/6/99	4	4.5	Thorium	6.18	ug/g dry		481642.56	1349583.05
12547	12547-9-M	10/6/99	4	4.5	Uranium, Total	2.53	ug/g dry		481642.56	1349583.05
12547	12547-11-M	10/6/99	5	5.5	Beryllium	0.740	ug/g dry		481642.56	1349583.05

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12547	12547-11-M	10/6/99	5	5.5	Thorium	6.21	ug/g dry		481642.56	1349583.05
12547	12547-11-M	10/6/99	5	5.5	Uranium, Total	1.84	ug/g dry		481642.56	1349583.05
12547	12547-13-M	10/6/99	6	6.5	Beryllium	0.776	ug/g dry		481642.56	1349583.05
12547	12547-13-M	10/6/99	6	6.5	Thorium	6.89	ug/g dry		481642.56	1349583.05
12547	12547-13-M	10/6/99	6	6.5	Uranium, Total	9.22	ug/g dry		481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,1,1-Trichloroethane	130000	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,1,2,2-Tetrachloroethane	10	ug/kg	UJ	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,1,2-Trichloroethane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,1-Dichloroethane	350	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,1-Dichloroethene	3500	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,2-Dichloroethane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	1,2-Dichloropropane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	2-Butanone	5	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	2-Hexanone	10	ug/kg	UJ	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	4-Methyl-2-Pentanone	10	ug/kg	UJ	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Acetone	8	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Benzene	2	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	BromodiChloromethane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Bromoform	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Bromomethane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Carbon Disulfide	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Carbon Tetrachloride	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Chlorobenzene	10	ug/kg	UJ	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Chloroethane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Chloroform	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Chloromethane	7	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	cis-1,2-Dichloroethene	270	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	cis-1,3-Dichloropropene	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Dibromochloromethane	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Ethylbenzene	70	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Methylene Chloride	5	ug/kg	UJ	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Styrene	10	ug/kg	UJ	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Tetrachloroethene	1100000	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Toluene	670	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	trans-1,2-Dichloroethene	2	ug/kg	J	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	trans-1,3-Dichloropropene	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Trichloroethene	5700	ug/kg	J	481642.56	1349583.05

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12547	12547-14B-L	10/6/99	6.5	7	Vinyl Chloride	10	ug/kg	U	481642.56	1349583.05
12547	12547-14B-L	10/6/99	6.5	7	Xylenes (Total)	430	ug/kg	J	481642.56	1349583.05
12547	12547-15-M	10/6/99	7	7.5	Beryllium	0.794	ug/g dry		481642.56	1349583.05
12547	12547-15-M	10/6/99	7	7.5	Thorium	5.49	ug/g dry		481642.56	1349583.05
12547	12547-15-M	10/6/99	7	7.5	Uranium, Total	6.12	ug/g dry		481642.56	1349583.05
12548	12548-7-M	10/6/99	3	3.5	Beryllium	2.13	ug/g dry		481630.56	1349583.05
12548	12548-7-M	10/6/99	3	3.5	Thorium	9.21	ug/g dry		481630.56	1349583.05
12548	12548-7-M	10/6/99	3	3.5	Uranium, Total	12.5	ug/g dry		481630.56	1349583.05
12548	12548-9-M	10/6/99	4	4.5	Beryllium	0.496	ug/g dry		481630.56	1349583.05
12548	12548-9-M	10/6/99	4	4.5	Thorium	3.03	ug/g dry		481630.56	1349583.05
12548	12548-9-M	10/6/99	4	4.5	Uranium, Total	1.40	ug/g dry		481630.56	1349583.05
12548	12548-11-M	10/6/99	5	5.5	Beryllium	0.774	ug/g dry		481630.56	1349583.05
12548	12548-11-M	10/6/99	5	5.5	Thorium	5.07	ug/g dry		481630.56	1349583.05
12548	12548-11-M	10/6/99	5	5.5	Uranium, Total	1.22	ug/g dry		481630.56	1349583.05
12548	12548-13-M	10/6/99	6	6.5	Beryllium	0.621	ug/g dry		481630.56	1349583.05
12548	12548-13-M	10/6/99	6	6.5	Thorium	5.31	ug/g dry		481630.56	1349583.05
12548	12548-13-M	10/6/99	6	6.5	Uranium, Total	1.43	ug/g dry		481630.56	1349583.05
12548	12548-15-M	10/6/99	7	7.5	Beryllium	0.763	ug/g dry		481630.56	1349583.05
12548	12548-15-M	10/6/99	7	7.5	Thorium	5.81	ug/g dry		481630.56	1349583.05
12548	12548-15-M	10/6/99	7	7.5	Uranium, Total	1.52	ug/g dry		481630.56	1349583.05
12549	12549-7-M	10/6/99	3	3.5	Beryllium	1.86	ug/g dry		481636.6	1349583.07
12549	12549-7-M	10/6/99	3	3.5	Thorium	9.25	ug/g dry		481636.6	1349583.07
12549	12549-7-M	10/6/99	3	3.5	Uranium, Total	33.8	ug/g dry		481636.6	1349583.07
12549	12549-9-M	10/6/99	4	4.5	Beryllium	0.775	ug/g dry		481636.6	1349583.07
12549	12549-9-M	10/6/99	4	4.5	Thorium	5.79	ug/g dry		481636.6	1349583.07
12549	12549-9-M	10/6/99	4	4.5	Uranium, Total	2.02	ug/g dry		481636.6	1349583.07
12549	12549-11-M	10/6/99	5	5.5	Beryllium	0.683	ug/g dry		481636.6	1349583.07
12549	12549-11-M	10/6/99	5	5.5	Thorium	5.32	ug/g dry		481636.6	1349583.07
12549	12549-11-M	10/6/99	5	5.5	Uranium, Total	3.31	ug/g dry		481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,1,1-Trichloroethane	32000	ug/kg	-	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,1,2,2-Tetrachloroethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,1,2-Trichloroethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,1-Dichloroethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,1-Dichloroethene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,2-Dichloroethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	1,2-Dichloropropane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	2-Butanone	7300	ug/kg	U	481636.6	1349583.07

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12549	12549-12B-L	10/6/99	5.5	6	2-Hexanone	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	4-Methyl-2-Pentanone	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Acetone	5200	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Benzene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	BromodiChloromethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Bromoform	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Bromomethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Carbon Disulfide	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Carbon Tetrachloride	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Chlorobenzene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Chloroethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Chloroform	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Chloromethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	cis-1,2-Dichloroethene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	cis-1,3-Dichloropropene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Dibromochloromethane	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Ethylbenzene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Methylene Chloride	46000	ug/kg	UJ	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Styrene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Tetrachloroethene	240000	ug/kg	-	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Toluene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	trans-1,2-Dichloroethene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	trans-1,3-Dichloropropene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Trichloroethene	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Vinyl Chloride	26000	ug/kg	U	481636.6	1349583.07
12549	12549-12B-L	10/6/99	5.5	6	Xylenes (Total)	26000	ug/kg	U	481636.6	1349583.07
12549	12549-13-M	10/6/99	6	6.5	Beryllium	0.637	ug/g dry		481636.6	1349583.07
12549	12549-13-M	10/6/99	6	6.5	Thorium	4.88	ug/g dry		481636.6	1349583.07
12549	12549-13-M	10/6/99	6	6.5	Uranium, Total	3.59	ug/g dry		481636.6	1349583.07
12549	12549-15-M	10/6/99	7	7.5	Beryllium	0.791	ug/g dry		481636.6	1349583.07
12549	12549-15-M	10/6/99	7	7.5	Thorium	5.76	ug/g dry		481636.6	1349583.07
12549	12549-15-M	10/6/99	7	7.5	Uranium, Total	2.44	ug/g dry		481636.6	1349583.07
12550	12550-7-M	10/6/99	3	3.5	Beryllium	1.30	ug/g dry		481636.56	1349589.05
12550	12550-7-M	10/6/99	3	3.5	Thorium	9.19	ug/g dry		481636.56	1349589.05
12550	12550-7-M	10/6/99	3	3.5	Uranium, Total	22.3	ug/g dry		481636.56	1349589.05
12550	12550-9-M	10/6/99	4	4.5	Beryllium	0.815	ug/g dry		481636.56	1349589.05
12550	12550-9-M	10/6/99	4	4.5	Thorium	5.91	ug/g dry		481636.56	1349589.05

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12550	12550-9-M	10/6/99	4	4.5	Uranium, Total	1.51	ug/g dry		481636.56	1349589.05
12550	12550-11-M	10/6/99	5	5.5	Beryllium	0.68	ug/g dry		481636.56	1349589.05
12550	12550-11-M	10/6/99	5	5.5	Thorium	5.20	ug/g dry	0	481636.56	1349589.05
12550	12550-11-M	10/6/99	5	5.5	Uranium, Total	2.14	ug/g dry		481636.56	1349589.05
12550	12550-13-M	10/6/99	6	6.5	Beryllium	0.767	ug/g dry		481636.56	1349589.05
12550	12550-13-M	10/6/99	6	6.5	Thorium	5.36	ug/g dry		481636.56	1349589.05
12550	12550-13-M	10/6/99	6	6.5	Uranium, Total	1.22	ug/g dry		481636.56	1349589.05
12550	12550-15-M	10/6/99	7	7.5	Beryllium	0.761	ug/g dry		481636.56	1349589.05
12550	12550-15-M	10/6/99	7	7.5	Thorium	5.35	ug/g dry		481636.56	1349589.05
12550	12550-15-M	10/6/99	7	7.5	Uranium, Total	1.15	ug/g dry		481636.56	1349589.05
12551	12551-3-S	9/17/99	1	1.5	Benzo(a)pyrene	93.0	ug/kg	J	481137.58	1349614.33
12551	12551-5-S	9/17/99	2	2.5	Benzo(a)pyrene	330.0	ug/kg	U	481137.58	1349614.33
12551	12551-7-S	9/17/99	3	3.5	Benzo(a)pyrene	330.0	ug/kg	U	481137.58	1349614.33
12551	12551-9-S	9/17/99	4	4.5	Benzo(a)pyrene	330.0	ug/kg	U	481137.58	1349614.33
12551	12551-11-S	9/17/99	5	5.5	Benzo(a)pyrene	330.0	ug/kg	U	481137.58	1349614.33
12552	12552-3-S	10/20/99	1	1.5	Benzo(a)pyrene	25.0	ug/kg	J	481141.26	1349611.79
12552	12552-5-S	10/20/99	2	2.5	Benzo(a)pyrene	23.0	ug/kg	J	481141.26	1349611.79
12552	12552-7-S	10/20/99	3	3.5	Benzo(a)pyrene	330.0	ug/kg	U	481141.26	1349611.79
12552	12552-9-S	10/20/99	4	4.5	Benzo(a)pyrene	330.0	ug/kg	U	481141.26	1349611.79
12552	12552-11-S	10/20/99	5	5.5	Benzo(a)pyrene	330.0	ug/kg	U	481141.26	1349611.79
12553	12553-3B-L	10/20/99	1	1.5	1,1,1-Trichloroethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	1,1,2,2-Tetrachloroethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	1,1,2-Trichloroethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	1,1-Dichloroethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	1,1-Dichloroethene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	1,2-Dichloroethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	1,2-Dichloropropane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	2-Butanone	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	2-Hexanone	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	4-Methyl-2-Pentanone	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Acetone	31	ug/kg	BJ	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Benzene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3-S	10/20/99	1	1.5	Benzo(a)pyrene	32.0	ug/kg	J	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	BromodiChloromethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Bromoform	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Bromomethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Carbon Disulfide	38	ug/kg	U	481127.44	1349611.23

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12553	12553-3B-L	10/20/99	1	1.5	Carbon Tetrachloride	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Chlorobenzene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Chloroethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Chloroform	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Chloromethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	cis-1,2-Dichloroethene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	cis-1,3-Dichloropropene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Dibromochloromethane	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Ethylbenzene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Methylene Chloride	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Styrene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Tetrachloroethene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Toluene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	trans-1,2-Dichloroethene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	trans-1,3-Dichloropropene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Trichloroethene	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Vinyl Chloride	38	ug/kg	U	481127.44	1349611.23
12553	12553-3B-L	10/20/99	1	1.5	Xylenes (Total)	38	ug/kg	U	481127.44	1349611.23
12553	12553-5-S	10/20/99	2	2.5	Benzo(a)pyrene	37.0	ug/kg	J	481127.44	1349611.23
12553	12553-7-S	10/20/99	3	3.5	Benzo(a)pyrene	31.0	ug/kg	J	481127.44	1349611.23
12554	12554-3-S	10/20/99	1	1.5	Benzo(a)pyrene	330.0	ug/kg	U	481135.34	1349601.76
12554	12554-5-S	10/20/99	2	2.5	Benzo(a)pyrene	330.0	ug/kg	U	481135.34	1349601.76
12554	12554-7-S	10/20/99	3	3.5	Benzo(a)pyrene	330.0	ug/kg	U	481135.34	1349601.76
12554	12554-9-S	10/20/99	4	4.5	Benzo(a)pyrene	330.0	ug/kg	U	481135.34	1349601.76
12554	12554-11-S	10/20/99	5	5.5	Benzo(a)pyrene	330.0	ug/kg	U	481135.34	1349601.76
12555	12555-3-S	10/20/99	1	1.5	Benzo(a)pyrene	330.0	ug/kg	U	481134.64	1349617.87
12555	12555-5-S	10/20/99	2	2.5	Benzo(a)pyrene	330.0	ug/kg	U	481134.64	1349617.87
12555	12555-7-S	10/20/99	3	3.5	Benzo(a)pyrene	330.0	ug/kg	U	481134.64	1349617.87
12555	12555-9-S	10/20/99	4	4.5	Benzo(a)pyrene	330.0	ug/kg	U	481134.64	1349617.87
12555	12555-11-S	10/20/99	5	5.5	Benzo(a)pyrene	330.0	ug/kg	U	481134.64	1349617.87
12556	12556-3-P	9/17/99	1	1.5	Aroclor 1254	530.0	ug/kg	-	481034.75	1349639.44
12556	12556-3-P	9/17/99	1	1.5	Aroclor 1260	330.0	ug/kg	U	481034.75	1349639.44
12556	12556-5-P	9/17/99	2	2.5	Aroclor 1254	1700.0	ug/kg	-	481034.75	1349639.44
12556	12556-5-P	9/17/99	2	2.5	Aroclor 1260	660.0	ug/kg	U	481034.75	1349639.44
12556	12556-7-P	9/17/99	3	3.5	Aroclor 1254	440.0	ug/kg	-	481034.75	1349639.44
12556	12556-7-P	9/17/99	3	3.5	Aroclor 1260	330.0	ug/kg	U	481034.75	1349639.44
12556	12556-9-P	9/17/99	4	4.5	Aroclor 1254	33.0	ug/kg	U	481034.75	1349639.44

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12556	12556-9-P	9/17/99	4	4.5	Aroclor 1260	33.0	ug/kg	U	481034.75	1349639.44
12556	12556-11-P	9/17/99	5	5.5	Aroclor 1254	1300.0	ug/kg	-	481034.75	1349639.44
12556	12556-11-P	9/17/99	5	5.5	Aroclor 1260	650.0	ug/kg	U	481034.75	1349639.44
12557	12557-3-P	10/25/99	1	1.5	Aroclor 1254	33	ug/kg	U	481045.78	1349640.73
12557	12557-3-P	10/25/99	1	1.5	Aroclor 1260	33	ug/kg	U	481045.78	1349640.73
12557	12557-5-P	10/25/99	2	2.5	Aroclor 1254	33	ug/kg	U	481045.78	1349640.73
12557	12557-5-P	10/25/99	2	2.5	Aroclor 1260	33	ug/kg	U	481045.78	1349640.73
12557	12557-7-P	10/25/99	3	3.5	Aroclor 1254	33	ug/kg	U	481045.78	1349640.73
12557	12557-7-P	10/25/99	3	3.5	Aroclor 1260	33	ug/kg	U	481045.78	1349640.73
12557	12557-9-P	10/25/99	4	4.5	Aroclor 1254	33	ug/kg	U	481045.78	1349640.73
12557	12557-9-P	10/25/99	4	4.5	Aroclor 1260	33	ug/kg	U	481045.78	1349640.73
12557	12557-11-P	10/25/99	5	5.5	Aroclor 1254	33	ug/kg	U	481045.78	1349640.73
12557	12557-11-P	10/25/99	5	5.5	Aroclor 1260	33	ug/kg	U	481045.78	1349640.73
12558	12558-3-P	10/25/99	1	1.5	Aroclor 1254	370	ug/kg		481026.03	1349639.21
12558	12558-3-P	10/25/99	1	1.5	Aroclor 1260	170	ug/kg	U	481026.03	1349639.21
12558	12558-5-P	10/25/99	2	2.5	Aroclor 1254	33	ug/kg	U	481026.03	1349639.21
12558	12558-5-P	10/25/99	2	2.5	Aroclor 1260	33	ug/kg	U	481026.03	1349639.21
12558	12558-7-P	10/25/99	3	3.5	Aroclor 1254	33	ug/kg	U	481026.03	1349639.21
12558	12558-7-P	10/25/99	3	3.5	Aroclor 1260	33	ug/kg	U	481026.03	1349639.21
12558	12558-9-P	10/25/99	4	4.5	Aroclor 1254	33	ug/kg	U	481026.03	1349639.21
12558	12558-9-P	10/25/99	4	4.5	Aroclor 1260	33	ug/kg	U	481026.03	1349639.21
12558	12558-11-P	10/25/99	5	5.5	Aroclor 1254	33	ug/kg	U	481026.03	1349639.21
12558	12558-11-P	10/25/99	5	5.5	Aroclor 1260	33	ug/kg	U	481026.03	1349639.21
12559	12559-3-P	10/25/99	1	1.5	Aroclor 1254	380	ug/kg		481034.91	1349633.68
12559	12559-3-P	10/25/99	1	1.5	Aroclor 1260	170	ug/kg	U	481034.91	1349633.68
12559	12559-5-P	10/25/99	2	2.5	Aroclor 1254	740	ug/kg		481034.91	1349633.68
12559	12559-5-P	10/25/99	2	2.5	Aroclor 1260	170	ug/kg	U	481034.91	1349633.68
12559	12559-7-P	10/25/99	3	3.5	Aroclor 1254	1400	ug/kg		481034.91	1349633.68
12559	12559-7-P	10/25/99	3	3.5	Aroclor 1260	330	ug/kg	U	481034.91	1349633.68
12559	12559-9-P	10/25/99	4	4.5	Aroclor 1254	170	ug/kg		481034.91	1349633.68
12559	12559-9-P	10/25/99	4	4.5	Aroclor 1260	33	ug/kg	U	481034.91	1349633.68
12559	12559-11-P	10/25/99	5	5.5	Aroclor 1254	33	ug/kg	U	481034.91	1349633.68
12559	12559-11-P	10/25/99	5	5.5	Aroclor 1260	33	ug/kg	U	481034.91	1349633.68
12560	12560-3-P	10/25/99	1	1.5	Aroclor 1254	120	ug/kg		481033.99	1349645.8
12560	12560-3-P	10/25/99	1	1.5	Aroclor 1260	33	ug/kg	U	481033.99	1349645.8
12560	12560-5-P	10/25/99	2	2.5	Aroclor 1254	700	ug/kg		481033.99	1349645.8
12560	12560-5-P	10/25/99	2	2.5	Aroclor 1260	170	ug/kg	U	481033.99	1349645.8

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12560	12560-7-P	10/25/99	3	3.5	Aroclor 1254	33	ug/kg	U	481033.99	1349645.8
12560	12560-7-P	10/25/99	3	3.5	Aroclor 1260	33	ug/kg	U	481033.99	1349645.8
12560	12560-9-P	10/25/99	4	4.5	Aroclor 1254	33	ug/kg	U	481033.99	1349645.8
12560	12560-9-P	10/25/99	4	4.5	Aroclor 1260	33	ug/kg	U	481033.99	1349645.8
12560	12560-11-P	10/25/99	5	5.5	Aroclor 1254	100	ug/kg		481033.99	1349645.8
12560	12560-11-P	10/25/99	5	5.5	Aroclor 1260	33	ug/kg	U	481033.99	1349645.8
12566	12566-3-R	11/15/99	1	1.5	Thorium	5.45	ug/g dry		480333.17	1350167.74
12566	12566-3-R	11/15/99	1	1.5	Uranium, Total	1.18	ug/g dry		480333.17	1350167.74
12566	12566-5-R	11/15/99	2	2.5	Thorium	11.6	ug/g dry		480333.17	1350167.74
12566	12566-5-R	11/15/99	2	2.5	Uranium, Total	2.22	ug/g dry		480333.17	1350167.74
12566	12566-7-R	11/15/99	3	3.5	Thorium	9.47	ug/g dry		480333.17	1350167.74
12566	12566-7-R	11/15/99	3	3.5	Uranium, Total	1.58	ug/g dry		480333.17	1350167.74
12566	12566-9-R	11/15/99	4	4.5	Thorium	10.1	ug/g dry		480333.17	1350167.74
12566	12566-9-R	11/15/99	4	4.5	Uranium, Total	2.40	ug/g dry		480333.17	1350167.74
12566	12566-11-R	11/15/99	5	5.5	Thorium	9.86	ug/g dry		480333.17	1350167.74
12566	12566-11-R	11/15/99	5	5.5	Uranium, Total	12.0	ug/g dry		480333.17	1350167.74
12566	12566-13-R	11/15/99	6	6.5	Thorium	8.20	ug/g dry		480333.17	1350167.74
12566	12566-13-R	11/15/99	6	6.5	Uranium, Total	24.1	ug/g dry		480333.17	1350167.74
12566	12566-15-R	11/15/99	7	7.5	Thorium	10.8	ug/g dry		480333.17	1350167.74
12566	12566-15-R	11/15/99	7	7.5	Uranium, Total	46.0	ug/g dry		480333.17	1350167.74
12566	12566-17-R	11/15/99	8	8.5	Thorium	8.49	ug/g dry		480333.17	1350167.74
12566	12566-17-R	11/15/99	8	8.5	Uranium, Total	49.2	ug/g dry		480333.17	1350167.74
12567	12567-3-R	11/10/99	1	1.5	Thorium	4.80	ug/g dry		480339.17	1350167.74
12567	12567-3-R	11/10/99	1	1.5	Uranium, Total	1.28	ug/g dry		480339.17	1350167.74
12567	12567-5-R	11/10/99	2	2.5	Thorium	9.25	ug/g dry		480339.17	1350167.74
12567	12567-5-R	11/10/99	2	2.5	Uranium, Total	1.89	ug/g dry		480339.17	1350167.74
12567	12567-7-R	11/10/99	3	3.5	Thorium	9.57	ug/g dry		480339.17	1350167.74
12567	12567-7-R	11/10/99	3	3.5	Uranium, Total	1.60	ug/g dry		480339.17	1350167.74
12567	12567-9-R	11/10/99	4	4.5	Thorium	9.91	ug/g dry		480339.17	1350167.74
12567	12567-9-R	11/10/99	4	4.5	Uranium, Total	11.7	ug/g dry		480339.17	1350167.74
12567	12567-11-R	11/10/99	5	5.5	Thorium	10.0	ug/g dry		480339.17	1350167.74
12567	12567-11-R	11/10/99	5	5.5	Uranium, Total	26.5	ug/g dry		480339.17	1350167.74
12567	12567-13-R	11/10/99	6	6.5	Thorium	8.69	ug/g dry		480339.17	1350167.74
12567	12567-13-R	11/10/99	6	6.5	Uranium, Total	35.8	ug/g dry		480339.17	1350167.74
12567	12567-15-R	11/10/99	7	7.5	Thorium	8.16	ug/g dry		480339.17	1350167.74
12567	12567-15-R	11/10/99	7	7.5	Uranium, Total	32.4	ug/g dry		480339.17	1350167.74
12567	12567-17-R	11/10/99	8	8.5	Thorium	6.76	ug/g dry		480339.17	1350167.74

000621

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12567	12567-17-R	11/10/99	8	8.5	Uranium, Total	17.1	ug/g dry		480339.17	1350167.74
12568	12568-3-R	11/15/99	1	1.5	Thorium	5.89	ug/g dry		480327.17	1350167.74
12568	12568-3-R	11/15/99	1	1.5	Uranium, Total	1.35	ug/g dry		480327.17	1350167.74
12568	12568-5-R	11/15/99	2	2.5	Thorium	7.99	ug/g dry		480327.17	1350167.74
12568	12568-5-R	11/15/99	2	2.5	Uranium, Total	1.49	ug/g dry		480327.17	1350167.74
12568	12568-7-R	11/15/99	3	3.5	Thorium	9.12	ug/g dry		480327.17	1350167.74
12568	12568-7-R	11/15/99	3	3.5	Uranium, Total	1.81	ug/g dry		480327.17	1350167.74
12568	12568-9-R	11/15/99	4	4.5	Thorium	9.28	ug/g dry		480327.17	1350167.74
12568	12568-9-R	11/15/99	4	4.5	Uranium, Total	1.27	ug/g dry		480327.17	1350167.74
12568	12568-11-R	11/15/99	5	5.5	Thorium	8.34	ug/g dry		480327.17	1350167.74
12568	12568-11-R	11/15/99	5	5.5	Uranium, Total	1.35	ug/g dry		480327.17	1350167.74
12568	12568-13-R	11/15/99	6	6.5	Thorium	7.53	ug/g dry		480327.17	1350167.74
12568	12568-13-R	11/15/99	6	6.5	Uranium, Total	2.66	ug/g dry		480327.17	1350167.74
12568	12568-15-R	11/15/99	7	7.5	Thorium	6.90	ug/g dry		480327.17	1350167.74
12568	12568-15-R	11/15/99	7	7.5	Uranium, Total	9.98	ug/g dry		480327.17	1350167.74
12568	12568-17-R	11/15/99	8	8.5	Thorium	6.10	ug/g dry		480327.17	1350167.74
12568	12568-17-R	11/15/99	8	8.5	Uranium, Total	9.39	ug/g dry		480327.17	1350167.74
12569	12569-3-R	11/10/99	1	1.5	Thorium	5.63	ug/g dry		480333.17	1350161.74
12569	12569-3-R	11/10/99	1	1.5	Uranium, Total	1.21	ug/g dry		480333.17	1350161.74
12569	12569-5-R	11/10/99	2	2.5	Thorium	7.99	ug/g dry		480333.17	1350161.74
12569	12569-5-R	11/10/99	2	2.5	Uranium, Total	1.60	ug/g dry		480333.17	1350161.74
12569	12569-7-R	11/10/99	3	3.5	Thorium	9.52	ug/g dry		480333.17	1350161.74
12569	12569-7-R	11/10/99	3	3.5	Uranium, Total	2.27	ug/g dry		480333.17	1350161.74
12569	12569-9-R	11/10/99	4	4.5	Thorium	8.94	ug/g dry		480333.17	1350161.74
12569	12569-9-R	11/10/99	4	4.5	Uranium, Total	2.90	ug/g dry		480333.17	1350161.74
12569	12569-11-R	11/10/99	5	5.5	Thorium	9.19	ug/g dry		480333.17	1350161.74
12569	12569-11-R	11/10/99	5	5.5	Uranium, Total	23.3	ug/g dry		480333.17	1350161.74
12569	12569-13-R	11/10/99	6	6.5	Thorium	8.40	ug/g dry		480333.17	1350161.74
12569	12569-13-R	11/10/99	6	6.5	Uranium, Total	43.5	ug/g dry		480333.17	1350161.74
12569	12569-15-R	11/10/99	7	7.5	Thorium	7.54	ug/g dry		480333.17	1350161.74
12569	12569-15-R	11/10/99	7	7.5	Uranium, Total	42.1	ug/g dry		480333.17	1350161.74
12569	12569-17-R	11/10/99	8	8.5	Thorium	5.72	ug/g dry		480333.17	1350161.74
12569	12569-17-R	11/10/99	8	8.5	Uranium, Total	22.8	ug/g dry		480333.17	1350161.74
12570	12570-3-R	11/10/99	1	1.5	Thorium	6.54	ug/g dry		480333.17	1350173.74
12570	12570-3-R	11/10/99	1	1.5	Uranium, Total	1.49	ug/g dry		480333.17	1350173.74
12570	12570-5-R	11/10/99	2	2.5	Thorium	8.64	ug/g dry		480333.17	1350173.74
12570	12570-5-R	11/10/99	2	2.5	Uranium, Total	1.74	ug/g dry		480333.17	1350173.74

000622

7-28-00

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12570	12570-7-R	11/10/99	3	3.5	Thorium	10.1	ug/g dry		480333.17	1350173.74
12570	12570-7-R	11/10/99	3	3.5	Uranium, Total	1.86	ug/g dry		480333.17	1350173.74
12570	12570-9-R	11/10/99	4	4.5	Thorium	9.31	ug/g dry		480333.17	1350173.74
12570	12570-9-R	11/10/99	4	4.5	Uranium, Total	1.58	ug/g dry		480333.17	1350173.74
12570	12570-11-R	11/10/99	5	5.5	Thorium	9.83	ug/g dry		480333.17	1350173.74
12570	12570-11-R	11/10/99	5	5.5	Uranium, Total	1.83	ug/g dry		480333.17	1350173.74
12570	12570-13-R	11/10/99	6	6.5	Thorium	9.21	ug/g dry		480333.17	1350173.74
12570	12570-13-R	11/10/99	6	6.5	Uranium, Total	2.92	ug/g dry		480333.17	1350173.74
12570	12570-15-R	11/10/99	7	7.5	Thorium	7.56	ug/g dry		480333.17	1350173.74
12570	12570-15-R	11/10/99	7	7.5	Uranium, Total	4.24	ug/g dry		480333.17	1350173.74
12570	12570-17-R	11/10/99	8	8.5	Thorium	6.71	ug/g dry		480333.17	1350173.74
12570	12570-17-R	11/10/99	8	8.5	Uranium, Total	11.2	ug/g dry		480333.17	1350173.74
12589	12589-1-R	10/8/99	0	0.5	Thorium	12.3	ug/g dry		481721.37	1349575.88
12589	12589-1-R	10/8/99	0	0.5	Uranium, Total	593	ug/g dry		481721.37	1349575.88
12589	12589-3-R	10/8/99	1	1.5	Thorium	8.12	ug/g dry		481721.37	1349575.88
12589	12589-3-R	10/8/99	1	1.5	Uranium, Total	220	ug/g dry		481721.37	1349575.88
12589	12589-5-R	10/8/99	2	2.5	Thorium	7.83	ug/g dry		481721.37	1349575.88
12589	12589-5-R	10/8/99	2	2.5	Uranium, Total	280	ug/g dry		481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,1,1-Trichloroethane	12	ug/kg	-	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,1-Dichloroethane	12	ug/kg	-	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,1-Dichloroethene	1	ug/kg	J	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	2-Butanone	2	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	2-Hexanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Acetone	7	ug/kg	UJ	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88

000623

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-7-L	10/8/99	3	3.5	Chloroform	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	cis-1,2-Dichloroethene	37	ug/kg	-	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Methylene Chloride	7	ug/kg	UJ	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Tetrachloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-R	10/8/99	3	3.5	Thorium	8.76	ug/g dry		481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	trans-1,2-Dichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Trichloroethene	6	ug/kg	J	481721.37	1349575.88
12589	12589-7-R	10/8/99	3	3.5	Uranium, Total	139	ug/g dry		481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-7-L	10/8/99	3	3.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,1,1-Trichloroethane	73	ug/kg	-	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,1-Dichloroethane	59	ug/kg	-	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,1-Dichloroethene	10	ug/kg	J	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	2-Butanone	2	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	2-Hexanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Acetone	4	ug/kg	UJ	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Chloroform	10	ug/kg	U	481721.37	1349575.88

000624

2888

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-9-L	10/8/99	4	4.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	cis-1,2-Dichloroethene	150	ug/kg	-	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Methylene Chloride	7	ug/kg	UJ	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Tetrachloroethene	1	ug/kg	U	481721.37	1349575.88
12589	12589-9-R	10/8/99	4	4.5	Thorium	8.01	ug/g dry		481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	trans-1,2-Dichloroethene	3	ug/kg	J	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Trichloroethene	30	ug/kg	-	481721.37	1349575.88
12589	12589-9-R	10/8/99	4	4.5	Uranium, Total	71.9	ug/g dry		481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-9-L	10/8/99	4	4.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,1,1-Trichloroethane	41	ug/kg	-	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,1-Dichloroethane	54	ug/kg	-	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,1-Dichloroethene	17	ug/kg	-	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	2-Butanone	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	2-Hexanone	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	4-Methyl-2-Pentanone	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Acetone	5	ug/kg	UJ	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Chloroform	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-11-L	10/8/99	5	5.5	cis-1,2-Dichloroethene	150	ug/kg	-	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Methylene Chloride	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Tetrachloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-R	10/8/99	5	5.5	Thorium	7.84	ug/g dry		481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	trans-1,2-Dichloroethene	4	ug/kg	J	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Trichloroethene	16	ug/kg	-	481721.37	1349575.88
12589	12589-11-R	10/8/99	5	5.5	Uranium, Total	738	ug/g dry		481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-11-L	10/8/99	5	5.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,1,1-Trichloroethane	25	ug/kg	-	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,1-Dichloroethane	53	ug/kg	-	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,1-Dichloroethene	17	ug/kg	-	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	2-Butanone	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	2-Hexanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Acetone	4	ug/kg	UJ	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Chloroform	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	cis-1,2-Dichloroethene	140	ug/kg	-	481721.37	1349575.88

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-13-L	10/8/99	6	6.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Methylene Chloride	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Tetrachloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-R	10/8/99	6	6.5	Thorium	3.53	ug/g dry		481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	trans-1,2-Dichloroethene	4	ug/kg	J	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Trichloroethene	12	ug/kg	-	481721.37	1349575.88
12589	12589-13-R	10/8/99	6	6.5	Uranium, Total	7.19	ug/g dry		481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-13-L	10/8/99	6	6.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,1,1-Trichloroethane	9	ug/kg	J	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,1,2,2-Tetrachloroethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,1,2-Trichloroethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,1-Dichloroethane	38	ug/kg	-	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,1-Dichloroethene	6	ug/kg	J	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,2-Dichloroethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	1,2-Dichloropropane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	2-Butanone	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	2-Hexanone	9	ug/kg	UJ	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	4-Methyl-2-Pentanone	9	ug/kg	UJ	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Acetone	3	ug/kg	UJ	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Benzene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	BromodiChloromethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Bromoform	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Bromomethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Carbon Disulfide	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Carbon Tetrachloride	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Chlorobenzene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Chloroethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Chloroform	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Chloromethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	cis-1,2-Dichloroethene	45	ug/kg	-	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	cis-1,3-Dichloropropene	9	ug/kg	U	481721.37	1349575.88

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-15-L	10/8/99	7	7.5	Dibromochloromethane	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Ethylbenzene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Methylene Chloride	9	ug/kg	UJ	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Styrene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Tetrachloroethene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-R	10/8/99	7	7.5	Thorium	4.01	ug/g dry		481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Toluene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	trans-1,2-Dichloroethene	2	ug/kg	J	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	trans-1,3-Dichloropropene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Trichloroethene	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-R	10/8/99	7	7.5	Uranium, Total	4.87	ug/g dry		481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Vinyl Chloride	9	ug/kg	U	481721.37	1349575.88
12589	12589-15-L	10/8/99	7	7.5	Xylenes (Total)	9	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,1,1-Trichloroethane	8	ug/kg	J	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,1-Dichloroethane	61	ug/kg	-	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,1-Dichloroethene	7	ug/kg	J	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	2-Butanone	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	2-Hexanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Acetone	5	ug/kg	UJ	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Chloroform	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	cis-1,2-Dichloroethene	52	ug/kg	-	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-17-L	10/8/99	8	8.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Methylene Chloride	16	ug/kg	UJ	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Tetrachloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-R	10/8/99	8	8.5	Thorium	3.89	ug/g dry		481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	trans-1,2-Dichloroethene	2	ug/kg	J	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Trichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-R	10/8/99	8	8.5	Uranium, Total	3.68	ug/g dry		481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-17-L	10/8/99	8	8.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,1,1-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,1-Dichloroethane	30	ug/kg	-	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,1-Dichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	2-Butanone	3	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	2-Hexanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Acetone	5	ug/kg	UJ	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Chloroform	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	cis-1,2-Dichloroethene	8	ug/kg	J	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-19-L	10/8/99	9	9.5	Methylene Chloride	22	ug/kg	UJ	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Tetrachloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-R	10/8/99	9	9.5	Thorium	3.34	ug/g dry		481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	trans-1,2-Dichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Trichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-R	10/8/99	9	9.5	Uranium, Total	1.85	ug/g dry		481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-19-L	10/8/99	9	9.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,1,1-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,1,2-Trichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,1-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,1-Dichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,2-Dichloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	1,2-Dichloropropane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	2-Butanone	2	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	2-Hexanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Acetone	4	ug/kg	UJ	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Benzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	BromodiChloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Bromoform	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Bromomethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Carbon Disulfide	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Carbon Tetrachloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Chlorobenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Chloroethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Chloroform	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Chloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	cis-1,2-Dichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	cis-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Dibromochloromethane	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Ethylbenzene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Methylene Chloride	15	ug/kg	UJ	481721.37	1349575.88

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12589	12589-21-L	10/8/99	10	10.5	Styrene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Tetrachloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-R	10/8/99	10	10.5	Thorium	4.06	ug/g dry		481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Toluene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	trans-1,2-Dichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	trans-1,3-Dichloropropene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Trichloroethene	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-R	10/8/99	10	10.5	Uranium, Total	1.29	ug/g dry		481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Vinyl Chloride	10	ug/kg	U	481721.37	1349575.88
12589	12589-21-L	10/8/99	10	10.5	Xylenes (Total)	10	ug/kg	U	481721.37	1349575.88
12590	12590-1-R	10/8/99	0	0.5	Thorium	7.91	ug/g dry		481716.68	1349587.24
12590	12590-1-R	10/8/99	0	0.5	Uranium, Total	414	ug/g dry		481716.68	1349587.24
12590	12590-3-R	10/8/99	1	1.5	Thorium	3.86	ug/g dry		481716.68	1349587.24
12590	12590-3-R	10/8/99	1	1.5	Uranium, Total	4.41	ug/g dry		481716.68	1349587.24
12590	12590-5-R	10/8/99	2	2.5	Thorium	8.61	ug/g dry		481716.68	1349587.24
12590	12590-5-R	10/8/99	2	2.5	Uranium, Total	2.92	ug/g dry		481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,1,1-Trichloroethane	4	ug/kg	J	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,1-Dichloroethane	7	ug/kg	J	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,1-Dichloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	2-Butanone	5	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Acetone	12	ug/kg	UJ	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-7-L	10/8/99	3	3.5	cis-1,2-Dichloroethene	14	ug/kg	-	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Methylene Chloride	4	ug/kg	UJ	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Styrene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-R	10/8/99	3	3.5	Thorium	8.51	ug/g dry		481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	trans-1,2-Dichloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Trichloroethene	4	ug/kg	J	481716.68	1349587.24
12590	12590-7-R	10/8/99	3	3.5	Uranium, Total	1.96	ug/g dry		481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-7-L	10/8/99	3	3.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,1,1-Trichloroethane	79	ug/kg	-	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,1-Dichloroethane	52	ug/kg	-	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,1-Dichloroethene	16	ug/kg	-	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	2-Butanone	4	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Acetone	7	ug/kg	UJ	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	cis-1,2-Dichloroethene	160	ug/kg	-	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-9-L	10/8/99	4	4.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Methylene Chloride	3	ug/kg	UJ	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Styrene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-R	10/8/99	4	4.5	Thorium	8.62	ug/g dry		481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	trans-1,2-Dichloroethene	1	ug/kg	J	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Trichloroethene	29	ug/kg	-	481716.68	1349587.24
12590	12590-9-R	10/8/99	4	4.5	Uranium, Total	22.2	ug/g dry		481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-9-L	10/8/99	4	4.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,1,1-Trichloroethane	47	ug/kg	-	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,1-Dichloroethane	34	ug/kg	-	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,1-Dichloroethene	10	ug/kg	J	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	2-Butanone	4	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Acetone	8	ug/kg	UJ	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	cis-1,2-Dichloroethene	120	ug/kg	-	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-11-L	10/8/99	5	5.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Methylene Chloride	3	ug/kg	UJ	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Styrene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-R	10/8/99	5	5.5	Thorium	8.77	ug/g dry		481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	trans-1,2-Dichloroethene	1	ug/kg	J	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Trichloroethene	22	ug/kg	-	481716.68	1349587.24
12590	12590-11-R	10/8/99	5	5.5	Uranium, Total	26.9	ug/g dry		481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-11-L	10/8/99	5	5.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,1,1-Trichloroethane	110	ug/kg	-	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,1-Dichloroethane	49	ug/kg	-	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,1-Dichloroethene	19	ug/kg	-	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	2-Butanone	3	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Acetone	8	ug/kg	UJ	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	cis-1,2-Dichloroethene	200	ug/kg	-	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-13-L	10/8/99	6	6.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Methylene Chloride	5	ug/kg	UJ	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Styrene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-R	10/8/99	6	6.5	Thorium	8.81	ug/g dry		481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	trans-1,2-Dichloroethene	3	ug/kg	J	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Trichloroethene	46	ug/kg	-	481716.68	1349587.24
12590	12590-13-R	10/8/99	6	6.5	Uranium, Total	16.6	ug/g dry		481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-13-L	10/8/99	6	6.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,1,1-Trichloroethane	130	ug/kg	-	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,1,2,2-Tetrachloroethane	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,1-Dichloroethane	74	ug/kg	-	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,1-Dichloroethene	32	ug/kg	-	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	2-Butanone	2	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Acetone	6	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Chlorobenzene	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	cis-1,2-Dichloroethene	260	ug/kg	-	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Ethylbenzene	10	ug/kg	UJ	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-15-L	10/8/99	7	7.5	Methylene Chloride	3	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Styrene	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Tetrachloroethene	2	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-R	10/8/99	7	7.5	Thorium	5.24	ug/g dry		481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Toluene	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	trans-1,2-Dichloroethene	5	ug/kg	J	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Trichloroethene	62	ug/kg	-	481716.68	1349587.24
12590	12590-15-R	10/8/99	7	7.5	Uranium, Total	3.53	ug/g dry		481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-15-L	10/8/99	7	7.5	Xylenes (Total)	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,1,1-Trichloroethane	81	ug/kg	-	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,1-Dichloroethane	110	ug/kg	-	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,1-Dichloroethene	35	ug/kg	-	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	2-Butanone	3	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Acetone	4	ug/kg	UJ	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	cis-1,2-Dichloroethene	290	ug/kg	-	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Methylene Chloride	4	ug/kg	UJ	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-17-L	10/8/99	8	8.5	Styrene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-R	10/8/99	8	8.5	Thorium	4.36	ug/g dry		481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	trans-1,2-Dichloroethene	7	ug/kg	J	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Trichloroethene	43	ug/kg	-	481716.68	1349587.24
12590	12590-17-R	10/8/99	8	8.5	Uranium, Total	2.10	ug/g dry		481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-17-L	10/8/99	8	8.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,1,1-Trichloroethane	30	ug/kg	-	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,1-Dichloroethane	110	ug/kg	-	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,1-Dichloroethene	20	ug/kg	-	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	2-Butanone	3	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	2-Hexanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Acetone	5	ug/kg	UJ	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	cis-1,2-Dichloroethene	140	ug/kg	-	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Methylene Chloride	5	ug/kg	UJ	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Styrene	10	ug/kg	U	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-19-L	10/8/99	9	9.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-R	10/8/99	9	9.5	Thorium	4.62	ug/g dry		481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	trans-1,2-Dichloroethene	6	ug/kg	J	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Trichloroethene	4	ug/kg	J	481716.68	1349587.24
12590	12590-19-R	10/8/99	9	9.5	Uranium, Total	1.47	ug/g dry		481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-19-L	10/8/99	9	9.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,1,1-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,1,2,2-Tetrachloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,1,2-Trichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,1-Dichloroethane	2	ug/kg	J	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,1-Dichloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,2-Dichloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	1,2-Dichloropropane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	2-Butanone	2	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	2-Hexanone	3	ug/kg	UJ	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	4-Methyl-2-Pentanone	10	ug/kg	UJ	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Acetone	4	ug/kg	UJ	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Benzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	BromodiChloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Bromoform	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Bromomethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Carbon Disulfide	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Carbon Tetrachloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Chlorobenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Chloroethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Chloroform	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Chloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	cis-1,2-Dichloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	cis-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Dibromochloromethane	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Ethylbenzene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Methylene Chloride	18	ug/kg	UJ	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Styrene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Tetrachloroethene	10	ug/kg	U	481716.68	1349587.24

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12590	12590-21-R	10/8/99	10	10.5	Thorium	4.51	ug/g dry		481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Toluene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	trans-1,2-Dichloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	trans-1,3-Dichloropropene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Trichloroethene	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-R	10/8/99	10	10.5	Uranium, Total	1.52	ug/g dry		481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Vinyl Chloride	10	ug/kg	U	481716.68	1349587.24
12590	12590-21-L	10/8/99	10	10.5	Xylenes (Total)	10	ug/kg	U	481716.68	1349587.24
12591	12591-1-R	10/11/99	0	0.5	Thorium	7.44	ug/g dry		481705.42	1349591.85
12591	12591-1-R	10/11/99	0	0.5	Uranium, Total	656	ug/g dry		481705.42	1349591.85
12591	12591-3-R	10/11/99	1	1.5	Thorium	5.66	ug/g dry		481705.42	1349591.85
12591	12591-3-R	10/11/99	1	1.5	Uranium, Total	4.55	ug/g dry		481705.42	1349591.85
12591	12591-5-R	10/11/99	2	2.5	Thorium	9.25	ug/g dry		481705.42	1349591.85
12591	12591-5-R	10/11/99	2	2.5	Uranium, Total	2.06	ug/g dry		481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,1,1-Trichloroethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,1,2-Trichloroethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,1-Dichloroethane	29	ug/kg	J	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,1-Dichloroethene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,2-Dichloroethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	1,2-Dichloropropane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	2-Butanone	19	ug/kg	JB	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	2-Hexanone	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	4-Methyl-2-Pentanone	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Acetone	61	ug/kg	B	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Benzene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	BromodiChloromethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Bromoform	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Bromomethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Carbon Disulfide	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Carbon Tetrachloride	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Chlorobenzene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Chloroethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Chloroform	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Chloromethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	cis-1,2-Dichloroethene	74	ug/kg		481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	cis-1,3-Dichloropropene	42	ug/kg	U	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-7-L	10/11/99	3	3.5	Dibromochloromethane	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Ethylbenzene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Methylene Chloride	42	ug/kg	B	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Styrene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Tetrachloroethene	4	ug/kg	J	481705.42	1349591.85
12591	12591-7-R	10/11/99	3	3.5	Thorium	5.42	ug/g dry		481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Toluene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	trans-1,2-Dichloroethene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	trans-1,3-Dichloropropene	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Trichloroethene	48	ug/kg		481705.42	1349591.85
12591	12591-7-R	10/11/99	3	3.5	Uranium, Total	1.15	ug/g dry		481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Vinyl Chloride	42	ug/kg	U	481705.42	1349591.85
12591	12591-7-L	10/11/99	3	3.5	Xylenes (Total)	42	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,1,1-Trichloroethane	11	ug/kg	J	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,1-Dichloroethane	13	ug/kg	J	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,2-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	1,2-Dichloropropane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	2-Butanone	13	ug/kg	JB	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	2-Hexanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Acetone	28	ug/kg	JB	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Benzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	BromodiChloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Bromoform	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Bromomethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Carbon Disulfide	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Carbon Tetrachloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Chlorobenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Chloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Chloroform	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Chloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	cis-1,2-Dichloroethene	40	ug/kg	J	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Dibromochloromethane	50	ug/kg	U	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-9-L	10/11/99	4	4.5	Ethylbenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Methylene Chloride	27	ug/kg	JB	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Styrene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Tetrachloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-R	10/11/99	4	4.5	Thorium	9.60	ug/g dry		481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Toluene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Trichloroethene	8	ug/kg	J	481705.42	1349591.85
12591	12591-9-R	10/11/99	4	4.5	Uranium, Total	2.05	ug/g dry		481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Vinyl Chloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-9-L	10/11/99	4	4.5	Xylenes (Total)	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,1,1-Trichloroethane	13	ug/kg	J	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,1-Dichloroethane	12	ug/kg	J	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,1-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,2-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	1,2-Dichloropropane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	2-Butanone	21	ug/kg	JB	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	2-Hexanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Acetone	33	ug/kg	JB	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Benzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	BromodiChloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Bromoform	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Bromomethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Carbon Disulfide	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Carbon Tetrachloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Chlorobenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Chloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Chloroform	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Chloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	cis-1,2-Dichloroethene	50	ug/kg		481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Dibromochloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Ethylbenzene	50	ug/kg	U	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-11-L	10/11/99	5	5.5	Methylene Chloride	58	ug/kg	B	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Styrene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Tetrachloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-R	10/11/99	5	5.5	Thorium	8.57	ug/g dry		481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Toluene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Trichloroethene	17	ug/kg	J	481705.42	1349591.85
12591	12591-11-R	10/11/99	5	5.5	Uranium, Total	2.07	ug/g dry		481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Vinyl Chloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-11-L	10/11/99	5	5.5	Xylenes (Total)	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,1,1-Trichloroethane	22	ug/kg	J	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,1-Dichloroethane	10	ug/kg	J	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,2-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	1,2-Dichloropropane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	2-Butanone	13	ug/kg	JB	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	2-Hexanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Acetone	46	ug/kg	JB	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Benzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	BromodiChloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Bromoform	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Bromomethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Carbon Disulfide	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Carbon Tetrachloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Chlorobenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Chloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Chloroform	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Chloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	cis-1,2-Dichloroethene	63	ug/kg		481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Dibromochloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Ethylbenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Methylene Chloride	33	ug/kg	JB	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-13-L	10/11/99	6	6.5	Styrene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Tetrachloroethene	6	ug/kg	J	481705.42	1349591.85
12591	12591-13-R	10/11/99	6	6.5	Thorium	8.89	ug/g dry		481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Toluene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Trichloroethene	63	ug/kg		481705.42	1349591.85
12591	12591-13-R	10/11/99	6	6.5	Uranium, Total	2.82	ug/g dry		481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Vinyl Chloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-13-L	10/11/99	6	6.5	Xylenes (Total)	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,1,1-Trichloroethane	67	ug/kg		481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,1-Dichloroethane	25	ug/kg	J	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,1-Dichloroethene	7	ug/kg	J	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,2-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	1,2-Dichloropropane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	2-Butanone	14	ug/kg	JB	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	2-Hexanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Acetone	15	ug/kg	JB	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Benzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	BromodiChloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Bromoform	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Bromomethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Carbon Disulfide	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Carbon Tetrachloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Chlorobenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Chloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Chloroform	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Chloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	cis-1,2-Dichloroethene	170	ug/kg		481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Dibromochloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Ethylbenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Methylene Chloride	59	ug/kg	B	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Styrene	50	ug/kg	U	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-15-L	10/11/99	7	7.5	Tetrachloroethene	20	ug/kg	J	481705.42	1349591.85
12591	12591-15-R	10/11/99	7	7.5	Thorium	8.51	ug/g dry		481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Toluene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Trichloroethene	130	ug/kg		481705.42	1349591.85
12591	12591-15-R	10/11/99	7	7.5	Uranium, Total	2.49	ug/g dry		481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Vinyl Chloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-15-L	10/11/99	7	7.5	Xylenes (Total)	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,1,1-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,1-Dichloroethane	10	ug/kg	J	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,2-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	1,2-Dichloropropane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	2-Butanone	18	ug/kg	JB	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	2-Hexanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Acetone	22	ug/kg	JB	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Benzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	BromodiChloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Bromoform	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Bromomethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Carbon Disulfide	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Carbon Tetrachloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Chlorobenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Chloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Chloroform	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Chloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	cis-1,2-Dichloroethene	23	ug/kg	J	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Dibromochloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Ethylbenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Methylene Chloride	55	ug/kg	B	481705.42.	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Styrene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Tetrachloroethene	50	ug/kg	U	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-17-R	10/11/99	8	8.5	Thorium	5.36	ug/g dry		481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Toluene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Trichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-R	10/11/99	8	8.5	Uranium, Total	1.26	ug/g dry		481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Vinyl Chloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-17-L	10/11/99	8	8.5	Xylenes (Total)	50	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,1,1-Trichloroethane	15	ug/kg	J	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,1-Dichloroethane	28	ug/kg	J	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,1-Dichloroethene	7	ug/kg	J	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,2-Dichloroethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	1,2-Dichloropropane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	2-Butanone	18	ug/kg	JB	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	2-Hexanone	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Acetone	29	ug/kg	JB	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Benzene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	BromodiChloromethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Bromoform	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Bromomethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Carbon Disulfide	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Carbon Tetrachloride	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Chlorobenzene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Chloroethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Chloroform	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Chloromethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	cis-1,2-Dichloroethene	50	ug/kg		481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Dibromochloromethane	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Ethylbenzene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Methylene Chloride	51	ug/kg	B	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Styrene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Tetrachloroethene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-R	10/11/99	9	9.5	Thorium	5.13	ug/g dry		481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-19-L	10/11/99	9	9.5	Toluene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	trans-1,2-Dichloroethene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Trichloroethene	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-R	10/11/99	9	9.5	Uranium, Total	1.25	ug/g dry		481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Vinyl Chloride	45	ug/kg	U	481705.42	1349591.85
12591	12591-19-L	10/11/99	9	9.5	Xylenes (Total)	45	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,1,1-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,1-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,2-Dichloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	1,2-Dichloropropane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	2-Butanone	17	ug/kg	JB	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	2-Hexanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Acetone	22	ug/kg	JB	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Benzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	BromodiChloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Bromoform	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Bromomethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Carbon Disulfide	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Carbon Tetrachloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Chlorobenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Chloroethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Chloroform	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Chloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	cis-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Dibromochloromethane	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Ethylbenzene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Methylene Chloride	58	ug/kg	B	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Styrene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Tetrachloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-R	10/11/99	10	10.5	Thorium	5.16	ug/g dry		481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Toluene	50	ug/kg	U	481705.42	1349591.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12591	12591-21-L	10/11/99	10	10.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Trichloroethene	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-R	10/11/99	10	10.5	Uranium, Total	1.34	ug/g dry		481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Vinyl Chloride	50	ug/kg	U	481705.42	1349591.85
12591	12591-21-L	10/11/99	10	10.5	Xylenes (Total)	50	ug/kg	U	481705.42	1349591.85
12592	12592-1-R	10/14/99	0	0.5	Thorium	7.36	ug/g dry		481694.18	1349587.14
12592	12592-1-R	10/14/99	0	0.5	Uranium, Total	112	ug/g dry		481694.18	1349587.14
12592	12592-3-R	10/14/99	1	1.5	Thorium	5.24	ug/g dry		481694.18	1349587.14
12592	12592-3-R	10/14/99	1	1.5	Uranium, Total	6.59	ug/g dry		481694.18	1349587.14
12592	12592-5-R	10/14/99	2	2.5	Thorium	8.24	ug/g dry		481694.18	1349587.14
12592	12592-5-R	10/14/99	2	2.5	Uranium, Total	1.89	ug/g dry		481694.18	1349587.14
12592	12592-6-R	10/14/99	2.5	3	Thorium	8.42	ug/g dry		481694.18	1349587.14
12592	12592-6-R	10/14/99	2.5	3	Uranium, Total	7.00	ug/g dry		481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,1,1-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,1,2-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,1-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,1-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,2-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	1,2-Dichloropropane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	2-Butanone	14	ug/kg	J	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	2-Hexanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	4-Methyl-2-Pentanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Acetone	42	ug/kg	JB	481694.18	1349587.14
12592	12592-7-P	10/14/99	3	3.5	Aroclor 1254	33	ug/kg	U	481694.18	1349587.14
12592	12592-7-P	10/14/99	3	3.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Benzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	BromodiChloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Bromoform	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Bromomethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Carbon Disulfide	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Carbon Tetrachloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Chlorobenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Chloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Chloroform	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Chloromethane	50	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-7-L	10/14/99	3	3.5	cis-1,2-Dichloroethene	13	ug/kg	J	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	cis-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Dibromochloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Ethylbenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Methylene Chloride	50	ug/kg		481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Styrene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Tetrachloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Toluene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	trans-1,2-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	trans-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Trichloroethene	5	ug/kg	J	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Vinyl Chloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-7-L	10/14/99	3	3.5	Xylenes (Total)	50	ug/kg	U	481694.18	1349587.14
12592	12592-8-R	10/14/99	3.5	4	Thorium	8.58	ug/g dry		481694.18	1349587.14
12592	12592-8-R	10/14/99	3.5	4	Uranium, Total	2.39	ug/g dry		481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,1,1-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,1,2-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,1-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,2-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	1,2-Dichloropropane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	2-Butanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	2-Hexanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	4-Methyl-2-Pentanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Acetone	32	ug/kg	JB	481694.18	1349587.14
12592	12592-9-P	10/14/99	4	4.5	Aroclor 1254	33	ug/kg	U	481694.18	1349587.14
12592	12592-9-P	10/14/99	4	4.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Benzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	BromodiChloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Bromoform	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Bromomethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Carbon Disulfide	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Carbon Tetrachloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Chlorobenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Chloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Chloroform	50	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-9-L	10/14/99	4	4.5	Chloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	cis-1,2-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	cis-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Dibromochloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Ethylbenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Methylene Chloride	37	ug/kg	J	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Styrene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Tetrachloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Toluene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	trans-1,2-Dichloroethene	9	ug/kg	J	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	trans-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Trichloroethene	5	ug/kg	J	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Vinyl Chloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-9-L	10/14/99	4	4.5	Xylenes (Total)	50	ug/kg	U	481694.18	1349587.14
12592	12592-10-R	10/14/99	4.5	5	Thorium	8.38	ug/g dry		481694.18	1349587.14
12592	12592-10-R	10/14/99	4.5	5	Uranium, Total	2.15	ug/g dry		481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,1,1-Trichloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,1,2-Trichloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,1-Dichloroethane	12	ug/kg	J	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,1-Dichloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,2-Dichloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	1,2-Dichloropropane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	2-Butanone	8	ug/kg	J	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	2-Hexanone	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	4-Methyl-2-Pentanone	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Acetone	44	ug/kg	JB	481694.18	1349587.14
12592	12592-11-P	10/14/99	5	5.5	Aroclor 1254	33	ug/kg	U	481694.18	1349587.14
12592	12592-11-P	10/14/99	5	5.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Benzene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	BromodiChloromethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Bromoform	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Bromomethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Carbon Disulfide	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Carbon Tetrachloride	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Chlorobenzene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Chloroethane	45	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-11-L	10/14/99	5	5.5	Chloroform	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Chloromethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	cis-1,2-Dichloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	cis-1,3-Dichloropropene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Dibromochloromethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Ethylbenzene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Methylene Chloride	23	ug/kg	J	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Styrene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Tetrachloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Toluene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	trans-1,2-Dichloroethene	38	ug/kg	J	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	trans-1,3-Dichloropropene	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Trichloroethene	19	ug/kg	J	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Vinyl Chloride	45	ug/kg	U	481694.18	1349587.14
12592	12592-11-L	10/14/99	5	5.5	Xylenes (Total)	45	ug/kg	U	481694.18	1349587.14
12592	12592-12-R	10/14/99	5.5	6	Thorium	8.38	ug/g dry		481694.18	1349587.14
12592	12592-12-R	10/14/99	5.5	6	Uranium, Total	3.72	ug/g dry		481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,1,1-Trichloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,1,2-Trichloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,1-Dichloroethane	18	ug/kg	J	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,1-Dichloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,2-Dichloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	1,2-Dichloropropane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	2-Butanone	13	ug/kg	J	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	2-Hexanone	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	4-Methyl-2-Pentanone	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Acetone	61	ug/kg	B	481694.18	1349587.14
12592	12592-13-P	10/14/99	6	6.5	Aroclor 1254	68	ug/kg		481694.18	1349587.14
12592	12592-13-P	10/14/99	6	6.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Benzene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	BromodiChloromethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Bromoform	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Bromomethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Carbon Disulfide	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Carbon Tetrachloride	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Chlorobenzene	45	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-13-L	10/14/99	6	6.5	Chloroethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Chloroform	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Chloromethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	cis-1,2-Dichloroethene	78	ug/kg		481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	cis-1,3-Dichloropropene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Dibromochloromethane	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Ethylbenzene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Methylene Chloride	35	ug/kg	J	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Styrene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Tetrachloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Toluene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	trans-1,2-Dichloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	trans-1,3-Dichloropropene	46	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Trichloroethene	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Vinyl Chloride	45	ug/kg	U	481694.18	1349587.14
12592	12592-13-L	10/14/99	6	6.5	Xylenes (Total)	45	ug/kg	U	481694.18	1349587.14
12592	12592-14-R	10/14/99	6.5	7	Thorium	7.37	ug/g dry		481694.18	1349587.14
12592	12592-14-R	10/14/99	6.5	7	Uranium, Total	1.42	ug/g dry		481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,1,1-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,1,2-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,1-Dichloroethane	98	ug/kg		481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,1-Dichloroethene	20	ug/kg	J	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,2-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	1,2-Dichloropropane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	2-Butanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	2-Hexanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	4-Methyl-2-Pentanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Acetone	20	ug/kg	BJ	481694.18	1349587.14
12592	12592-15-P	10/14/99	7	7.5	Aroclor 1254	31	ug/kg	J	481694.18	1349587.14
12592	12592-15-P	10/14/99	7	7.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Benzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	BromodiChloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Bromoform	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Bromomethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Carbon Disulfide	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Carbon Tetrachloride	50	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-15-L	10/14/99	7	7.5	Chlorobenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Chloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Chloroform	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Chloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	cis-1,2-Dichloroethene	310	ug/kg		481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	cis-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Dibromochloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Ethylbenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Methylene Chloride	19	ug/kg	J	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Styrene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Tetrachloroethene	8	ug/kg	BJ	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Toluene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	trans-1,2-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	trans-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Trichloroethene	6	ug/kg	J	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Vinyl Chloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-15-L	10/14/99	7	7.5	Xylenes (Total)	50	ug/kg	U	481694.18	1349587.14
12592	12592-16-R	10/14/99	7.5	8	Thorium	4.20	ug/g dry		481694.18	1349587.14
12592	12592-16-R	10/14/99	7.5	8	Uranium, Total	1.24	ug/g dry		481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,1,1-Trichloroethane	110	ug/kg		481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,1,2-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,1-Dichloroethane	87	ug/kg		481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,1-Dichloroethene	34	ug/kg	J	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,2-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	1,2-Dichloropropane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	2-Butanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	2-Hexanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	4-Methyl-2-Pentanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Acetone	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-P	10/14/99	8	8.5	Aroclor 1254	33	ug/kg	U	481694.18	1349587.14
12592	12592-17-P	10/14/99	8	8.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Benzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	BromodiChloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Bromoform	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Bromomethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Carbon Disulfide	50	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-17-L	10/14/99	8	8.5	Carbon Tetrachloride	14	ug/kg	J	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Chlorobenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Chloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Chloroform	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Chloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	cis-1,2-Dichloroethene	390	ug/kg		481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	cis-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Dibromochloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Ethylbenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Methylene Chloride	23	ug/kg	J	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Styrene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Tetrachloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Toluene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	trans-1,2-Dichloroethene	7	ug/kg	J	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	trans-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Trichloroethene	110	ug/kg		481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Vinyl Chloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-17-L	10/14/99	8	8.5	Xylenes (Total)	50	ug/kg	U	481694.18	1349587.14
12592	12592-18-R	10/14/99	8.5	9	Thorium	3.57	ug/g dry		481694.18	1349587.14
12592	12592-18-R	10/14/99	8.5	9	Uranium, Total	1.13	ug/g dry		481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,1,1-Trichloroethane	7	ug/kg	J	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,1,2,2-Tetrachloroethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,1,2-Trichloroethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,1-Dichloroethane	55	ug/kg		481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,1-Dichloroethene	9	ug/kg	J	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,2-Dichloroethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	1,2-Dichloropropane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	2-Butanone	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	2-Hexanone	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	4-Methyl-2-Pentanone	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Acetone	10	ug/kg	JB	481694.18	1349587.14
12592	12592-19-P	10/14/99	9	9.5	Aroclor 1254	33	ug/kg	U	481694.18	1349587.14
12592	12592-19-P	10/14/99	9	9.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Benzene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	BromodiChloromethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Bromoform	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Bromomethane	36	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-19-L	10/14/99	9	9.5	Carbon Disulfide	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Carbon Tetrachloride	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Chlorobenzene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Chloroethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Chloroform	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Chloromethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	cis-1,2-Dichloroethene	64	ug/kg		481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	cis-1,3-Dichloropropene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Dibromochloromethane	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Ethylbenzene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Methylene Chloride	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Styrene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Tetrachloroethene	8	ug/kg	JB	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Toluene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	trans-1,2-Dichloroethene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	trans-1,3-Dichloropropene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Trichloroethene	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Vinyl Chloride	36	ug/kg	U	481694.18	1349587.14
12592	12592-19-L	10/14/99	9	9.5	Xylenes (Total)	36	ug/kg	U	481694.18	1349587.14
12592	12592-20-R	10/14/99	9.5	10	Thorium	4.22	ug/g dry		481694.18	1349587.14
12592	12592-20-R	10/14/99	9.5	10	Uranium, Total	1.22	ug/g dry		481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,1,1-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,1,2-Trichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,1-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,2-Dichloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	1,2-Dichloropropane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	2-Butanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	2-Hexanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	4-Methyl-2-Pentanone	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Acetone	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-P	10/14/99	10	10.5	Aroclor 1254	33	ug/kg	U	481694.18	1349587.14
12592	12592-21-P	10/14/99	10	10.5	Aroclor 1260	33	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Benzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	BromodiChloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Bromoform	50	ug/kg	U	481694.18	1349587.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12592	12592-21-L	10/14/99	10	10.5	Bromomethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Carbon Disulfide	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Carbon Tetrachloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Chlorobenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Chloroethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Chloroform	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Chloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	cis-1,2-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	cis-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Dibromochloromethane	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Ethylbenzene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Methylene Chloride	21	ug/kg	J	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Styrene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Tetrachloroethene	16	ug/kg	JB	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Toluene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	trans-1,2-Dichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	trans-1,3-Dichloropropene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Trichloroethene	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Vinyl Chloride	50	ug/kg	U	481694.18	1349587.14
12592	12592-21-L	10/14/99	10	10.5	Xylenes (Total)	50	ug/kg	U	481694.18	1349587.14
12593	12593-1-R	10/14/99	0	0.5	Thorium	6.84	ug/g dry		481689.47	1349575.95
12593	12593-1-R	10/14/99	0	0.5	Uranium, Total	600	ug/g dry		481689.47	1349575.95
12593	12593-3-R	10/14/99	1	1.5	Thorium	6.31	ug/g dry		481689.47	1349575.95
12593	12593-3-R	10/14/99	1	1.5	Uranium, Total	5.24	ug/g dry		481689.47	1349575.95
12593	12593-5-R	10/14/99	2	2.5	Thorium	8.66	ug/g dry		481689.47	1349575.95
12593	12593-5-R	10/14/99	2	2.5	Uranium, Total	10.0	ug/g dry		481689.47	1349575.95
12593	12593-6-R	10/14/99	2.5	3	Thorium	8.45	ug/g dry		481689.47	1349575.95
12593	12593-6-R	10/14/99	2.5	3	Uranium, Total	46.6	ug/g dry		481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,1,1-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,1,2-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,1-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,1-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,2-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	1,2-Dichloropropane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	2-Butanone	13	ug/kg	J	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	2-Hexanone	50	ug/kg	U	481689.47	1349575.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-7-L	10/14/99	3	3.5	4-Methyl-2-Pentanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Acetone	27	ug/kg	JB	481689.47	1349575.95
12593	12593-7-P	10/14/99	3	3.5	Aroclor 1254	170	ug/kg		481689.47	1349575.95
12593	12593-7-P	10/14/99	3	3.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Benzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	BromodiChloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Bromoform	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Bromomethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Carbon Disulfide	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Carbon Tetrachloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Chlorobenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Chloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Chloroform	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Chloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	cis-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	cis-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Dibromochloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Ethylbenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Methylene Chloride	59	ug/kg		481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Styrene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Tetrachloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Toluene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	trans-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	trans-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Trichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Vinyl Chloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-7-L	10/14/99	3	3.5	Xylenes (Total)	50	ug/kg	U	481689.47	1349575.95
12593	12593-8-R	10/14/99	3.5	4	Thorium	8.81	ug/g dry		481689.47	1349575.95
12593	12593-8-R	10/14/99	3.5	4	Uranium, Total	3.42	ug/g dry		481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,1,1-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,1,2-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,1-Dichloroethane	7	ug/kg	J	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,2-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	1,2-Dichloropropane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	2-Butanone	22	ug/kg	J	481689.47	1349575.95

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-9-L	10/14/99	4	4.5	2-Hexanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	4-Methyl-2-Pentanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Acetone	110	ug/kg	B	481689.47	1349575.95
12593	12593-9-P	10/14/99	4	4.5	Aroclor 1254	27	ug/kg	J	481689.47	1349575.95
12593	12593-9-P	10/14/99	4	4.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Benzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	BromodiChloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Bromoform	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Bromomethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Carbon Disulfide	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Carbon Tetrachloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Chlorobenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Chloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Chloroform	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Chloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	cis-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	cis-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Dibromochloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Ethylbenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Methylene Chloride	46	ug/kg	J	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Styrene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Tetrachloroethene	5	ug/kg	JB	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Toluene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	trans-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	trans-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Trichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Vinyl Chloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-9-L	10/14/99	4	4.5	Xylenes (Total)	50	ug/kg	U	481689.47	1349575.95
12593	12593-10-R	10/14/99	4.5	5	Thorium	5.76	ug/g dry		481689.47	1349575.95
12593	12593-10-R	10/14/99	4.5	5	Uranium, Total	3.15	ug/g dry		481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,1,1-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,1,2-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,1-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,1-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,2-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	1,2-Dichloropropane	50	ug/kg	U	481689.47	1349575.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-11-L	10/14/99	5	5.5	2-Butanone	24	ug/kg	J	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	2-Hexanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	4-Methyl-2-Pentanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Acetone	57	ug/kg	B	481689.47	1349575.95
12593	12593-11-P	10/14/99	5	5.5	Aroclor 1254	120	ug/kg		481689.47	1349575.95
12593	12593-11-P	10/14/99	5	5.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Benzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	BromodiChloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Bromoform	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Bromomethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Carbon Disulfide	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Carbon Tetrachloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Chlorobenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Chloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Chloroform	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Chloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	cis-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	cis-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Dibromochloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Ethylbenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Methylene Chloride	46	ug/kg	J	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Styrene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Tetrachloroethene	7	ug/kg	JB	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Toluene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	trans-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	trans-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Trichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Vinyl Chloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-11-L	10/14/99	5	5.5	Xylenes (Total)	50	ug/kg	U	481689.47	1349575.95
12593	12593-12-R	10/14/99	5.5	6	Thorium	7.28	ug/g dry		481689.47	1349575.95
12593	12593-12-R	10/14/99	5.5	6	Uranium, Total	17.6	ug/g dry		481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	1,1,1-Trichloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	1,1,2-Trichloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	1,1-Dichloroethane	57	ug/kg		481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	1,1-Dichloroethene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	1,2-Dichloroethane	45	ug/kg	U	481689.47	1349575.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-13-L	10/14/99	6	6.5	1,2-Dichloropropane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	2-Butanone	16	ug/kg	J	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	2-Hexanone	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	4-Methyl-2-Pentanone	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Acetone	26	ug/kg	JB	481689.47	1349575.95
12593	12593-13-P	10/14/99	6	6.5	Aroclor 1254	310	ug/kg		481689.47	1349575.95
12593	12593-13-P	10/14/99	6	6.5	Aroclor 1260	66	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Benzene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	BromodiChloromethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Bromoform	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Bromomethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Carbon Disulfide	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Carbon Tetrachloride	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Chlorobenzene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Chloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Chloroform	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Chloromethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	cis-1,2-Dichloroethene	15	ug/kg	J	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	cis-1,3-Dichloropropene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Dibromochloromethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Ethylbenzene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Methylene Chloride	44	ug/kg	J	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Styrene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Tetrachloroethene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Toluene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	trans-1,2-Dichloroethene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	trans-1,3-Dichloropropene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Trichloroethene	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Vinyl Chloride	45	ug/kg	U	481689.47	1349575.95
12593	12593-13-L	10/14/99	6	6.5	Xylenes (Total)	45	ug/kg	U	481689.47	1349575.95
12593	12593-14-R	10/14/99	6.5	7	Thorium	7.50	ug/g dry		481689.47	1349575.95
12593	12593-14-R	10/14/99	6.5	7	Uranium, Total	2.26	ug/g dry		481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	1,1,1-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	1,1,2-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	1,1-Dichloroethane	100	ug/kg		481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	1,1-Dichloroethene	18	ug/kg	J	481689.47	1349575.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-15-L	10/14/99	7	7.5	1,2-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	1,2-Dichloropropane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	2-Butanone	20	ug/kg	J	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	2-Hexanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	4-Methyl-2-Pentanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Acetone	23	ug/kg	JB	481689.47	1349575.95
12593	12593-15-P	10/14/99	7	7.5	Aroclor 1254	91	ug/kg		481689.47	1349575.95
12593	12593-15-P	10/14/99	7	7.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Benzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	BromodiChloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Bromoform	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Bromomethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Carbon Disulfide	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Carbon Tetrachloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Chlorobenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Chloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Chloroform	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Chloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	cis-1,2-Dichloroethene	290	ug/kg		481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	cis-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Dibromochloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Ethylbenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Methylene Chloride	49	ug/kg	J	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Styrene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Tetrachloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Toluene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	trans-1,2-Dichloroethene	5	ug/kg	J	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	trans-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Trichloroethene	7	ug/kg	J	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Vinyl Chloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-15-L	10/14/99	7	7.5	Xylenes (Total)	50	ug/kg	U	481689.47	1349575.95
12593	12593-16-R	10/14/99	7.5	8	Thorium	3.03	ug/g dry		481689.47	1349575.95
12593	12593-16-R	10/14/99	7.5	8	Uranium, Total	1.30	ug/g dry		481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	1,1,1-Trichloroethane	24	ug/kg	J	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	1,1,2-Trichloroethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	1,1-Dichloroethane	58	ug/kg		481689.47	1349575.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-17-L	10/14/99	8	8.5	1,1-Dichloroethene	19	ug/kg	J	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	1,2-Dichloroethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	1,2-Dichloropropane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	2-Butanone	10	ug/kg	J	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	2-Hexanone	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	4-Methyl-2-Pentanone	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Acetone	15	ug/kg	JB	481689.47	1349575.95
12593	12593-17-P	10/14/99	8	8.5	Aroclor 1254	33	ug/kg	U	481689.47	1349575.95
12593	12593-17-P	10/14/99	8	8.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Benzene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	BromodiChloromethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Bromoform	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Bromomethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Carbon Disulfide	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Carbon Tetrachloride	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Chlorobenzene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Chloroethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Chloroform	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Chloromethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	cis-1,2-Dichloroethene	340	ug/kg		481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	cis-1,3-Dichloropropene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Dibromochloromethane	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Ethylbenzene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Methylene Chloride	29	ug/kg	J	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Styrene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Tetrachloroethene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Toluene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	trans-1,2-Dichloroethene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	trans-1,3-Dichloropropene	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Trichloroethene	33	ug/kg	J	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Vinyl Chloride	42	ug/kg	U	481689.47	1349575.95
12593	12593-17-L	10/14/99	8	8.5	Xylenes (Total)	42	ug/kg	U	481689.47	1349575.95
12593	12593-18-R	10/14/99	8.5	9	Thorium	1.60	ug/g dry		481689.47	1349575.95
12593	12593-18-R	10/14/99	8.5	9	Uranium, Total	2.28	ug/g dry		481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	1,1,1-Trichloroethane	21	ug/kg	J	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	1,1,2-Trichloroethane	45	ug/kg	U	481689.47	1349575.95

000661

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-19-L	10/14/99	9	9.5	1,1-Dichloroethane	55	ug/kg		481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	1,1-Dichloroethene	11	ug/kg	J	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	1,2-Dichloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	1,2-Dichloropropane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	2-Butanone	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	2-Hexanone	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	4-Methyl-2-Pentanone	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Acetone	12	ug/kg	JB	481689.47	1349575.95
12593	12593-19-P	10/14/99	9	9.5	Aroclor 1254	33	ug/kg	U	481689.47	1349575.95
12593	12593-19-P	10/14/99	9	9.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Benzene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	BromodiChloromethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Bromoform	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Bromomethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Carbon Disulfide	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Carbon Tetrachloride	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Chlorobenzene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Chloroethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Chloroform	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Chloromethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	cis-1,2-Dichloroethene	150	ug/kg		481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	cis-1,3-Dichloropropene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Dibromochloromethane	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Ethylbenzene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Methylene Chloride	27	ug/kg	J	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Styrene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Tetrachloroethene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Toluene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	trans-1,2-Dichloroethene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	trans-1,3-Dichloropropene	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Trichloroethene	11	ug/kg	J	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Vinyl Chloride	45	ug/kg	U	481689.47	1349575.95
12593	12593-19-L	10/14/99	9	9.5	Xylenes (Total)	45	ug/kg	U	481689.47	1349575.95
12593	12593-20-R	10/14/99	9.5	10	Thorium	2.94	ug/g dry		481689.47	1349575.95
12593	12593-20-R	10/14/99	9.5	10	Uranium, Total	1.12	ug/g dry		481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	1,1,1-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481689.47	1349575.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12593	12593-21-L	10/14/99	10	10.5	1,1,2-Trichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	1,1-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	1,2-Dichloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	1,2-Dichloropropane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	2-Butanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	2-Hexanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	4-Methyl-2-Pentanone	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Acetone	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-P	10/14/99	10	10.5	Aroclor 1254	33	ug/kg	U	481689.47	1349575.95
12593	12593-21-P	10/14/99	10	10.5	Aroclor 1260	33	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Benzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	BromodiChloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Bromoform	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Bromomethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Carbon Disulfide	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Carbon Tetrachloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Chlorobenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Chloroethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Chloroform	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Chloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	cis-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	cis-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Dibromochloromethane	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Ethylbenzene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Methylene Chloride	22	ug/kg	J	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Styrene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Tetrachloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Toluene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	trans-1,2-Dichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	trans-1,3-Dichloropropene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Trichloroethene	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Vinyl Chloride	50	ug/kg	U	481689.47	1349575.95
12593	12593-21-L	10/14/99	10	10.5	Xylenes (Total)	50	ug/kg	U	481689.47	1349575.95
12594	12594-1-R	10/13/99	0	0.5	Thorium	7.26	ug/g dry		481694.15	1349564.58
12594	12594-1-R	10/13/99	0	0.5	Uranium, Total	337	ug/g dry		481694.15	1349564.58
12594	12594-3-R	10/13/99	1	1.5	Thorium	0.643	ug/g dry		481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-3-R	10/13/99	1	1.5	Uranium, Total	31.4	ug/g dry		481694.15	1349564.58
12594	12594-5-R	10/13/99	2	2.5	Thorium	9.12	ug/g dry		481694.15	1349564.58
12594	12594-5-R	10/13/99	2	2.5	Uranium, Total	4.55	ug/g dry		481694.15	1349564.58
12594	12594-6-R	10/13/99	2.5	3	Thorium	9.51	ug/g dry		481694.15	1349564.58
12594	12594-6-R	10/13/99	2.5	3	Uranium, Total	1.86	ug/g dry		481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,1,1-Trichloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,1,2-Trichloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,1-Dichloroethane	10	ug/kg	J	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,1-Dichloroethene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,2-Dichloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	1,2-Dichloropropane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	2-Butanone	22	ug/kg	JB	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	2-Hexanone	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	4-Methyl-2-Pentanone	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Acetone	47	ug/kg	B	481694.15	1349564.58
12594	12594-7-P	10/13/99	3	3.5	Aroclor 1254	33	ug/kg	U	481694.15	1349564.58
12594	12594-7-P	10/13/99	3	3.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Benzene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	BromodiChloromethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Bromoform	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Bromomethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Carbon Disulfide	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Carbon Tetrachloride	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Chlorobenzene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Chloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Chloroform	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Chloromethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	cis-1,2-Dichloroethene	10	ug/kg	J	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	cis-1,3-Dichloropropene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Dibromochloromethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Ethylbenzene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Methylene Chloride	36	ug/kg	J	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Styrene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Tetrachloroethene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Toluene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	trans-1,2-Dichloroethene	45	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-7-L	10/13/99	3	3.5	trans-1,3-Dichloropropene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Trichloroethene	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Vinyl Chloride	45	ug/kg	U	481694.15	1349564.58
12594	12594-7-L	10/13/99	3	3.5	Xylenes (Total)	45	ug/kg	U	481694.15	1349564.58
12594	12594-8-R	10/13/99	3.5	4	Thorium	9.00	ug/g dry		481694.15	1349564.58
12594	12594-8-R	10/13/99	3.5	4	Uranium, Total	2.35	ug/g dry		481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,1,1-Trichloroethane	11	ug/kg	J	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,1,2-Trichloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,1-Dichloroethane	37	ug/kg	J	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,1-Dichloroethene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,2-Dichloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	1,2-Dichloropropane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	2-Butanone	18	ug/kg	JB	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	2-Hexanone	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	4-Methyl-2-Pentanone	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Acetone	26	ug/kg	JB	481694.15	1349564.58
12594	12594-9-P	10/13/99	4	4.5	Aroclor 1254	52	ug/kg		481694.15	1349564.58
12594	12594-9-P	10/13/99	4	4.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Benzene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	BromodiChloromethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Bromoform	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Bromomethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Carbon Disulfide	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Carbon Tetrachloride	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Chlorobenzene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Chloroethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Chloroform	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Chloromethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	cis-1,2-Dichloroethene	58	ug/kg		481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	cis-1,3-Dichloropropene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Dibromochloromethane	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Ethylbenzene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Methylene Chloride	19	ug/kg	J	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Styrene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Tetrachloroethene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Toluene	45	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-9-L	10/13/99	4	4.5	trans-1,2-Dichloroethene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	trans-1,3-Dichloropropene	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Trichloroethene	14	ug/kg	J	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Vinyl Chloride	45	ug/kg	U	481694.15	1349564.58
12594	12594-9-L	10/13/99	4	4.5	Xylenes (Total)	45	ug/kg	U	481694.15	1349564.58
12594	12594-10-R	10/13/99	4.5	5	Thorium	9.43	ug/g dry		481694.15	1349564.58
12594	12594-10-R	10/13/99	4.5	5	Uranium, Total	3.43	ug/g dry		481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,1,1-Trichloroethane	10	ug/kg	J	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,1,2,2-Tetrachloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,1,2-Trichloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,1-Dichloroethane	28	ug/kg	J	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,1-Dichloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,2-Dichloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	1,2-Dichloropropane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	2-Butanone	14	ug/kg	JB	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	2-Hexanone	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	4-Methyl-2-Pentanone	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-P	10/13/99	5	5.5	Acetone	27	ug/kg	JB	481694.15	1349564.58
12594	12594-11-P	10/13/99	5	5.5	Aroclor 1254	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Benzene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	BromodiChloromethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Bromoform	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Bromomethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Carbon Disulfide	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Carbon Tetrachloride	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Chlorobenzene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Chloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Chloroform	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Chloromethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	cis-1,2-Dichloroethene	32	ug/kg	J	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	cis-1,3-Dichloropropene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Dibromochloromethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Ethylbenzene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Methylene Chloride	16	ug/kg	J	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Styrene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Tetrachloroethene	33	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-11-L	10/13/99	5	5.5	Toluene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	trans-1,2-Dichloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	trans-1,3-Dichloropropene	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Trichloroethene	15	ug/kg	J	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Vinyl Chloride	33	ug/kg	U	481694.15	1349564.58
12594	12594-11-L	10/13/99	5	5.5	Xylenes (Total)	33	ug/kg	U	481694.15	1349564.58
12594	12594-12-R	10/13/99	5.5	6	Thorium	8.76	ug/g dry		481694.15	1349564.58
12594	12594-12-R	10/13/99	5.5	6	Uranium, Total	3.42	ug/g dry		481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,1,1-Trichloroethane	15	ug/kg	J	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,1,2-Trichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,1-Dichloroethane	25	ug/kg	J	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,1-Dichloroethene	9	ug/kg	J	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,2-Dichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	1,2-Dichloropropane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	2-Butanone	17	ug/kg	JB	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	2-Hexanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	4-Methyl-2-Pentanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Acetone	37	ug/kg	JB	481694.15	1349564.58
12594	12594-13-P	10/13/99	6	6.5	Aroclor 1254	120	ug/kg		481694.15	1349564.58
12594	12594-13-P	10/13/99	6	6.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Benzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	BromodiChloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Bromoform	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Bromomethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Carbon Disulfide	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Carbon Tetrachloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Chlorobenzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Chloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Chloroform	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Chloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	cis-1,2-Dichloroethene	100	ug/kg		481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	cis-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Dibromochloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Ethylbenzene.	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Methylene Chloride	22	ug/kg	J	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Styrene	42	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-13-L	10/13/99	6	6.5	Tetrachloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Toluene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	trans-1,2-Dichloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	trans-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Trichloroethene	48	ug/kg		481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Vinyl Chloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-13-L	10/13/99	6	6.5	Xylenes (Total)	42	ug/kg	U	481694.15	1349564.58
12594	12594-14-R	10/13/99	6.5	7	Thorium	9.16	ug/g dry		481694.15	1349564.58
12594	12594-14-R	10/13/99	6.5	7	Uranium, Total	6.63	ug/g dry		481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,1,1-Trichloroethane	60	ug/kg		481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,1,2-Trichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,1-Dichloroethane	200	ug/kg		481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,1-Dichloroethene	80	ug/kg		481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,2-Dichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	1,2-Dichloropropane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	2-Butanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	2-Hexanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	4-Methyl-2-Pentanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Acetone	26	ug/kg	JB	481694.15	1349564.58
12594	12594-15-P	10/13/99	7	7.5	Aroclor 1254	25	ug/kg	J	481694.15	1349564.58
12594	12594-15-P	10/13/99	7	7.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Benzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	BromodiChloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Bromoform	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Bromomethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Carbon Disulfide	6	ug/kg	J	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Carbon Tetrachloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Chlorobenzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Chloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Chloroform	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Chloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	cis-1,2-Dichloroethene	930	ug/kg	E	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	cis-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Dibromochloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Ethylbenzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Methylene Chloride	17	ug/kg	J	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-15-L	10/13/99	7	7.5	Styrene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Tetrachloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Toluene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	trans-1,2-Dichloroethene	11	ug/kg	J	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	trans-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Trichloroethene	200	ug/kg		481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Vinyl Chloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-15-L	10/13/99	7	7.5	Xylenes (Total)	42	ug/kg	U	481694.15	1349564.58
12594	12594-16-R	10/13/99	7.5	8	Thorium	9.27	ug/g dry		481694.15	1349564.58
12594	12594-16-R	10/13/99	7.5	8	Uranium, Total	72.6	ug/g dry		481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,1,1-Trichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,1,2-Trichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,1-Dichloroethane	170	ug/kg		481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,1-Dichloroethene	19	ug/kg	J	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,2-Dichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	1,2-Dichloropropane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	2-Butanone	19	ug/kg	JB	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	2-Hexanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	4-Methyl-2-Pentanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Acetone	20	ug/kg	JB	481694.15	1349564.58
12594	12594-17-P	10/13/99	8	8.5	Aroclor 1254	33	ug/kg	U	481694.15	1349564.58
12594	12594-17-P	10/13/99	8	8.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Benzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	BromodiChloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Bromoform	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Bromomethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Carbon Disulfide	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Carbon Tetrachloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Chlorobenzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Chloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Chloroform	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Chloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	cis-1,2-Dichloroethene	250	ug/kg		481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	cis-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Dibromochloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Ethylbenzene	42	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-17-L	10/13/99	8	8.5	Methylene Chloride	19	ug/kg	J	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Styrene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Tetrachloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Toluene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	trans-1,2-Dichloroethene	12	ug/kg	J	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	trans-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Trichloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Vinyl Chloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-17-L	10/13/99	8	8.5	Xylenes (Total)	42	ug/kg	U	481694.15	1349564.58
12594	12594-18-R	10/13/99	8.5	9	Thorium	5.15	ug/g dry		481694.15	1349564.58
12594	12594-18-R	10/13/99	8.5	9	Uranium, Total	6.12	ug/g dry		481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,1,1-Trichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,1,2-Trichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,1-Dichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,1-Dichloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,2-Dichloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	1,2-Dichloropropane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	2-Butanone	17	ug/kg	JB	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	2-Hexanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	4-Methyl-2-Pentanone	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Acetone	23	ug/kg	JB	481694.15	1349564.58
12594	12594-19-P	10/13/99	9	9.5	Aroclor 1254	33	ug/kg	U	481694.15	1349564.58
12594	12594-19-P	10/13/99	9	9.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Benzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	BromodiChloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Bromoform	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Bromomethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Carbon Disulfide	8	ug/kg	J	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Carbon Tetrachloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Chlorobenzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Chloroethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Chloroform	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Chloromethane	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	cis-1,2-Dichloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	cis-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Dibromochloromethane	42	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-19-L	10/13/99	9	9.5	Ethylbenzene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Methylene Chloride	21	ug/kg	J	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Styrene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Tetrachloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Toluene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	trans-1,2-Dichloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	trans-1,3-Dichloropropene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Trichloroethene	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Vinyl Chloride	42	ug/kg	U	481694.15	1349564.58
12594	12594-19-L	10/13/99	9	9.5	Xylenes (Total)	42	ug/kg	U	481694.15	1349564.58
12594	12594-20-R	10/13/99	9.5	10	Thorium	5.06	ug/g dry		481694.15	1349564.58
12594	12594-20-R	10/13/99	9.5	10	Uranium, Total	1.33	ug/g dry		481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,1,1-Trichloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,1,2,2-Tetrachloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,1,2-Trichloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,1-Dichloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,1-Dichloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,2-Dichloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	1,2-Dichloropropane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	2-Butanone	13	ug/kg	JB	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	2-Hexanone	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	4-Methyl-2-Pentanone	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Acetone	21	ug/kg	JB	481694.15	1349564.58
12594	12594-21-P	10/13/99	10	10.5	Aroclor 1254	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-P	10/13/99	10	10.5	Aroclor 1260	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Benzene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	BromodiChloromethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Bromoform	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Bromomethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Carbon Disulfide	4	ug/kg	J	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Carbon Tetrachloride	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Chlorobenzene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Chloroethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Chloroform	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Chloromethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	cis-1,2-Dichloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	cis-1,3-Dichloropropene	33	ug/kg	U	481694.15	1349564.58

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12594	12594-21-L	10/13/99	10	10.5	Dibromochloromethane	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Ethylbenzene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Methylene Chloride	17	ug/kg	J	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Styrene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Tetrachloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Toluene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	trans-1,2-Dichloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	trans-1,3-Dichloropropene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Trichloroethene	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Vinyl Chloride	33	ug/kg	U	481694.15	1349564.58
12594	12594-21-L	10/13/99	10	10.5	Xylenes (Total)	33	ug/kg	U	481694.15	1349564.58
12595	12595-1-R	10/12/99	0	0.5	Thorium	7.94	ug/g dry		481705.47	1349559.9
12595	12595-1-R	10/12/99	0	0.5	Uranium, Total	487	ug/g dry		481705.47	1349559.9
12595	12595-3-R	10/12/99	1	1.5	Thorium	8.38	ug/g dry		481705.47	1349559.9
12595	12595-3-R	10/12/99	1	1.5	Uranium, Total	66.4	ug/g dry		481705.47	1349559.9
12595	12595-5-R	10/12/99	2	2.5	Thorium	8.16	ug/g dry		481705.47	1349559.9
12595	12595-5-R	10/12/99	2	2.5	Uranium, Total	326	ug/g dry		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,1,1-Trichloroethane	150	ug/kg		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,1-Dichloroethane	120	ug/kg		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,1-Dichloroethene	32	ug/kg	J	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,2-Dichloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	1,2-Dichloropropane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	2-Butanone	23	ug/kg	JB	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	2-Hexanone	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Acetone	37	ug/kg	JB	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Benzene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	BromodiChloromethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Bromoform	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Bromomethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Carbon Disulfide	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Carbon Tetrachloride	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Chlorobenzene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Chloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Chloroform	50	ug/kg	U	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-7-L	10/12/99	3	3.5	Chloromethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	cis-1,2-Dichloroethene	280	ug/kg		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Dibromochloromethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Ethylbenzene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Methylene Chloride	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Styrene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-R	10/12/99	3	3.5	Tetrachloroethene	10	ug/kg	J	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Thorium	7.38	ug/g dry		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Toluene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.47	1349559.9
12595	12595-7-R	10/12/99	3	3.5	Trichloroethene	150	ug/kg		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Uranium, Total	1700	ug/g dry		481705.47	1349559.9
12595	12595-7-L	10/12/99	3	3.5	Vinyl Chloride	50	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Xylenes (Total)	50	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,1,1-Trichloroethane	110	ug/kg		481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,1-Dichloroethane	95	ug/kg		481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,1-Dichloroethene	41	ug/kg	J	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,2-Dichloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	1,2-Dichloropropane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	2-Butanone	16	ug/kg	JB	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	2-Hexanone	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Acetone	29	ug/kg	JB	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Benzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	BromodiChloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Bromoform	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Bromomethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Carbon Disulfide	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Carbon Tetrachloride	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Chlorobenzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Chloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Chloroform	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Chloromethane	45	ug/kg	U	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-9-L	10/12/99	4	4.5	cis-1,2-Dichloroethene	300	ug/kg		481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Dibromochloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Ethylbenzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Methylene Chloride	41	ug/kg	JB	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Styrene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Tetrachloroethene	6	ug/kg	J	481705.47	1349559.9
12595	12595-9-R	10/12/99	4	4.5	Thorium	6.45	ug/g dry		481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Toluene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	trans-1,2-Dichloroethene	6	ug/kg	J	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Trichloroethene	95	ug/kg		481705.47	1349559.9
12595	12595-9-R	10/12/99	4	4.5	Uranium, Total	29.9	ug/g dry		481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Vinyl Chloride	45	ug/kg	U	481705.47	1349559.9
12595	12595-9-L	10/12/99	4	4.5	Xylenes (Total)	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,1,1-Trichloroethane	190	ug/kg		481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,1-Dichloroethane	130	ug/kg		481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,1-Dichloroethene	89	ug/kg		481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,2-Dichloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	1,2-Dichloropropane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	2-Butanone	15	ug/kg	JB	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	2-Hexanone	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Acetone	36	ug/kg	JB	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Benzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	BromodiChloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Bromoform	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Bromomethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Carbon Disulfide	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Carbon Tetrachloride	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Chlorobenzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Chloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Chloroform	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Chloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	cis-1,2-Dichloroethene	490	ug/kg		481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-11-L	10/12/99	5	5.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Dibromochloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Ethylbenzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Methylene Chloride	46	ug/kg	B	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Styrene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Tetrachloroethene	130	ug/kg		481705.47	1349559.9
12595	12595-11-R	10/12/99	5	5.5	Thorium	4.50	ug/g dry		481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Toluene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	trans-1,2-Dichloroethene	11	ug/kg	J	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Trichloroethene	120	ug/kg		481705.47	1349559.9
12595	12595-11-R	10/12/99	5	5.5	Uranium, Total	10.9	ug/g dry		481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Vinyl Chloride	45	ug/kg	U	481705.47	1349559.9
12595	12595-11-L	10/12/99	5	5.5	Xylenes (Total)	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,1,1-Trichloroethane	130	ug/kg		481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,1-Dichloroethane	130	ug/kg		481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,1-Dichloroethene	100	ug/kg		481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,2-Dichloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	1,2-Dichloropropane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	2-Butanone	19	ug/kg	JB	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	2-Hexanone	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Acetone	35	ug/kg	JB	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Benzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	BromodiChloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Bromoform	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Bromomethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Carbon Disulfide	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Carbon Tetrachloride	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Chlorobenzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Chloroethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Chloroform	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Chloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	cis-1,2-Dichloroethene	550	ug/kg		481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-13-L	10/12/99	6	6.5	Dibromochloromethane	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Ethylbenzene	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Methylene Chloride	46	ug/kg	B	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Styrene	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Tetrachloroethene	140	ug/kg		481705.47	1349559.9
12595	12595-13-R	10/12/99	6	6.5	Thorium	3.87	ug/g dry		481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Toluene	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	trans-1,2-Dichloroethene	15	ug/kg	J	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Trichloroethene	100	ug/kg		481705.47	1349559.9
12595	12595-13-R	10/12/99	6	6.5	Uranium, Total	6.55	ug/g dry		481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Vinyl Chloride	45	ug/kg	U	481705.47	1349559.9
12595	12595-13-L	10/12/99	6	6.5	Xylenes (Total)	45	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,1,1-Trichloroethane	79	ug/kg		481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,1,2-Trichloroethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,1-Dichloroethane	190	ug/kg		481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,1-Dichloroethene	87	ug/kg		481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,2-Dichloroethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	1,2-Dichloropropane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	2-Butanone	18	ug/kg	JB	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	2-Hexanone	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	4-Methyl-2-Pentanone	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Acetone	25	ug/kg	JB	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Benzene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	BromodiChloromethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Bromoform	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Bromomethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Carbon Disulfide	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Carbon Tetrachloride	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Chlorobenzene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Chloroethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Chloroform	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Chloromethane	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	cis-1,2-Dichloroethene	700	ug/kg		481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	cis-1,3-Dichloropropene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Dibromochloromethane	42	ug/kg	U	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-15-L	10/12/99	7	7.5	Ethylbenzene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Methylene Chloride	79	ug/kg	B	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Styrene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Tetrachloroethene	54	ug/kg		481705.47	1349559.9
12595	12595-15-R	10/12/99	7	7.5	Thorium	4.38	ug/g dry		481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Toluene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	trans-1,2-Dichloroethene	21	ug/kg	J	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	trans-1,3-Dichloropropene	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Trichloroethene	110	ug/kg		481705.47	1349559.9
12595	12595-15-R	10/12/99	7	7.5	Uranium, Total	4.88	ug/g dry		481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Vinyl Chloride	42	ug/kg	U	481705.47	1349559.9
12595	12595-15-L	10/12/99	7	7.5	Xylenes (Total)	42	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,1,1-Trichloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,1-Dichloroethane	16	ug/kg	J	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,2-Dichloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	1,2-Dichloropropane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	2-Butanone	27	ug/kg	JB	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	2-Hexanone	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Acetone	40	ug/kg	JB	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Benzene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	BromodiChloromethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Bromoform	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Bromomethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Carbon Disulfide	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Carbon Tetrachloride	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Chlorobenzene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Chloroethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Chloroform	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Chloromethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	cis-1,2-Dichloroethene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Dibromochloromethane	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Ethylbenzene	50	ug/kg	U	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-17-L	10/12/99	8	8.5	Methylene Chloride	110	ug/kg	B	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Styrene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Tetrachloroethene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-R	10/12/99	8	8.5	Thorium	3.45	ug/g dry		481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Toluene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	trans-1,2-Dichloroethene	13	ug/kg	J	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Trichloroethene	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-R	10/12/99	8	8.5	Uranium, Total	1.14	ug/g dry		481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Vinyl Chloride	50	ug/kg	U	481705.47	1349559.9
12595	12595-17-L	10/12/99	8	8.5	Xylenes (Total)	50	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,1,1-Trichloroethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,1,2,2-Tetrachloroethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,1,2-Trichloroethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,1-Dichloroethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,1-Dichloroethene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,2-Dichloroethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	1,2-Dichloropropane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	2-Butanone	15	ug/kg	JB	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	2-Hexanone	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	4-Methyl-2-Pentanone	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Acetone	20	ug/kg	JB	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Benzene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	BromodiChloromethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Bromoform	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Bromomethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Carbon Disulfide	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Carbon Tetrachloride	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Chlorobenzene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Chloroethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Chloroform	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Chloromethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	cis-1,2-Dichloroethene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	cis-1,3-Dichloropropene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Dibromochloromethane	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Ethylbenzene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Methylene Chloride	89	ug/kg	B	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-19-L	10/12/99	9	9.5	Styrene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Tetrachloroethene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-R	10/12/99	9	9.5	Thorium	3.38	ug/g dry		481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Toluene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	trans-1,2-Dichloroethene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	trans-1,3-Dichloropropene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Trichloroethene	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-R	10/12/99	9	9.5	Uranium, Total	1.33	ug/g dry		481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Vinyl Chloride	38	ug/kg	U	481705.47	1349559.9
12595	12595-19-L	10/12/99	9	9.5	Xylenes (Total)	38	ug/kg	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,1,1-Trichloroethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,1,2,2-Tetrachloroethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,1,2-Trichloroethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,1-Dichloroethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,1-Dichloroethene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,2-Dichloroethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	1,2-Dichloropropane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	2-Butanone	18	ug/L	JB	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	2-Hexanone	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	4-Methyl-2-Pentanone	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Acetone	38	ug/L	JB	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Benzene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	BromodiChloromethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Bromoform	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Bromomethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Carbon Disulfide	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Carbon Tetrachloride	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Chlorobenzene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Chloroethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Chloroform	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Chloromethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	cis-1,2-Dichloroethene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	cis-1,3-Dichloropropene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Dibromochloromethane	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Ethylbenzene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Methylene Chloride	100	ug/L	B	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Styrene	45	ug/L	U	481705.47	1349559.9

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12595	12595-21-L	10/12/99	10	10.5	Tetrachloroethene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-R	10/12/99	10	10.5	Thorium	3.46	ug/g dry		481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Toluene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	trans-1,2-Dichloroethene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	trans-1,3-Dichloropropene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Trichloroethene	45	ug/L	U	481705.47	1349559.9
12595	12595-21-R	10/12/99	10	10.5	Uranium, Total	1.50	ug/g dry		481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Vinyl Chloride	45	ug/L	U	481705.47	1349559.9
12595	12595-21-L	10/12/99	10	10.5	Xylenes (Total)	45	ug/L	U	481705.47	1349559.9
12596	12596-1-R	10/11/99	0	0.5	Thorium	7.78	ug/g dry		481716.71	1349564.64
12596	12596-1-R	10/11/99	0	0.5	Uranium, Total	1250	ug/g dry		481716.71	1349564.64
12596	12596-3-R	10/11/99	1	1.5	Thorium	10.1	ug/g dry		481716.71	1349564.64
12596	12596-3-R	10/11/99	1	1.5	Uranium, Total	51.6	ug/g dry		481716.71	1349564.64
12596	12596-5-R	10/11/99	2	2.5	Thorium	6.24	ug/g dry		481716.71	1349564.64
12596	12596-5-R	10/11/99	2	2.5	Uranium, Total	75.9	ug/g dry		481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,1,1-Trichloroethane	13	ug/kg	J	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,1,2-Trichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,1-Dichloroethane	29	ug/kg	J	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,1-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,2-Dichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	1,2-Dichloropropane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	2-Butanone	17	ug/kg	JB	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	2-Hexanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	4-Methyl-2-Pentanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Acetone	37	ug/kg	JB	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Benzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	BromodiChloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Bromoform	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Bromomethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Carbon Disulfide	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Carbon Tetrachloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Chlorobenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Chloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Chloroform	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Chloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	cis-1,2-Dichloroethene	120	ug/kg		481716.71	1349564.64

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-7-L	10/11/99	3	3.5	cis-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Dibromochloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Ethylbenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Methylene Chloride	59	ug/kg	B	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Styrene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Tetrachloroethene	87	ug/kg		481716.71	1349564.64
12596	12596-7-R	10/11/99	3	3.5	Thorium	6.13	ug/g dry		481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Toluene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	trans-1,2-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	trans-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Trichloroethene	47	ug/kg	J	481716.71	1349564.64
12596	12596-7-R	10/11/99	3	3.5	Uranium, Total	181	ug/g dry		481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Vinyl Chloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-7-L	10/11/99	3	3.5	Xylenes (Total)	50	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1,1-Trichloroethane	15	ug/kg	J	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1,1-Trichloroethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1,2,2-Tetrachloroethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1,2,2-Tetrachloroethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1,2-Trichloroethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1,2-Trichloroethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1-Dichloroethane	29	ug/kg	J	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1-Dichloroethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1-Dichloroethene	8	ug/kg	J	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,1-Dichloroethene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,2-Dichloroethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,2-Dichloroethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,2-Dichloropropane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	1,2-Dichloropropane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	2-Butanone	13	ug/kg	JB	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	2-Butanone	360	ug/kg	JBD	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	2-Hexanone	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	2-Hexanone	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	4-Methyl-2-Pentanone	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	4-Methyl-2-Pentanone	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Acetone	25	ug/kg	JB	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Acetone	390	ug/kg	JBD	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Benzene	1300	ug/kg	U	481716.71	1349564.64

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-9-L	10/11/99	4	4.5	Benzene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	BromodiChloromethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	BromodiChloromethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Bromoform	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Bromoform	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Bromomethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Bromomethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Carbon Disulfide	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Carbon Disulfide	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Carbon Tetrachloride	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Carbon Tetrachloride	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chlorobenzene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chlorobenzene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chloroethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chloroethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chloroform	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chloroform	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chloromethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Chloromethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	cis-1,2-Dichloroethene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	cis-1,2-Dichloroethene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	cis-1,3-Dichloropropene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	cis-1,3-Dichloropropene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Dibromochloromethane	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Dibromochloromethane	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Ethylbenzene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Ethylbenzene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Methylene Chloride	39	ug/kg	B	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Methylene Chloride	450	ug/kg	JBD	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Styrene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Styrene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Tetrachloroethene	5800	ug/kg	D	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Tetrachloroethene	2500	ug/kg	E	481716.71	1349564.64
12596	12596-9-R	10/11/99	4	4.5	Thorium	4.45	ug/g dry		481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Toluene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Toluene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	trans-1,2-Dichloroethene	1300	ug/kg	U	481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-9-L	10/11/99	4	4.5	trans-1,2-Dichloroethene	100	ug/kg		481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	trans-1,3-Dichloropropene	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	trans-1,3-Dichloropropene	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Trichloroethene	260	ug/kg	JD	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Trichloroethene	200	ug/kg		481716.71	1349564.64
12596	12596-9-R	10/11/99	4	4.5	Uranium, Total	37.7	ug/g dry		481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Vinyl Chloride	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Vinyl Chloride	38	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Xylenes (Total)	1300	ug/kg	U	481716.71	1349564.64
12596	12596-9-L	10/11/99	4	4.5	Xylenes (Total)	38	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1,1-Trichloroethane	14	ug/kg	J	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1,1-Trichloroethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1,2,2-Tetrachloroethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1,2-Trichloroethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1,2-Trichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1-Dichloroethane	36	ug/kg	J	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1-Dichloroethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1-Dichloroethene	7	ug/kg	J	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,1-Dichloroethene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,2-Dichloroethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,2-Dichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,2-Dichloropropane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	1,2-Dichloropropane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	2-Butanone	14	ug/kg	JB	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	2-Butanone	300	ug/kg	JBD	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	2-Hexanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	2-Hexanone	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	4-Methyl-2-Pentanone	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	4-Methyl-2-Pentanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Acetone	25	ug/kg	JB	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Acetone	370	ug/kg	JBD	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Benzene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Benzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	BromodiChloromethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	BromodiChloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Bromoform	50	ug/kg	U	481716.71	1349564.64

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-11-L	10/11/99	5	5.5	Bromoform	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Bromomethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Bromomethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Carbon Disulfide	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Carbon Disulfide	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Carbon Tetrachloride	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Carbon Tetrachloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chlorobenzene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chlorobenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chloroethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chloroform	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chloroform	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chloromethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Chloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	cis-1,2-Dichloroethene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	cis-1,2-Dichloroethene	180	ug/kg		481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	cis-1,3-Dichloropropene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	cis-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Dibromochloromethane	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Dibromochloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Ethylbenzene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Ethylbenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Methylene Chloride	56	ug/kg	B	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Methylene Chloride	470	ug/kg	JBD	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Styrene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Styrene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Tetrachloroethene	2000	ug/kg	E	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Tetrachloroethene	1100	ug/kg	JD	481716.71	1349564.64
12596	12596-11-R	10/11/99	5	5.5	Thorium	4.26	ug/g dry		481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Toluene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Toluene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	trans-1,2-Dichloroethene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	trans-1,2-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	trans-1,3-Dichloropropene	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	trans-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Trichloroethene	220	ug/kg	JD	481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-11-L	10/11/99	5	5.5	Trichloroethene	610	ug/kg		481716.71	1349564.64
12596	12596-11-R	10/11/99	5	5.5	Uranium, Total	2.33	ug/g dry		481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Vinyl Chloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Vinyl Chloride	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Xylenes (Total)	1200	ug/kg	U	481716.71	1349564.64
12596	12596-11-L	10/11/99	5	5.5	Xylenes (Total)	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,1,1-Trichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,1,2-Trichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,1-Dichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,2-Dichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	1,2-Dichloropropane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	2-Butanone	14	ug/kg	JB	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	2-Hexanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	4-Methyl-2-Pentanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Acetone	37	ug/kg	JB	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Benzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	BromodiChloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Bromoform	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Bromomethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Carbon Disulfide	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Carbon Tetrachloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Chlorobenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Chloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Chloroform	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Chloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	cis-1,2-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	cis-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Dibromochloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Ethylbenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Methylene Chloride	52	ug/kg	B	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Styrene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Tetrachloroethene	17	ug/kg	J	481716.71	1349564.64
12596	12596-13-R	10/11/99	6	6.5	Thorium	3.17	ug/g dry		481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Toluene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	trans-1,2-Dichloroethene	25	ug/kg	J	481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-13-L	10/11/99	6	6.5	trans-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Trichloroethene	15	ug/kg	J	481716.71	1349564.64
12596	12596-13-R	10/11/99	6	6.5	Uranium, Total	1.84	ug/g dry		481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Vinyl Chloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-13-L	10/11/99	6	6.5	Xylenes (Total)	50	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,1,1-Trichloroethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,1,2,2-Tetrachloroethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,1,2-Trichloroethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,1-Dichloroethane	25	ug/kg	J	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,1-Dichloroethene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,2-Dichloroethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	1,2-Dichloropropane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	2-Butanone	11	ug/kg	JB	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	2-Hexanone	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	4-Methyl-2-Pentanone	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Acetone	17	ug/kg	JB	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Benzene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	BromodiChloromethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Bromoform	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Bromomethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Carbon Disulfide	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Carbon Tetrachloride	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Chlorobenzene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Chloroethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Chloroform	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Chloromethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	cis-1,2-Dichloroethene	120	ug/kg		481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	cis-1,3-Dichloropropene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Dibromochloromethane	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Ethylbenzene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Methylene Chloride	39	ug/kg	JB	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Styrene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Tetrachloroethene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-R	10/11/99	7	7.5	Thorium	5.37	ug/g dry		481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Toluene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	trans-1,2-Dichloroethene	7	ug/kg	J	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	trans-1,3-Dichloropropene	42	ug/kg	U	481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-15-L	10/11/99	7	7.5	Trichloroethene	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-R	10/11/99	7	7.5	Uranium, Total	1.30	ug/g dry		481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Vinyl Chloride	42	ug/kg	U	481716.71	1349564.64
12596	12596-15-L	10/11/99	7	7.5	Xylenes (Total)	42	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,1,1-Trichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,1,2-Trichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,1-Dichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,2-Dichloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	1,2-Dichloropropane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	2-Butanone	16	ug/kg	BJ	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	2-Hexanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	4-Methyl-2-Pentanone	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Acetone	30	ug/kg	BJ	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Benzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	BromodiChloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Bromoform	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Bromomethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Carbon Disulfide	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Carbon Tetrachloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Chlorobenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Chloroethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Chloroform	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Chloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	cis-1,2-Dichloroethene	6	ug/kg	J	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	cis-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Dibromochloromethane	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Ethylbenzene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Methylene Chloride	70	ug/kg	B	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Styrene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Tetrachloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-R	10/11/99	8	8.5	Thorium	3.79	ug/g dry		481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Toluene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	trans-1,2-Dichloroethene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	trans-1,3-Dichloropropene	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Trichloroethene	50	ug/kg	U	481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-17-R	10/11/99	8	8.5	Uranium, Total	1.20	ug/g dry		481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Vinyl Chloride	50	ug/kg	U	481716.71	1349564.64
12596	12596-17-L	10/11/99	8	8.5	Xylenes (Total)	50	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,1,1-Trichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,1,2-Trichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,1-Dichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,1-Dichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,2-Dichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	1,2-Dichloropropane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	2-Butanone	18	ug/kg	BJ	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	2-Hexanone	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	4-Methyl-2-Pentanone	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Acetone	28	ug/kg	BJ	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Benzene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	BromodiChloromethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Bromoform	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Bromomethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Carbon Disulfide	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Carbon Tetrachloride	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Chlorobenzene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Chloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Chloroform	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Chloromethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	cis-1,2-Dichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	cis-1,3-Dichloropropene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Dibromochloromethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Ethylbenzene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Methylene Chloride	58	ug/kg	B	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Styrene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Tetrachloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-R	10/11/99	9	9.5	Thorium	5.38	ug/g dry		481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Toluene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	trans-1,2-Dichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	trans-1,3-Dichloropropene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Trichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-R	10/11/99	9	9.5	Uranium, Total	1.30	ug/g dry		481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-19-L	10/11/99	9	9.5	Vinyl Chloride	45	ug/kg	U	481716.71	1349564.64
12596	12596-19-L	10/11/99	9	9.5	Xylenes (Total)	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,1,1-Trichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,1,2-Trichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,1-Dichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,1-Dichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,2-Dichloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	1,2-Dichloropropane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	2-Butanone	16	ug/kg	JB	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	2-Hexanone	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	4-Methyl-2-Pentanone	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Acetone	27	ug/kg	JB	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Benzene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	BromodiChloromethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Bromoform	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Bromomethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Carbon Disulfide	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Carbon Tetrachloride	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Chlorobenzene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Chloroethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Chloroform	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Chloromethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	cis-1,2-Dichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	cis-1,3-Dichloropropene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Dibromochloromethane	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Ethylbenzene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Methylene Chloride	48	ug/kg	B	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Styrene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Tetrachloroethene	6	ug/kg	J	481716.71	1349564.64
12596	12596-21-R	10/11/99	10	10.5	Thorium	2.76	ug/g dry		481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Toluene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	trans-1,2-Dichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	trans-1,3-Dichloropropene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Trichloroethene	45	ug/kg	U	481716.71	1349564.64
12596	12596-21-R	10/11/99	10	10.5	Uranium, Total	1.23	ug/g dry		481716.71	1349564.64
12596	12596-21-L	10/11/99	10	10.5	Vinyl Chloride	45	ug/kg	U	481716.71	1349564.64

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12596	12596-21-L	10/11/99	10	10.5	Xylenes (Total)	45	ug/kg	U	481716.71	1349564.64
12597	12597-1-R	10/12/99	0	0.5	Thorium	6.69	ug/g dry		481705.48	1349574.97
12597	12597-1-R	10/12/99	0	0.5	Uranium, Total	984	ug/g dry		481705.48	1349574.97
12597	12597-3-R	10/12/99	1	1.5	Thorium	8.59	ug/g dry		481705.48	1349574.97
12597	12597-3-R	10/12/99	1	1.5	Uranium, Total	10.2	ug/g dry		481705.48	1349574.97
12597	12597-5-R	10/12/99	2	2.5	Thorium	8.68	ug/g dry		481705.48	1349574.97
12597	12597-5-R	10/12/99	2	2.5	Uranium, Total	3.11	ug/g dry		481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,1,1-Trichloroethane	45	ug/kg	J	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,1-Dichloroethane	58	ug/kg		481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,1-Dichloroethene	15	ug/kg	J	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,2-Dichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	1,2-Dichloropropane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	2-Butanone	14	ug/kg	JB	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	2-Hexanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Acetone	30	ug/kg	JB	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Benzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	BromodiChloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Bromoform	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Bromomethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Carbon Disulfide	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Carbon Tetrachloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Chlorobenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Chloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Chloroform	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Chloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	cis-1,2-Dichloroethene	190	ug/kg		481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Dibromochloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Ethylbenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Methylene Chloride	99	ug/kg	B	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Styrene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Tetrachloroethene	16	ug/kg	J	481705.48	1349574.97
12597	12597-7-R	10/12/99	3	3.5	Thorium	9.86	ug/g dry		481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Toluene	45	ug/kg	U	481705.48	1349574.97

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-7-L	10/12/99	3	3.5	trans-1,2-Dichloroethene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Trichloroethene	42	ug/kg	J	481705.48	1349574.97
12597	12597-7-R	10/12/99	3	3.5	Uranium, Total	30.8	ug/g dry		481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Vinyl Chloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-7-L	10/12/99	3	3.5	Xylenes (Total)	45	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,1,1-Trichloroethane	62	ug/kg		481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,1-Dichloroethane	63	ug/kg		481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,1-Dichloroethene	10	ug/kg	J	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,2-Dichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	1,2-Dichloropropane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	2-Butanone	21	ug/kg	JB	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	2-Hexanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Acetone	20	ug/kg	JB	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Benzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	BromodiChloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Bromoform	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Bromomethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Carbon Disulfide	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Carbon Tetrachloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Chlorobenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Chloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Chloroform	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Chloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	cis-1,2-Dichloroethene	150	ug/kg		481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Dibromochloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Ethylbenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Methylene Chloride	24	ug/kg	J	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Styrene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Tetrachloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-R	10/12/99	4	4.5	Thorium	9.10	ug/g dry		481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Toluene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.48	1349574.97

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-9-L	10/12/99	4	4.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Trichloroethene	31	ug/kg	J	481705.48	1349574.97
12597	12597-9-R	10/12/99	4	4.5	Uranium, Total	83.5	ug/g dry		481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Vinyl Chloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-9-L	10/12/99	4	4.5	Xylenes (Total)	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,1,1-Trichloroethane	100	ug/kg		481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,1-Dichloroethane	69	ug/kg		481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,1-Dichloroethene	13	ug/kg	J	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,2-Dichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	1,2-Dichloropropane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	2-Butanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	2-Hexanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Acetone	24	ug/kg	JB	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Benzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	BromodiChloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Bromoform	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Bromomethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Carbon Disulfide	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Carbon Tetrachloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Chlorobenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Chloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Chloroform	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Chloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	cis-1,2-Dichloroethene	230	ug/kg		481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Dibromochloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Ethylbenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Methylene Chloride	15	ug/kg	J	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Styrene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Tetrachloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-R	10/12/99	5	5.5	Thorium	8.68	ug/g dry		481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Toluene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-11-L	10/12/99	5	5.5	Trichloroethene	130	ug/kg		481705.48	1349574.97
12597	12597-11-R	10/12/99	5	5.5	Uranium, Total	20.3	ug/g dry		481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Vinyl Chloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-11-L	10/12/99	5	5.5	Xylenes (Total)	50	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,1,1-Trichloroethane	49	ug/kg		481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,1-Dichloroethane	90	ug/kg		481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,1-Dichloroethene	24	ug/kg	J	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,2-Dichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	1,2-Dichloropropane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	2-Butanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	2-Hexanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Acetone	20	ug/kg	JB	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Benzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	BromodiChloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Bromoform	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Bromomethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Carbon Disulfide	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Carbon Tetrachloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Chlorobenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Chloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Chloroform	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Chloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	cis-1,2-Dichloroethene	270	ug/kg		481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Dibromochloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Ethylbenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Methylene Chloride	11	ug/kg	J	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Styrene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Tetrachloroethene	10	ug/kg	J	481705.48	1349574.97
12597	12597-13-R	10/12/99	6	6.5	Thorium	4.52	ug/g dry		481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Toluene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	trans-1,2-Dichloroethene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Trichloroethene	98	ug/kg		481705.48	1349574.97

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-13-R	10/12/99	6	6.5	Uranium, Total	1.80	ug/g dry		481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Vinyl Chloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-13-L	10/12/99	6	6.5	Xylenes (Total)	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,1,1-Trichloroethane	160	ug/kg		481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,1-Dichloroethane	140	ug/kg		481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,1-Dichloroethene	33	ug/kg	J	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,2-Dichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	1,2-Dichloropropane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	2-Butanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	2-Hexanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Acetone	15	ug/kg	JB	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Benzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	BromodiChloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Bromoform	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Bromomethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Carbon Disulfide	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Carbon Tetrachloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Chlorobenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Chloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Chloroform	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Chloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	cis-1,2-Dichloroethene	460	ug/kg		481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Dibromochloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Ethylbenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Methylene Chloride	8	ug/kg	J	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Styrene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Tetrachloroethene	6	ug/kg	J	481705.48	1349574.97
12597	12597-15-R	10/12/99	7	7.5	Thorium	3.97	ug/g dry		481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Toluene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	trans-1,2-Dichloroethene	5	ug/kg	J	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Trichloroethene	91	ug/kg		481705.48	1349574.97
12597	12597-15-R	10/12/99	7	7.5	Uranium, Total	1.80	ug/g dry		481705.48	1349574.97

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-15-L	10/12/99	7	7.5	Vinyl Chloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-15-L	10/12/99	7	7.5	Xylenes (Total)	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,1,1-Trichloroethane	34	ug/kg	J	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,1,2,2-Tetrachloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,1,2-Trichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,1-Dichloroethane	130	ug/kg		481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,1-Dichloroethene	16	ug/kg	J	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,2-Dichloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	1,2-Dichloropropane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	2-Butanone	19	ug/kg	JB	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	2-Hexanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	4-Methyl-2-Pentanone	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Acetone	13	ug/kg	JB	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Benzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	BromodiChloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Bromoform	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Bromomethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Carbon Disulfide	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Carbon Tetrachloride	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Chlorobenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Chloroethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Chloroform	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Chloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	cis-1,2-Dichloroethene	120	ug/kg		481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	cis-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Dibromochloromethane	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Ethylbenzene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Methylene Chloride	9	ug/kg	J	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Styrene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Tetrachloroethene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-R	10/12/99	8	8.5	Thorium	4.03	ug/g dry		481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Toluene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	trans-1,2-Dichloroethene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	trans-1,3-Dichloropropene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Trichloroethene	45	ug/kg	U	481705.48	1349574.97
12597	12597-17-R	10/12/99	8	8.5	Uranium, Total	1.30	ug/g dry		481705.48	1349574.97
12597	12597-17-L	10/12/99	8	8.5	Vinyl Chloride	45	ug/kg	U	481705.48	1349574.97

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-17-L	10/12/99	8	8.5	Xylenes (Total)	45	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,1,1-Trichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,1-Dichloroethane	28	ug/kg	J	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,1-Dichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,2-Dichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	1,2-Dichloropropane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	2-Butanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	2-Hexanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Acetone	11	ug/kg	JB	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Benzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	BromodiChloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Bromoform	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Bromomethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Carbon Disulfide	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Carbon Tetrachloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Chlorobenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Chloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Chloroform	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Chloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	cis-1,2-Dichloroethene	6	ug/kg	J	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Dibromochloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Ethylbenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Methylene Chloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Styrene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Tetrachloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-R	10/12/99	9	9.5	Thorium	5.46	ug/g dry		481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Toluene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Trichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-R	10/12/99	9	9.5	Uranium, Total	1.34	ug/g dry		481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Vinyl Chloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-19-L	10/12/99	9	9.5	Xylenes (Total)	50	ug/kg	U	481705.48	1349574.97

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12597	12597-21-L	10/12/99	10	10.5	1,1,1-Trichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	1,1,2-Trichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	1,1-Dichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	1,2-Dichloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	1,2-Dichloropropane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	2-Butanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	2-Hexanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	4-Methyl-2-Pentanone	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Acetone	14	ug/kg	JB	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Benzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	BromodiChloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Bromoform	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Bromomethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Carbon Disulfide	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Carbon Tetrachloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Chlorobenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Chloroethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Chloroform	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Chloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	cis-1,2-Dichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	cis-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Dibromochloromethane	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Ethylbenzene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Methylene Chloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Styrene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Tetrachloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-R	10/12/99	10	10.5	Thorium	4.34	ug/g dry		481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Toluene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	trans-1,2-Dichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	trans-1,3-Dichloropropene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Trichloroethene	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-R	10/12/99	10	10.5	Uranium, Total	1.18	ug/g dry		481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Vinyl Chloride	50	ug/kg	U	481705.48	1349574.97
12597	12597-21-L	10/12/99	10	10.5	Xylenes (Total)	50	ug/kg	U	481705.48	1349574.97
12598	12598-1-M	10/8/99	0	0.5	Beryllium	0.763	ug/g dry		481648.37	1349570.28

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12598	12598-1-M	10/8/99	0	0.5	Thorium	8.38	ug/g dry		481648.37	1349570.28
12598	12598-1-M	10/8/99	0	0.5	Uranium, Total	275	ug/g dry		481648.37	1349570.28
12598	12598-3-M	10/8/99	1	1.5	Beryllium	1.14	ug/g dry		481648.37	1349570.28
12598	12598-3-M	10/8/99	1	1.5	Thorium	8.42	ug/g dry		481648.37	1349570.28
12598	12598-3-M	10/8/99	1	1.5	Uranium, Total	250	ug/g dry		481648.37	1349570.28
12598	12598-5-M	10/8/99	2	2.5	Beryllium	1.20	ug/g dry		481648.37	1349570.28
12598	12598-5-M	10/8/99	2	2.5	Thorium	8.46	ug/g dry		481648.37	1349570.28
12598	12598-5-M	10/8/99	2	2.5	Uranium, Total	276	ug/g dry		481648.37	1349570.28
12598	12598-7-M	10/8/99	3	3.5	Beryllium	1.42	ug/g dry		481648.37	1349570.28
12598	12598-7-M	10/8/99	3	3.5	Thorium	8.45	ug/g dry		481648.37	1349570.28
12598	12598-7-M	10/8/99	3	3.5	Uranium, Total	291	ug/g dry		481648.37	1349570.28
12598	12598-9-M	10/8/99	4	4.5	Beryllium	1.73	ug/g dry		481648.37	1349570.28
12598	12598-9-M	10/8/99	4	4.5	Thorium	8.66	ug/g dry		481648.37	1349570.28
12598	12598-9-M	10/8/99	4	4.5	Uranium, Total	367	ug/g dry		481648.37	1349570.28
12598	12598-11-M	10/8/99	5	5.5	Beryllium	1.05	ug/g dry		481648.37	1349570.28
12598	12598-11-M	10/8/99	5	5.5	Thorium	6.38	ug/g dry		481648.37	1349570.28
12598	12598-11-M	10/8/99	5	5.5	Uranium, Total	195	ug/g dry		481648.37	1349570.28
12598	12598-13-M	10/8/99	6	6.5	Beryllium	0.697	ug/g dry		481648.37	1349570.28
12598	12598-13-M	10/8/99	6	6.5	Thorium	5.20	ug/g dry		481648.37	1349570.28
12598	12598-13-M	10/8/99	6	6.5	Uranium, Total	34.1	ug/g dry		481648.37	1349570.28
12598	12598-15-M	10/8/99	7	7.5	Beryllium	0.545	ug/g dry		481648.37	1349570.28
12598	12598-15-M	10/8/99	7	7.5	Thorium	4.26	ug/g dry		481648.37	1349570.28
12598	12598-15-M	10/8/99	7	7.5	Uranium, Total	15.9	ug/g dry		481648.37	1349570.28
12599	12599-1-M	10/7/99	0	0.5	Beryllium	0.954	ug/g dry		481636.61	1349567
12599	12599-1-M	10/7/99	0	0.5	Thorium	6.77	ug/g dry		481636.61	1349567
12599	12599-1-M	10/7/99	0	0.5	Uranium, Total	20.0	ug/g dry		481636.61	1349567
12599	12599-3-M	10/7/99	1	1.5	Beryllium	0.926	ug/g dry		481636.61	1349567
12599	12599-3-M	10/7/99	1	1.5	Thorium	5.57	ug/g dry		481636.61	1349567
12599	12599-3-M	10/7/99	1	1.5	Uranium, Total	1.39	ug/g dry		481636.61	1349567
12599	12599-5-M	10/7/99	2	2.5	Beryllium	0.738	ug/g dry		481636.61	1349567
12599	12599-5-M	10/7/99	2	2.5	Thorium	5.06	ug/g dry		481636.61	1349567
12599	12599-5-M	10/7/99	2	2.5	Uranium, Total	3.58	ug/g dry		481636.61	1349567
12599	12599-7-M	10/7/99	3	3.5	Beryllium	0.601	ug/g dry		481636.61	1349567
12599	12599-7-M	10/7/99	3	3.5	Thorium	4.59	ug/g dry		481636.61	1349567
12599	12599-7-M	10/7/99	3	3.5	Uranium, Total	8.76	ug/g dry		481636.61	1349567
12599	12599-9-M	10/7/99	4	4.5	Beryllium	0.313	ug/g dry		481636.61	1349567
12599	12599-9-M	10/7/99	4	4.5	Thorium	2.03	ug/g dry		481636.61	1349567

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12599	12599-9-M	10/7/99	4	4.5	Uranium, Total	33.1	ug/g dry		481636.61	1349567
12599	12599-11-M	10/7/99	5	5.5	Beryllium	0.791	ug/g dry		481636.61	1349567
12599	12599-11-M	10/7/99	5	5.5	Thorium	5.39	ug/g dry		481636.61	1349567
12599	12599-11-M	10/7/99	5	5.5	Uranium, Total	67.5	ug/g dry		481636.61	1349567
12599	12599-13-M	10/7/99	6	6.5	Beryllium	0.397	ug/g dry		481636.61	1349567
12599	12599-13-M	10/7/99	6	6.5	Thorium	3.49	ug/g dry		481636.61	1349567
12599	12599-13-M	10/7/99	6	6.5	Uranium, Total	13.1	ug/g dry		481636.61	1349567
12599	12599-15-M	10/7/99	7	7.5	Beryllium	0.699	ug/g dry		481636.61	1349567
12599	12599-15-M	10/7/99	7	7.5	Thorium	4.82	ug/g dry		481636.61	1349567
12599	12599-15-M	10/7/99	7	7.5	Uranium, Total	4.99	ug/g dry		481636.61	1349567
12600	12600-1-M	10/7/99	0	0.5	Beryllium	1.32	ug/g dry		481625.21	1349571.7
12600	12600-1-M	10/7/99	0	0.5	Thorium	8.13	ug/g dry		481625.21	1349571.7
12600	12600-1-M	10/7/99	0	0.5	Uranium, Total	3.99	ug/g dry		481625.21	1349571.7
12600	12600-3-M	10/7/99	1	1.5	Beryllium	1.26	ug/g dry		481625.21	1349571.7
12600	12600-3-M	10/7/99	1	1.5	Thorium	8.15	ug/g dry		481625.21	1349571.7
12600	12600-3-M	10/7/99	1	1.5	Uranium, Total	1.34	ug/g dry		481625.21	1349571.7
12600	12600-5-M	10/7/99	2	2.5	Beryllium	1.20	ug/g dry		481625.21	1349571.7
12600	12600-5-M	10/7/99	2	2.5	Thorium	8.38	ug/g dry		481625.21	1349571.7
12600	12600-5-M	10/7/99	2	2.5	Uranium, Total	1.36	ug/g dry		481625.21	1349571.7
12600	12600-7-M	10/7/99	3	3.5	Beryllium	1.44	ug/g dry		481625.21	1349571.7
12600	12600-7-M	10/7/99	3	3.5	Thorium	8.36	ug/g dry		481625.21	1349571.7
12600	12600-7-M	10/7/99	3	3.5	Uranium, Total	1.50	ug/g dry		481625.21	1349571.7
12600	12600-9-M	10/7/99	4	4.5	Beryllium	1.40	ug/g dry		481625.21	1349571.7
12600	12600-9-M	10/7/99	4	4.5	Thorium	7.76	ug/g dry		481625.21	1349571.7
12600	12600-9-M	10/7/99	4	4.5	Uranium, Total	1.26	ug/g dry		481625.21	1349571.7
12600	12600-11-M	10/7/99	5	5.5	Beryllium	0.959	ug/g dry		481625.21	1349571.7
12600	12600-11-M	10/7/99	5	5.5	Thorium	6.55	ug/g dry		481625.21	1349571.7
12600	12600-11-M	10/7/99	5	5.5	Uranium, Total	1.66	ug/g dry		481625.21	1349571.7
12600	12600-13-M	10/7/99	6	6.5	Beryllium	0.700	ug/g dry		481625.21	1349571.7
12600	12600-13-M	10/7/99	6	6.5	Thorium	4.82	ug/g dry		481625.21	1349571.7
12600	12600-13-M	10/7/99	6	6.5	Uranium, Total	1.22	ug/g dry		481625.21	1349571.7
12600	12600-15-M	10/7/99	7	7.5	Beryllium	0.664	ug/g dry		481625.21	1349571.7
12600	12600-15-M	10/7/99	7	7.5	Thorium	5.38	ug/g dry		481625.21	1349571.7
12600	12600-15-M	10/7/99	7	7.5	Uranium, Total	1.65	ug/g dry		481625.21	1349571.7
12601	12601-1-R	11/3/99	0	0.5	Technetium 99	3.9	pCi/g dry		480880.89	1350211.29
12601	12601-1-R	11/3/99	0	0.5	Thorium	6.09	ug/g dry		480880.89	1350211.29
12601	12601-1-R	11/3/99	0	0.5	Uranium, Total	191	ug/g dry		480880.89	1350211.29

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12601	12601-3-R	11/3/99	1	1.5	Technetium 99	0.40	pCi/g dry	U	480880.89	1350211.29
12601	12601-3-R	11/3/99	1	1.5	Thorium	3.99	ug/g dry		480880.89	1350211.29
12601	12601-3-R	11/3/99	1	1.5	Uranium, Total	61.9	ug/g dry		480880.89	1350211.29
12601	12601-5-R	11/3/99	2	2.5	Technetium 99	1.5	pCi/g dry		480880.89	1350211.29
12601	12601-5-R	11/3/99	2	2.5	Thorium	3.44	ug/g dry		480880.89	1350211.29
12601	12601-5-R	11/3/99	2	2.5	Uranium, Total	189	ug/g dry		480880.89	1350211.29
12601	12601-7-R	11/3/99	3	3.5	Technetium 99	1.0	pCi/g dry		480880.89	1350211.29
12601	12601-7-R	11/3/99	3	3.5	Thorium	4.99	ug/g dry		480880.89	1350211.29
12601	12601-7-R	11/3/99	3	3.5	Uranium, Total	196	ug/g dry		480880.89	1350211.29
12601	12601-9-R	11/3/99	4	4.5	Technetium 99	76	pCi/g dry		480880.89	1350211.29
12601	12601-9-R	11/3/99	4	4.5	Thorium	5.42	ug/g dry		480880.89	1350211.29
12601	12601-9-R	11/3/99	4	4.5	Uranium, Total	14.2	ug/g dry		480880.89	1350211.29
12601	12601-11-R	11/3/99	5	5.5	Technetium 99	0.73	pCi/g dry	U	480880.89	1350211.29
12601	12601-11-R	11/3/99	5	5.5	Thorium	5.19	ug/g dry		480880.89	1350211.29
12601	12601-11-R	11/3/99	5	5.5	Uranium, Total	1.55	ug/g dry		480880.89	1350211.29
12601	12601-13-R	11/3/99	6	6.5	Technetium 99	0.54	pCi/g dry	U	480880.89	1350211.29
12601	12601-13-R	11/3/99	6	6.5	Thorium	5.03	ug/g dry		480880.89	1350211.29
12601	12601-13-R	11/3/99	6	6.5	Uranium, Total	1.90	ug/g dry		480880.89	1350211.29
12601	12601-15-R	11/3/99	7	7.5	Technetium 99	1.7	pCi/g dry		480880.89	1350211.29
12601	12601-15-R	11/3/99	7	7.5	Thorium	5.18	ug/g dry		480880.89	1350211.29
12601	12601-15-R	11/3/99	7	7.5	Uranium, Total	1.57	ug/g dry		480880.89	1350211.29
12602	12602-1-R	11/3/99	0	0.5	Technetium 99	3.8	pCi/g dry	U	480870.97	1350221.21
12602	12602-1-R	11/3/99	0	0.5	Thorium	2.78	ug/g dry		480870.97	1350221.21
12602	12602-1-R	11/3/99	0	0.5	Uranium, Total	1710	ug/g dry		480870.97	1350221.21
12602	12602-3-R	11/3/99	1	1.5	Technetium 99	1.4	pCi/g dry		480870.97	1350221.21
12602	12602-3-R	11/3/99	1	1.5	Thorium	5.02	ug/g dry		480870.97	1350221.21
12602	12602-3-R	11/3/99	1	1.5	Uranium, Total	94.2	ug/g dry		480870.97	1350221.21
12602	12602-5-R	11/3/99	2	2.5	Technetium 99	3.3	pCi/g dry		480870.97	1350221.21
12602	12602-5-R	11/3/99	2	2.5	Thorium	5.52	ug/g dry		480870.97	1350221.21
12602	12602-5-R	11/3/99	2	2.5	Uranium, Total	375	ug/g dry		480870.97	1350221.21
12602	12602-7-R	11/3/99	3	3.5	Technetium 99	3.0	pCi/g dry		480870.97	1350221.21
12602	12602-7-R	11/3/99	3	3.5	Thorium	4.90	ug/g dry		480870.97	1350221.21
12602	12602-7-R	11/3/99	3	3.5	Uranium, Total	289	ug/g dry		480870.97	1350221.21
12602	12602-9-R	11/3/99	4	4.5	Technetium 99	5.8	pCi/g dry		480870.97	1350221.21
12602	12602-9-R	11/3/99	4	4.5	Thorium	5.03	ug/g dry		480870.97	1350221.21
12602	12602-9-R	11/3/99	4	4.5	Uranium, Total	7.69	ug/g dry		480870.97	1350221.21
12602	12602-11-R	11/3/99	5	5.5	Technetium 99	0.85	pCi/g dry	U	480870.97	1350221.21

000700

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12602	12602-11-R	11/3/99	5	5.5	Thorium	4.83	ug/g dry		480870.97	1350221.21
12602	12602-11-R	11/3/99	5	5.5	Uranium, Total	1.65	ug/g dry		480870.97	1350221.21
12602	12602-13-R	11/3/99	6	6.5	Technetium 99	0.71	pCi/g dry	U	480870.97	1350221.21
12602	12602-13-R	11/3/99	6	6.5	Thorium	4.74	ug/g dry		480870.97	1350221.21
12602	12602-13-R	11/3/99	6	6.5	Uranium, Total	1.98	ug/g dry		480870.97	1350221.21
12602	12602-15-R	11/3/99	7	7.5	Technetium 99	0.68	pCi/g dry	U	480870.97	1350221.21
12602	12602-15-R	11/3/99	7	7.5	Thorium	4.67	ug/g dry		480870.97	1350221.21
12602	12602-15-R	11/3/99	7	7.5	Uranium, Total	1.62	ug/g dry		480870.97	1350221.21
12603	12603A-1-R	11/4/99	0	0.5	Technetium 99	0.60	pCi/g dry	U	480863.84	1350218.2
12603	12603A-1-R	11/4/99	0	0.5	Thorium	5.47	ug/g dry		480863.84	1350218.2
12603	12603A-1-R	11/4/99	0	0.5	Uranium, Total	324	ug/g dry		480863.84	1350218.2
12603	12603A-3-R	11/4/99	1	1.5	Technetium 99	1.4	pCi/g dry		480863.84	1350218.2
12603	12603A-3-R	11/4/99	1	1.5	Thorium	5.66	ug/g dry		480863.84	1350218.2
12603	12603A-3-R	11/4/99	1	1.5	Uranium, Total	159	ug/g dry		480863.84	1350218.2
12603	12603A-5-R	11/4/99	2	2.5	Technetium 99	1.3	pCi/g dry		480863.84	1350218.2
12603	12603A-5-R	11/4/99	2	2.5	Thorium	4.71	ug/g dry		480863.84	1350218.2
12603	12603A-5-R	11/4/99	2	2.5	Uranium, Total	92.3	ug/g dry		480863.84	1350218.2
12603	12603A-7-R	11/4/99	3	3.5	Technetium 99	1.9	pCi/g dry		480863.84	1350218.2
12603	12603A-7-R	11/4/99	3	3.5	Thorium	5.08	ug/g dry		480863.84	1350218.2
12603	12603A-7-R	11/4/99	3	3.5	Uranium, Total	2.04	ug/g dry		480863.84	1350218.2
12603	12603A-9-R	11/4/99	4	4.5	Technetium 99	1.7	pCi/g dry		480863.84	1350218.2
12603	12603A-9-R	11/4/99	4	4.5	Thorium	4.82	ug/g dry		480863.84	1350218.2
12603	12603A-9-R	11/4/99	4	4.5	Uranium, Total	1.73	ug/g dry		480863.84	1350218.2
12603	12603A-11-R	11/4/99	5	5.5	Technetium 99	0.22	pCi/g dry	U	480863.84	1350218.2
12603	12603A-11-R	11/4/99	5	5.5	Thorium	4.14	ug/g dry		480863.84	1350218.2
12603	12603A-11-R	11/4/99	5	5.5	Uranium, Total	2.09	ug/g dry		480863.84	1350218.2
12603	12603A-13-R	11/4/99	6	6.5	Technetium 99	-0.054	pCi/g dry	U	480863.84	1350218.2
12603	12603A-13-R	11/4/99	6	6.5	Thorium	4.60	ug/g dry		480863.84	1350218.2
12603	12603A-13-R	11/4/99	6	6.5	Uranium, Total	1.57	ug/g dry		480863.84	1350218.2
12603	12603A-15-R	11/4/99	7	7.5	Technetium 99	-0.22	pCi/g dry	U	480863.84	1350218.2
12603	12603A-15-R	11/4/99	7	7.5	Thorium	4.59	ug/g dry		480863.84	1350218.2
12603	12603A-15-R	11/4/99	7	7.5	Uranium, Total	1.32	ug/g dry		480863.84	1350218.2
12604	12604-1-R	11/3/99	0	0.5	Technetium 99	3.6	pCi/g dry		480849.99	1350209.22
12604	12604-1-R	11/3/99	0	0.5	Thorium	4.34	ug/g dry		480849.99	1350209.22
12604	12604-1-R	11/3/99	0	0.5	Uranium, Total	321	ug/g dry		480849.99	1350209.22
12604	12604-3-R	11/3/99	1	1.5	Technetium 99	3.2	pCi/g dry		480849.99	1350209.22
12604	12604-3-R	11/3/99	1	1.5	Thorium	4.66	ug/g dry		480849.99	1350209.22

000701

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12604	12604-3-R	11/3/99	1	1.5	Uranium, Total	316	ug/g dry		480849.99	1350209.22
12604	12604-5-R	11/3/99	2	2.5	Technetium 99	2.1	pCi/g dry		480849.99	1350209.22
12604	12604-5-R	11/3/99	2	2.5	Thorium	4.93	ug/g dry		480849.99	1350209.22
12604	12604-5-R	11/3/99	2	2.5	Uranium, Total	266	ug/g dry		480849.99	1350209.22
12604	12604-7-R	11/3/99	3	3.5	Technetium 99	5.6	pCi/g dry		480849.99	1350209.22
12604	12604-7-R	11/3/99	3	3.5	Thorium	4.63	ug/g dry		480849.99	1350209.22
12604	12604-7-R	11/3/99	3	3.5	Uranium, Total	312	ug/g dry		480849.99	1350209.22
12604	12604-9-R	11/3/99	4	4.5	Technetium 99	19	pCi/g dry		480849.99	1350209.22
12604	12604-9-R	11/3/99	4	4.5	Thorium	5.03	ug/g dry		480849.99	1350209.22
12604	12604-9-R	11/3/99	4	4.5	Uranium, Total	239	ug/g dry		480849.99	1350209.22
12604	12604-11-R	11/3/99	5	5.5	Technetium 99	3.2	pCi/g dry		480849.99	1350209.22
12604	12604-11-R	11/3/99	5	5.5	Thorium	3.01	ug/g dry		480849.99	1350209.22
12604	12604-11-R	11/3/99	5	5.5	Uranium, Total	150	ug/g dry		480849.99	1350209.22
12604	12604-13-R	11/3/99	6	6.5	Technetium 99	1.7	pCi/g dry		480849.99	1350209.22
12604	12604-13-R	11/3/99	6	6.5	Thorium	4.62	ug/g dry		480849.99	1350209.22
12604	12604-13-R	11/3/99	6	6.5	Uranium, Total	160	ug/g dry		480849.99	1350209.22
12604	12604-15-R	11/3/99	7	7.5	Technetium 99	1.6	pCi/g dry		480849.99	1350209.22
12604	12604-15-R	11/3/99	7	7.5	Thorium	4.79	ug/g dry		480849.99	1350209.22
12604	12604-15-R	11/3/99	7	7.5	Uranium, Total	123	ug/g dry		480849.99	1350209.22
12604	12604-17-R	11/3/99	8	8.5	Technetium 99	0.45	pCi/g dry	U	480849.99	1350209.22
12604	12604-17-R	11/3/99	8	8.5	Thorium	4.82	ug/g dry		480849.99	1350209.22
12604	12604-17-R	11/3/99	8	8.5	Uranium, Total	83.9	ug/g dry		480849.99	1350209.22
12604	12604-19-R	11/3/99	9	9.5	Technetium 99	0.41	pCi/g dry	U	480849.99	1350209.22
12604	12604-19-R	11/3/99	9	9.5	Thorium	3.55	ug/g dry		480849.99	1350209.22
12604	12604-19-R	11/3/99	9	9.5	Uranium, Total	43.0	ug/g dry		480849.99	1350209.22
12605	12605-1-R	11/4/99	0	0.5	Technetium 99	0.40	pCi/g dry	U	480840.09	1350199.25
12605	12605-1-R	11/4/99	0	0.5	Thorium	5.27	ug/g dry		480840.09	1350199.25
12605	12605-1-R	11/4/99	0	0.5	Uranium, Total	112	ug/g dry		480840.09	1350199.25
12605	12605-3-R	11/4/99	1	1.5	Technetium 99	0.32	pCi/g dry	U	480840.09	1350199.25
12605	12605-3-R	11/4/99	1	1.5	Thorium	4.94	ug/g dry		480840.09	1350199.25
12605	12605-3-R	11/4/99	1	1.5	Uranium, Total	1.38	ug/g dry		480840.09	1350199.25
12605	12605-5-R	11/4/99	2	2.5	Technetium 99	0.71	pCi/g dry	U	480840.09	1350199.25
12605	12605-5-R	11/4/99	2	2.5	Thorium	4.35	ug/g dry		480840.09	1350199.25
12605	12605-5-R	11/4/99	2	2.5	Uranium, Total	1.15	ug/g dry		480840.09	1350199.25
12605	12605-7-R	11/4/99	3	3.5	Technetium 99	-0.014	pCi/g dry	U	480840.09	1350199.25
12605	12605-7-R	11/4/99	3	3.5	Thorium	4.98	ug/g dry		480840.09	1350199.25
12605	12605-7-R	11/4/99	3	3.5	Uranium, Total	1.43	ug/g dry		480840.09	1350199.25

000702

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12605	12605-9-R	11/4/99	4	4.5	Technetium 99	0.98	pCi/g dry	U	480840.09	1350199.25
12605	12605-9-R	11/4/99	4	4.5	Thorium	4.90	ug/g dry		480840.09	1350199.25
12605	12605-9-R	11/4/99	4	4.5	Uranium, Total	2.75	ug/g dry		480840.09	1350199.25
12605	12605-11-R	11/4/99	5	5.5	Technetium 99	0.71	pCi/g dry	U	480840.09	1350199.25
12605	12605-11-R	11/4/99	5	5.5	Thorium	4.64	ug/g dry		480840.09	1350199.25
12605	12605-11-R	11/4/99	5	5.5	Uranium, Total	2.01	ug/g dry		480840.09	1350199.25
12605	12605-13-R	11/4/99	6	6.5	Technetium 99	0.17	pCi/g dry	U	480840.09	1350199.25
12605	12605-13-R	11/4/99	6	6.5	Thorium	4.69	ug/g dry		480840.09	1350199.25
12605	12605-13-R	11/4/99	6	6.5	Uranium, Total	1.89	ug/g dry		480840.09	1350199.25
12605	12605-15-R	11/4/99	7	7.5	Technetium 99	0.23	pCi/g dry	U	480840.09	1350199.25
12605	12605-15-R	11/4/99	7	7.5	Thorium	5.15	ug/g dry		480840.09	1350199.25
12605	12605-15-R	11/4/99	7	7.5	Uranium, Total	1.60	ug/g dry		480840.09	1350199.25
12605	12605-17-R	11/4/99	8	8.5	Technetium 99	-0.19	pCi/g dry	U	480840.09	1350199.25
12605	12605-17-R	11/4/99	8	8.5	Thorium	4.81	ug/g dry		480840.09	1350199.25
12605	12605-17-R	11/4/99	8	8.5	Uranium, Total	1.61	ug/g dry		480840.09	1350199.25
12605	12605-19-R	11/4/99	9	9.5	Technetium 99	-0.19	pCi/g dry	U	480840.09	1350199.25
12605	12605-19-R	11/4/99	9	9.5	Thorium	4.49	ug/g dry		480840.09	1350199.25
12605	12605-19-R	11/4/99	9	9.5	Uranium, Total	1.48	ug/g dry		480840.09	1350199.25
12606	12606-1-R	11/4/99	0	0.5	Technetium 99	4.0	pCi/g dry		480850.05	1350189.21
12606	12606-1-R	11/4/99	0	0.5	Thorium	5.63	ug/g dry		480850.05	1350189.21
12606	12606-1-R	11/4/99	0	0.5	Uranium, Total	187	ug/g dry		480850.05	1350189.21
12606	12606-3-R	11/4/99	1	1.5	Technetium 99	2.3	pCi/g dry		480850.05	1350189.21
12606	12606-3-R	11/4/99	1	1.5	Thorium	5.24	ug/g dry		480850.05	1350189.21
12606	12606-3-R	11/4/99	1	1.5	Uranium, Total	59.2	ug/g dry		480850.05	1350189.21
12606	12606-5-R	11/4/99	2	2.5	Technetium 99	1.1	pCi/g dry		480850.05	1350189.21
12606	12606-5-R	11/4/99	2	2.5	Thorium	4.92	ug/g dry		480850.05	1350189.21
12606	12606-5-R	11/4/99	2	2.5	Uranium, Total	224	ug/g dry		480850.05	1350189.21
12606	12606-7-R	11/4/99	3	3.5	Technetium 99	0.64	pCi/g dry	U	480850.05	1350189.21
12606	12606-7-R	11/4/99	3	3.5	Thorium	5.12	ug/g dry		480850.05	1350189.21
12606	12606-7-R	11/4/99	3	3.5	Uranium, Total	247	ug/g dry		480850.05	1350189.21
12606	12606-9-R	11/4/99	4	4.5	Technetium 99	1.8	pCi/g dry		480850.05	1350189.21
12606	12606-9-R	11/4/99	4	4.5	Thorium	4.84	ug/g dry		480850.05	1350189.21
12606	12606-9-R	11/4/99	4	4.5	Uranium, Total	195	ug/g dry		480850.05	1350189.21
12606	12606-11-R	11/4/99	5	5.5	Technetium 99	2.1	pCi/g dry		480850.05	1350189.21
12606	12606-11-R	11/4/99	5	5.5	Thorium	5.11	ug/g dry		480850.05	1350189.21
12606	12606-11-R	11/4/99	5	5.5	Uranium, Total	175	ug/g dry		480850.05	1350189.21
12606	12606-13-R	11/4/99	6	6.5	Technetium 99	-0.32	pCi/g dry	U	480850.05	1350189.21

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12606	12606-13-R	11/4/99	6	6.5	Thorium	5.07	ug/g dry		480850.05	1350189.21
12606	12606-13-R	11/4/99	6	6.5	Uranium, Total	160	ug/g dry		480850.05	1350189.21
12606	12606-15-R	11/4/99	7	7.5	Technetium 99	-0.31	pCi/g dry	U	480850.05	1350189.21
12606	12606-15-R	11/4/99	7	7.5	Thorium	4.31	ug/g dry		480850.05	1350189.21
12606	12606-15-R	11/4/99	7	7.5	Uranium, Total	67.8	ug/g dry		480850.05	1350189.21
12606	12606-17-R	11/4/99	8	8.5	Technetium 99	-0.27	pCi/g dry	U	480850.05	1350189.21
12606	12606-17-R	11/4/99	8	8.5	Thorium	4.80	ug/g dry		480850.05	1350189.21
12606	12606-17-R	11/4/99	8	8.5	Uranium, Total	28.8	ug/g dry		480850.05	1350189.21
12606	12606-19-R	11/4/99	9	9.5	Technetium 99	0.0075	pCi/g dry	U	480850.05	1350189.21
12606	12606-19-R	11/4/99	9	9.5	Thorium	4.81	ug/g dry		480850.05	1350189.21
12606	12606-19-R	11/4/99	9	9.5	Uranium, Total	5.27	ug/g dry		480850.05	1350189.21
12607	12607-1-R	11/4/99	0	0.5	Technetium 99	0.39	pCi/g dry	U	480823.49	1350219.62
12607	12607-1-R	11/4/99	0	0.5	Thorium	5.38	ug/g dry		480823.49	1350219.62
12607	12607-1-R	11/4/99	0	0.5	Uranium, Total	42.7	ug/g dry		480823.49	1350219.62
12607	12607-3-R	11/4/99	1	1.5	Technetium 99	-0.25	pCi/g dry	U	480823.49	1350219.62
12607	12607-3-R	11/4/99	1	1.5	Thorium	4.97	ug/g dry		480823.49	1350219.62
12607	12607-3-R	11/4/99	1	1.5	Uranium, Total	2.40	ug/g dry		480823.49	1350219.62
12607	12607-5-R	11/4/99	2	2.5	Technetium 99	0.58	pCi/g dry	U	480823.49	1350219.62
12607	12607-5-R	11/4/99	2	2.5	Thorium	5.47	ug/g dry		480823.49	1350219.62
12607	12607-5-R	11/4/99	2	2.5	Uranium, Total	1.84	ug/g dry		480823.49	1350219.62
12607	12607-7-R	11/4/99	3	3.5	Technetium 99	0.57	pCi/g dry	U	480823.49	1350219.62
12607	12607-7-R	11/4/99	3	3.5	Thorium	5.35	ug/g dry		480823.49	1350219.62
12607	12607-7-R	11/4/99	3	3.5	Uranium, Total	1.97	ug/g dry		480823.49	1350219.62
12608	12608-1-R	11/4/99	0	0.5	Technetium 99	37	pCi/g dry		480813.45	1350235.8
12608	12608-1-R	11/4/99	0	0.5	Thorium	2.35	ug/g dry		480813.45	1350235.8
12608	12608-1-R	11/4/99	0	0.5	Uranium, Total	2590	ug/g dry		480813.45	1350235.8
12608	12608-3-R	11/4/99	1	1.5	Technetium 99	0.19	pCi/g dry	U	480813.45	1350235.8
12608	12608-3-R	11/4/99	1	1.5	Thorium	4.85	ug/g dry		480813.45	1350235.8
12608	12608-3-R	11/4/99	1	1.5	Uranium, Total	35.8	ug/g dry		480813.45	1350235.8
12608	12608-5-R	11/4/99	2	2.5	Thorium	5.02	ug/g dry		480813.45	1350235.8
12608	12608-5-R	11/4/99	2	2.5	Uranium, Total	1.73	ug/g dry		480813.45	1350235.8
12608	12608-7-R	11/4/99	3	3.5	Thorium	4.59	ug/g dry		480813.45	1350235.8
12608	12608-7-R	11/4/99	3	3.5	Uranium, Total	1.88	ug/g dry		480813.45	1350235.8
12609	12609-1-R	11/4/99	0	0.5	Thorium	4.62	ug/g dry		480803.44	1350214.7
12609	12609-1-R	11/4/99	0	0.5	Uranium, Total	18.7	ug/g dry		480803.44	1350214.7
12609	12609-3-R	11/4/99	1	1.5	Thorium	5.08	ug/g dry		480803.44	1350214.7
12609	12609-3-R	11/4/99	1	1.5	Uranium, Total	1.91	ug/g dry		480803.44	1350214.7

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12609	12609-5-R	11/4/99	2	2.5	Thorium	4.93	ug/g dry		480803.44	1350214.7
12609	12609-5-R	11/4/99	2	2.5	Uranium, Total	1.34	ug/g dry		480803.44	1350214.7
12609	12609-7-R	11/4/99	3	3.5	Thorium	4.42	ug/g dry		480803.44	1350214.7
12609	12609-7-R	11/4/99	3	3.5	Uranium, Total	1.19	ug/g dry		480803.44	1350214.7
12610	12610-1-L	11/5/99	0	0.5	1,1,1-Trichloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	1,1,2-Trichloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	1,1-Dichloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	1,1-Dichloroethene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	1,2-Dichloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	1,2-Dichloropropane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	2-Butanone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	2-Hexanone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	4-Methyl-2-Pentanone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Acetone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Benzene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	BromodiChloromethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Bromoform	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Bromomethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Carbon Disulfide	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Carbon Tetrachloride	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Chlorobenzene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Chloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Chloroform	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Chloromethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	cis-1,2-Dichloroethene	5.8	ug/kg	J	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	cis-1,3-Dichloropropene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Dibromochloromethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Ethylbenzene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Methylene Chloride	15.9	ug/kg	BJ	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Styrene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-R	11/5/99	0	0.5	Technetium 99	5.6	pCi/g dry		480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Tetrachloroethene	209	ug/kg		480489.5	1350234.42
12610	12610-1-R	11/5/99	0	0.5	Thorium	8.73	ug/g dry		480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Toluene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	trans-1,2-Dichloroethene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	trans-1,3-Dichloropropene	49.5	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-1-L	11/5/99	0	0.5	Trichloroethene	19.8	ug/kg	J	480489.5	1350234.42
12610	12610-1-R	11/5/99	0	0.5	Uranium, Total	708	ug/g dry		480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Vinyl Chloride	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-1-L	11/5/99	0	0.5	Xylenes (Total)	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,1,1-Trichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,1,2-Trichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,1-Dichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,1-Dichloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,2-Dichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	1,2-Dichloropropane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	2-Butanone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	2-Hexanone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	4-Methyl-2-Pentanone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Acetone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Benzene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	BromodiChloromethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Bromoform	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Bromomethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Carbon Disulfide	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Carbon Tetrachloride	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Chlorobenzene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Chloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Chloroform	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Chloromethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	cis-1,2-Dichloroethene	13.9	ug/kg	J	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	cis-1,3-Dichloropropene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Dibromochloromethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Ethylbenzene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Methylene Chloride	13.4	ug/kg	BJ	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Styrene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-R	11/5/99	1	1.5	Technetium 99	0.87	pCi/g dry	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Tetrachloroethene	205	ug/kg		480489.5	1350234.42
12610	12610-3-R	11/5/99	1	1.5	Thorium	11.7	ug/g dry		480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Toluene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	trans-1,2-Dichloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	trans-1,3-Dichloropropene	47.6	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-3-L	11/5/99	1	1.5	Trichloroethene	24.5	ug/kg	J	480489.5	1350234.42
12610	12610-3-R	11/5/99	1	1.5	Uranium, Total	190	ug/g dry		480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Vinyl Chloride	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-3-L	11/5/99	1	1.5	Xylenes (Total)	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,1,1-Trichloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,1,2-Trichloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,1-Dichloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,1-Dichloroethene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,2-Dichloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	1,2-Dichloropropane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	2-Butanone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	2-Hexanone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	4-Methyl-2-Pentanone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Acetone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Benzene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	BromodiChloromethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Bromoform	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Bromomethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Carbon Disulfide	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Carbon Tetrachloride	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Chlorobenzene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Chloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Chloroform	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Chloromethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	cis-1,2-Dichloroethene	9.7	ug/kg	J	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	cis-1,3-Dichloropropene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Dibromochloromethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Ethylbenzene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Methylene Chloride	14.8	ug/kg	BJ	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Styrene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-R	11/5/99	2	2.5	Technetium 99	5.2	pCi/g dry		480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Tetrachloroethene	155	ug/kg		480489.5	1350234.42
12610	12610-5-R	11/5/99	2	2.5	Thorium	11.1	ug/g dry		480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Toluene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	trans-1,2-Dichloroethene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	trans-1,3-Dichloropropene	48.5	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-5-L	11/5/99	2	2.5	Trichloroethene	16.2	ug/kg	J	480489.5	1350234.42
12610	12610-5-R	11/5/99	2	2.5	Uranium, Total	434	ug/g dry		480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Vinyl Chloride	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-5-L	11/5/99	2	2.5	Xylenes (Total)	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,1,1-Trichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,1,2,2-Tetrachloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,1,2-Trichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,1-Dichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,1-Dichloroethene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,2-Dichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	1,2-Dichloropropane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	2-Butanone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	2-Hexanone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	4-Methyl-2-Pentanone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Acetone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Benzene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	BromodiChloromethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Bromoform	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Bromomethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Carbon Disulfide	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Carbon Tetrachloride	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Chlorobenzene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Chloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Chloroform	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Chloromethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	cis-1,2-Dichloroethene	8.6	ug/kg	J	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	cis-1,3-Dichloropropene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Dibromochloromethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Ethylbenzene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Methylene Chloride	29.8	ug/kg	BJ	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Styrene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-R	11/5/99	3	3.5	Technetium 99	0.41	pCi/g dry	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Tetrachloroethene	193	ug/kg		480489.5	1350234.42
12610	12610-7-R	11/5/99	3	3.5	Thorium	8.46	ug/g dry		480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Toluene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	trans-1,2-Dichloroethene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	trans-1,3-Dichloropropene	50.5	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-7-L	11/5/99	3	3.5	Trichloroethene	13.7	ug/kg	J	480489.5	1350234.42
12610	12610-7-R	11/5/99	3	3.5	Uranium, Total	103	ug/g dry		480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Vinyl Chloride	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-7-L	11/5/99	3	3.5	Xylenes (Total)	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,1,1-Trichloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,1,2,2-Tetrachloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,1,2-Trichloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,1-Dichloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,1-Dichloroethene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,2-Dichloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	1,2-Dichloropropane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	2-Butanone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	2-Hexanone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	4-Methyl-2-Pentanone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Acetone	14.9	ug/kg	J	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Benzene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	BromodiChloromethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Bromoform	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Bromomethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Carbon Disulfide	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Carbon Tetrachloride	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Chlorobenzene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Chloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Chloroform	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Chloromethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	cis-1,2-Dichloroethene	7.7	ug/kg	J	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	cis-1,3-Dichloropropene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Dibromochloromethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Ethylbenzene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Methylene Chloride	24.3	ug/kg	BJ	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Styrene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-R	11/5/99	4	4.5	Technetium 99	0.30	pCi/g dry	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Tetrachloroethene	320	ug/kg		480489.5	1350234.42
12610	12610-9-R	11/5/99	4	4.5	Thorium	7.88	ug/g dry		480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Toluene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	trans-1,2-Dichloroethene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	trans-1,3-Dichloropropene	49.0	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-9-L	11/5/99	4	4.5	Trichloroethene	16.0	ug/kg	J	480489.5	1350234.42
12610	12610-9-R	11/5/99	4	4.5	Uranium, Total	142	ug/g dry		480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Vinyl Chloride	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-9-L	11/5/99	4	4.5	Xylenes (Total)	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1,1-Trichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1,1-Trichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1,2,2-Tetrachloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1,2-Trichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1,2-Trichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1-Dichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1-Dichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1-Dichloroethene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,1-Dichloroethene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,2-Dichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,2-Dichloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,2-Dichloropropane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	1,2-Dichloropropane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	2-Butanone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	2-Butanone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	2-Hexanone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	2-Hexanone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	4-Methyl-2-Pentanone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Acetone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Acetone	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Benzene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Benzene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	BromodiChloromethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	BromodiChloromethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Bromoform	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Bromoform	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Bromomethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Bromomethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Carbon Disulfide	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Carbon Disulfide	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Carbon Tetrachloride	1000	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-11-L	11/5/99	5	5.5	Carbon Tetrachloride	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chlorobenzene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chlorobenzene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chloroethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chloroform	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chloroform	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chloromethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Chloromethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	cis-1,2-Dichloroethene	104	ug/kg	DJ	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	cis-1,2-Dichloroethene	61.1	ug/kg		480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	cis-1,3-Dichloropropene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Dibromochloromethane	10000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Dibromochloromethane	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Ethylbenzene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Ethylbenzene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Methylene Chloride	24.2	ug/kg	BJ	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Methylene Chloride	193	ug/kg	DBJ	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Styrene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Styrene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-R	11/5/99	5	5.5	Technetium 99	0.34	pCi/g dry	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Tetrachloroethene	7700	ug/kg	D	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Tetrachloroethene	1860	ug/kg	E	480489.5	1350234.42
12610	12610-11-R	11/5/99	5	5.5	Thorium	4.66	ug/g dry		480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Toluene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Toluene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	trans-1,2-Dichloroethene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	trans-1,3-Dichloropropene	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Trichloroethene	439	ug/kg	DJ	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Trichloroethene	163	ug/kg		480489.5	1350234.42
12610	12610-11-R	11/5/99	5	5.5	Uranium, Total	93.3	ug/g dry		480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Vinyl Chloride	1000	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Vinyl Chloride	50.5	ug/kg	U	480489.5	1350234.42
12610	12610-11-L	11/5/99	5	5.5	Xylenes (Total)	50.5	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-11-L	11/5/99	5	5.5	Xylenes (Total)	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1,1-Trichloroethane	7.1	ug/kg	J	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1,1-Trichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1,2-Trichloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1,2-Trichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1-Dichloroethane	8.8	ug/kg	J	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1-Dichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1-Dichloroethene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,1-Dichloroethene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,2-Dichloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,2-Dichloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,2-Dichloropropane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	1,2-Dichloropropane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	2-Butanone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	2-Butanone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	2-Hexanone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	2-Hexanone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	4-Methyl-2-Pentanone	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Acetone	16.4	ug/kg	J	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Acetone	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Benzene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Benzene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	BromodiChloromethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	BromodiChloromethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Bromoform	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Bromoform	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Bromomethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Bromomethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Carbon Disulfide	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Carbon Disulfide	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Carbon Tetrachloride	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Carbon Tetrachloride	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chlorobenzene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chlorobenzene	1000	ug/kg	U	480489.5	1350234.42

000712

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-13-L	11/5/99	6	6.5	Chloroethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chloroethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chloroform	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chloroform	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chloromethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Chloromethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	cis-1,2-Dichloroethene	95.6	ug/kg	DJ	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	cis-1,2-Dichloroethene	85.6	ug/kg		480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	cis-1,3-Dichloropropene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Dibromochloromethane	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Dibromochloromethane	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Ethylbenzene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Ethylbenzene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Methylene Chloride	23.7	ug/kg	BJ	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Methylene Chloride	164	ug/kg	DBJ	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Styrene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Styrene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-R	11/5/99	6	6.5	Technetium 99	1.6	pCi/g dry		480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Tetrachloroethene	6840	ug/kg	D	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Tetrachloroethene	1590	ug/kg	E	480489.5	1350234.42
12610	12610-13-R	11/5/99	6	6.5	Thorium	10.0	ug/g dry		480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Toluene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Toluene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	trans-1,2-Dichloroethene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	trans-1,3-Dichloropropene	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Trichloroethene	457	ug/kg	DJ	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Trichloroethene	228	ug/kg		480489.5	1350234.42
12610	12610-13-R	11/5/99	6	6.5	Uranium, Total	255	ug/g dry		480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Vinyl Chloride	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Vinyl Chloride	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Xylenes (Total)	1000	ug/kg	U	480489.5	1350234.42
12610	12610-13-L	11/5/99	6	6.5	Xylenes (Total)	48.5	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	1,1,1-Trichloroethane	12.9	ug/kg	J	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-15-L	11/5/99	7	7.5	1,1,2-Trichloroethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	1,1-Dichloroethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	1,1-Dichloroethene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	1,2-Dichloroethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	1,2-Dichloropropane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	2-Butanone	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	2-Hexanone	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	4-Methyl-2-Pentanone	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Acetone	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Benzene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	BromodiChloromethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Bromoform	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Bromomethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Carbon Disulfide	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Carbon Tetrachloride	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Chlorobenzene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Chloroethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Chloroform	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Chloromethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	cis-1,2-Dichloroethene	9.5	ug/kg	J	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	cis-1,3-Dichloropropene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Dibromochloromethane	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Ethylbenzene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Methylene Chloride	25.9	ug/kg	BJ	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Styrene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-R	11/5/99	7	7.5	Technetium 99	-0.12	pCi/g dry	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Tetrachloroethene	319	ug/kg		480489.5	1350234.42
12610	12610-15-R	11/5/99	7	7.5	Thorium	4.96	ug/g dry		480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Toluene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	trans-1,2-Dichloroethene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	trans-1,3-Dichloropropene	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Trichloroethene	95.2	ug/kg		480489.5	1350234.42
12610	12610-15-R	11/5/99	7	7.5	Uranium, Total	50.2	ug/g dry		480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Vinyl Chloride	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-15-L	11/5/99	7	7.5	Xylenes (Total)	50.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	1,1,1-Trichloroethane	234	ug/kg		480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	1,1,2,2-Tetrachloroethane	49.0	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-17-L	11/5/99	8	8.5	1,1,2-Trichloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	1,1-Dichloroethane	14.9	ug/kg	J	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	1,1-Dichloroethene	62.4	ug/kg		480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	1,2-Dichloroethane	25.9	ug/kg	J	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	1,2-Dichloropropane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	2-Butanone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	2-Hexanone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	4-Methyl-2-Pentanone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Acetone	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Benzene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	BromodiChloromethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Bromoform	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Bromomethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Carbon Disulfide	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Carbon Tetrachloride	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Chlorobenzene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Chloroethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Chloroform	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Chloromethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	cis-1,2-Dichloroethene	62.6	ug/kg		480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	cis-1,3-Dichloropropene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Dibromochloromethane	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Ethylbenzene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Methylene Chloride	12.7	ug/kg	BJ	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Styrene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-R	11/5/99	8	8.5	Technetium 99	0.039	pCi/g dry	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Tetrachloroethene	9.3	ug/kg	J	480489.5	1350234.42
12610	12610-17-R	11/5/99	8	8.5	Thorium	4.69	ug/g dry		480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Toluene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	trans-1,2-Dichloroethene	3.0	ug/kg	J	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	trans-1,3-Dichloropropene	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Trichloroethene	382	ug/kg		480489.5	1350234.42
12610	12610-17-R	11/5/99	8	8.5	Uranium, Total	36.0	ug/g dry		480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Vinyl Chloride	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-17-L	11/5/99	8	8.5	Xylenes (Total)	49.0	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	1,1,1-Trichloroethane	4.2	ug/kg	J	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480489.5	1350234.42

000715

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-19-L	11/5/99	9	9.5	1,1,2-Trichloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	1,1-Dichloroethane	5.3	ug/kg	J	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	1,1-Dichloroethene	23.0	ug/kg	J	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	1,2-Dichloroethane	42.6	ug/kg	J	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	1,2-Dichloropropane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	2-Butanone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	2-Hexanone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	4-Methyl-2-Pentanone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Acetone	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Benzene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	BromodiChloromethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Bromoform	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Bromomethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Carbon Disulfide	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Carbon Tetrachloride	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Chlorobenzene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Chloroethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Chloroform	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Chloromethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	cis-1,2-Dichloroethene	7.9	ug/kg	J	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	cis-1,3-Dichloropropene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Dibromochloromethane	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Ethylbenzene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Methylene Chloride	14.0	ug/kg	BJ	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Styrene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-R	11/5/99	9	9.5	Technetium 99	-0.05	pCi/g dry	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Tetrachloroethene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-R	11/5/99	9	9.5	Thorium	4.40	ug/g dry		480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Toluene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	trans-1,2-Dichloroethene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	trans-1,3-Dichloropropene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Trichloroethene	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-R	11/5/99	9	9.5	Uranium, Total	2.80	ug/g dry		480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Vinyl Chloride	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-19-L	11/5/99	9	9.5	Xylenes (Total)	49.5	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	1,1,1-Trichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	480489.5	1350234.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12610	12610-22-L	11/5/99	10.5	11	1,1,2-Trichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	1,1-Dichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	1,1-Dichloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	1,2-Dichloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	1,2-Dichloropropane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	2-Butanone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	2-Hexanone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	4-Methyl-2-Pentanone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Acetone	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Benzene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	BromodiChloromethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Bromoform	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Bromomethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Carbon Disulfide	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Carbon Tetrachloride	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Chlorobenzene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Chloroethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Chloroform	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Chloromethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	cis-1,2-Dichloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	cis-1,3-Dichloropropene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Dibromochloromethane	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Ethylbenzene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Methylene Chloride	12.7	ug/kg	BJ	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Styrene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-R	11/5/99	10.5	11	Technetium 99	0.27	pCi/g dry	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Tetrachloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-R	11/5/99	10.5	11	Thorium	4.52	ug/g dry		480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Toluene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	trans-1,2-Dichloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	trans-1,3-Dichloropropene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Trichloroethene	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-R	11/5/99	10.5	11	Uranium, Total	1.99	ug/g dry		480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Vinyl Chloride	47.6	ug/kg	U	480489.5	1350234.42
12610	12610-22-L	11/5/99	10.5	11	Xylenes (Total)	47.6	ug/kg	U	480489.5	1350234.42
12611	12611-1-L	11/5/99	0	0.5	1,1,1-Trichloroethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	1,1,2,2-Tetrachloroethane	50.5	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-1-L	11/5/99	0	0.5	1,1,2-Trichloroethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	1,1-Dichloroethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	1,1-Dichloroethene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	1,2-Dichloroethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	1,2-Dichloropropane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	2-Butanone	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	2-Hexanone	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	4-Methyl-2-Pentanone	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Acetone	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Benzene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	BromodiChloromethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Bromoform	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Bromomethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Carbon Disulfide	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Carbon Tetrachloride	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Chlorobenzene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Chloroethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Chloroform	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Chloromethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	cis-1,2-Dichloroethene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	cis-1,3-Dichloropropene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Dibromochloromethane	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Ethylbenzene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Methylene Chloride	13.9	ug/kg	BJ	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Styrene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-R	11/5/99	0	0.5	Technetium 99	0.56	pCi/g dry	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Tetrachloroethene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-R	11/5/99	0	0.5	Thorium	9.49	ug/g dry		480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Toluene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	trans-1,2-Dichloroethene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	trans-1,3-Dichloropropene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Trichloroethene	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-R	11/5/99	0	0.5	Uranium, Total	139	ug/g dry		480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Vinyl Chloride	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-1-L	11/5/99	0	0.5	Xylenes (Total)	50.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	1,1,1-Trichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-3-L	11/5/99	1	1.5	1,1,2-Trichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	1,1-Dichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	1,1-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	1,2-Dichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	1,2-Dichloropropane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	2-Butanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	2-Hexanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	4-Methyl-2-Pentanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Acetone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Benzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	BromodiChloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Bromoform	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Bromomethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Carbon Disulfide	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Carbon Tetrachloride	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Chlorobenzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Chloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Chloroform	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Chloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	cis-1,2-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	cis-1,3-Dichloropropene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Dibromochloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Ethylbenzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Methylene Chloride	13.1	ug/kg	BJ	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Styrene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-R	11/5/99	1	1.5	Technetium 99	0.59	pCi/g dry	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Tetrachloroethene	9.9	ug/kg	J	480475.79	1350258.31
12611	12611-3-R	11/5/99	1	1.5	Thorium	9.67	ug/g dry		480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Toluene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	trans-1,2-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	trans-1,3-Dichloropropene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Trichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-R	11/5/99	1	1.5	Uranium, Total	87.6	ug/g dry		480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Vinyl Chloride	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-3-L	11/5/99	1	1.5	Xylenes (Total)	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	1,1,1-Trichloroethane	2.9	ug/kg	J	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-5-L	11/5/99	2	2.5	1,1,2-Trichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	1,1-Dichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	1,1-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	1,2-Dichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	1,2-Dichloropropane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	2-Butanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	2-Hexanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	4-Methyl-2-Pentanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Acetone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Benzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	BromodiChloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Bromoform	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Bromomethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Carbon Disulfide	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Carbon Tetrachloride	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Chlorobenzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Chloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Chloroform	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Chloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	cis-1,2-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	cis-1,3-Dichloropropene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Dibromochloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Ethylbenzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Methylene Chloride	11.2	ug/kg	BJ	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Styrene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-R	11/5/99	2	2.5	Technetium 99	-0.053	pCi/g dry	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Tetrachloroethene	24.2	ug/kg	J	480475.79	1350258.31
12611	12611-5-R	11/5/99	2	2.5	Thorium	10.0	ug/g dry		480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Toluene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	trans-1,2-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	trans-1,3-Dichloropropene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Trichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-R	11/5/99	2	2.5	Uranium, Total	23.3	ug/g dry		480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Vinyl Chloride	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-5-L	11/5/99	2	2.5	Xylenes (Total)	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	1,1,1-Trichloroethane	3.9	ug/kg	J	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-7-L	11/5/99	3	3.5	1,1,2-Trichloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	1,1-Dichloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	1,1-Dichloroethene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	1,2-Dichloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	1,2-Dichloropropane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	2-Butanone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	2-Hexanone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	4-Methyl-2-Pentanone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Acetone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Benzene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	BromodiChloromethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Bromoform	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Bromomethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Carbon Disulfide	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Carbon Tetrachloride	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Chlorobenzene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Chloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Chloroform	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Chloromethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	cis-1,2-Dichloroethene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	cis-1,3-Dichloropropene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Dibromochloromethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Ethylbenzene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Methylene Chloride	12.5	ug/kg	BJ	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Styrene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-R	11/5/99	3	3.5	Technetium 99	0.81	pCi/g dry	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Tetrachloroethene	39.6	ug/kg	J	480475.79	1350258.31
12611	12611-7-R	11/5/99	3	3.5	Thorium	10.0	ug/g dry		480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Toluene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	trans-1,2-Dichloroethene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	trans-1,3-Dichloropropene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Trichloroethene	5.5	ug/kg	J	480475.79	1350258.31
12611	12611-7-R	11/5/99	3	3.5	Uranium, Total	3.64	ug/g dry		480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Vinyl Chloride	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-7-L	11/5/99	3	3.5	Xylenes (Total)	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	1,1,1-Trichloroethane	6.5	ug/kg	J	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-9-L	11/5/99	4	4.5	1,1,2-Trichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	1,1-Dichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	1,1-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	1,2-Dichloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	1,2-Dichloropropane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	2-Butanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	2-Hexanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	4-Methyl-2-Pentanone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Acetone	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Benzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	BromodiChloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Bromoform	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Bromomethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Carbon Disulfide	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Carbon Tetrachloride	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Chlorobenzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Chloroethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Chloroform	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Chloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	cis-1,2-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	cis-1,3-Dichloropropene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Dibromochloromethane	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Ethylbenzene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Methylene Chloride	11.6	ug/kg	BJ	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Styrene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-R	11/5/99	4	4.5	Technetium 99	0.24	pCi/g dry	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Tetrachloroethene	46.4	ug/kg	J	480475.79	1350258.31
12611	12611-9-R	11/5/99	4	4.5	Thorium	9.59	ug/g dry		480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Toluene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	trans-1,2-Dichloroethene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	trans-1,3-Dichloropropene	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Trichloroethene	9.7	ug/kg	J	480475.79	1350258.31
12611	12611-9-R	11/5/99	4	4.5	Uranium, Total	126	ug/g dry		480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Vinyl Chloride	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-9-L	11/5/99	4	4.5	Xylenes (Total)	49.5	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	1,1,1-Trichloroethane	15.9	ug/kg	J	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-11-L	11/5/99	5	5.5	1,1,2-Trichloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	1,1-Dichloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	1,1-Dichloroethene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	1,2-Dichloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	1,2-Dichloropropane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	2-Butanone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	2-Hexanone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	4-Methyl-2-Pentanone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Acetone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Benzene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	BromodiChloromethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Bromoform	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Bromomethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Carbon Disulfide	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Carbon Tetrachloride	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Chlorobenzene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Chloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Chloroform	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Chloromethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	cis-1,2-Dichloroethene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	cis-1,3-Dichloropropene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Dibromochloromethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Ethylbenzene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Methylene Chloride	12.3	ug/kg	BJ	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Styrene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-R	11/5/99	5	5.5	Technetium 99	0.91	pCi/g dry	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Tetrachloroethene	73.9	ug/kg		480475.79	1350258.31
12611	12611-11-R	11/5/99	5	5.5	Thorium	9.22	ug/g dry		480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Toluene	9.4	ug/kg	BJ	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	trans-1,2-Dichloroethene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	trans-1,3-Dichloropropene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Trichloroethene	20.9	ug/kg	J	480475.79	1350258.31
12611	12611-11-R	11/5/99	5	5.5	Uranium, Total	28.8	ug/g dry		480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Vinyl Chloride	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-11-L	11/5/99	5	5.5	Xylenes (Total)	8.3	ug/kg	J	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	1,1,1-Trichloroethane	31.2	ug/kg	J	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-13-L	11/5/99	6	6.5	1,1,2-Trichloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	1,1-Dichloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	1,1-Dichloroethene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	1,2-Dichloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	1,2-Dichloropropane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	2-Butanone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	2-Hexanone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	4-Methyl-2-Pentanone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Acetone	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Benzene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	BromodiChloromethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Bromoform	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Bromomethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Carbon Disulfide	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Carbon Tetrachloride	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Chlorobenzene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Chloroethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Chloroform	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Chloromethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	cis-1,2-Dichloroethene	2.9	ug/kg	J	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	cis-1,3-Dichloropropene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Dibromochloromethane	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Ethylbenzene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Methylene Chloride	10.7	ug/kg	BJ	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Styrene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-R	11/5/99	6	6.5	Technetium 99	0.76	pCi/g dry	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Tetrachloroethene	240	ug/kg		480475.79	1350258.31
12611	12611-13-R	11/5/99	6	6.5	Thorium	8.45	ug/g dry		480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Toluene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	trans-1,2-Dichloroethene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	trans-1,3-Dichloropropene	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Trichloroethene	73.9	ug/kg		480475.79	1350258.31
12611	12611-13-R	11/5/99	6	6.5	Uranium, Total	341	ug/g dry		480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Vinyl Chloride	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-13-L	11/5/99	6	6.5	Xylenes (Total)	50.0	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	1,1,1-Trichloroethane	89.6	ug/kg		480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-15-L	11/5/99	7	7.5	1,1,2-Trichloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	1,1-Dichloroethane	4.0	ug/kg	J	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	1,1-Dichloroethene	7.2	ug/kg	J	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	1,2-Dichloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	1,2-Dichloropropane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	2-Butanone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	2-Hexanone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	4-Methyl-2-Pentanone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Acetone	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Benzene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	BromodiChloromethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Bromoform	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Bromomethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Carbon Disulfide	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Carbon Tetrachloride	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Chlorobenzene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Chloroethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Chloroform	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Chloromethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	cis-1,2-Dichloroethene	18.1	ug/kg	J	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	cis-1,3-Dichloropropene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Dibromochloromethane	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Ethylbenzene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Methylene Chloride	14.0	ug/kg	BJ	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Styrene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-R	11/5/99	7	7.5	Technetium 99	0.98	pCi/g dry	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Tetrachloroethene	464	ug/kg		480475.79	1350258.31
12611	12611-15-R	11/5/99	7	7.5	Thorium	4.18	ug/g dry		480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Toluene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	trans-1,2-Dichloroethene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	trans-1,3-Dichloropropene	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Trichloroethene	176	ug/kg		480475.79	1350258.31
12611	12611-15-R	11/5/99	7	7.5	Uranium, Total	92.8	ug/g dry		480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Vinyl Chloride	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-15-L	11/5/99	7	7.5	Xylenes (Total)	48.1	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	1,1,1-Trichloroethane	17.9	ug/kg	J	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	1,1,2,2-Tetrachloroethane	47.2	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-17-L	11/5/99	8	8.5	1,1,2-Trichloroethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	1,1-Dichloroethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	1,1-Dichloroethene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	1,2-Dichloroethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	1,2-Dichloropropane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	2-Butanone	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	2-Hexanone	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	4-Methyl-2-Pentanone	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Acetone	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Benzene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	BromodiChloromethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Bromoform	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Bromomethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Carbon Disulfide	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Carbon Tetrachloride	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Chlorobenzene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Chloroethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Chloroform	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Chloromethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	cis-1,2-Dichloroethene	7.9	ug/kg	J	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	cis-1,3-Dichloropropene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Dibromochloromethane	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Ethylbenzene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Methylene Chloride	26.4	ug/kg	BJ	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Styrene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-R	11/5/99	8	8.5	Technetium 99	0.23	pCi/g dry	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Tetrachloroethene	208	ug/kg		480475.79	1350258.31
12611	12611-17-R	11/5/99	8	8.5	Thorium	2.27	ug/g dry		480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Toluene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	trans-1,2-Dichloroethene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	trans-1,3-Dichloropropene	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Trichloroethene	70.2	ug/kg		480475.79	1350258.31
12611	12611-17-R	11/5/99	8	8.5	Uranium, Total	39.8	ug/g dry		480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Vinyl Chloride	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-17-L	11/5/99	8	8.5	Xylenes (Total)	47.2	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1,1-Trichloroethane	653	ug/kg	DJ	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1,1-Trichloroethane	188	ug/kg		480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-19-L	11/5/99	9	9.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1,2,2-Tetrachloroethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1,2-Trichloroethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1,2-Trichloroethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1-Dichloroethane	7.4	ug/kg	J	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1-Dichloroethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1-Dichloroethene	34.4	ug/kg	J	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,1-Dichloroethene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,2-Dichloroethane	4.7	ug/kg	J	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,2-Dichloroethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,2-Dichloropropane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	1,2-Dichloropropane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	2-Butanone	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	2-Butanone	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	2-Hexanone	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	2-Hexanone	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	4-Methyl-2-Pentanone	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Acetone	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Acetone	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Benzene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Benzene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	BromodiChloromethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	BromodiChloromethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Bromoform	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Bromoform	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Bromomethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Bromomethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Carbon Disulfide	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Carbon Disulfide	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Carbon Tetrachloride	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Carbon Tetrachloride	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chlorobenzene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chlorobenzene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chloroethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chloroethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chloroform	49.0	ug/kg	U	480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-19-L	11/5/99	9	9.5	Chloroform	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chloromethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Chloromethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	cis-1,2-Dichloroethene	46.1	ug/kg	J	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	cis-1,2-Dichloroethene	1190	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	cis-1,3-Dichloropropene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Dibromochloromethane	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Dibromochloromethane	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Ethylbenzene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Ethylbenzene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Methylene Chloride	23.2	ug/kg	BJ	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Methylene Chloride	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Styrene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Styrene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-R	11/5/99	9	9.5	Technetium 99	-0.016	pCi/g dry	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Tetrachloroethene	2960	ug/kg	D	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Tetrachloroethene	804	ug/kg	E	480475.79	1350258.31
12611	12611-19-R	11/5/99	9	9.5	Thorium	2.84	ug/g dry		480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Toluene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Toluene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	trans-1,2-Dichloroethene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	trans-1,3-Dichloropropene	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Trichloroethene	835	ug/kg	DJ	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Trichloroethene	437	ug/kg		480475.79	1350258.31
12611	12611-19-R	11/5/99	9	9.5	Uranium, Total	44.0	ug/g dry		480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Vinyl Chloride	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Vinyl Chloride	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Xylenes (Total)	1000	ug/kg	U	480475.79	1350258.31
12611	12611-19-L	11/5/99	9	9.5	Xylenes (Total)	49.0	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	1,1,1-Trichloroethane	378	ug/kg		480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	1,1,2,2-Tetrachloroethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	1,1,2-Trichloroethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	1,1-Dichloroethane	19.9	ug/kg	J	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	1,1-Dichloroethene	86.4	ug/kg		480475.79	1350258.31

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12611	12611-22-L	11/5/99	10.5	11	1,2-Dichloroethane	29.4	ug/kg	J	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	1,2-Dichloropropane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	2-Butanone	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	2-Hexanone	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	4-Methyl-2-Pentanone	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Acetone	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Benzene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	BromodiChloromethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Bromoform	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Bromomethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Carbon Disulfide	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Carbon Tetrachloride	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Chlorobenzene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Chloroethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Chloroform	3.9	ug/kg	J	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Chloromethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	cis-1,2-Dichloroethene	22.0	ug/kg	J	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	cis-1,3-Dichloropropene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Dibromochloromethane	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Ethylbenzene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Methylene Chloride	24.7	ug/kg	BJ	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Styrene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-R	11/5/99	10.5	11	Technetium 99	0.80	pCi/g dry	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Tetrachloroethene	60.4	ug/kg		480475.79	1350258.31
12611	12611-22-R	11/5/99	10.5	11	Thorium	4.71	ug/g dry		480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Toluene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	trans-1,2-Dichloroethene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	trans-1,3-Dichloropropene	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Trichloroethene	339	ug/kg		480475.79	1350258.31
12611	12611-22-R	11/5/99	10.5	11	Uranium, Total	44.5	ug/g dry		480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Vinyl Chloride	46.7	ug/kg	U	480475.79	1350258.31
12611	12611-22-L	11/5/99	10.5	11	Xylenes (Total)	46.7	ug/kg	U	480475.79	1350258.31
12612	12612-1-L	11/8/99	0	0.5	1,1,1-Trichloroethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	1,1,2-Trichloroethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	1,1-Dichloroethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	1,1-Dichloroethene	48.1	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-1-L	11/8/99	0	0.5	1,2-Dichloroethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	1,2-Dichloropropane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	2-Butanone	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	2-Hexanone	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	4-Methyl-2-Pentanone	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Acetone	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Benzene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	BromodiChloromethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Bromoform	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Bromomethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Carbon Disulfide	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Carbon Tetrachloride	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Chlorobenzene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Chloroethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Chloroform	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Chloromethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	cis-1,2-Dichloroethene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	cis-1,3-Dichloropropene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Dibromochloromethane	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Ethylbenzene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Methylene Chloride	23.1	ug/kg	BJ	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Styrene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-R	11/8/99	0	0.5	Technetium 99	13	pCi/g dry		480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Tetrachloroethene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-R	11/8/99	0	0.5	Thorium	6.61	ug/g dry		480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Toluene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	trans-1,2-Dichloroethene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	trans-1,3-Dichloropropene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Trichloroethene	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-R	11/8/99	0	0.5	Uranium, Total	1220	ug/g dry		480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Vinyl Chloride	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-1-L	11/8/99	0	0.5	Xylenes (Total)	48.1	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	1,1,1-Trichloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	1,1,2-Trichloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	1,1-Dichloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	1,1-Dichloroethene	47.6	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-3-L	11/8/99	1	1.5	1,2-Dichloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	1,2-Dichloropropane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	2-Butanone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	2-Hexanone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	4-Methyl-2-Pentanone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Acetone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Benzene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	BromodiChloromethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Bromoform	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Bromomethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Carbon Disulfide	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Carbon Tetrachloride	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Chlorobenzene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Chloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Chloroform	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Chloromethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	cis-1,2-Dichloroethene	5.4	ug/kg	J	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	cis-1,3-Dichloropropene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Dibromochloromethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Ethylbenzene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Methylene Chloride	22.4	ug/kg	BJ	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Styrene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-R	11/8/99	1	1.5	Technetium 99	-0.35	pCi/g dry	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Tetrachloroethene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-R	11/8/99	1	1.5	Thorium	8.17	ug/g dry		480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Toluene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	trans-1,2-Dichloroethene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	trans-1,3-Dichloropropene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Trichloroethene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-R	11/8/99	1	1.5	Uranium, Total	355	ug/g dry		480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Vinyl Chloride	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-3-L	11/8/99	1	1.5	Xylenes (Total)	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	1,1,1-Trichloroethane	22.5	ug/kg	J	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	1,1,2,2-Tetrachloroethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	1,1,2-Trichloroethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	1,1-Dichloroethane	2.8	ug/kg	J	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	1,1-Dichloroethene	2.8	ug/kg	J	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-5-L	11/8/99	2	2.5	1,2-Dichloroethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	1,2-Dichloropropane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	2-Butanone	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	2-Hexanone	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	4-Methyl-2-Pentanone	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Acetone	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Benzene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	BromodiChloromethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Bromoform	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Bromomethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Carbon Disulfide	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Carbon Tetrachloride	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Chlorobenzene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Chloroethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Chloroform	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Chloromethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	cis-1,2-Dichloroethene	33.7	ug/kg	J	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	cis-1,3-Dichloropropene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Dibromochloromethane	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Ethylbenzene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Methylene Chloride	17.5	ug/kg	BJ	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Styrene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-R	11/8/99	2	2.5	Technetium 99	0.58	pCi/g dry	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Tetrachloroethene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-R	11/8/99	2	2.5	Thorium	7.35	ug/g dry		480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Toluene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	trans-1,2-Dichloroethene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	trans-1,3-Dichloropropene	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Trichloroethene	34.6	ug/kg	J	480462.14	1350257.91
12612	12612-5-R	11/8/99	2	2.5	Uranium, Total	127	ug/g dry		480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Vinyl Chloride	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-5-L	11/8/99	2	2.5	Xylenes (Total)	49.0	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	1,1,1-Trichloroethane	62.1	ug/kg		480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	1,1,2-Trichloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	1,1-Dichloroethane	5.8	ug/kg	J	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	1,1-Dichloroethene	14.2	ug/kg	J	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-7-L	11/8/99	3	3.5	1,2-Dichloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	1,2-Dichloropropane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	2-Butanone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	2-Hexanone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	4-Methyl-2-Pentanone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Acetone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Benzene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	BromodiChloromethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Bromoform	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Bromomethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Carbon Disulfide	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Carbon Tetrachloride	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Chlorobenzene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Chloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Chloroform	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Chloromethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	cis-1,2-Dichloroethene	15.8	ug/kg	J	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	cis-1,3-Dichloropropene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Dibromochloromethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Ethylbenzene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Methylene Chloride	22.7	ug/kg	BJ	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Styrene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-R	11/8/99	3	3.5	Technetium 99	-0.28	pCi/g dry	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Tetrachloroethene	2.5	ug/kg	J	480462.14	1350257.91
12612	12612-7-R	11/8/99	3	3.5	Thorium	9.51	ug/g dry		480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Toluene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	trans-1,2-Dichloroethene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	trans-1,3-Dichloropropene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Trichloroethene	61.3	ug/kg		480462.14	1350257.91
12612	12612-7-R	11/8/99	3	3.5	Uranium, Total	49.4	ug/g dry		480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Vinyl Chloride	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-7-L	11/8/99	3	3.5	Xylenes (Total)	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	1,1,1-Trichloroethane	85.3	ug/kg		480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	1,1,2-Trichloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	1,1-Dichloroethane	5.3	ug/kg	J	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	1,1-Dichloroethene	22.1	ug/kg	J	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-9-L	11/8/99	4	4.5	1,2-Dichloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	1,2-Dichloropropane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	2-Butanone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	2-Hexanone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	4-Methyl-2-Pentanone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Acetone	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Benzene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	BromodiChloromethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Bromoform	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Bromomethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Carbon Disulfide	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Carbon Tetrachloride	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Chlorobenzene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Chloroethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Chloroform	2.9	ug/kg	J	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Chloromethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	cis-1,2-Dichloroethene	10.5	ug/kg	J	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	cis-1,3-Dichloropropene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Dibromochloromethane	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Ethylbenzene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Methylene Chloride	23.5	ug/kg	BJ	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Styrene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-R	11/8/99	4	4.5	Technetium 99	-0.22	pCi/g dry	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Tetrachloroethene	5.4	ug/kg	J	480462.14	1350257.91
12612	12612-9-R	11/8/99	4	4.5	Thorium	8.06	ug/g dry		480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Toluene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	trans-1,2-Dichloroethene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	trans-1,3-Dichloropropene	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Trichloroethene	106	ug/kg		480462.14	1350257.91
12612	12612-9-R	11/8/99	4	4.5	Uranium, Total	34.8	ug/g dry		480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Vinyl Chloride	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-9-L	11/8/99	4	4.5	Xylenes (Total)	48.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1,1-Trichloroethane	398	ug/kg	DJ	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1,1-Trichloroethane	504	ug/kg	E	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1,2-Trichloroethane	49.5	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-11-L	11/8/99	5	5.5	1,1,2-Trichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1-Dichloroethane	13.5	ug/kg	J	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1-Dichloroethene	58.1	ug/kg	DJ	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,1-Dichloroethene	103	ug/kg		480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,2-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,2-Dichloroethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,2-Dichloropropane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	1,2-Dichloropropane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	2-Butanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	2-Butanone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	2-Hexanone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	2-Hexanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	4-Methyl-2-Pentanone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Acetone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Acetone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Benzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Benzene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	BromodiChloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	BromodiChloromethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Bromoform	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Bromoform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Bromomethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Bromomethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Carbon Disulfide	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Carbon Disulfide	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Carbon Tetrachloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Carbon Tetrachloride	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chlorobenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chlorobenzene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chloroethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chloroform	12.2	ug/kg	J	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chloroform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Chloromethane	49.5	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-11-L	11/8/99	5	5.5	cis-1,2-Dichloroethene	17.3	ug/kg	J	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	cis-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	cis-1,3-Dichloropropene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Dibromochloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Dibromochloromethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Ethylbenzene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Ethylbenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Methylene Chloride	22.8	ug/kg	BJ	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Methylene Chloride	378	ug/kg	DBJ	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Styrene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Styrene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-R	11/8/99	5	5.5	Technetium 99	2.3	pCi/g dry	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Tetrachloroethene	28.6	ug/kg	J	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Tetrachloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-R	11/8/99	5	5.5	Thorium	8.05	ug/g dry		480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Toluene	106	ug/kg	DBJ	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Toluene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	trans-1,2-Dichloroethene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	trans-1,3-Dichloropropene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Trichloroethene	462	ug/kg	DJ	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Trichloroethene	646	ug/kg	E	480462.14	1350257.91
12612	12612-11-R	11/8/99	5	5.5	Uranium, Total	223	ug/g dry		480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Vinyl Chloride	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Vinyl Chloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Xylenes (Total)	1000	ug/kg	U	480462.14	1350257.91
12612	12612-11-L	11/8/99	5	5.5	Xylenes (Total)	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,1,1-Trichloroethane	441	ug/kg		480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,1,2-Trichloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,1-Dichloroethane	5.6	ug/kg	J	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,1-Dichloroethene	59.9	ug/kg		480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,2-Dichloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	1,2-Dichloropropane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	2-Butanone	47.6	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-13-L	11/8/99	6	6.5	2-Hexanone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	4-Methyl-2-Pentanone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Acetone	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Benzene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	BromodiChloromethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Bromoform	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Bromomethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Carbon Disulfide	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Carbon Tetrachloride	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Chlorobenzene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Chloroethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Chloroform	4.2	ug/kg	J	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Chloromethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	cis-1,2-Dichloroethene	5.7	ug/kg	J	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	cis-1,3-Dichloropropene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Dibromochloromethane	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Ethylbenzene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Methylene Chloride	14.8	ug/kg	BJ	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Styrene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-R	11/8/99	6	6.5	Technetium 99	0.031	pCi/g dry	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Tetrachloroethene	20.8	ug/kg	J	480462.14	1350257.91
12612	12612-13-R	11/8/99	6	6.5	Thorium	3.11	ug/g dry		480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Toluene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	trans-1,2-Dichloroethene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	trans-1,3-Dichloropropene	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Trichloroethene	436	ug/kg		480462.14	1350257.91
12612	12612-13-R	11/8/99	6	6.5	Uranium, Total	69.1	ug/g dry		480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Vinyl Chloride	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-13-L	11/8/99	6	6.5	Xylenes (Total)	47.6	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1,1-Trichloroethane	735	ug/kg	DJ	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1,1-Trichloroethane	593	ug/kg	E	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1,2,2-Tetrachloroethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1,2-Trichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1,2-Trichloroethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1-Dichloroethane	11.2	ug/kg	J	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-15-L	11/8/99	7	7.5	1,1-Dichloroethene	67.4	ug/kg	DJ	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,1-Dichloroethene	170	ug/kg		480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,2-Dichloroethane	11.8	ug/kg	J	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,2-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,2-Dichloropropane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	1,2-Dichloropropane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	2-Butanone	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	2-Butanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	2-Hexanone	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	2-Hexanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	4-Methyl-2-Pentanone	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Acetone	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Acetone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Benzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Benzene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	BromodiChloromethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	BromodiChloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Bromoform	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Bromoform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Bromomethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Bromomethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Carbon Disulfide	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Carbon Disulfide	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Carbon Tetrachloride	8.1	ug/kg	J	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Carbon Tetrachloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chlorobenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chlorobenzene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chloroethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chloroform	15.0	ug/kg	J	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chloroform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Chloromethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	cis-1,2-Dichloroethene	10.0	ug/kg	J	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	cis-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-15-L	11/8/99	7	7.5	cis-1,3-Dichloropropene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Dibromochloromethane	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Dibromochloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Ethylbenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Ethylbenzene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Methylene Chloride	22.0	ug/kg	BJ	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Methylene Chloride	103	ug/kg	DBJ	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Styrene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Styrene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-R	11/8/99	7	7.5	Technetium 99	0.92	pCi/g dry	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Tetrachloroethene	167	ug/kg	DJ	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Tetrachloroethene	56.4	ug/kg		480462.14	1350257.91
12612	12612-15-R	11/8/99	7	7.5	Thorium	4.13	ug/g dry		480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Toluene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Toluene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	trans-1,2-Dichloroethene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	trans-1,3-Dichloropropene	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Trichloroethene	762	ug/kg	DJ	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Trichloroethene	825	ug/kg	E	480462.14	1350257.91
12612	12612-15-R	11/8/99	7	7.5	Uranium, Total	82.4	ug/g dry		480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Vinyl Chloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Vinyl Chloride	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Xylenes (Total)	1000	ug/kg	U	480462.14	1350257.91
12612	12612-15-L	11/8/99	7	7.5	Xylenes (Total)	46.3	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1,1-Trichloroethane	2240	ug/kg	D	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1,1-Trichloroethane	1390	ug/kg	E	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1,2,2-Tetrachloroethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1,2-Trichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1,2-Trichloroethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1-Dichloroethane	24.4	ug/kg	J	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1-Dichloroethene	207	ug/kg	DJ	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,1-Dichloroethene	485	ug/kg	E	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,2-Dichloroethane	30.0	ug/kg	J	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-17-L	11/8/99	8	8.5	1,2-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,2-Dichloropropane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	1,2-Dichloropropane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	2-Butanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	2-Butanone	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	2-Hexanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	2-Hexanone	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	4-Methyl-2-Pentanone	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Acetone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Acetone	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Benzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Benzene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	BromodiChloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	BromodiChloromethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Bromoform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Bromoform	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Bromomethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Bromomethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Carbon Disulfide	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Carbon Disulfide	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Carbon Tetrachloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Carbon Tetrachloride	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chlorobenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chlorobenzene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chloroethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chloroform	28.3	ug/kg	J	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chloroform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Chloromethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	cis-1,2-Dichloroethene	20.8	ug/kg	J	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	cis-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	cis-1,3-Dichloropropene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Dibromochloromethane	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Dibromochloromethane	1000	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-17-L	11/8/99	8	8.5	Ethylbenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Ethylbenzene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Methylene Chloride	22.3	ug/kg	BJ	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Methylene Chloride	119	ug/kg	DBJ	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Styrene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Styrene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-R	11/8/99	8	8.5	Technetium 99	1.1	pCi/g dry	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Tetrachloroethene	192	ug/kg	DJ	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Tetrachloroethene	112	ug/kg		480462.14	1350257.91
12612	12612-17-R	11/8/99	8	8.5	Thorium	3.00	ug/g dry		480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Toluene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Toluene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	trans-1,2-Dichloroethene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	trans-1,3-Dichloropropene	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Trichloroethene	2220	ug/kg	D	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Trichloroethene	2500	ug/kg	E	480462.14	1350257.91
12612	12612-17-R	11/8/99	8	8.5	Uranium, Total	68.5	ug/g dry		480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Vinyl Chloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Vinyl Chloride	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Xylenes (Total)	1000	ug/kg	U	480462.14	1350257.91
12612	12612-17-L	11/8/99	8	8.5	Xylenes (Total)	45.9	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1,1-Trichloroethane	949	ug/kg	DJ	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1,1-Trichloroethane	890	ug/kg	E	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1,2,2-Tetrachloroethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1,2-Trichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1,2-Trichloroethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1-Dichloroethane	15.9	ug/kg	J	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,1-Dichloroethene	217	ug/kg		480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,2-Dichloroethane	35.7	ug/kg	J	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,2-Dichloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,2-Dichloropropane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	1,2-Dichloropropane	46.7	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-19-L	11/8/99	9	9.5	2-Butanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	2-Butanone	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	2-Hexanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	2-Hexanone	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	4-Methyl-2-Pentanone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	4-Methyl-2-Pentanone	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Acetone	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Acetone	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Benzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Benzene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	BromodiChloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	BromodiChloromethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Bromoform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Bromoform	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Bromomethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Bromomethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Carbon Disulfide	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Carbon Disulfide	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Carbon Tetrachloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Carbon Tetrachloride	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chlorobenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chlorobenzene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chloroethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chloroethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chloroform	15.2	ug/kg	J	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chloroform	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Chloromethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	cis-1,2-Dichloroethene	10.3	ug/kg	J	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	cis-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	cis-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	cis-1,3-Dichloropropene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Dibromochloromethane	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Dibromochloromethane	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Ethylbenzene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Ethylbenzene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Methylene Chloride	23.2	ug/kg	BJ	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-19-L	11/8/99	9	9.5	Methylene Chloride	145	ug/kg	DBJ	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Styrene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Styrene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-R	11/8/99	9	9.5	Technetium 99	59	pCi/g dry		480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Tetrachloroethene	54.2	ug/kg	DJ	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Tetrachloroethene	27.7	ug/kg	J	480462.14	1350257.91
12612	12612-19-R	11/8/99	9	9.5	Thorium	5.28	ug/g dry		480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Toluene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Toluene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	trans-1,2-Dichloroethene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	trans-1,2-Dichloroethene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	trans-1,3-Dichloropropene	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	trans-1,3-Dichloropropene	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Trichloroethene	830	ug/kg	DJ	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Trichloroethene	1240	ug/kg	E	480462.14	1350257.91
12612	12612-19-R	11/8/99	9	9.5	Uranium, Total	48.5	ug/g dry		480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Vinyl Chloride	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Vinyl Chloride	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Xylenes (Total)	1000	ug/kg	U	480462.14	1350257.91
12612	12612-19-L	11/8/99	9	9.5	Xylenes (Total)	46.7	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,1,1-Trichloroethane	2.8	ug/kg	J	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,1,2-Trichloroethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,1-Dichloroethane	6.4	ug/kg	J	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,1-Dichloroethene	55.5	ug/kg		480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,2-Dichloroethane	52.9	ug/kg		480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	1,2-Dichloropropane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	2-Butanone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	2-Hexanone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	4-Methyl-2-Pentanone	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Acetone	10.0	ug/kg	J	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Benzene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	BromodiChloromethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Bromoform	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Bromomethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Carbon Disulfide	12.9	ug/kg	J	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Carbon Tetrachloride	49.5	ug/kg	U	480462.14	1350257.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12612	12612-22-L	11/8/99	10.5	11	Chlorobenzene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Chloroethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Chloroform	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Chloromethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	cis-1,2-Dichloroethene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	cis-1,3-Dichloropropene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Dibromochloromethane	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Ethylbenzene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Methylene Chloride	33.6	ug/kg	BJ	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Styrene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-R	11/8/99	10.5	11	Technetium 99	-0.20	pCi/g dry	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Tetrachloroethene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-R	11/8/99	10.5	11	Thorium	4.64	ug/g dry		480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Toluene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	trans-1,2-Dichloroethene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	trans-1,3-Dichloropropene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Trichloroethene	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-R	11/8/99	10.5	11	Uranium, Total	1.84	ug/g dry		480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Vinyl Chloride	49.5	ug/kg	U	480462.14	1350257.91
12612	12612-22-L	11/8/99	10.5	11	Xylenes (Total)	49.5	ug/kg	U	480462.14	1350257.91
12613	12613-1-L	11/5/99	0	0.5	1,1,1-Trichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	1,1,2-Trichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	1,1-Dichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	1,1-Dichloroethene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	1,2-Dichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	1,2-Dichloropropane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	2-Butanone	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	2-Hexanone	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	4-Methyl-2-Pentanone	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Acetone	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Benzene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	BromodiChloromethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Bromoform	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Bromomethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Carbon Disulfide	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Carbon Tetrachloride	50.0	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-1-L	11/5/99	0	0.5	Chlorobenzene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Chloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Chloroform	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Chloromethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	cis-1,2-Dichloroethene	4.8	ug/kg	J	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	cis-1,3-Dichloropropene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Dibromochloromethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Ethylbenzene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Methylene Chloride	23.2	ug/kg	BJ	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Styrene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-R	11/5/99	0	0.5	Technetium 99	0.88	pCi/g dry	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Tetrachloroethene	41.6	ug/kg	J	480490.06	1350215.42
12613	12613-1-R	11/5/99	0	0.5	Thorium	10.1	ug/g dry		480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Toluene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	trans-1,2-Dichloroethene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	trans-1,3-Dichloropropene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Trichloroethene	3.6	ug/kg	J	480490.06	1350215.42
12613	12613-1-R	11/5/99	0	0.5	Uranium, Total	349	ug/g dry		480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Vinyl Chloride	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-1-L	11/5/99	0	0.5	Xylenes (Total)	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1,1-Trichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1,1-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1,2-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1,2-Trichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1-Dichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,1-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,2-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,2-Dichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,2-Dichloropropane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	1,2-Dichloropropane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	2-Butanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	2-Butanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	2-Hexanone	5000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-3-L	11/5/99	1	1.5	2-Hexanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	4-Methyl-2-Pentanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	4-Methyl-2-Pentanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Acetone	27.6	ug/kg	J	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Acetone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Benzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Benzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	BromodiChloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	BromodiChloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Bromoform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Bromoform	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Bromomethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Bromomethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Carbon Disulfide	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Carbon Disulfide	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Carbon Tetrachloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Carbon Tetrachloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chlorobenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chlorobenzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chloroform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chloroform	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Chloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	cis-1,2-Dichloroethene	38.2	ug/kg	J	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	cis-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	cis-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	cis-1,3-Dichloropropene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Dibromochloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Dibromochloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Ethylbenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Ethylbenzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Methylene Chloride	21.0	ug/kg	BJ	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Methylene Chloride	974	ug/kg	DBJ	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Styrene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Styrene	48.5	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-3-R	11/5/99	1	1.5	Technetium 99	12	pCi/g dry		480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Tetrachloroethene	4780	ug/kg	DJ	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Tetrachloroethene	21100	ug/kg	E	480490.06	1350215.42
12613	12613-3-R	11/5/99	1	1.5	Thorium	12.6	ug/g dry		480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Toluene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Toluene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	trans-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	trans-1,2-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	trans-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	trans-1,3-Dichloropropene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Trichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Trichloroethene	94.4	ug/kg		480490.06	1350215.42
12613	12613-3-R	11/5/99	1	1.5	Uranium, Total	436	ug/g dry		480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Vinyl Chloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Vinyl Chloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Xylenes (Total)	5000	ug/kg	U	480490.06	1350215.42
12613	12613-3-L	11/5/99	1	1.5	Xylenes (Total)	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1,1-Trichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1,1-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1,2-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1,2-Trichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1-Dichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,1-Dichloroethene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,2-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,2-Dichloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,2-Dichloropropane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	1,2-Dichloropropane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	2-Butanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	2-Butanone	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	2-Hexanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	2-Hexanone	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	4-Methyl-2-Pentanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	4-Methyl-2-Pentanone	50.0	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-5-L	11/5/99	2	2.5	Acetone	22.3	ug/kg	J	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Acetone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Benzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Benzene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	BromodiChloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	BromodiChloromethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Bromoform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Bromoform	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Bromomethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Bromomethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Carbon Disulfide	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Carbon Disulfide	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Carbon Tetrachloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Carbon Tetrachloride	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chlorobenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chlorobenzene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chloroethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chloroform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chloroform	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Chloromethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	cis-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	cis-1,2-Dichloroethene	158	ug/kg		480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	cis-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	cis-1,3-Dichloropropene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Dibromochloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Dibromochloromethane	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Ethylbenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Ethylbenzene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Methylene Chloride	19.8	ug/kg	BJ	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Methylene Chloride	2030	ug/kg	DBJ	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Styrene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Styrene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-R	11/5/99	2	2.5	Technetium 99	0.96	pCi/g dry	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Tetrachloroethene	49400	ug/kg	D	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Tetrachloroethene	17900	ug/kg	E	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-5-R	11/5/99	2	2.5	Thorium	10.0	ug/g dry		480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Toluene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Toluene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	trans-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	trans-1,2-Dichloroethene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	trans-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	trans-1,3-Dichloropropene	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Trichloroethene	633	ug/kg	DJ	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Trichloroethene	349	ug/kg		480490.06	1350215.42
12613	12613-5-R	11/5/99	2	2.5	Uranium, Total	471	ug/g dry		480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Vinyl Chloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Vinyl Chloride	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Xylenes (Total)	5000	ug/kg	U	480490.06	1350215.42
12613	12613-5-L	11/5/99	2	2.5	Xylenes (Total)	50.0	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1,1-Trichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1,1-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1,2-Trichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1,2-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1-Dichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,1-Dichloroethene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,2-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,2-Dichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,2-Dichloropropane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	1,2-Dichloropropane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	2-Butanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	2-Butanone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	2-Hexanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	2-Hexanone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	4-Methyl-2-Pentanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	4-Methyl-2-Pentanone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Acetone	12.4	ug/kg	J	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Acetone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Benzene	5000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-7-L	11/5/99	3	3.5	Benzene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	BromodiChloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	BromodiChloromethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Bromoform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Bromoform	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Bromomethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Bromomethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Carbon Disulfide	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Carbon Disulfide	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Carbon Tetrachloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Carbon Tetrachloride	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chlorobenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chlorobenzene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chloroform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chloroform	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Chloromethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	cis-1,2-Dichloroethene	31.5	ug/kg	J	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	cis-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	cis-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	cis-1,3-Dichloropropene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Dibromochloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Dibromochloromethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Ethylbenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Ethylbenzene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Methylene Chloride	22.0	ug/kg	BJ	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Methylene Chloride	1100	ug/kg	DBJ	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Styrene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Styrene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-R	11/5/99	3	3.5	Technetium 99	4.8	pCi/g dry		480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Tetrachloroethene	12700	ug/kg	D	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Tetrachloroethene	17400	ug/kg	E	480490.06	1350215.42
12613	12613-7-R	11/5/99	3	3.5	Thorium	10.5	ug/g dry		480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Toluene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Toluene	47.6	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-7-L	11/5/99	3	3.5	trans-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	trans-1,2-Dichloroethene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	trans-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	trans-1,3-Dichloropropene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Trichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Trichloroethene	121	ug/kg		480490.06	1350215.42
12613	12613-7-R	11/5/99	3	3.5	Uranium, Total	489	ug/g dry		480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Vinyl Chloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Vinyl Chloride	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Xylenes (Total)	5000	ug/kg	U	480490.06	1350215.42
12613	12613-7-L	11/5/99	3	3.5	Xylenes (Total)	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1,1-Trichloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1,1-Trichloroethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1,2,2-Tetrachloroethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1,2,2-Tetrachloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1,2-Trichloroethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1,2-Trichloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1-Dichloroethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1-Dichloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1-Dichloroethene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,1-Dichloroethene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,2-Dichloroethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,2-Dichloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,2-Dichloropropane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	1,2-Dichloropropane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	2-Butanone	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	2-Butanone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	2-Hexanone	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	2-Hexanone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	4-Methyl-2-Pentanone	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	4-Methyl-2-Pentanone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Acetone	12.9	ug/kg	J	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Acetone	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Benzene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Benzene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	BromodiChloromethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	BromodiChloromethane	50.5	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-9-L	11/5/99	4	4.5	Bromoform	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Bromoform	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Bromomethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Bromomethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Carbon Disulfide	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Carbon Disulfide	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Carbon Tetrachloride	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Carbon Tetrachloride	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chlorobenzene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chlorobenzene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chloroethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chloroform	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chloroform	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chloromethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Chloromethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	cis-1,2-Dichloroethene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	cis-1,2-Dichloroethene	453	ug/kg		480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	cis-1,3-Dichloropropene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	cis-1,3-Dichloropropene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Dibromochloromethane	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Dibromochloromethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Ethylbenzene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Ethylbenzene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Methylene Chloride	20.5	ug/kg	BJ	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Methylene Chloride	5480	ug/kg	DBJ	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Styrene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Styrene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-R	11/5/99	4	4.5	Technetium 99	1.1	pCi/g dry	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Tetrachloroethene	143000	ug/kg	D	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Tetrachloroethene	36000	ug/kg	E	480490.06	1350215.42
12613	12613-9-R	11/5/99	4	4.5	Thorium	9.52	ug/g dry		480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Toluene	2.5	ug/kg	BJ	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Toluene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	trans-1,2-Dichloroethene	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	trans-1,2-Dichloroethene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	trans-1,3-Dichloropropene	25000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-9-L	11/5/99	4	4.5	trans-1,3-Dichloropropene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Trichloroethene	1280	ug/kg	DJ	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Trichloroethene	966	ug/kg	E	480490.06	1350215.42
12613	12613-9-R	11/5/99	4	4.5	Uranium, Total	1410	ug/g dry		480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Vinyl Chloride	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Vinyl Chloride	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Xylenes (Total)	25000	ug/kg	U	480490.06	1350215.42
12613	12613-9-L	11/5/99	4	4.5	Xylenes (Total)	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1,1-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1,1-Trichloroethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1,2-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1,2-Trichloroethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1-Dichloroethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,1-Dichloroethene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,2-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,2-Dichloroethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,2-Dichloropropane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	1,2-Dichloropropane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	2-Butanone	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	2-Butanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	2-Hexanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	2-Hexanone	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	4-Methyl-2-Pentanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	4-Methyl-2-Pentanone	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Acetone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Acetone	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Benzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Benzene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	BromodiChloromethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	BromodiChloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Bromoform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Bromoform	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Bromomethane	5000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-11-L	11/5/99	5	5.5	Bromomethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Carbon Disulfide	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Carbon Disulfide	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Carbon Tetrachloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Carbon Tetrachloride	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chlorobenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chlorobenzene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chloroethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chloroform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chloroform	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Chloromethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	cis-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	cis-1,2-Dichloroethene	320	ug/kg		480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	cis-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	cis-1,3-Dichloropropene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Dibromochloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Dibromochloromethane	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Ethylbenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Ethylbenzene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Methylene Chloride	696	ug/kg	DBJ	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Methylene Chloride	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Styrene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Styrene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-R	11/5/99	5	5.5	Technetium 99	13	pCi/g dry		480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Tetrachloroethene	18100	ug/kg	D	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Tetrachloroethene	26100	ug/kg	E	480490.06	1350215.42
12613	12613-11-R	11/5/99	5	5.5	Thorium	13.8	ug/g dry		480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Toluene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Toluene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	trans-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	trans-1,2-Dichloroethene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	trans-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	trans-1,3-Dichloropropene	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Trichloroethene	513	ug/kg	E	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Trichloroethene	5000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-11-R	11/5/99	5	5.5	Uranium, Total	1120	ug/g dry		480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Vinyl Chloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Vinyl Chloride	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Xylenes (Total)	5000	ug/kg	U	480490.06	1350215.42
12613	12613-11-L	11/5/99	5	5.5	Xylenes (Total)	48.1	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1,1-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1,1-Trichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1,2-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1,2-Trichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1-Dichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,1-Dichloroethene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,2-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,2-Dichloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,2-Dichloropropane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	1,2-Dichloropropane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	2-Butanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	2-Butanone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	2-Hexanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	2-Hexanone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	4-Methyl-2-Pentanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	4-Methyl-2-Pentanone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Acetone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Acetone	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Benzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Benzene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	BromodiChloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	BromodiChloromethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Bromoform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Bromoform	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Bromomethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Bromomethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Carbon Disulfide	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Carbon Disulfide	47.6	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-13-L	11/5/99	6	6.5	Carbon Tetrachloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Carbon Tetrachloride	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chlorobenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chlorobenzene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chloroethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chloroform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chloroform	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Chloromethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	cis-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	cis-1,2-Dichloroethene	210	ug/kg		480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	cis-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	cis-1,3-Dichloropropene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Dibromochloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Dibromochloromethane	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Ethylbenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Ethylbenzene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Methylene Chloride	565	ug/kg	DBJ	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Methylene Chloride	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Styrene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Styrene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-R	11/5/99	6	6.5	Technetium 99	19	pCi/g dry		480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Tetrachloroethene	20200	ug/kg	D	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Tetrachloroethene	30200	ug/kg	E	480490.06	1350215.42
12613	12613-13-R	11/5/99	6	6.5	Thorium	9.78	ug/g dry		480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Toluene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Toluene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	trans-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	trans-1,2-Dichloroethene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	trans-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	trans-1,3-Dichloropropene	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Trichloroethene	11100	ug/kg	D	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Trichloroethene	698	ug/kg	E	480490.06	1350215.42
12613	12613-13-R	11/5/99	6	6.5	Uranium, Total	659	ug/g dry		480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Vinyl Chloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Vinyl Chloride	47.6	ug/kg	U	480490.06	1350215.42

000256

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-13-L	11/5/99	6	6.5	Xylenes (Total)	5000	ug/kg	U	480490.06	1350215.42
12613	12613-13-L	11/5/99	6	6.5	Xylenes (Total)	47.6	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1,1-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1,1-Trichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1,2-Trichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1,2-Trichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1-Dichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,1-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,2-Dichloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,2-Dichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,2-Dichloropropane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	1,2-Dichloropropane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	2-Butanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	2-Butanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	2-Hexanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	2-Hexanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	4-Methyl-2-Pentanone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	4-Methyl-2-Pentanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Acetone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Acetone	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Benzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Benzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	BromodiChloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	BromodiChloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Bromoform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Bromoform	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Bromomethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Bromomethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Carbon Disulfide	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Carbon Disulfide	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Carbon Tetrachloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Carbon Tetrachloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chlorobenzene	5000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-16-L	11/5/99	7.5	8	Chlorobenzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chloroethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chloroform	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chloroform	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Chloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	cis-1,2-Dichloroethene	504	ug/kg	E	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	cis-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	cis-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	cis-1,3-Dichloropropene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Dibromochloromethane	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Dibromochloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Ethylbenzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Ethylbenzene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Methylene Chloride	758	ug/kg	DBJ	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Methylene Chloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Styrene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Styrene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-R	11/5/99	7.5	8	Technetium 99	3.5	pCi/g dry		480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Tetrachloroethene	49400	ug/kg	D	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Tetrachloroethene	28800	ug/kg	E	480490.06	1350215.42
12613	12613-16-R	11/5/99	7.5	8	Thorium	11.3	ug/g dry		480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Toluene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Toluene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	trans-1,2-Dichloroethene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	trans-1,2-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	trans-1,3-Dichloropropene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	trans-1,3-Dichloropropene	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Trichloroethene	550	ug/kg	DJ	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Trichloroethene	856	ug/kg	E	480490.06	1350215.42
12613	12613-16-R	11/5/99	7.5	8	Uranium, Total	367	ug/g dry		480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Vinyl Chloride	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Vinyl Chloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Xylenes (Total)	5000	ug/kg	U	480490.06	1350215.42
12613	12613-16-L	11/5/99	7.5	8	Xylenes (Total)	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1,1-Trichloroethane	2300	ug/kg	D	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-18-L	11/5/99	8.5	9	1,1,1-Trichloroethane	727	ug/kg	E	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1,2,2-Tetrachloroethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1,2-Trichloroethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1,2-Trichloroethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1-Dichloroethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1-Dichloroethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1-Dichloroethene	107	ug/kg	DJ	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,1-Dichloroethene	109	ug/kg		480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,2-Dichloroethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,2-Dichloroethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,2-Dichloropropane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	1,2-Dichloropropane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	2-Butanone	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	2-Butanone	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	2-Hexanone	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	2-Hexanone	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	4-Methyl-2-Pentanone	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	4-Methyl-2-Pentanone	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Acetone	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Acetone	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Benzene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Benzene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	BromodiChloromethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	BromodiChloromethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Bromoform	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Bromoform	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Bromomethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Bromomethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Carbon Disulfide	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Carbon Disulfide	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Carbon Tetrachloride	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Carbon Tetrachloride	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chlorobenzene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chlorobenzene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chloroethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chloroethane	1000	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-18-L	11/5/99	8.5	9	Chloroform	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chloroform	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chloromethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Chloromethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	cis-1,2-Dichloroethene	546	ug/kg	DJ	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	cis-1,2-Dichloroethene	586	ug/kg	E	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	cis-1,3-Dichloropropene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	cis-1,3-Dichloropropene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Dibromochloromethane	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Dibromochloromethane	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Ethylbenzene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Ethylbenzene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Methylene Chloride	188	ug/kg	DBJ	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Methylene Chloride	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Styrene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Styrene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-R	11/5/99	8.5	9	Technetium 99	0.16	pCi/g dry	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Tetrachloroethene	9670	ug/kg	D	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Tetrachloroethene	4460	ug/kg	E	480490.06	1350215.42
12613	12613-18-R	11/5/99	8.5	9	Thorium	4.69	ug/g dry		480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Toluene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Toluene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	trans-1,2-Dichloroethene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	trans-1,2-Dichloroethene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	trans-1,3-Dichloropropene	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	trans-1,3-Dichloropropene	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Trichloroethene	2180	ug/kg	D	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Trichloroethene	1470	ug/kg	E	480490.06	1350215.42
12613	12613-18-R	11/5/99	8.5	9	Uranium, Total	56.4	ug/g dry		480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Vinyl Chloride	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Vinyl Chloride	1000	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Xylenes (Total)	46.7	ug/kg	U	480490.06	1350215.42
12613	12613-18-L	11/5/99	8.5	9	Xylenes (Total)	1000	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	1,1,1-Trichloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	1,1,2,2-Tetrachloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	1,1,2-Trichloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	1,1-Dichloroethane	11.6	ug/kg	J	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-20-L	11/5/99	9.5	10	1,1-Dichloroethene	25.8	ug/kg	J	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	1,2-Dichloroethane	36.2	ug/kg	J	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	1,2-Dichloropropane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	2-Butanone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	2-Hexanone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	4-Methyl-2-Pentanone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Acetone	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Benzene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	BromodiChloromethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Bromoform	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Bromomethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Carbon Disulfide	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Carbon Tetrachloride	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Chlorobenzene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Chloroethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Chloroform	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Chloromethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	cis-1,2-Dichloroethene	46.3	ug/kg	J	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	cis-1,3-Dichloropropene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Dibromochloromethane	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Ethylbenzene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Methylene Chloride	23.4	ug/kg	BJ	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Styrene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-R	11/5/99	9.5	10	Technetium 99	-0.12	pCi/g dry	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Tetrachloroethene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-R	11/5/99	9.5	10	Thorium	3.78	ug/g dry		480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Toluene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	trans-1,2-Dichloroethene	4.4	ug/kg	J	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	trans-1,3-Dichloropropene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Trichloroethene	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-R	11/5/99	9.5	10	Uranium, Total	2.47	ug/g dry		480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Vinyl Chloride	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-20-L	11/5/99	9.5	10	Xylenes (Total)	50.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	1,1,1-Trichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	1,1,2-Trichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	1,1-Dichloroethane	48.5	ug/kg	U	480490.06	1350215.42

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12613	12613-22-L	11/5/99	10.5	11	1,1-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	1,2-Dichloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	1,2-Dichloropropane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	2-Butanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	2-Hexanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	4-Methyl-2-Pentanone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Acetone	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Benzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	BromodiChloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Bromoform	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Bromomethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Carbon Disulfide	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Carbon Tetrachloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Chlorobenzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Chloroethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Chloroform	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Chloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	cis-1,2-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	cis-1,3-Dichloropropene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Dibromochloromethane	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Ethylbenzene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Methylene Chloride	14.2	ug/kg	BJ	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Styrene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-R	11/5/99	10.5	11	Technetium 99	-0.17	pCi/g dry	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Tetrachloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-R	11/5/99	10.5	11	Thorium	3.57	ug/g dry		480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Toluene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	trans-1,2-Dichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	trans-1,3-Dichloropropene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Trichloroethene	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-R	11/5/99	10.5	11	Uranium, Total	1.45	ug/g dry		480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Vinyl Chloride	48.5	ug/kg	U	480490.06	1350215.42
12613	12613-22-L	11/5/99	10.5	11	Xylenes (Total)	48.5	ug/kg	U	480490.06	1350215.42
12620	12620-1-R	11/22/99	0	0.5	Beryllium	1.18	ug/g dry		481707.3	1349609.39
12620	12620-1-R	11/22/99	0	0.5	Thorium	7.28	ug/g dry		481707.3	1349609.39
12620	12620-1-R	11/22/99	0	0.5	Uranium, Total	59.7	ug/g dry		481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	1,1,1-Trichloroethane	49.0	ug/kg	U	481707.3	1349609.39

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12620	12620-2-L	11/22/99	0.5	1	1,1,2,2-Tetrachloroethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	1,1,2-Trichloroethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	1,1-Dichloroethane	6.8	ug/kg	J	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	1,1-Dichloroethene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	1,2-Dichloroethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	1,2-Dichloropropane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	2-Butanone	21.9	ug/kg	J	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	2-Hexanone	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	4-Methyl-2-Pentanone	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Acetone	17.6	ug/kg	J	481707.3	1349609.39
12620	12620-2-P	11/23/99	0.5	1	Aroclor 1254	33	ug/kg	U	481707.3	1349609.39
12620	12620-2-P	11/23/99	0.5	1	Aroclor 1260	33	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Benzene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	BromodiChloromethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Bromoform	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Bromomethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Carbon Disulfide	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Carbon Tetrachloride	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Chlorobenzene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Chloroethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Chloroform	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Chloromethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	cis-1,2-Dichloroethene	15.8	ug/kg	J	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	cis-1,3-Dichloropropene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Dibromochloromethane	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Ethylbenzene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Methylene Chloride	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Styrene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Tetrachloroethene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Toluene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	trans-1,2-Dichloroethene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	trans-1,3-Dichloropropene	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Trichloroethene	7.0	ug/kg	J	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Vinyl Chloride	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-2-L	11/22/99	0.5	1	Xylenes (Total)	49.0	ug/kg	U	481707.3	1349609.39
12620	12620-7-R	11/22/99	3	3.5	Beryllium	1.38	ug/g dry		481707.3	1349609.39
12620	12620-7-R	11/22/99	3	3.5	Thorium	9.74	ug/g dry		481707.3	1349609.39

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12620	12620-7-R	11/22/99	3	3.5	Uranium, Total	3.01	ug/g dry		481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,1,1-Trichloroethane	63.7	ug/kg		481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,1,2-Trichloroethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,1-Dichloroethane	32.9	ug/kg	J	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,1-Dichloroethene	3.0	ug/kg	J	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,2-Dichloroethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	1,2-Dichloropropane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	2-Butanone	21.8	ug/kg	J	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	2-Hexanone	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	4-Methyl-2-Pentanone	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Acetone	20.2	ug/kg	J	481707.3	1349609.39
12620	12620-8-P	11/23/99	3.5	4	Aroclor 1254	32	ug/kg	U	481707.3	1349609.39
12620	12620-8-P	11/23/99	3.5	4	Aroclor 1260	32	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Benzene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	BromodiChloromethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Bromoform	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Bromomethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Carbon Disulfide	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Carbon Tetrachloride	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Chlorobenzene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Chloroethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Chloroform	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Chloromethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	cis-1,2-Dichloroethene	45.4	ug/kg	J	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	cis-1,3-Dichloropropene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Dibromochloromethane	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Ethylbenzene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Methylene Chloride	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Styrene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Tetrachloroethene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Toluene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	trans-1,2-Dichloroethene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	trans-1,3-Dichloropropene	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Trichloroethene	5.8	ug/kg	J	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Vinyl Chloride	49.5	ug/kg	U	481707.3	1349609.39
12620	12620-8-L	11/22/99	3.5	4	Xylenes (Total)	49.5	ug/kg	U	481707.3	1349609.39

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12620	12620-13-R	11/22/99	6	6.5	Beryllium	0.710	ug/g dry		481707.3	1349609.39
12620	12620-13-R	11/22/99	6	6.5	Thorium	5.79	ug/g dry		481707.3	1349609.39
12620	12620-13-R	11/22/99	6	6.5	Uranium, Total	1.36	ug/g dry		481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,1,1-Trichloroethane	665	ug/kg	E	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,1,2,2-Tetrachloroethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,1,2-Trichloroethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,1-Dichloroethane	110	ug/kg		481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,1-Dichloroethene	103	ug/kg		481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,2-Dichloroethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	1,2-Dichloropropane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	2-Butanone	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	2-Hexanone	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	4-Methyl-2-Pentanone	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Acetone	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-P	11/23/99	6.5	7	Aroclor 1254	33	ug/kg	U	481707.3	1349609.39
12620	12620-14-P	11/23/99	6.5	7	Aroclor 1260	33	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Benzene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	BromodiChloromethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Bromoform	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Bromomethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Carbon Disulfide	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Carbon Tetrachloride	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Chlorobenzene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Chloroethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Chloroform	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Chloromethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	cis-1,2-Dichloroethene	395	ug/kg		481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	cis-1,3-Dichloropropene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Dibromochloromethane	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Ethylbenzene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Methylene Chloride	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Styrene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Tetrachloroethene	6.4	ug/kg	J	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Toluene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	trans-1,2-Dichloroethene	7.8	ug/kg	J	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	trans-1,3-Dichloropropene	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Trichloroethene	266	ug/kg		481707.3	1349609.39

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12620	12620-14-L	11/22/99	6.5	7	Vinyl Chloride	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-14-L	11/22/99	6.5	7	Xylenes (Total)	46.7	ug/kg	U	481707.3	1349609.39
12620	12620-19-R	11/22/99	9	9.5	Beryllium	0.499	ug/g dry		481707.3	1349609.39
12620	12620-19-R	11/22/99	9	9.5	Thorium	4.48	ug/g dry		481707.3	1349609.39
12620	12620-19-R	11/22/99	9	9.5	Uranium, Total	1.26	ug/g dry		481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,1,1-Trichloroethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,1,2-Trichloroethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,1-Dichloroethane	6.0	ug/kg	J	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,1-Dichloroethene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,2-Dichloroethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	1,2-Dichloropropane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	2-Butanone	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	2-Hexanone	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	4-Methyl-2-Pentanone	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Acetone	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-P	11/23/99	9.5	10	Aroclor 1254	32	ug/kg	U	481707.3	1349609.39
12620	12620-20-P	11/23/99	9.5	10	Aroclor 1260	32	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Benzene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	BromodiChloromethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Bromoform	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Bromomethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Carbon Disulfide	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Carbon Tetrachloride	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Chlorobenzene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Chloroethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Chloroform	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Chloromethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	cis-1,2-Dichloroethene	3.3	ug/kg	J	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	cis-1,3-Dichloropropene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Dibromochloromethane	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Ethylbenzene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Methylene Chloride	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Styrene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Tetrachloroethene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Toluene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	trans-1,2-Dichloroethene	48.5	ug/kg	U	481707.3	1349609.39

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12620	12620-20-L	11/22/99	9.5	10	trans-1,3-Dichloropropene	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Trichloroethene	2.6	ug/kg	J	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Vinyl Chloride	48.5	ug/kg	U	481707.3	1349609.39
12620	12620-20-L	11/22/99	9.5	10	Xylenes (Total)	48.5	ug/kg	U	481707.3	1349609.39
12621	12621-1-R	11/22/99	0	0.5	Beryllium	1.17	ug/g dry		481706.92	1349630.12
12621	12621-1-R	11/22/99	0	0.5	Thorium	7.09	ug/g dry		481706.92	1349630.12
12621	12621-1-R	11/22/99	0	0.5	Uranium, Total	147	ug/g dry		481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,1,1-Trichloroethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,1,2-Trichloroethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,1-Dichloroethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,1-Dichloroethene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,2-Dichloroethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	1,2-Dichloropropane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	2-Butanone	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	2-Hexanone	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	4-Methyl-2-Pentanone	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Acetone	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-P	11/23/99	0.5	1	Aroclor 1254	32	ug/kg	U	481706.92	1349630.12
12621	12621-2-P	11/23/99	0.5	1	Aroclor 1260	32	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Benzene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	BromodiChloromethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Bromoform	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Bromomethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Carbon Disulfide	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Carbon Tetrachloride	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Chlorobenzene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Chloroethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Chloroform	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Chloromethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	cis-1,2-Dichloroethene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	cis-1,3-Dichloropropene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Dibromochloromethane	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Ethylbenzene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Methylene Chloride	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Styrene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Tetrachloroethene	48.1	ug/kg	U	481706.92	1349630.12

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12621	12621-2-L	11/22/99	0.5	1	Toluene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	trans-1,2-Dichloroethene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	trans-1,3-Dichloropropene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Trichloroethene	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Vinyl Chloride	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-2-L	11/22/99	0.5	1	Xylenes (Total)	48.1	ug/kg	U	481706.92	1349630.12
12621	12621-7-R	11/22/99	3	3.5	Beryllium	1.28	ug/g dry		481706.92	1349630.12
12621	12621-7-R	11/22/99	3	3.5	Thorium	9.48	ug/g dry		481706.92	1349630.12
12621	12621-7-R	11/22/99	3	3.5	Uranium, Total	13.9	ug/g dry		481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,1,1-Trichloroethane	19.4	ug/kg	J	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,1,2-Trichloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,1-Dichloroethane	19.2	ug/kg	J	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,1-Dichloroethene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,2-Dichloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	1,2-Dichloropropane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	2-Butanone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	2-Hexanone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	4-Methyl-2-Pentanone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Acetone	21.6	ug/kg	J	481706.92	1349630.12
12621	12621-8-P	11/23/99	3.5	4	Aroclor 1254	33	ug/kg	U	481706.92	1349630.12
12621	12621-8-P	11/23/99	3.5	4	Aroclor 1260	33	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Benzene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	BromodiChloromethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Bromoform	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Bromomethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Carbon Disulfide	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Carbon Tetrachloride	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Chlorobenzene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Chloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Chloroform	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Chloromethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	cis-1,2-Dichloroethene	7.7	ug/kg	J	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	cis-1,3-Dichloropropene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Dibromochloromethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Ethylbenzene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Methylene Chloride	48.5	ug/kg	U	481706.92	1349630.12

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12621	12621-8-L	11/22/99	3.5	4	Styrene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Tetrachloroethene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Toluene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	trans-1,2-Dichloroethene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	trans-1,3-Dichloropropene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Trichloroethene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Vinyl Chloride	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-8-L	11/22/99	3.5	4	Xylenes (Total)	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-13-R	11/22/99	6	6.5	Beryllium	1.37	ug/g dry		481706.92	1349630.12
12621	12621-13-R	11/22/99	6	6.5	Thorium	8.90	ug/g dry		481706.92	1349630.12
12621	12621-13-R	11/22/99	6	6.5	Uranium, Total	1.64	ug/g dry		481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,1,1-Trichloroethane	356	ug/kg		481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,1,2-Trichloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,1-Dichloroethane	103	ug/kg		481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,1-Dichloroethene	74.7	ug/kg		481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,2-Dichloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	1,2-Dichloropropane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	2-Butanone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	2-Hexanone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	4-Methyl-2-Pentanone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Acetone	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-P	11/23/99	6.5	7	Aroclor 1254	33	ug/kg	U	481706.92	1349630.12
12621	12621-14-P	11/23/99	6.5	7	Aroclor 1260	33	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Benzene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	BromodiChloromethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Bromoform	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Bromomethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Carbon Disulfide	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Carbon Tetrachloride	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Chlorobenzene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Chloroethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Chloroform	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Chloromethane	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	cis-1,2-Dichloroethene	319	ug/kg		481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	cis-1,3-Dichloropropene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Dibromochloromethane	48.5	ug/kg	U	481706.92	1349630.12

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12621	12621-14-L	11/22/99	6.5	7	Ethylbenzene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Methylene Chloride	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Styrene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Tetrachloroethene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Toluene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	trans-1,2-Dichloroethene	9.2	ug/kg	J	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	trans-1,3-Dichloropropene	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Trichloroethene	88.5	ug/kg		481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Vinyl Chloride	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-14-L	11/22/99	6.5	7	Xylenes (Total)	48.5	ug/kg	U	481706.92	1349630.12
12621	12621-19-R	11/22/99	9	9.5	Beryllium	0.485	ug/g dry		481706.92	1349630.12
12621	12621-19-R	11/22/99	9	9.5	Thorium	4.75	ug/g dry		481706.92	1349630.12
12621	12621-19-R	11/22/99	9	9.5	Uranium, Total	1.23	ug/g dry		481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,1,1-Trichloroethane	117	ug/kg		481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,1-Dichloroethane	121	ug/kg		481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,1-Dichloroethene	51.4	ug/kg		481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	2-Butanone	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Acetone	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-P	11/23/99	9.5	10	Aroclor 1254	33	ug/kg	U	481706.92	1349630.12
12621	12621-20-P	11/23/99	9.5	10	Aroclor 1260	33	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Benzene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Bromoform	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Bromomethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Chloroethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Chloroform	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Chloromethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	cis-1,2-Dichloroethene	149	ug/kg		481706.92	1349630.12

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12621	12621-20-L	11/22/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Methylene Chloride	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Styrene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Toluene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	trans-1,2-Dichloroethene	7.4	ug/kg	J	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Trichloroethene	24.0	ug/kg	J	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481706.92	1349630.12
12621	12621-20-L	11/22/99	9.5	10	Xylenes (Total)	50.0	ug/kg	U	481706.92	1349630.12
12622	12622-1-R	11/23/99	0	0.5	Beryllium	0.375	ug/g dry		481705.83	1349649.81
12622	12622-1-R	11/23/99	0	0.5	Thorium	3.69	ug/g dry		481705.83	1349649.81
12622	12622-1-R	11/23/99	0	0.5	Uranium, Total	54.7	ug/g dry		481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,1,1-Trichloroethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,1,2,2-Tetrachloroethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,1,2-Trichloroethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,1-Dichloroethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,1-Dichloroethene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,2-Dichloroethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	1,2-Dichloropropane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	2-Butanone	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	2-Hexanone	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	4-Methyl-2-Pentanone	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Acetone	12.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-P	11/23/99	0.5	1	Aroclor 1254	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-2-P	11/23/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Benzene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	BromodiChloromethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Bromoform	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Bromomethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Carbon Disulfide	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Carbon Tetrachloride	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Chlorobenzene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Chloroethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Chloroform	52.1	ug/kg	U	481705.83	1349649.81

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12622	12622-2-L	11/23/99	0.5	1	Chloromethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	cis-1,2-Dichloroethene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	cis-1,3-Dichloropropene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Dibromochloromethane	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Ethylbenzene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Methylene Chloride	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Styrene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Tetrachloroethene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Toluene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	trans-1,2-Dichloroethene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	trans-1,3-Dichloropropene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Trichloroethene	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Vinyl Chloride	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-2-L	11/23/99	0.5	1	Xylenes (Total)	52.1	ug/kg	U	481705.83	1349649.81
12622	12622-7-R	11/23/99	3	3.5	Beryllium	1.34	ug/g dry		481705.83	1349649.81
12622	12622-7-R	11/23/99	3	3.5	Thorium	9.06	ug/g dry		481705.83	1349649.81
12622	12622-7-R	11/23/99	3	3.5	Uranium, Total	2.93	ug/g dry		481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,1,1-Trichloroethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,1,2-Trichloroethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,1-Dichloroethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,1-Dichloroethene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,2-Dichloroethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	1,2-Dichloropropane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	2-Butanone	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	2-Hexanone	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	4-Methyl-2-Pentanone	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Acetone	23.6	ug/kg	U	481705.83	1349649.81
12622	12622-8-P	11/23/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-P	11/23/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Benzene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	BromodiChloromethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Bromoform	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Bromomethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Carbon Disulfide	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Carbon Tetrachloride	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Chlorobenzene	50.0	ug/kg	U	481705.83	1349649.81

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12622	12622-8-L	11/23/99	3.5	4	Chloroethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Chloroform	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Chloromethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	cis-1,2-Dichloroethene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	cis-1,3-Dichloropropene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Dibromochloromethane	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Ethylbenzene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Methylene Chloride	16.1	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Styrene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Tetrachloroethene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Toluene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	trans-1,2-Dichloroethene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	trans-1,3-Dichloropropene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Trichloroethene	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Vinyl Chloride	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-8-L	11/23/99	3.5	4	Xylenes (Total)	50.0	ug/kg	U	481705.83	1349649.81
12622	12622-13-R	11/23/99	6	6.5	Beryllium	0.642	ug/g dry		481705.83	1349649.81
12622	12622-13-R	11/23/99	6	6.5	Thorium	4.62	ug/g dry		481705.83	1349649.81
12622	12622-13-R	11/23/99	6	6.5	Uranium, Total	1.50	ug/g dry		481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,1,1-Trichloroethane	17.6	ug/kg	J	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,1,2,2-Tetrachloroethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,1,2-Trichloroethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,1-Dichloroethane	8.7	ug/kg	J	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,1-Dichloroethene	2.6	ug/kg	J	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,2-Dichloroethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	1,2-Dichloropropane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	2-Butanone	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	2-Hexanone	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	4-Methyl-2-Pentanone	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Acetone	6.6	ug/kg	U	481705.83	1349649.81
12622	12622-14-P	11/23/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-14-P	11/23/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Benzene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	BromodiChloromethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Bromoform	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Bromomethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Carbon Disulfide	42.7	ug/kg	U	481705.83	1349649.81

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12622	12622-14-L	11/23/99	6.5	7	Carbon Tetrachloride	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Chlorobenzene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Chloroethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Chloroform	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Chloromethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	cis-1,2-Dichloroethene	12.1	ug/kg	J	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	cis-1,3-Dichloropropene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Dibromochloromethane	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Ethylbenzene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Methylene Chloride	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Styrene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Tetrachloroethene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Toluene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	trans-1,2-Dichloroethene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	trans-1,3-Dichloropropene	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Trichloroethene	8.2	ug/kg	J	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Vinyl Chloride	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-14-L	11/23/99	6.5	7	Xylenes (Total)	42.7	ug/kg	U	481705.83	1349649.81
12622	12622-19-R	11/23/99	9	9.5	Beryllium	0.511	ug/g dry		481705.83	1349649.81
12622	12622-19-R	11/23/99	9	9.5	Thorium	4.43	ug/g dry		481705.83	1349649.81
12622	12622-19-R	11/23/99	9	9.5	Uranium, Total	1.44	ug/g dry		481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,1,1-Trichloroethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,1,2,2-Tetrachloroethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,1,2-Trichloroethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,1-Dichloroethane	9.0	ug/kg	J	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,1-Dichloroethene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,2-Dichloroethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	1,2-Dichloropropane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	2-Butanone	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	2-Hexanone	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	4-Methyl-2-Pentanone	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Acetone	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-P	11/23/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-P	11/23/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Benzene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	BromodiChloromethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Bromoform	51.0	ug/kg	U	481705.83	1349649.81

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12622	12622-20-L	11/23/99	9.5	10	Bromomethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Carbon Disulfide	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Carbon Tetrachloride	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Chlorobenzene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Chloroethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Chloroform	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Chloromethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	cis-1,2-Dichloroethene	7.1	ug/kg	J	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	cis-1,3-Dichloropropene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Dibromochloromethane	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Ethylbenzene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Methylene Chloride	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Styrene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Tetrachloroethene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Toluene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	trans-1,2-Dichloroethene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	trans-1,3-Dichloropropene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Trichloroethene	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Vinyl Chloride	51.0	ug/kg	U	481705.83	1349649.81
12622	12622-20-L	11/23/99	9.5	10	Xylenes (Total)	51.0	ug/kg	U	481705.83	1349649.81
12623	12623-1-R	11/23/99	0	0.5	Beryllium	0.332	ug/g dry	U	481705.95	1349667.78
12623	12623-1-R	11/23/99	0	0.5	Thorium	1.85	ug/g dry		481705.95	1349667.78
12623	12623-1-R	11/23/99	0	0.5	Uranium, Total	53.5	ug/g dry		481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,1,1-Trichloroethane	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,1,2-Trichloroethane	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,1-Dichloroethane	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,1-Dichloroethene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,2-Dichloroethane	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	1,2-Dichloropropane	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	2-Butanone	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	2-Hexanone	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	4-Methyl-2-Pentanone	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Acetone	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-P	11/23/99	0.5	1	Aroclor 1254	51.0	ug/kg	-	481705.95	1349667.78
12623	12623-2-P	11/23/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Benzene	45.4	ug/kg	UJ	481705.95	1349667.78

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12623	12623-2-L	11/23/99	0.5	1	BromodiChloromethane	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Bromoform	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Bromomethane	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Carbon Disulfide	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Carbon Tetrachloride	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Chlorobenzene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Chloroethane	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Chloroform	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Chloromethane	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	cis-1,2-Dichloroethene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	cis-1,3-Dichloropropene	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Dibromochloromethane	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Ethylbenzene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Methylene Chloride	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Styrene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Tetrachloroethene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Toluene	3.8	ug/kg	J	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	trans-1,2-Dichloroethene	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	trans-1,3-Dichloropropene	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Trichloroethene	45.4	ug/kg	UJ	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Vinyl Chloride	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-2-L	11/23/99	0.5	1	Xylenes (Total)	45.4	ug/kg	U	481705.95	1349667.78
12623	12623-7-R	11/23/99	3	3.5	Beryllium	1.21	ug/g dry		481705.95	1349667.78
12623	12623-7-R	11/23/99	3	3.5	Thorium	8.64	ug/g dry		481705.95	1349667.78
12623	12623-7-R	11/23/99	3	3.5	Uranium, Total	2.24	ug/g dry		481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,1,1-Trichloroethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,1,2,2-Tetrachloroethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,1,2-Trichloroethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,1-Dichloroethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,1-Dichloroethene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,2-Dichloroethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	1,2-Dichloropropane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	2-Butanone	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	2-Hexanone	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	4-Methyl-2-Pentanone	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Acetone	12.6	ug/kg	U	481705.95	1349667.78
12623	12623-8-P	11/23/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481705.95	1349667.78

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12623	12623-8-P	11/23/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Benzene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	BromodiChloromethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Bromoform	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Bromomethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Carbon Disulfide	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Carbon Tetrachloride	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Chlorobenzene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Chloroethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Chloroform	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Chloromethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	cis-1,2-Dichloroethene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	cis-1,3-Dichloropropene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Dibromochloromethane	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Ethylbenzene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Methylene Chloride	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Styrene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Tetrachloroethene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Toluene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	trans-1,2-Dichloroethene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	trans-1,3-Dichloropropene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Trichloroethene	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Vinyl Chloride	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-8-L	11/23/99	3.5	4	Xylenes (Total)	46.3	ug/kg	U	481705.95	1349667.78
12623	12623-13-R	11/23/99	6	6.5	Beryllium	1.49	ug/g dry		481705.95	1349667.78
12623	12623-13-R	11/23/99	6	6.5	Thorium	8.83	ug/g dry		481705.95	1349667.78
12623	12623-13-R	11/23/99	6	6.5	Uranium, Total	5.71	ug/g dry		481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,1,1-Trichloroethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,1,2,2-Tetrachloroethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,1,2-Trichloroethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,1-Dichloroethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,1-Dichloroethene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,2-Dichloroethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	1,2-Dichloropropane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	2-Butanone	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	2-Hexanone	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	4-Methyl-2-Pentanone	52.1	ug/kg	U	481705.95	1349667.78

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12623	12623-14-L	11/23/99	6.5	7	Acetone	16.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-P	11/23/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481705.95	1349667.78
12623	12623-14-P	11/23/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Benzene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	BromodiChloromethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Bromoform	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Bromomethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Carbon Disulfide	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Carbon Tetrachloride	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Chlorobenzene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Chloroethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Chloroform	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Chloromethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	cis-1,2-Dichloroethene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	cis-1,3-Dichloropropene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Dibromochloromethane	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Ethylbenzene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Methylene Chloride	20.3	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Styrene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Tetrachloroethene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Toluene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	trans-1,2-Dichloroethene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	trans-1,3-Dichloropropene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Trichloroethene	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Vinyl Chloride	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-14-L	11/23/99	6.5	7	Xylenes (Total)	52.1	ug/kg	U	481705.95	1349667.78
12623	12623-19-R	11/23/99	9	9.5	Beryllium	0.710	ug/g dry		481705.95	1349667.78
12623	12623-19-R	11/23/99	9	9.5	Thorium	5.32	ug/g dry		481705.95	1349667.78
12623	12623-19-R	11/23/99	9	9.5	Uranium, Total	1.48	ug/g dry		481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,1,1-Trichloroethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,1,2,2-Tetrachloroethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,1,2-Trichloroethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,1-Dichloroethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,1-Dichloroethene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,2-Dichloroethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	1,2-Dichloropropane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	2-Butanone	51.0	ug/kg	U	481705.95	1349667.78

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12623	12623-20-L	11/23/99	9.5	10	2-Hexanone	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	4-Methyl-2-Pentanone	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Acetone	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-P	11/23/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-P	11/23/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Benzene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	BromodiChloromethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Bromoform	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Bromomethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Carbon Disulfide	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Carbon Tetrachloride	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Chlorobenzene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Chloroethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Chloroform	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Chloromethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	cis-1,2-Dichloroethene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	cis-1,3-Dichloropropene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Dibromochloromethane	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Ethylbenzene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Methylene Chloride	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Styrene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Tetrachloroethene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Toluene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	trans-1,2-Dichloroethene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	trans-1,3-Dichloropropene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Trichloroethene	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Vinyl Chloride	51.0	ug/kg	U	481705.95	1349667.78
12623	12623-20-L	11/23/99	9.5	10	Xylenes (Total)	51.0	ug/kg	U	481705.95	1349667.78
12624	12624-1-R	11/29/99	0	0.5	Beryllium	1.04	ug/g dry		481683.59	1349589.34
12624	12624-1-R	11/29/99	0	0.5	Thorium	9.43	ug/g dry		481683.59	1349589.34
12624	12624-1-R	11/29/99	0	0.5	Uranium, Total	199	ug/g dry		481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	1,1,1-Trichloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	1,1,2-Trichloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	1,1-Dichloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	1,1-Dichloroethene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	1,2-Dichloroethane	45.4	ug/kg	U	481683.59	1349589.34

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12624	12624-2-L	11/29/99	0.5	1	1,2-Dichloropropane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	2-Butanone	12.5	ug/kg	J	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	2-Hexanone	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	4-Methyl-2-Pentanone	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Acetone	68.5	ug/kg	B	481683.59	1349589.34
12624	12624-2-P	11/29/99	0.5	1	Aroclor 1254	33.0	ug/kg	UJ	481683.59	1349589.34
12624	12624-2-P	11/29/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Benzene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	BromodiChloromethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Bromoform	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Bromomethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Carbon Disulfide	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Carbon Tetrachloride	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Chlorobenzene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Chloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Chloroform	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Chloromethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	cis-1,2-Dichloroethene	6.4	ug/kg	J	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	cis-1,3-Dichloropropene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Dibromochloromethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Ethylbenzene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Methylene Chloride	2.7	ug/kg	JB	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Styrene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Tetrachloroethene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Toluene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	trans-1,2-Dichloroethene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	trans-1,3-Dichloropropene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Trichloroethene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Vinyl Chloride	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-2-L	11/29/99	0.5	1	Xylenes (Total)	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-7-R	11/29/99	3	3.5	Beryllium	1.29	ug/g dry		481683.59	1349589.34
12624	12624-7-R	11/29/99	3	3.5	Thorium	11.7	ug/g dry		481683.59	1349589.34
12624	12624-7-R	11/29/99	3	3.5	Uranium, Total	2.19	ug/g dry		481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	1,1,1-Trichloroethane	12.8	ug/kg	J	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	1,1,2-Trichloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	1,1-Dichloroethane	20.7	ug/kg	J	481683.59	1349589.34

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12624	12624-8-L	11/29/99	3.5	4	1,1-Dichloroethene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	1,2-Dichloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	1,2-Dichloropropane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	2-Butanone	5.8	ug/kg	J	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	2-Hexanone	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	4-Methyl-2-Pentanone	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Acetone	33.9	ug/kg	JB	481683.59	1349589.34
12624	12624-8-P	11/29/99	3.5	4	Aroclor 1254	33.0	ug/kg	UJ	481683.59	1349589.34
12624	12624-8-P	11/29/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Benzene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	BromodiChloromethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Bromoform	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Bromomethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Carbon Disulfide	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Carbon Tetrachloride	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Chlorobenzene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Chloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Chloroform	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Chloromethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	cis-1,2-Dichloroethene	38.0	ug/kg	J	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	cis-1,3-Dichloropropene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Dibromochloromethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Ethylbenzene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Methylene Chloride	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Styrene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Tetrachloroethene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Toluene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	trans-1,2-Dichloroethene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	trans-1,3-Dichloropropene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Trichloroethene	26.0	ug/kg	J	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Vinyl Chloride	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-8-L	11/29/99	3.5	4	Xylenes (Total)	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-13-R	11/29/99	6	6.5	Beryllium	1.39	ug/g dry		481683.59	1349589.34
12624	12624-13-R	11/29/99	6	6.5	Thorium	11.6	ug/g dry		481683.59	1349589.34
12624	12624-13-R	11/29/99	6	6.5	Uranium, Total	2.72	ug/g dry		481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1,1-Trichloroethane	160	ug/kg	DJ	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1,1-Trichloroethane	251	ug/kg		481683.59	1349589.34

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12624	12624-14-L	11/29/99	6.5	7	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1,2-Trichloroethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1,2-Trichloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1-Dichloroethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1-Dichloroethane	58.5	ug/kg		481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1-Dichloroethene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,1-Dichloroethene	51.0	ug/kg		481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,2-Dichloroethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,2-Dichloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,2-Dichloropropane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	1,2-Dichloropropane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	2-Butanone	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	2-Butanone	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	2-Hexanone	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	2-Hexanone	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	4-Methyl-2-Pentanone	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	4-Methyl-2-Pentanone	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Acetone	206	ug/kg	DJB	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Acetone	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-P	11/29/99	6.5	7	Aroclor 1254	33.0	ug/kg	UJ	481683.59	1349589.34
12624	12624-14-P	11/29/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Benzene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Benzene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	BromodiChloromethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	BromodiChloromethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Bromoform	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Bromoform	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Bromomethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Bromomethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Carbon Disulfide	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Carbon Disulfide	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Carbon Tetrachloride	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Carbon Tetrachloride	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chlorobenzene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chlorobenzene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chloroethane	1000	ug/kg	U	481683.59	1349589.34

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12624	12624-14-L	11/29/99	6.5	7	Chloroethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chloroform	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chloroform	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chloromethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Chloromethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	cis-1,2-Dichloroethene	189	ug/kg	DJ	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	cis-1,2-Dichloroethene	348	ug/kg		481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	cis-1,3-Dichloropropene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	cis-1,3-Dichloropropene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Dibromochloromethane	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Dibromochloromethane	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Ethylbenzene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Ethylbenzene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Methylene Chloride	661	ug/kg	DJ	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Methylene Chloride	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Styrene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Styrene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Tetrachloroethene	1250	ug/kg	D	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Tetrachloroethene	1050	ug/kg	E	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Toluene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Toluene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	trans-1,2-Dichloroethene	4.3	ug/kg	J	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	trans-1,2-Dichloroethene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	trans-1,3-Dichloropropene	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	trans-1,3-Dichloropropene	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Trichloroethene	803	ug/kg	DJ	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Trichloroethene	1210	ug/kg	E	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Vinyl Chloride	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Vinyl Chloride	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Xylenes (Total)	1000	ug/kg	U	481683.59	1349589.34
12624	12624-14-L	11/29/99	6.5	7	Xylenes (Total)	45.4	ug/kg	U	481683.59	1349589.34
12624	12624-19-R	11/29/99	9	9.5	Beryllium	0.479	ug/g dry		481683.59	1349589.34
12624	12624-19-R	11/29/99	9	9.5	Thorium	6.27	ug/g dry		481683.59	1349589.34
12624	12624-19-R	11/29/99	9	9.5	Uranium, Total	1.55	ug/g dry		481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	1,1,1-Trichloroethane	4.8	ug/kg	J	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481683.59	1349589.34

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12624	12624-20-L	11/29/99	9.5	10	1,1-Dichloroethane	35.1	ug/kg	J	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	1,1-Dichloroethene	8.2	ug/kg	J	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	2-Butanone	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Acetone	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-P	11/29/99	9.5	10	Aroclor 1254	33.0	ug/kg	UJ	481683.59	1349589.34
12624	12624-20-P	11/29/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Benzene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Bromoform	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Bromomethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Chloroethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Chloroform	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Chloromethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	cis-1,2-Dichloroethene	23.1	ug/kg	J	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Methylene Chloride	2.9	ug/kg	JB	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Styrene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Toluene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	trans-1,2-Dichloroethene	2.8	ug/kg	J	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Trichloroethene	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481683.59	1349589.34
12624	12624-20-L	11/29/99	9.5	10	Xylenes (Total)	50.0	ug/kg	U	481683.59	1349589.34
12625	12625-1-R	11/29/99	0	0.5	Beryllium	1.10	ug/g dry		481682.57	1349612.79
12625	12625-1-R	11/29/99	0	0.5	Thorium	11.2	ug/g dry		481682.57	1349612.79
12625	12625-1-R	11/29/99	0	0.5	Uranium, Total	109	ug/g dry		481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	1,1,1-Trichloroethane	45.4	ug/kg	U	481682.57	1349612.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12625	12625-2-L	11/29/99	0.5	1	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	1,1,2-Trichloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	1,1-Dichloroethane	21.2	ug/kg	J	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	1,1-Dichloroethene	2.3	ug/kg	J	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	1,2-Dichloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	1,2-Dichloropropane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	2-Butanone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	2-Hexanone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	4-Methyl-2-Pentanone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Acetone	7.2	ug/kg	JB	481682.57	1349612.79
12625	12625-2-P	11/29/99	0.5	1	Aroclor 1254	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-2-P	11/29/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Benzene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	BromodiChloromethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Bromoform	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Bromomethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Carbon Disulfide	3.9	ug/kg	J	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Carbon Tetrachloride	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Chlorobenzene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Chloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Chloroform	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Chloromethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	cis-1,2-Dichloroethene	5.1	ug/kg	J	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	cis-1,3-Dichloropropene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Dibromochloromethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Ethylbenzene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Methylene Chloride	3.5	ug/kg	JB	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Styrene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Tetrachloroethene	11.9	ug/kg	J	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Toluene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	trans-1,2-Dichloroethene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	trans-1,3-Dichloropropene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Trichloroethene	3.2	ug/kg	J	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Vinyl Chloride	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-2-L	11/29/99	0.5	1	Xylenes (Total)	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-7-R	11/29/99	3	3.5	Beryllium	1.22	ug/g dry		481682.57	1349612.79
12625	12625-7-R	11/29/99	3	3.5	Thorium	11.5	ug/g dry		481682.57	1349612.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12625	12625-7-R	11/29/99	3	3.5	Uranium, Total	3.09	ug/g dry		481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,1,1-Trichloroethane	81.4	ug/kg		481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,1,2-Trichloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,1-Dichloroethane	91.6	ug/kg		481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,1-Dichloroethene	11.0	ug/kg	J	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,2-Dichloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	1,2-Dichloropropane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99.	3.5	4	2-Butanone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	2-Hexanone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	4-Methyl-2-Pentanone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Acetone	22.5	ug/kg	JB	481682.57	1349612.79
12625	12625-8-P	11/29/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-P	11/29/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Benzene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	BromodiChloromethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Bromoform	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Bromomethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Carbon Disulfide	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Carbon Tetrachloride	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Chlorobenzene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Chloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Chloroform	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Chloromethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	cis-1,2-Dichloroethene	54.9	ug/kg		481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	cis-1,3-Dichloropropene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Dibromochloromethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Ethylbenzene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Methylene Chloride	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Styrene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Tetrachloroethene	10	ug/kg	J	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Toluene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	trans-1,2-Dichloroethene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	trans-1,3-Dichloropropene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Trichloroethene	109	ug/kg		481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Vinyl Chloride	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-8-L	11/29/99	3.5	4	Xylenes (Total)	50.0	ug/kg	U	481682.57	1349612.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12625	12625-13-R	11/29/99	6	6.5	Beryllium	1.30	ug/g dry		481682.57	1349612.79
12625	12625-13-R	11/29/99	6	6.5	Thorium	10.5	ug/g dry		481682.57	1349612.79
12625	12625-13-R	11/29/99	6	6.5	Uranium, Total	1.75	ug/g dry		481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1,1-Trichloroethane	3130	ug/kg	D	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1,1-Trichloroethane	2580	ug/kg	E	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1,2,2-Tetrachloroethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1,2-Trichloroethane	2.4	ug/kg	J	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1,2-Trichloroethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1-Dichloroethane	205	ug/kg	DJ	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1-Dichloroethane	230	ug/kg		481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1-Dichloroethene	483	ug/kg	DJ	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,1-Dichloroethene	500	ug/kg	E	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,2-Dichloroethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,2-Dichloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,2-Dichloropropane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	1,2-Dichloropropane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	2-Butanone	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	2-Butanone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	2-Hexanone	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	2-Hexanone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	4-Methyl-2-Pentanone	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	4-Methyl-2-Pentanone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-P	11/29/99	6.5	7	Acetone	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-P	11/29/99	6.5	7	Acetone	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Benzene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Benzene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	BromodiChloromethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	BromodiChloromethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Bromoform	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Bromoform	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Bromomethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Bromomethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Carbon Disulfide	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Carbon Disulfide	45.4	ug/kg	U	481682.57	1349612.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12625	12625-14-L	11/29/99	6.5	7	Carbon Tetrachloride	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Carbon Tetrachloride	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chlorobenzene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chlorobenzene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chloroethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chloroethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chloroform	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chloroform	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chloromethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Chloromethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	cis-1,2-Dichloroethene	618	ug/kg	DJ	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	cis-1,2-Dichloroethene	696	ug/kg	E	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	cis-1,3-Dichloropropene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	cis-1,3-Dichloropropene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Dibromochloromethane	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Dibromochloromethane	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Ethylbenzene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Ethylbenzene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Methylene Chloride	515	ug/kg	DJ	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Methylene Chloride	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Styrene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Styrene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Tetrachloroethene	23.4	ug/kg	J	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Tetrachloroethene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Toluene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Toluene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	trans-1,2-Dichloroethene	16.5	ug/kg	J	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	trans-1,2-Dichloroethene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	trans-1,3-Dichloropropene	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	trans-1,3-Dichloropropene	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Trichloroethene	867	ug/kg	DJ	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Trichloroethene	782	ug/kg	E	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Vinyl Chloride	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Vinyl Chloride	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Xylenes (Total)	980	ug/kg	U	481682.57	1349612.79
12625	12625-14-L	11/29/99	6.5	7	Xylenes (Total)	45.4	ug/kg	U	481682.57	1349612.79
12625	12625-19-R	11/29/99	9	9.5	Beryllium	0.485	ug/g dry		481682.57	1349612.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12625	12625-19-R	11/29/99	9	9.5	Thorium	5.54	ug/g dry		481682.57	1349612.79
12625	12625-19-R	11/29/99	9	9.5	Uranium, Total	8.25	ug/g dry		481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,1,1-Trichloroethane	3.2	ug/kg	J	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,1-Dichloroethane	21.1	ug/kg	J	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,1-Dichloroethene	4.6	ug/kg	J	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	2-Butanone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Acetone	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-P	11/29/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-P	11/29/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Benzene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Bromoform	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Bromomethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Chloroethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Chloroform	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Chloromethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	cis-1,2-Dichloroethene	14.5	ug/kg	J	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Ethylbenzene	4.3	ug/kg	J	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Methylene Chloride	16.0	ug/kg	J	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Styrene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Toluene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	trans-1,2-Dichloroethene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Trichloroethene	50.0	ug/kg	U	481682.57	1349612.79
12625	12625-20-L	11/29/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481682.57	1349612.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12625	12625-20-L	11/29/99	9.5	10	Xylenes (Total)	9.3	ug/kg	J	481682.57	1349612.79
12626	12626-1-R	11/29/99	0	0.5	Beryllium	1.21	ug/g dry		481682.85	1349628.8
12626	12626-1-R	11/29/99	0	0.5	Thorium	9.59	ug/g dry		481682.85	1349628.8
12626	12626-1-R	11/29/99	0	0.5	Uranium, Total	90.5	ug/g dry		481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,1,1-Trichloroethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,1,2-Trichloroethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,1-Dichloroethane	3.8	ug/kg	J	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,1-Dichloroethene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,2-Dichloroethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	1,2-Dichloropropane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	2-Butanone	11.0	ug/kg	J	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	2-Hexanone	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	4-Methyl-2-Pentanone	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Acetone	41.2	ug/kg	JB	481682.85	1349628.8
12626	12626-2-P	11/29/99	0.5	1	Aroclor 1254	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-2-P	11/29/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Benzene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	BromodiChloromethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Bromoform	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Bromomethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Carbon Disulfide	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Carbon Tetrachloride	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Chlorobenzene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Chloroethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Chloroform	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Chloromethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	cis-1,2-Dichloroethene	2.8	ug/kg	J	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	cis-1,3-Dichloropropene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Dibromochloromethane	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Ethylbenzene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Methylene Chloride	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Styrene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Tetrachloroethene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Toluene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	trans-1,2-Dichloroethene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	trans-1,3-Dichloropropene	45.4	ug/kg	U	481682.85	1349628.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12626	12626-2-L	11/29/99	0.5	1	Trichloroethene	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Vinyl Chloride	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-2-L	11/29/99	0.5	1	Xylenes (Total)	45.4	ug/kg	U	481682.85	1349628.8
12626	12626-7-R	11/29/99	3	3.5	Beryllium	1.30	ug/g dry		481682.85	1349628.8
12626	12626-7-R	11/29/99	3	3.5	Thorium	12.1	ug/g dry		481682.85	1349628.8
12626	12626-7-R	11/29/99	3	3.5	Uranium, Total	4.60	ug/g dry		481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,1,1-Trichloroethane	6.3	ug/kg	J	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,1,2-Trichloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,1-Dichloroethane	58.9	ug/kg		481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,1-Dichloroethene	13.4	ug/kg	J	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,2-Dichloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	1,2-Dichloropropane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	2-Butanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	2-Hexanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	4-Methyl-2-Pentanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Acetone	14.6	ug/kg	JB	481682.85	1349628.8
12626	12626-8-P	11/29/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-P	11/29/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Benzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	BromodiChloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Bromoform	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Bromomethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Carbon Disulfide	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Carbon Tetrachloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Chlorobenzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Chloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Chloroform	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Chloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	cis-1,2-Dichloroethene	77.4	ug/kg		481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	cis-1,3-Dichloropropene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Dibromochloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Ethylbenzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Methylene Chloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Styrene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Tetrachloroethene	2.9	ug/kg	J	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Toluene	50.0	ug/kg	U	481682.85	1349628.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12626	12626-8-L	11/29/99	3.5	4	trans-1,2-Dichloroethene	2.8	ug/kg	J	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	trans-1,3-Dichloropropene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Trichloroethene	80.3	ug/kg		481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Vinyl Chloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-8-L	11/29/99	3.5	4	Xylenes (Total)	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-13-R	11/29/99	6	6.5	Beryllium	1.34	ug/g dry		481682.85	1349628.8
12626	12626-13-R	11/29/99	6	6.5	Thorium	11.3	ug/g dry		481682.85	1349628.8
12626	12626-13-R	11/29/99	6	6.5	Uranium, Total	1.94	ug/g dry		481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1,1-Trichloroethane	2070	ug/kg	D	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1,1-Trichloroethane	2460	ug/kg	E	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1,2-Trichloroethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1,2-Trichloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1-Dichloroethane	160	ug/kg	DJ	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1-Dichloroethane	248	ug/kg		481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1-Dichloroethene	256	ug/kg	DJ	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,1-Dichloroethene	361	ug/kg		481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,2-Dichloroethane	5.0	ug/kg	J	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,2-Dichloroethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,2-Dichloropropane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	1,2-Dichloropropane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	2-Butanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	2-Butanone	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	2-Hexanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	2-Hexanone	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	4-Methyl-2-Pentanone	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	4-Methyl-2-Pentanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Acetone	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Acetone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-P	11/29/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-P	11/29/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Benzene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Benzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	BromodiChloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	BromodiChloromethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Bromoform	50.0	ug/kg	U	481682.85	1349628.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12626	12626-14-L	11/29/99	6.5	7	Bromoform	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Bromomethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Bromomethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Carbon Disulfide	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Carbon Disulfide	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Carbon Tetrachloride	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Carbon Tetrachloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chlorobenzene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chlorobenzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chloroethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chloroform	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chloroform	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chloromethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Chloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	cis-1,2-Dichloroethene	559	ug/kg	DJ	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	cis-1,2-Dichloroethene	717	ug/kg	E	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	cis-1,3-Dichloropropene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	cis-1,3-Dichloropropene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Dibromochloromethane	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Dibromochloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Ethylbenzene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Ethylbenzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Methylene Chloride	581	ug/kg	DJ	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Methylene Chloride	4.8	ug/kg	JB	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Styrene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Styrene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Tetrachloroethene	105	ug/kg	DJ	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Tetrachloroethene	58.5	ug/kg		481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Toluene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Toluene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	trans-1,2-Dichloroethene	15.5	ug/kg	J	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	trans-1,2-Dichloroethene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	trans-1,3-Dichloropropene	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	trans-1,3-Dichloropropene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Trichloroethene	790	ug/kg	DJ	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Trichloroethene	781	ug/kg	E	481682.85	1349628.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12626	12626-14-L	11/29/99	6.5	7	Vinyl Chloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Vinyl Chloride	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Xylenes (Total)	1000	ug/kg	U	481682.85	1349628.8
12626	12626-14-L	11/29/99	6.5	7	Xylenes (Total)	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-19-R	11/29/99	9	9.5	Beryllium	0.514	ug/g dry		481682.85	1349628.8
12626	12626-19-R	11/29/99	9	9.5	Thorium	6.75	ug/g dry		481682.85	1349628.8
12626	12626-19-R	11/29/99	9	9.5	Uranium, Total	1.58	ug/g dry		481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1,1-Trichloroethane	2590	ug/kg	D	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1,1-Trichloroethane	1580	ug/kg	E	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1,2,2-Tetrachloroethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1,2-Trichloroethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1-Dichloroethane	133	ug/kg	DJ	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1-Dichloroethane	142	ug/kg		481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1-Dichloroethene	365	ug/kg	DJ	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,1-Dichloroethene	273	ug/kg		481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,2-Dichloroethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,2-Dichloropropane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	2-Butanone	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	2-Butanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	2-Hexanone	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	4-Methyl-2-Pentanone	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Acetone	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Acetone	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-P	11/29/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-P	11/29/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Benzene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Benzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	BromodiChloromethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Bromoform	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Bromoform	50.0	ug/kg	U	481682.85	1349628.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12626	12626-20-L	11/29/99	9.5	10	Bromomethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Bromomethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Carbon Disulfide	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Carbon Tetrachloride	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chlorobenzene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chloroethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chloroethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chloroform	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chloroform	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chloromethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Chloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	cis-1,2-Dichloroethene	546	ug/kg	DJ	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	cis-1,2-Dichloroethene	540	ug/kg	E	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	cis-1,3-Dichloropropene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Dibromochloromethane	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Ethylbenzene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Methylene Chloride	622	ug/kg	DJ	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Methylene Chloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Styrene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Styrene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Tetrachloroethene	169	ug/kg	DJ	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Tetrachloroethene	46.0	ug/kg	J	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Toluene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Toluene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	trans-1,2-Dichloroethene	15.8	ug/kg	J	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	trans-1,2-Dichloroethene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	trans-1,3-Dichloropropene	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Trichloroethene	1350	ug/kg	D	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Trichloroethene	774	ug/kg	E	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Vinyl Chloride	980	ug/kg	U	481682.85	1349628.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12626	12626-20-L	11/29/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Xylenes (Total)	980	ug/kg	U	481682.85	1349628.8
12626	12626-20-L	11/29/99	9.5	10	Xylenes (Total)	50.0	ug/kg	U	481682.85	1349628.8
12627	12627-1-R	11/24/99	0	0.5	Beryllium	1.06	ug/g dry		481681.79	1349649.41
12627	12627-1-R	11/24/99	0	0.5	Thorium	10.5	ug/g dry		481681.79	1349649.41
12627	12627-1-R	11/24/99	0	0.5	Uranium, Total	396	ug/g dry		481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,1,1-Trichloroethane	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,1,2,2-Tetrachloroethane	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,1,2-Trichloroethane	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,1-Dichloroethane	5.8	ug/kg	J	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,1-Dichloroethene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,2-Dichloroethane	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	1,2-Dichloropropane	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	2-Butanone	8.6	ug/kg	J	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	2-Hexanone	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	4-Methyl-2-Pentanone	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Acetone	55.1	ug/kg	U	481681.79	1349649.41
12627	12627-2-P	11/24/99	0.5	1	Aroclor 1254	57.0	ug/kg	-	481681.79	1349649.41
12627	12627-2-P	11/24/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Benzene	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	BromodiChloromethane	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Bromoform	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Bromomethane	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Carbon Disulfide	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Carbon Tetrachloride	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Chlorobenzene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Chloroethane	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Chloroform	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Chloromethane	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	cis-1,2-Dichloroethene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	cis-1,3-Dichloropropene	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Dibromochloromethane	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Ethylbenzene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Methylene Chloride	21.8	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Styrene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Tetrachloroethene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Toluene	4.9	ug/kg	J	481681.79	1349649.41

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12627	12627-2-L	11/24/99	0.5	1	trans-1,2-Dichloroethene	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	trans-1,3-Dichloropropene	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Trichloroethene	47.2	ug/kg	UJ	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Vinyl Chloride	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-2-L	11/24/99	0.5	1	Xylenes (Total)	47.2	ug/kg	U	481681.79	1349649.41
12627	12627-7-R	11/24/99	3	3.5	Beryllium	1.28	ug/g dry		481681.79	1349649.41
12627	12627-7-R	11/24/99	3	3.5	Thorium	11.0	ug/g dry		481681.79	1349649.41
12627	12627-7-R	11/24/99	3	3.5	Uranium, Total	4.47	ug/g dry		481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,1,1-Trichloroethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,1,2,2-Tetrachloroethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,1,2-Trichloroethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,1-Dichloroethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,1-Dichloroethene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,2-Dichloroethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	1,2-Dichloropropane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	2-Butanone	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	2-Hexanone	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	4-Methyl-2-Pentanone	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Acetone	32.8	ug/kg	U	481681.79	1349649.41
12627	12627-8-P	11/24/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481681.79	1349649.41
12627	12627-8-P	11/24/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Benzene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	BromodiChloromethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Bromoform	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Bromomethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Carbon Disulfide	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Carbon Tetrachloride	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Chlorobenzene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Chloroethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Chloroform	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Chloromethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	cis-1,2-Dichloroethene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	cis-1,3-Dichloropropene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Dibromochloromethane	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Ethylbenzene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Methylene Chloride	20.0	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Styrene	50.5	ug/kg	U	481681.79	1349649.41

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12627	12627-8-L	11/24/99	3.5	4	Tetrachloroethene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Toluene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	trans-1,2-Dichloroethene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	trans-1,3-Dichloropropene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Trichloroethene	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Vinyl Chloride	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-8-L	11/24/99	3.5	4	Xylenes (Total)	50.5	ug/kg	U	481681.79	1349649.41
12627	12627-13-R	11/24/99	6	6.5	Beryllium	0.568	ug/g dry		481681.79	1349649.41
12627	12627-13-R	11/24/99	6	6.5	Thorium	5.78	ug/g dry		481681.79	1349649.41
12627	12627-13-R	11/24/99	6	6.5	Uranium, Total	1.19	ug/g dry		481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,1,1-Trichloroethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,1,2,2-Tetrachloroethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,1,2-Trichloroethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,1-Dichloroethane	2.9	ug/kg	J	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,1-Dichloroethene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,2-Dichloroethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	1,2-Dichloropropane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	2-Butanone	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	2-Hexanone	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	4-Methyl-2-Pentanone	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Acetone	8.6	ug/kg	U	481681.79	1349649.41
12627	12627-14-P	11/24/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481681.79	1349649.41
12627	12627-14-P	11/24/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Benzene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	BromodiChloromethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Bromoform	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Bromomethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Carbon Disulfide	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Carbon Tetrachloride	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Chlorobenzene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Chloroethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Chloroform	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Chloromethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	cis-1,2-Dichloroethene	4.4	ug/kg	J	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	cis-1,3-Dichloropropene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Dibromochloromethane	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Ethylbenzene	43.1	ug/kg	U	481681.79	1349649.41

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12627	12627-14-L	11/24/99	6.5	7	Methylene Chloride	17.9	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Styrene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Tetrachloroethene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Toluene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	trans-1,2-Dichloroethene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	trans-1,3-Dichloropropene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Trichloroethene	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Vinyl Chloride	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-14-L	11/24/99	6.5	7	Xylenes (Total)	43.1	ug/kg	U	481681.79	1349649.41
12627	12627-19-R	11/24/99	9	9.5	Beryllium	1.333	ug/g dry	U	481681.79	1349649.41
12627	12627-19-R	11/24/99	9	9.5	Thorium	3.76	ug/g dry		481681.79	1349649.41
12627	12627-19-R	11/24/99	9	9.5	Uranium, Total	1.05	ug/g dry		481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,1,1-Trichloroethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,1,2,2-Tetrachloroethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,1,2-Trichloroethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,1-Dichloroethane	20.6	ug/kg	J	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,1-Dichloroethene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,2-Dichloroethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	1,2-Dichloropropane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	2-Butanone	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	2-Hexanone	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	4-Methyl-2-Pentanone	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Acetone	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-P	11/24/99	9.5	10	Aroclor 1254	32.0	ug/kg	U	481681.79	1349649.41
12627	12627-20-P	11/24/99	9.5	10	Aroclor 1260	32.0	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Benzene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	BromodiChloromethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Bromoform	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Bromomethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Carbon Disulfide	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Carbon Tetrachloride	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Chlorobenzene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Chloroethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Chloroform	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Chloromethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	cis-1,2-Dichloroethene	88.2	ug/kg	-	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	cis-1,3-Dichloropropene	44.2	ug/kg	U	481681.79	1349649.41

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12627	12627-20-L	11/24/99	9.5	10	Dibromochloromethane	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Ethylbenzene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Methylene Chloride	16.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Styrene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Tetrachloroethene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Toluene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	trans-1,2-Dichloroethene	5.1	ug/kg	J	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	trans-1,3-Dichloropropene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Trichloroethene	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Vinyl Chloride	44.2	ug/kg	U	481681.79	1349649.41
12627	12627-20-L	11/24/99	9.5	10	Xylenes (Total)	44.2	ug/kg	U	481681.79	1349649.41
12628	12628-1-R	11/23/99	0	0.5	Beryllium	0.390	ug/g dry		481680.43	1349669.14
12628	12628-1-R	11/23/99	0	0.5	Thorium	9.57	ug/g dry		481680.43	1349669.14
12628	12628-1-R	11/23/99	0	0.5	Uranium, Total	1570	ug/g dry		481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,1,1-Trichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,1,2-Trichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,1-Dichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,1-Dichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,2-Dichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	1,2-Dichloropropane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	2-Butanone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	2-Hexanone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	4-Methyl-2-Pentanone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Acetone	9.8	ug/kg	U	481680.43	1349669.14
12628	12628-2-P	11/23/99	0.5	1	Aroclor 1254	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-P	11/23/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Benzene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	BromodiChloromethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Bromoform	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Bromomethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Carbon Disulfide	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Carbon Tetrachloride	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Chlorobenzene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Chloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Chloroform	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Chloromethane	50.0	ug/kg	U	481680.43	1349669.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12628	12628-2-L	11/23/99	0.5	1	cis-1,2-Dichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	cis-1,3-Dichloropropene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Dibromochloromethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Ethylbenzene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Methylene Chloride	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Styrene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Tetrachloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Toluene	4.6	ug/kg	J	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	trans-1,2-Dichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	trans-1,3-Dichloropropene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Trichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Vinyl Chloride	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-2-L	11/23/99	0.5	1	Xylenes (Total)	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-7-R	11/23/99	3	3.5	Beryllium	1.29	ug/g dry		481680.43	1349669.14
12628	12628-7-R	11/23/99	3	3.5	Thorium	9.44	ug/g dry		481680.43	1349669.14
12628	12628-7-R	11/23/99	3	3.5	Uranium, Total	5.37	ug/g dry		481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,1,1-Trichloroethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,1,2,2-Tetrachloroethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,1,2-Trichloroethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,1-Dichloroethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,1-Dichloroethene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,2-Dichloroethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	1,2-Dichloropropane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	2-Butanone	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	2-Hexanone	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	4-Methyl-2-Pentanone	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Acetone	17.3	ug/kg	U	481680.43	1349669.14
12628	12628-8-P	11/23/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-8-P	11/23/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Benzene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	BromodiChloromethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Bromoform	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Bromomethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Carbon Disulfide	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Carbon Tetrachloride	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Chlorobenzene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Chloroethane	47.2	ug/kg	U	481680.43	1349669.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12628	12628-8-L	11/23/99	3.5	4	Chloroform	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Chloromethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	cis-1,2-Dichloroethene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	cis-1,3-Dichloropropene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Dibromochloromethane	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Ethylbenzene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Methylene Chloride	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Styrene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Tetrachloroethene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Toluene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	trans-1,2-Dichloroethene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	trans-1,3-Dichloropropene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Trichloroethene	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Vinyl Chloride	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-8-L	11/23/99	3.5	4	Xylenes (Total)	47.2	ug/kg	U	481680.43	1349669.14
12628	12628-13-R	11/23/99	6	6.5	Beryllium	1.27	ug/g dry		481680.43	1349669.14
12628	12628-13-R	11/23/99	6	6.5	Thorium	8.49	ug/g dry		481680.43	1349669.14
12628	12628-13-R	11/23/99	6	6.5	Uranium, Total	2.28	ug/g dry		481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,1,1-Trichloroethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,1,2,2-Tetrachloroethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,1,2-Trichloroethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,1-Dichloroethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,1-Dichloroethene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,2-Dichloroethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	1,2-Dichloropropane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	2-Butanone	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	2-Hexanone	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	4-Methyl-2-Pentanone	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Acetone	32.0	ug/kg	U	481680.43	1349669.14
12628	12628-14-P	11/23/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-14-P	11/23/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Benzene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	BromodiChloromethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Bromoform	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Bromomethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Carbon Disulfide	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Carbon Tetrachloride	46.3	ug/kg	U	481680.43	1349669.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12628	12628-14-L	11/23/99	6.5	7	Chlorobenzene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Chloroethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Chloroform	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Chloromethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	cis-1,2-Dichloroethene	13.1	ug/kg	J	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	cis-1,3-Dichloropropene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Dibromochloromethane	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Ethylbenzene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Methylene Chloride	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Styrene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Tetrachloroethene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Toluene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	trans-1,2-Dichloroethene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	trans-1,3-Dichloropropene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Trichloroethene	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Vinyl Chloride	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-14-L	11/23/99	6.5	7	Xylenes (Total)	46.3	ug/kg	U	481680.43	1349669.14
12628	12628-19-R	11/23/99	9	9.5	Beryllium	0.616	ug/g dry		481680.43	1349669.14
12628	12628-19-R	11/23/99	9	9.5	Thorium	5.04	ug/g dry		481680.43	1349669.14
12628	12628-19-R	11/23/99	9	9.5	Uranium, Total	1.71	ug/g dry		481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,1,1-Trichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,1-Dichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,1-Dichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	2-Butanone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Acetone	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-P	11/23/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-P	11/23/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Benzene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Bromoform	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Bromomethane	50.0	ug/kg	U	481680.43	1349669.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12628	12628-20-L	11/23/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Chloroethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Chloroform	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Chloromethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	cis-1,2-Dichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Methylene Chloride	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Styrene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Toluene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	trans-1,2-Dichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Trichloroethene	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481680.43	1349669.14
12628	12628-20-L	11/23/99	9.5	10	Xylenes (Total)	1.15	ug/g dry		481658.62	1349589.13
12629	12629-1-R	11/30/99	0	0.5	Beryllium	7.47	ug/g dry		481658.62	1349589.13
12629	12629-1-R	11/30/99	0	0.5	Thorium	356	ug/g dry		481658.62	1349589.13
12629	12629-1-R	11/30/99	0	0.5	Uranium, Total	7170	ug/kg	D	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1,1-Trichloroethane	96.6	ug/kg		481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1,1-Trichloroethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1,2-Trichloroethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1,2-Trichloroethane	11200	ug/kg	D	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1-Dichloroethane	411	ug/kg		481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1-Dichloroethane	171	ug/kg	DJ	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1-Dichloroethene	171	ug/kg	DJ	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,1-Dichloroethene	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,2-Dichloroethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,2-Dichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,2-Dichloropropane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	1,2-Dichloropropane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	2-Butanone					

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-2-L	11/30/99	0.5	1	2-Butanone	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	2-Hexanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	2-Hexanone	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	4-Methyl-2-Pentanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	4-Methyl-2-Pentanone	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Acetone	7.6	ug/kg	J	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Acetone	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-P	11/30/99	0.5	1	Aroclor 1254	70	ug/kg		481658.62	1349589.13
12629	12629-2-P	11/30/99	0.5	1	Aroclor 1260	33	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Benzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Benzene	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	BromodiChloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	BromodiChloromethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Bromoform	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Bromoform	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Bromomethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Bromomethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Carbon Disulfide	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Carbon Disulfide	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Carbon Tetrachloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Carbon Tetrachloride	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chlorobenzene	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chlorobenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chloroethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chloroform	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chloroform	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Chloromethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	cis-1,2-Dichloroethene	16900	ug/kg	D	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	cis-1,2-Dichloroethene	1240	ug/kg	E	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	cis-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	cis-1,3-Dichloropropene	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Dibromochloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Dibromochloromethane	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Ethylbenzene	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Ethylbenzene	50	ug/kg	U	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-2-L	11/30/99	0.5	1	Methylene Chloride	2130	ug/kg	DJB	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Methylene Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Styrene	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Styrene	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Tetrachloroethene	12800	ug/kg	D	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Tetrachloroethene	5200	ug/kg	E	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Toluene	330	ug/kg	DJ	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Toluene	10.6	ug/kg	J	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	trans-1,2-Dichloroethene	1090	ug/kg	DJ	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	trans-1,2-Dichloroethene	35.6	ug/kg	J	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	trans-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	trans-1,3-Dichloropropene	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Trichloroethene	1320	ug/kg	DJ	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Trichloroethene	115	ug/kg		481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Vinyl Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Vinyl Chloride	2500	ug/kg	U	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Xylenes (Total)	431	ug/kg	DJ	481658.62	1349589.13
12629	12629-2-L	11/30/99	0.5	1	Xylenes (Total)	9.6	ug/kg	J	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1,1-Trichloroethane	481	ug/kg	DJ	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1,1-Trichloroethane	196	ug/kg		481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1,2-Trichloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1,2-Trichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1-Dichloroethane	99.9	ug/kg	DJ	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1-Dichloroethane	375	ug/kg		481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1-Dichloroethene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,1-Dichloroethene	70.3	ug/kg		481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,2-Dichloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,2-Dichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,2-Dichloropropane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	1,2-Dichloropropane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	2-Butanone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	2-Butanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	2-Hexanone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	2-Hexanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	4-Methyl-2-Pentanone	50	ug/kg	U	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-4B-L	11/30/99	1.5	2	4-Methyl-2-Pentanone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Acetone	6.2	ug/kg	J	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Acetone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Benzene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Benzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	BromodiChloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	BromodiChloromethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Bromoform	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Bromoform	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Bromomethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Bromomethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Carbon Disulfide	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Carbon Disulfide	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Carbon Tetrachloride	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Carbon Tetrachloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chlorobenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chlorobenzene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chloroform	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chloroform	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chloromethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Chloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	cis-1,2-Dichloroethene	466	ug/kg	DJ	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	cis-1,2-Dichloroethene	1610	ug/kg	E	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	cis-1,3-Dichloropropene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	cis-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Dibromochloromethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Dibromochloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Ethylbenzene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Ethylbenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Methylene Chloride	869	ug/kg	DJB	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Methylene Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Styrene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Styrene	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Tetrachloroethene	840	ug/kg	DJ	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Tetrachloroethene	1400	ug/kg	E	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-4B-L	11/30/99	1.5	2	Toluene	7.1	ug/kg	J	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Toluene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	trans-1,2-Dichloroethene	4	ug/kg	J	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	trans-1,2-Dichloroethene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	trans-1,3-Dichloropropene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	trans-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Trichloroethene	402	ug/kg	DJ	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Trichloroethene	850	ug/kg	E	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Vinyl Chloride	1000	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Vinyl Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Xylenes (Total)	6.4	ug/kg	J	481658.62	1349589.13
12629	12629-4B-L	11/30/99	1.5	2	Xylenes (Total)	1000	ug/kg	U	481658.62	1349589.13
12629	12629-7-R	11/30/99	3	3.5	Beryllium	1.79	ug/g dry		481658.62	1349589.13
12629	12629-7-R	11/30/99	3	3.5	Thorium	9.15	ug/g dry		481658.62	1349589.13
12629	12629-7-R	11/30/99	3	3.5	Uranium, Total	2.70	ug/g dry		481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1,1-Trichloroethane	11.8	ug/kg	J	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1,1-Trichloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1,2-Trichloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1,2-Trichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1-Dichloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1-Dichloroethane	142	ug/kg		481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1-Dichloroethene	35.5	ug/kg	J	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,1-Dichloroethene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,2-Dichloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,2-Dichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,2-Dichloropropane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	1,2-Dichloropropane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	2-Butanone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	2-Butanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	2-Hexanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	2-Hexanone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	4-Methyl-2-Pentanone	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	4-Methyl-2-Pentanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Acetone	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Acetone	1000	ug/kg	U	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-8-P	11/30/99	3.5	4	Aroclor 1254	33	ug/kg	U	481658.62	1349589.13
12629	12629-8-P	11/30/99	3.5	4	Aroclor 1260	33	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Benzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Benzene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	BromodiChloromethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	BromodiChloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Bromoform	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Bromoform	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Bromomethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Bromomethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Carbon Disulfide	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Carbon Disulfide	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Carbon Tetrachloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Carbon Tetrachloride	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chlorobenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chlorobenzene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chloroethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chloroform	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chloroform	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chloromethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Chloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	cis-1,2-Dichloroethene	108	ug/kg	DJ	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	cis-1,2-Dichloroethene	613	ug/kg	E	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	cis-1,3-Dichloropropene	10000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	cis-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Dibromochloromethane	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Dibromochloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Ethylbenzene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Ethylbenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Methylene Chloride	625	ug/kg	DJB	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Methylene Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Styrene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Styrene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Tetrachloroethene	1770	ug/kg	D	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Tetrachloroethene	3390	ug/kg	E	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Toluene	1000	ug/kg	U	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-8-L	11/30/99	3.5	4	Toluene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	trans-1,2-Dichloroethene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	trans-1,2-Dichloroethene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	trans-1,3-Dichloropropene	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	trans-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Trichloroethene	235	ug/kg	DJ	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Trichloroethene	727	ug/kg	E	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Vinyl Chloride	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Vinyl Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Xylenes (Total)	1000	ug/kg	U	481658.62	1349589.13
12629	12629-8-L	11/30/99	3.5	4	Xylenes (Total)	50	ug/kg	U	481658.62	1349589.13
12629	12629-13-R	11/30/99	6	6.5	Beryllium	0.534	ug/g dry		481658.62	1349589.13
12629	12629-13-R	11/30/99	6	6.5	Thorium	3.39	ug/g dry		481658.62	1349589.13
12629	12629-13-R	11/30/99	6	6.5	Uranium, Total	1.61	ug/g dry		481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1,1-Trichloroethane	628	ug/kg	DJ	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1,1-Trichloroethane	1960	ug/kg	E	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1,2-Trichloroethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1,2-Trichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1-Dichloroethane	25.4	ug/kg	J	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1-Dichloroethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1-Dichloroethene	19.9	ug/kg	J	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,1-Dichloroethene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,2-Dichloroethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,2-Dichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,2-Dichloropropane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	1,2-Dichloropropane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	2-Butanone	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	2-Butanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	2-Hexanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	2-Hexanone	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	4-Methyl-2-Pentanone	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	4-Methyl-2-Pentanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Acetone	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Acetone	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-P	11/30/99	6.5	7	Aroclor 1254	33	ug/kg	U	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-14-P	11/30/99	6.5	7	Aroclor 1260	33	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Benzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Benzene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	BromodiChloromethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	BromodiChloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Bromoform	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Bromoform	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Bromomethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Bromomethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Carbon Disulfide	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Carbon Disulfide	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Carbon Tetrachloride	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Carbon Tetrachloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chlorobenzene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chlorobenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chloroethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chloroform	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chloroform	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chloromethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Chloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	cis-1,2-Dichloroethene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	cis-1,2-Dichloroethene	130	ug/kg		481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	cis-1,3-Dichloropropene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	cis-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Dibromochloromethane	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Dibromochloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Ethylbenzene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Ethylbenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Methylene Chloride	4160	ug/kg	DJB	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Methylene Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Styrene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Styrene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Tetrachloroethene	22500	ug/kg	D	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Tetrachloroethene	9710	ug/kg	E	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Toluene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Toluene	50	ug/kg	U	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-14-L	11/30/99	6.5	7	trans-1,2-Dichloroethene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	trans-1,2-Dichloroethene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	trans-1,3-Dichloropropene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	trans-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Trichloroethene	607	ug/kg	E	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Trichloroethene	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Vinyl Chloride	5000	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Vinyl Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-14-L	11/30/99	6.5	7	Xylenes (Total)	6.6	ug/kg	J	481658.62	1349589.13
12629	12629-19-R	11/30/99	9	9.5	Xylenes (Total)	5000	ug/kg	U	481658.62	1349589.13
12629	12629-19-R	11/30/99	9	9.5	Beryllium	0.463	ug/g dry		481658.62	1349589.13
12629	12629-19-R	11/30/99	9	9.5	Thorium	3.27	ug/g dry		481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Uranium, Total	13.3	ug/g dry		481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,1,1-Trichloroethane	364	ug/kg		481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,1,2-Trichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,1-Dichloroethane	28.7	ug/kg	J	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,1-Dichloroethene	15.5	ug/kg	J	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,2-Dichloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	1,2-Dichloropropane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	2-Butanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	2-Hexanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	4-Methyl-2-Pentanone	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-P	11/30/99	9.5	10	Acetone	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-P	11/30/99	9.5	10	Aroclor 1254	33	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Aroclor 1260	33	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Benzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	BromodiChloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Bromoform	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Bromomethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Carbon Disulfide	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Carbon Tetrachloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Chlorobenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Chloroethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Chloroform	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Chloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	cis-1,2-Dichloroethene	18.3	ug/kg	J	481658.62	1349589.13

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12629	12629-20-L	11/30/99	9.5	10	cis-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Dibromochloromethane	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Ethylbenzene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Methylene Chloride	35.9	ug/kg	JB	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Styrene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Tetrachloroethene	11.1	ug/kg	J	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Toluene	3.2	ug/kg	J	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	trans-1,2-Dichloroethene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	trans-1,3-Dichloropropene	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Trichloroethene	27	ug/kg	J	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Vinyl Chloride	50	ug/kg	U	481658.62	1349589.13
12629	12629-20-L	11/30/99	9.5	10	Xylenes (Total)	2.6	ug/kg	J	481658.62	1349589.13
12630	12630-1-R	11/30/99	0	0.5	Beryllium	0.885	ug/g dry		481657.79	1349609.09
12630	12630-1-R	11/30/99	0	0.5	Thorium	5.94	ug/g dry		481657.79	1349609.09
12630	12630-1-R	11/30/99	0	0.5	Uranium, Total	7.33	ug/g dry		481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,1,1-Trichloroethane	3.5	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,1,2-Trichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,1-Dichloroethane	3.2	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,1-Dichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,2-Dichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	1,2-Dichloropropane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	2-Butanone	43.9	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	2-Hexanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Acetone	92.4	ug/kg		481657.79	1349609.09
12630	12630-2-P	11/30/99	0.5	1	Aroclor 1254	33	ug/kg	U	481657.79	1349609.09
12630	12630-2-P	11/30/99	0.5	1	Aroclor 1260	33	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Benzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Carbon Disulfide	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Chloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Chloroform	50	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-2-L	11/30/99	0.5	1	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	cis-1,2-Dichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Ethylbenzene	7.7	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Methylene Chloride	33.9	ug/kg	JB	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Styrene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Tetrachloroethene	27.9	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Toluene	3.9	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	trans-1,2-Dichloroethene	2.5	ug/kg	J	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Trichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-2-L	11/30/99	0.5	1	Xylenes (Total)	51.7	ug/kg		481657.79	1349609.09
12630	12630-7-R	11/30/99	3	3.5	Beryllium	1.86	ug/g dry		481657.79	1349609.09
12630	12630-7-R	11/30/99	3	3.5	Thorium	9.45	ug/g dry		481657.79	1349609.09
12630	12630-7-R	11/30/99	3	3.5	Uranium, Total	2.49	ug/g dry		481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,1,1-Trichloroethane	9.7	ug/kg	J	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,1,2-Trichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,1-Dichloroethane	61.2	ug/kg		481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,1-Dichloroethene	5.7	ug/kg	J	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,2-Dichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	1,2-Dichloropropane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	2-Butanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	2-Hexanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Acetone	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-P	11/30/99	3.5	4	Aroclor 1254	33	ug/kg	U	481657.79	1349609.09
12630	12630-8-P	11/30/99	3.5	4	Aroclor 1260	33	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Benzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Carbon Disulfide	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-8-L	11/30/99	3.5	4	Chloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Chloroform	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	cis-1,2-Dichloroethene	108	ug/kg		481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Ethylbenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Methylene Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Styrene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Tetrachloroethene	47.9	ug/kg	J	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Toluene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	trans-1,2-Dichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Trichloroethene	96.4	ug/kg		481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-8-L	11/30/99	3.5	4	Xylenes (Total)	50	ug/kg	U	481657.79	1349609.09
12630	12630-13-R	11/30/99	6	6.5	Beryllium	0.673	ug/g dry		481657.79	1349609.09
12630	12630-13-R	11/30/99	6	6.5	Thorium	4.31	ug/g dry		481657.79	1349609.09
12630	12630-13-R	11/30/99	6	6.5	Uranium, Total	3.49	ug/g dry		481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1,1-Trichloroethane	463	ug/kg	DJ	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1,1-Trichloroethane	1430	ug/kg	E	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1,2,2-Tetrachloroethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1,2-Trichloroethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1,2-Trichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1-Dichloroethane	21.6	ug/kg	J	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1-Dichloroethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1-Dichloroethene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,1-Dichloroethene	54.1	ug/kg		481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,2-Dichloroethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,2-Dichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,2-Dichloropropane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	1,2-Dichloropropane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	2-Butanone	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	2-Butanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	2-Hexanone	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	2-Hexanone	50	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-14-L	11/30/99	6.5	7	4-Methyl-2-Pentanone	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Acetone	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Acetone	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-P	11/30/99	6.5	7	Aroclor 1254	33	ug/kg	U	481657.79	1349609.09
12630	12630-14-P	11/30/99	6.5	7	Aroclor 1260	33	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Benzene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Benzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	BromodiChloromethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Bromoform	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Bromomethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Carbon Disulfide	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Carbon Disulfide	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Carbon Tetrachloride	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chlorobenzene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chloroethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chloroform	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chloroform	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chloromethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	cis-1,2-Dichloroethene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	cis-1,2-Dichloroethene	175	ug/kg		481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	cis-1,3-Dichloropropene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Dibromochloromethane	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Ethylbenzene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Ethylbenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Methylene Chloride	912	ug/kg	DJB	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Methylene Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Styrene	1000	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-14-L	11/30/99	6.5	7	Styrene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Tetrachloroethene	1250	ug/kg	D	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Tetrachloroethene	1890	ug/kg	E	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Toluene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Toluene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	trans-1,2-Dichloroethene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	trans-1,2-Dichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	trans-1,3-Dichloropropene	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Trichloroethene	258	ug/kg	DJ	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Trichloroethene	657	ug/kg	E	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Vinyl Chloride	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Xylenes (Total)	1000	ug/kg	U	481657.79	1349609.09
12630	12630-14-L	11/30/99	6.5	7	Xylenes (Total)	50	ug/kg	U	481657.79	1349609.09
12630	12630-19-R	11/30/99	9	9.5	Beryllium	0.644	ug/g dry		481657.79	1349609.09
12630	12630-19-R	11/30/99	9	9.5	Thorium	4.32	ug/g dry		481657.79	1349609.09
12630	12630-19-R	11/30/99	9	9.5	Uranium, Total	2.01	ug/g dry		481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1,1-Trichloroethane	370000	ug/kg	DE	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1,1-Trichloroethane	26200	ug/kg	E	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1,2,2-Tetrachloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1,2-Trichloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1,2-Trichloroethane	106	ug/kg		481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1-Dichloroethane	960	ug/kg	E	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1-Dichloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1-Dichloroethene	7040	ug/kg	DJ	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,1-Dichloroethene	23900	ug/kg	E	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,2-Dichloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,2-Dichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,2-Dichloropropane	35.8	ug/kg	J	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	1,2-Dichloropropane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	2-Butanone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	2-Butanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	2-Hexanone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	2-Hexanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	4-Methyl-2-Pentanone	20000	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-20-L	11/30/99	9.5	10	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Acetone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Acetone	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-P	11/30/99	9.5	10	Aroclor 1254	83	ug/kg		481657.79	1349609.09
12630	12630-20-P	11/30/99	9.5	10	Aroclor 1260	33	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Benzene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Benzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	BromodiChloromethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Bromoform	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Bromomethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Carbon Disulfide	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Carbon Disulfide	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Carbon Tetrachloride	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chlorobenzene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chloroform	29.6	ug/kg	J	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chloroform	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chloromethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	cis-1,2-Dichloroethene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	cis-1,2-Dichloroethene	337	ug/kg		481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	cis-1,3-Dichloropropene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Dibromochloromethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Ethylbenzene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Ethylbenzene	265	ug/kg		481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Methylene Chloride	7620	ug/kg	DJB	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Methylene Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Styrene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Styrene	50	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-20-L	11/30/99	9.5	10	Tetrachloroethene	168000	ug/kg	D	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Tetrachloroethene	8550	ug/kg	E	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Toluene	1470	ug/kg	E	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Toluene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	trans-1,2-Dichloroethene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	trans-1,2-Dichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	trans-1,3-Dichloropropene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Trichloroethene	61600	ug/kg	D	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Trichloroethene	12400	ug/kg	E	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Vinyl Chloride	20000	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Xylenes (Total)	1400	ug/kg	DJ	481657.79	1349609.09
12630	12630-20-L	11/30/99	9.5	10	Xylenes (Total)	1820	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1,1-Trichloroethane	232000	ug/kg	DE	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1,1-Trichloroethane	27000	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1,2,2-Tetrachloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1,2-Trichloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1,2-Trichloroethane	73.3	ug/kg		481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1-Dichloroethane	803	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1-Dichloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1-Dichloroethene	3700	ug/kg	DJ	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,1-Dichloroethene	7740	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,2-Dichloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,2-Dichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,2-Dichloropropane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	1,2-Dichloropropane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	2-Butanone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	2-Butanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	2-Hexanone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	2-Hexanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	4-Methyl-2-Pentanone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Acetone	4.2	ug/kg	J	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Acetone	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Benzene	20000	ug/kg	U	481657.79	1349609.09

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-21B-L	11/30/99	10	10.5	Benzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	BromodiChloromethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Bromoform	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Bromomethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Carbon Disulfide	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Carbon Disulfide	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Carbon Tetrachloride	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chlorobenzene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chloroethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chloroform	18	ug/kg	J	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chloroform	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chloromethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	cis-1,2-Dichloroethene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	cis-1,2-Dichloroethene	102	ug/kg		481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	cis-1,3-Dichloropropene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Dibromochloromethane	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Ethylbenzene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Ethylbenzene	94.8	ug/kg		481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Methylene Chloride	9690	ug/kg	DJB	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Methylene Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Styrene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Styrene	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Tetrachloroethene	109000	ug/kg	D	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Tetrachloroethene	9810	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Toluene	523	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Toluene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	trans-1,2-Dichloroethene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	trans-1,2-Dichloroethene	50	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-21B-L	11/30/99	10	10.5	trans-1,3-Dichloropropene	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Trichloroethene	46400	ug/kg	D	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Trichloroethene	10500	ug/kg	E	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Vinyl Chloride	20000	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Xylenes (Total)	1240	ug/kg	DJ	481657.79	1349609.09
12630	12630-21B-L	11/30/99	10	10.5	Xylenes (Total)	724	ug/kg		481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1,1-Trichloroethane	34600	ug/kg	D	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1,1-Trichloroethane	20100	ug/kg	E	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1,2,2-Tetrachloroethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1,2-Trichloroethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1,2-Trichloroethane	68.3	ug/kg		481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1-Dichloroethane	12700	ug/kg	D	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1-Dichloroethane	14600	ug/kg	E	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1-Dichloroethene	502	ug/kg	E	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,1-Dichloroethene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,2-Dichloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,2-Dichloroethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,2-Dichloropropane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	1,2-Dichloropropane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	2-Butanone	32.4	ug/kg	J	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	2-Butanone	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	2-Hexanone	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	2-Hexanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	4-Methyl-2-Pentanone	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Acetone	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Acetone	152	ug/kg		481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Benzene	7	ug/kg	J	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Benzene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	BromodiChloromethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Bromoform	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Bromomethane	10000	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-25B-L	11/30/99	12	12.5	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Carbon Disulfide	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Carbon Disulfide	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Carbon Tetrachloride	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chlorobenzene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chloroethane	4.6	ug/kg	J	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chloroethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chloroform	14.2	ug/kg	J	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chloroform	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chloromethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	cis-1,2-Dichloroethene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	cis-1,2-Dichloroethene	118	ug/kg		481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	cis-1,3-Dichloropropene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Dibromochloromethane	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Ethylbenzene	26.7	ug/kg	J	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Ethylbenzene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Methylene Chloride	8810	ug/kg	DJB	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Methylene Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Styrene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Styrene	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Tetrachloroethene	22100	ug/kg	D	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Tetrachloroethene	18300	ug/kg	E	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Toluene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Toluene	304	ug/kg		481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	trans-1,2-Dichloroethene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	trans-1,2-Dichloroethene	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	trans-1,3-Dichloropropene	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Trichloroethene	5580	ug/kg	DJ	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Trichloroethene	7530	ug/kg	E	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Vinyl Chloride	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-25B-L	11/30/99	12	12.5	Xylenes (Total)	10000	ug/kg	U	481657.79	1349609.09
12630	12630-25B-L	11/30/99	12	12.5	Xylenes (Total)	224	ug/kg		481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1,1-Trichloroethane	3180	ug/kg	DJ	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1,1-Trichloroethane	2700	ug/kg	E	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1,2,2-Tetrachloroethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1,2-Trichloroethane	44.8	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1,2-Trichloroethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1-Dichloroethane	10800	ug/kg	D	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1-Dichloroethane	11000	ug/kg	E	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1-Dichloroethene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,1-Dichloroethene	51.3	ug/kg		481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,2-Dichloroethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,2-Dichloroethane	90.3	ug/kg		481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,2-Dichloropropane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	1,2-Dichloropropane	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	2-Butanone	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	2-Butanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	2-Hexanone	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	2-Hexanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	4-Methyl-2-Pentanone	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	4-Methyl-2-Pentanone	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Acetone	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Acetone	78.9	ug/kg		481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Benzene	3.8	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Benzene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	BromodiChloromethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	BromodiChloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Bromoform	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Bromoform	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Bromomethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Bromomethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Carbon Disulfide	16.7	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Carbon Disulfide	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Carbon Tetrachloride	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Carbon Tetrachloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chlorobenzene	5000	ug/kg	U	481657.79	1349609.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12630	12630-26B-L	11/30/99	12.5	13	Chlorobenzene	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chloroethane	6.4	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chloroethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chloroform	4.1	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chloroform	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chloromethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Chloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	cis-1,2-Dichloroethene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	cis-1,2-Dichloroethene	80.1	ug/kg		481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	cis-1,3-Dichloropropene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	cis-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Dibromochloromethane	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Dibromochloromethane	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Ethylbenzene	9.5	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Ethylbenzene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Methylene Chloride	4020	ug/kg	DJB	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Methylene Chloride	28	ug/kg	JB	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Styrene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Styrene	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Tetrachloroethene	13000	ug/kg	D	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Tetrachloroethene	14300	ug/kg	E	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Toluene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Toluene	94.8	ug/kg		481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	trans-1,2-Dichloroethene	4.6	ug/kg	J	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	trans-1,2-Dichloroethene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	trans-1,3-Dichloropropene	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	trans-1,3-Dichloropropene	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Trichloroethene	1630	ug/kg	DJ	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Trichloroethene	2030	ug/kg	E	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Vinyl Chloride	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Vinyl Chloride	50	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Xylenes (Total)	5000	ug/kg	U	481657.79	1349609.09
12630	12630-26B-L	11/30/99	12.5	13	Xylenes (Total)	72.3	ug/kg		481657.79	1349609.09
12631	12631-1-R	11/30/99	0	0.5	Beryllium	1.41	ug/g dry		481657.49	1349629.11
12631	12631-1-R	11/30/99	0	0.5	Thorium	8.37	ug/g dry		481657.49	1349629.11
12631	12631-1-R	11/30/99	0	0.5	Uranium, Total	4.67	ug/g dry		481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	1,1,1-Trichloroethane	50	ug/kg	U	481657.49	1349629.11

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12631	12631-2-L	11/30/99	0.5	1	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	1,1,2-Trichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	1,1-Dichloroethane	11.9	ug/kg	J	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	1,1-Dichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	1,2-Dichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	1,2-Dichloropropane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	2-Butanone	26.9	ug/kg	J	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	2-Hexanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	4-Methyl-2-Pentanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Acetone	35.1	ug/kg	J	481657.49	1349629.11
12631	12631-2-P	11/30/99	0.5	1	Aroclor 1254	33	ug/kg	U	481657.49	1349629.11
12631	12631-2-P	11/30/99	0.5	1	Aroclor 1260	33	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Benzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	BromodiChloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Bromoform	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Bromomethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Carbon Disulfide	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Carbon Tetrachloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Chlorobenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Chloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Chloroform	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Chloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	cis-1,2-Dichloroethene	58.8	ug/kg		481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	cis-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Dibromochloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Ethylbenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Methylene Chloride	11.3	ug/kg	JB	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Styrene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Tetrachloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Toluene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	trans-1,2-Dichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	trans-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Trichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Vinyl Chloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-2-L	11/30/99	0.5	1	Xylenes (Total)	50	ug/kg	U	481657.49	1349629.11
12631	12631-7-R	11/30/99	3	3.5	Beryllium	1.62	ug/g dry		481657.49	1349629.11
12631	12631-7-R	11/30/99	3	3.5	Thorium	9.11	ug/g dry		481657.49	1349629.11

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12631	12631-7-R	11/30/99	3	3.5	Uranium, Total	2.09	ug/g dry		481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,1,1-Trichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,1,2-Trichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,1-Dichloroethane	20.2	ug/kg	J	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,2-Dichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	1,2-Dichloropropane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	2-Butanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	2-Hexanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	4-Methyl-2-Pentanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Acetone	9.3	ug/kg	J	481657.49	1349629.11
12631	12631-8-P	11/30/99	3.5	4	Aroclor 1254	33	ug/kg	U	481657.49	1349629.11
12631	12631-8-P	11/30/99	3.5	4	Aroclor 1260	33	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Benzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	BromodiChloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Bromoform	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Bromomethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Carbon Disulfide	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Carbon Tetrachloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Chlorobenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Chloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Chloroform	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Chloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	cis-1,2-Dichloroethene	62.7	ug/kg		481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	cis-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Dibromochloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Ethylbenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Methylene Chloride	10.9	ug/kg	JB	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Styrene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Tetrachloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Toluene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	trans-1,2-Dichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	trans-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Trichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Vinyl Chloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-8-L	11/30/99	3.5	4	Xylenes (Total)	50	ug/kg	U	481657.49	1349629.11

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12631	12631-13-R	11/30/99	6	6.5	Beryllium	0.633	ug/g dry		481657.49	1349629.11
12631	12631-13-R	11/30/99	6	6.5	Thorium	4.45	ug/g dry		481657.49	1349629.11
12631	12631-13-R	11/30/99	6	6.5	Uranium, Total	2.72	ug/g dry		481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,1,1-Trichloroethane	5.1	ug/kg	J	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,1,2-Trichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,1-Dichloroethane	26	ug/kg	J	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,1-Dichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,2-Dichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	1,2-Dichloropropane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	2-Butanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	2-Hexanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	4-Methyl-2-Pentanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Acetone	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-P	11/30/99	6.5	7	Aroclor 1254	33	ug/kg	U	481657.49	1349629.11
12631	12631-14-P	11/30/99	6.5	7	Aroclor 1260	33	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Benzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	BromodiChloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Bromoform	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Bromomethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Carbon Disulfide	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Carbon Tetrachloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Chlorobenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Chloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Chloroform	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Chloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	cis-1,2-Dichloroethene	233	ug/kg		481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	cis-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Dibromochloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Ethylbenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Methylene Chloride	16	ug/kg	JB	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Styrene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Tetrachloroethene	6.2	ug/kg	J	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Toluene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	trans-1,2-Dichloroethene	5.3	ug/kg	J	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	trans-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Trichloroethene	21	ug/kg	J	481657.49	1349629.11

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12631	12631-14-L	11/30/99	6.5	7	Vinyl Chloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-14-L	11/30/99	6.5	7	Xylenes (Total)	50	ug/kg	U	481657.49	1349629.11
12631	12631-19-R	11/30/99	9	9.5	Beryllium	0.720	ug/g dry		481657.49	1349629.11
12631	12631-19-R	11/30/99	9	9.5	Thorium	4.66	ug/g dry		481657.49	1349629.11
12631	12631-19-R	11/30/99	9	9.5	Uranium, Total	2.60	ug/g dry		481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,1,1-Trichloroethane	8.4	ug/kg	J	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,1,2-Trichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,1-Dichloroethane	15	ug/kg	J	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,2-Dichloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	1,2-Dichloropropane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	2-Butanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	2-Hexanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	4-Methyl-2-Pentanone	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Acetone	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-P	11/30/99	9.5	10	Aroclor 1254	33	ug/kg	U	481657.49	1349629.11
12631	12631-20-P	11/30/99	9.5	10	Aroclor 1260	33	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Benzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	BromodiChloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Bromoform	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Bromomethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Carbon Disulfide	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Carbon Tetrachloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Chlorobenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Chloroethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Chloroform	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Chloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	cis-1,2-Dichloroethene	164	ug/kg		481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	cis-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Dibromochloromethane	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Ethylbenzene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Methylene Chloride	11.2	ug/kg	JB	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Styrene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Tetrachloroethene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Toluene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	trans-1,2-Dichloroethene	3.1	ug/kg	J	481657.49	1349629.11

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12631	12631-20-L	11/30/99	9.5	10	trans-1,3-Dichloropropene	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Trichloroethene	17.9	ug/kg	J	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Vinyl Chloride	50	ug/kg	U	481657.49	1349629.11
12631	12631-20-L	11/30/99	9.5	10	Xylenes (Total)	50	ug/kg	U	481657.49	1349629.11
12632	12632-1-R	12/1/99	0	0.5	Beryllium	1.60	ug/g dry		481653.22	1349648.85
12632	12632-1-R	12/1/99	0	0.5	Thorium	9.02	ug/g dry		481653.22	1349648.85
12632	12632-1-R	12/1/99	0	0.5	Uranium, Total	117	ug/g dry		481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,1,1-Trichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,1,2-Trichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,1-Dichloroethane	32.9	ug/kg	J	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,1-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,2-Dichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	1,2-Dichloropropane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	2-Butanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	2-Hexanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	4-Methyl-2-Pentanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Acetone	21.8	ug/kg	J	481653.22	1349648.85
12632	12632-2-P	12/1/99	0.5	1	Aroclor 1254	33	ug/kg		481653.22	1349648.85
12632	12632-2-P	12/1/99	0.5	1	Aroclor 1260	33	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Benzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	BromodiChloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Bromoform	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Bromomethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Carbon Disulfide	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Carbon Tetrachloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Chlorobenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Chloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Chloroform	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Chloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	cis-1,2-Dichloroethene	482	ug/kg		481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	cis-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Dibromochloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Ethylbenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Methylene Chloride	28.7	ug/kg	JB	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Styrene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Tetrachloroethene	26.8	ug/kg	J	481653.22	1349648.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12632	12632-2-L	12/1/99	0.5	1	Toluene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	trans-1,2-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	trans-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Trichloroethene	5.7	ug/kg	J	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Vinyl Chloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-2-L	12/1/99	0.5	1	Xylenes (Total)	2.8	ug/kg	J	481653.22	1349648.85
12632	12632-7-R	12/1/99	3	3.5	Beryllium	1.40	ug/g dry		481653.22	1349648.85
12632	12632-7-R	12/1/99	3	3.5	Thorium	7.75	ug/g dry		481653.22	1349648.85
12632	12632-7-R	12/1/99	3	3.5	Uranium, Total	2.87	ug/g dry		481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,1,1-Trichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,1,2-Trichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,1-Dichloroethane	18.7	ug/kg	J	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,2-Dichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	1,2-Dichloropropane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	2-Butanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	2-Hexanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	4-Methyl-2-Pentanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Acetone	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-P	12/1/99	3.5	4	Aroclor 1254	33	ug/kg	U	481653.22	1349648.85
12632	12632-8-P	12/1/99	3.5	4	Aroclor 1260	33	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Benzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	BromodiChloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Bromoform	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Bromomethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Carbon Disulfide	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Carbon Tetrachloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Chlorobenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Chloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Chloroform	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Chloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	cis-1,2-Dichloroethene	109	ug/kg		481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	cis-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Dibromochloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Ethylbenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Methylene Chloride	29.8	ug/kg	JB	481653.22	1349648.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12632	12632-8-L	12/1/99	3.5	4	Styrene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Tetrachloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Toluene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	trans-1,2-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	trans-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Trichloroethene	5.9	ug/kg	J	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Vinyl Chloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-8-L	12/1/99	3.5	4	Xylenes (Total)	50	ug/kg	U	481653.22	1349648.85
12632	12632-13-R	12/1/99	6	6.5	Beryllium	0.736	ug/g dry		481653.22	1349648.85
12632	12632-13-R	12/1/99	6	6.5	Thorium	4.39	ug/g dry		481653.22	1349648.85
12632	12632-13-R	12/1/99	6	6.5	Uranium, Total	2.92	ug/g dry		481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,1,1-Trichloroethane	9	ug/kg	J	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,1,2-Trichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,1-Dichloroethane	49.4	ug/kg	J	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,1-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,2-Dichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	1,2-Dichloropropane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	2-Butanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	2-Hexanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	4-Methyl-2-Pentanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Acetone	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-P	12/1/99	6.5	7	Aroclor 1254	33	ug/kg	U	481653.22	1349648.85
12632	12632-14-P	12/1/99	6.5	7	Aroclor 1260	33	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Benzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	BromodiChloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Bromoform	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Bromomethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Carbon Disulfide	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Carbon Tetrachloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Chlorobenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Chloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Chloroform	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Chloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	cis-1,2-Dichloroethene	321	ug/kg		481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	cis-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Dibromochloromethane	50	ug/kg	U	481653.22	1349648.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12632	12632-14-L	12/1/99	6.5	7	Ethylbenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Methylene Chloride	31.6	ug/kg	JB	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Styrene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Tetrachloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Toluene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	trans-1,2-Dichloroethene	12.3	ug/kg	J	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	trans-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Trichloroethene	6.7	ug/kg	J	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Vinyl Chloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-14-L	12/1/99	6.5	7	Xylenes (Total)	50	ug/kg	U	481653.22	1349648.85
12632	12632-19-R	12/1/99	9	9.5	Beryllium	0.889	ug/g dry		481653.22	1349648.85
12632	12632-19-R	12/1/99	9	9.5	Thorium	5.60	ug/g dry		481653.22	1349648.85
12632	12632-19-R	12/1/99	9	9.5	Uranium, Total	1.58	ug/g dry		481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,1,1-Trichloroethane	3.2	ug/kg	J	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,1,2-Trichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,1-Dichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,2-Dichloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	1,2-Dichloropropane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	2-Butanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	2-Hexanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	4-Methyl-2-Pentanone	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Acetone	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-P	12/1/99	9.5	10	Aroclor 1254	33	ug/kg	U	481653.22	1349648.85
12632	12632-20-P	12/1/99	9.5	10	Aroclor 1260	33	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Benzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	BromodiChloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Bromoform	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Bromomethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Carbon Disulfide	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Carbon Tetrachloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Chlorobenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Chloroethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Chloroform	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Chloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	cis-1,2-Dichloroethene	50	ug/kg	U	481653.22	1349648.85

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12632	12632-20-L	12/1/99	9.5	10	cis-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Dibromochloromethane	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Ethylbenzene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Methylene Chloride	31.1	ug/kg	JB	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Styrene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Tetrachloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Toluene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	trans-1,2-Dichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	trans-1,3-Dichloropropene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Trichloroethene	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Vinyl Chloride	50	ug/kg	U	481653.22	1349648.85
12632	12632-20-L	12/1/99	9.5	10	Xylenes (Total)	50	ug/kg	U	481653.22	1349648.85
12633	12633-1-R	11/23/99	0	0.5	Beryllium	0.335	ug/g dry		481655.91	1349669.48
12633	12633-1-R	11/23/99	0	0.5	Thorium	3.26	ug/g dry		481655.91	1349669.48
12633	12633-1-R	11/23/99	0	0.5	Uranium, Total	71.9	ug/g dry		481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,1,1-Trichloroethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,1,2-Trichloroethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,1-Dichloroethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,1-Dichloroethene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,2-Dichloroethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	1,2-Dichloropropane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	2-Butanone	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	2-Hexanone	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	4-Methyl-2-Pentanone	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Acetone	28.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-P	11/23/99	0.5	1	Aroclor 1254	56.0	ug/kg	-	481655.91	1349669.48
12633	12633-2-P	11/23/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Benzene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	BromodiChloromethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Bromoform	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Bromomethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Carbon Disulfide	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Carbon Tetrachloride	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Chlorobenzene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Chloroethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Chloroform	45.4	ug/kg	U	481655.91	1349669.48

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12633	12633-2-L	11/23/99	0.5	1	Chloromethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	cis-1,2-Dichloroethene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	cis-1,3-Dichloropropene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Dibromochloromethane	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Ethylbenzene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Methylene Chloride	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Styrene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Tetrachloroethene	26.3	ug/kg	J	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Toluene	4.7	ug/kg	J	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	trans-1,2-Dichloroethene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	trans-1,3-Dichloropropene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Trichloroethene	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Vinyl Chloride	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-2-L	11/23/99	0.5	1	Xylenes (Total)	45.4	ug/kg	U	481655.91	1349669.48
12633	12633-7-R	11/23/99	3	3.5	Beryllium	1.26	ug/g dry		481655.91	1349669.48
12633	12633-7-R	11/23/99	3	3.5	Thorium	9.37	ug/g dry		481655.91	1349669.48
12633	12633-7-R	11/23/99	3	3.5	Uranium, Total	2.20	ug/g dry		481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,1,1-Trichloroethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,1,2,2-Tetrachloroethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,1,2-Trichloroethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,1-Dichloroethane	6.6	ug/kg	J	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,1-Dichloroethene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,2-Dichloroethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	1,2-Dichloropropane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	2-Butanone	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	2-Hexanone	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	4-Methyl-2-Pentanone	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Acetone	31.2	ug/kg	U	481655.91	1349669.48
12633	12633-8-P	11/23/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-8-P	11/23/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Benzene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	BromodiChloromethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Bromoform	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Bromomethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Carbon Disulfide	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Carbon Tetrachloride	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Chlorobenzene	43.8	ug/kg	U	481655.91	1349669.48

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12633	12633-8-L	11/23/99	3.5	4	Chloroethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Chloroform	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Chloromethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	cis-1,2-Dichloroethene	9.0	ug/kg	J	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	cis-1,3-Dichloropropene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Dibromochloromethane	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Ethylbenzene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Methylene Chloride	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Styrene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Tetrachloroethene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Toluene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	trans-1,2-Dichloroethene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	trans-1,3-Dichloropropene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Trichloroethene	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Vinyl Chloride	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-8-L	11/23/99	3.5	4	Xylenes (Total)	43.8	ug/kg	U	481655.91	1349669.48
12633	12633-13-R	11/23/99	6	6.5	Beryllium	1.46	ug/g dry		481655.91	1349669.48
12633	12633-13-R	11/23/99	6	6.5	Thorium	9.21	ug/g dry		481655.91	1349669.48
12633	12633-13-R	11/23/99	6	6.5	Uranium, Total	2.12	ug/g dry		481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,1,1-Trichloroethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,1,2,2-Tetrachloroethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,1,2-Trichloroethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,1-Dichloroethane	7.5	ug/kg	J	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,1-Dichloroethene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,2-Dichloroethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	1,2-Dichloropropane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	2-Butanone	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	2-Hexanone	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	4-Methyl-2-Pentanone	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Acetone	10.4	ug/kg	U	481655.91	1349669.48
12633	12633-14-P	11/23/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-14-P	11/23/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Benzene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	BromodiChloromethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Bromoform	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Bromomethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Carbon Disulfide	44.2	ug/kg	U	481655.91	1349669.48

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12633	12633-14-L	11/23/99	6.5	7	Carbon Tetrachloride	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Chlorobenzene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Chloroethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Chloroform	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Chloromethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	cis-1,2-Dichloroethene	22.3	ug/kg	J	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	cis-1,3-Dichloropropene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Dibromochloromethane	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Ethylbenzene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Methylene Chloride	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Styrene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Tetrachloroethene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Toluene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	trans-1,2-Dichloroethene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	trans-1,3-Dichloropropene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Trichloroethene	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Vinyl Chloride	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-14-L	11/23/99	6.5	7	Xylenes (Total)	44.2	ug/kg	U	481655.91	1349669.48
12633	12633-19-R	11/23/99	9	9.5	Beryllium	0.657	ug/g dry		481655.91	1349669.48
12633	12633-19-R	11/23/99	9	9.5	Thorium	5.11	ug/g dry		481655.91	1349669.48
12633	12633-19-R	11/23/99	9	9.5	Uranium, Total	2.46	ug/g dry		481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,1,1-Trichloroethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,1-Dichloroethane	20.9	ug/kg	J	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,1-Dichloroethene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	2-Butanone	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Acetone	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-P	11/23/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-P	11/23/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Benzene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Bromoform	50.0	ug/kg	U	481655.91	1349669.48

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12633	12633-20-L	11/23/99	9.5	10	Bromomethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Chloroethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Chloroform	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Chloromethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	cis-1,2-Dichloroethene	81.3	ug/kg	-	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Methylene Chloride	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Styrene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Toluene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	trans-1,2-Dichloroethene	4.1	ug/kg	J	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Trichloroethene	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481655.91	1349669.48
12633	12633-20-L	11/23/99	9.5	10	Xylenes (Total)	50.0	ug/kg	U	481655.91	1349669.48
12634	12634-1-R	11/22/99	0	0.5	Beryllium	1.32	ug/g dry		481631.95	1349609.95
12634	12634-1-R	11/22/99	0	0.5	Thorium	9.73	ug/g dry		481631.95	1349609.95
12634	12634-1-R	11/22/99	0	0.5	Uranium, Total	2.36	ug/g dry		481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,1,1-Trichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,1,2-Trichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,1-Dichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,1-Dichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,2-Dichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	1,2-Dichloropropane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	2-Butanone	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	2-Hexanone	47.6	ug/kg	UJ	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	4-Methyl-2-Pentanone	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Acetone	47.6	ug/kg	UJ	481631.95	1349609.95
12634	12634-2-P	11/19/99	0.5	1	Aroclor 1254	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-2-P	11/19/99	0.5	1	Aroclor 1260	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Benzene	47.6	ug/kg	U	481631.95	1349609.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12634	12634-2-L	11/22/99	0.5	1	BromodiChloromethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Bromoform	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Bromomethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Carbon Disulfide	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Carbon Tetrachloride	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Chlorobenzene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Chloroethane	47.6	ug/kg	UJ	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Chloroform	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Chloromethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	cis-1,2-Dichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	cis-1,3-Dichloropropene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Dibromochloromethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Ethylbenzene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Methylene Chloride	6.1	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Styrene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Tetrachloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Toluene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	trans-1,2-Dichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	trans-1,3-Dichloropropene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Trichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Vinyl Chloride	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-2-L	11/22/99	0.5	1	Xylenes (Total)	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-7-R	11/22/99	3	3.5	Beryllium	1.08	ug/g dry		481631.95	1349609.95
12634	12634-7-R	11/22/99	3	3.5	Thorium	7.10	ug/g dry		481631.95	1349609.95
12634	12634-7-R	11/22/99	3	3.5	Uranium, Total	2.16	ug/g dry		481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,1,1-Trichloroethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,1,2,2-Tetrachloroethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,1,2-Trichloroethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,1-Dichloroethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,1-Dichloroethene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,2-Dichloroethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	1,2-Dichloropropane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	2-Butanone	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	2-Hexanone	49.5	ug/kg	UJ	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	4-Methyl-2-Pentanone	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Acetone	49.5	ug/kg	UJ	481631.95	1349609.95
12634	12634-8-P	11/19/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481631.95	1349609.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12634	12634-8-P	11/19/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Benzene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	BromodiChloromethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Bromoform	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Bromomethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Carbon Disulfide	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Carbon Tetrachloride	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Chlorobenzene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Chloroethane	49.5	ug/kg	UJ	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Chloroform	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Chloromethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	cis-1,2-Dichloroethene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	cis-1,3-Dichloropropene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Dibromochloromethane	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Ethylbenzene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Methylene Chloride	5.3	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Styrene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Tetrachloroethene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Toluene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	trans-1,2-Dichloroethene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	trans-1,3-Dichloropropene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Trichloroethene	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Vinyl Chloride	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-8-L	11/22/99	3.5	4	Xylenes (Total)	49.5	ug/kg	U	481631.95	1349609.95
12634	12634-13-R	11/22/99	6	6.5	Beryllium	0.665	ug/g dry		481631.95	1349609.95
12634	12634-13-R	11/22/99	6	6.5	Thorium	5.19	ug/g dry		481631.95	1349609.95
12634	12634-13-R	11/22/99	6	6.5	Uranium, Total	1.29	ug/g dry		481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,1,1-Trichloroethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,1,2-Trichloroethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,1-Dichloroethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,1-Dichloroethene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,2-Dichloroethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	1,2-Dichloropropane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	2-Butanone	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	2-Hexanone	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	4-Methyl-2-Pentanone	3.0	ug/kg	U	481631.95	1349609.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12634	12634-14-L	11/22/99	6.5	7	Acetone	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-P	11/19/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-14-P	11/19/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Benzene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	BromodiChloromethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Bromoform	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Bromomethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Carbon Disulfide	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Carbon Tetrachloride	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Chlorobenzene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Chloroethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Chloroform	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Chloromethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	cis-1,2-Dichloroethene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	cis-1,3-Dichloropropene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Dibromochloromethane	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Ethylbenzene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Methylene Chloride	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Styrene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Tetrachloroethene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Toluene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	trans-1,2-Dichloroethene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	trans-1,3-Dichloropropene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Trichloroethene	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Vinyl Chloride	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-14-L	11/22/99	6.5	7	Xylenes (Total)	48.1	ug/kg	U	481631.95	1349609.95
12634	12634-19-R	11/22/99	9	9.5	Beryllium	0.633	ug/g dry		481631.95	1349609.95
12634	12634-19-R	11/22/99	9	9.5	Thorium	4.63	ug/g dry		481631.95	1349609.95
12634	12634-19-R	11/22/99	9	9.5	Uranium, Total	1.40	ug/g dry		481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,1,1-Trichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,1,2,2-Tetrachloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,1,2-Trichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,1-Dichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,1-Dichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,2-Dichloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	1,2-Dichloropropane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	2-Butanone	47.6	ug/kg	U	481631.95	1349609.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12634	12634-20-L	11/22/99	9.5	10	2-Hexanone	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	4-Methyl-2-Pentanone	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Acetone	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-P	11/19/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-20-P	11/19/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Benzene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	BromodiChloromethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Bromoform	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Bromomethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Carbon Disulfide	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Carbon Tetrachloride	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Chlorobenzene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Chloroethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Chloroform	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Chloromethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	cis-1,2-Dichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	cis-1,3-Dichloropropene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Dibromochloromethane	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Ethylbenzene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Methylene Chloride	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Styrene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Tetrachloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Toluene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	trans-1,2-Dichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	trans-1,3-Dichloropropene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Trichloroethene	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Vinyl Chloride	47.6	ug/kg	U	481631.95	1349609.95
12634	12634-20-L	11/22/99	9.5	10	Xylenes (Total)	47.6	ug/kg	U	481631.95	1349609.95
12635	12635-1-R	11/22/99	0	0.5	Beryllium	1.36	ug/g dry		481631.16	1349629.01
12635	12635-1-R	11/22/99	0	0.5	Thorium	9.47	ug/g dry		481631.16	1349629.01
12635	12635-1-R	11/22/99	0	0.5	Uranium, Total	14.4	ug/g dry		481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	1,1,1-Trichloroethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	1,1,2,2-Tetrachloroethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	1,1,2-Trichloroethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	1,1-Dichloroethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	1,1-Dichloroethene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	1,2-Dichloroethane	48.5	ug/kg	U	481631.16	1349629.01

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12635	12635-2-L	11/22/99	0.5	1	1,2-Dichloropropane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	2-Butanone	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	2-Hexanone	48.5	ug/kg	UJ	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	4-Methyl-2-Pentanone	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Acetone	48.5	ug/kg	UJ	481631.16	1349629.01
12635	12635-2-P	11/22/99	0.5	1	Aroclor 1254	32.0	ug/kg	U	481631.16	1349629.01
12635	12635-2-P	11/22/99	0.5	1	Aroclor 1260	32.0	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Benzene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	BromodiChloromethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Bromoform	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Bromomethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Carbon Disulfide	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Carbon Tetrachloride	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Chlorobenzene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Chloroethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Chloroform	48.5	ug/kg	UJ	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Chloromethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	cis-1,2-Dichloroethene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	cis-1,3-Dichloropropene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Dibromochloromethane	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Ethylbenzene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Methylene Chloride	6.7	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Styrene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Tetrachloroethene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Toluene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	trans-1,2-Dichloroethene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	trans-1,3-Dichloropropene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Trichloroethene	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Vinyl Chloride	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-2-L	11/22/99	0.5	1	Xylenes (Total)	48.5	ug/kg	U	481631.16	1349629.01
12635	12635-7-R	11/22/99	3	3.5	Beryllium	0.793	ug/g dry		481631.16	1349629.01
12635	12635-7-R	11/22/99	3	3.5	Thorium	6.00	ug/g dry		481631.16	1349629.01
12635	12635-7-R	11/22/99	3	3.5	Uranium, Total	3.97	ug/g dry		481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	1,1,1-Trichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	1,1,2-Trichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	1,1-Dichloroethane	48.1	ug/kg	U	481631.16	1349629.01

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12635	12635-8-L	11/22/99	3.5	4	1,1-Dichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	1,2-Dichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	1,2-Dichloropropane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	2-Butanone	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	2-Hexanone	48.1	ug/kg	UJ	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	4-Methyl-2-Pentanone	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Acetone	48.1	ug/kg	UJ	481631.16	1349629.01
12635	12635-8-P	11/22/99	3.5	4	Aroclor 1254	33.0	ug/kg	U	481631.16	1349629.01
12635	12635-8-P	11/22/99	3.5	4	Aroclor 1260	33.0	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Benzene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	BromodiChloromethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Bromoform	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Bromomethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Carbon Disulfide	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Carbon Tetrachloride	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Chlorobenzene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Chloroethane	48.1	ug/kg	UJ	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Chloroform	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Chloromethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	cis-1,2-Dichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	cis-1,3-Dichloropropene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Dibromochloromethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Ethylbenzene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Methylene Chloride	4.4	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Styrene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Tetrachloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Toluene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	trans-1,2-Dichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	trans-1,3-Dichloropropene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Trichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Vinyl Chloride	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-8-L	11/22/99	3.5	4	Xylenes (Total)	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-13-R	11/22/99	6	6.5	Beryllium	0.656	ug/g dry		481631.16	1349629.01
12635	12635-13-R	11/22/99	6	6.5	Thorium	5.41	ug/g dry		481631.16	1349629.01
12635	12635-13-R	11/22/99	6	6.5	Uranium, Total	1.30	ug/g dry		481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	1,1,1-Trichloroethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	1,1,2,2-Tetrachloroethane	49.0	ug/kg	U	481631.16	1349629.01

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12635	12635-14-L	11/22/99	6.5	7	1,1,2-Trichloroethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	1,1-Dichloroethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	1,1-Dichloroethene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	1,2-Dichloroethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	1,2-Dichloropropane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	2-Butanone	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	2-Hexanone	49.0	ug/kg	UJ	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	4-Methyl-2-Pentanone	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Acetone	49.0	ug/kg	UJ	481631.16	1349629.01
12635	12635-14-P	11/19/99	6.5	7	Aroclor 1254	33.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-P	11/19/99	6.5	7	Aroclor 1260	33.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Benzene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	BromodiChloromethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Bromoform	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Bromomethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Carbon Disulfide	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Carbon Tetrachloride	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Chlorobenzene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Chloroethane	49.0	ug/kg	UJ	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Chloroform	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Chloromethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	cis-1,2-Dichloroethene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	cis-1,3-Dichloropropene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Dibromochloromethane	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Ethylbenzene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Methylene Chloride	4.5	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Styrene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Tetrachloroethene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Toluene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	trans-1,2-Dichloroethene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	trans-1,3-Dichloropropene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Trichloroethene	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Vinyl Chloride	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-14-L	11/22/99	6.5	7	Xylenes (Total)	49.0	ug/kg	U	481631.16	1349629.01
12635	12635-19-R	11/22/99	9	9.5	Beryllium	0.501	ug/g dry		481631.16	1349629.01
12635	12635-19-R	11/22/99	9	9.5	Thorium	4.74	ug/g dry		481631.16	1349629.01
12635	12635-19-R	11/22/99	9	9.5	Uranium, Total	1.29	ug/g dry		481631.16	1349629.01

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12635	12635-20-L	11/22/99	9.5	10	1,1,1-Trichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	1,1,2,2-Tetrachloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	1,1,2-Trichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	1,1-Dichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	1,1-Dichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	1,2-Dichloroethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	1,2-Dichloropropane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	2-Butanone	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	2-Hexanone	48.1	ug/kg	UJ	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	4-Methyl-2-Pentanone	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Acetone	48.1	ug/kg	UJ	481631.16	1349629.01
12635	12635-20-P	11/19/99	9.5	10	Aroclor 1254	33.0	ug/kg	U	481631.16	1349629.01
12635	12635-20-P	11/19/99	9.5	10	Aroclor 1260	33.0	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Benzene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	BromodiChloromethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Bromoform	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Bromomethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Carbon Disulfide	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Carbon Tetrachloride	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Chlorobenzene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Chloroethane	48.1	ug/kg	UJ	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Chloroform	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Chloromethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	cis-1,2-Dichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	cis-1,3-Dichloropropene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Dibromochloromethane	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Ethylbenzene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Methylene Chloride	7.0	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Styrene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Tetrachloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Toluene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	trans-1,2-Dichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	trans-1,3-Dichloropropene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Trichloroethene	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Vinyl Chloride	48.1	ug/kg	U	481631.16	1349629.01
12635	12635-20-L	11/22/99	9.5	10	Xylenes (Total)	48.1	ug/kg	U	481631.16	1349629.01
12636	12636-1-R	11/19/99	0	0.5	Beryllium	1.39	ug/g dry		481630.87	1349649.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12636	12636-1-R	11/19/99	0	0.5	Thorium	9.13	ug/g dry		481630.87	1349649.14
12636	12636-1-R	11/19/99	0	0.5	Uranium, Total	48.8	ug/g dry		481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,1,1-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,1,2-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,1-Dichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,1-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,2-Dichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	1,2-Dichloropropane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	2-Butanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	2-Hexanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	4-Methyl-2-Pentanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Acetone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Aroclor 1254	33	ug/kg	U	481630.87	1349649.14
12636	12636-2-P	11/19/99	0.5	1	Aroclor 1260	33	ug/kg	U	481630.87	1349649.14
12636	12636-2-P	11/19/99	0.5	1	Benzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	BromodiChloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Bromoform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Bromomethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Carbon Disulfide	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Carbon Tetrachloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Chlorobenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Chloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Chloroform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Chloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	cis-1,2-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	cis-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Dibromochloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Ethylbenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Methylene Chloride	2.7	ug/kg	BJ	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Styrene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Tetrachloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Toluene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	trans-1,2-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	trans-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Trichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-2-L	11/19/99	0.5	1	Vinyl Chloride	50.0	ug/kg	U	481630.87	1349649.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12636	12636-2-L	11/19/99	0.5	1	Xylenes (Total)	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-7-R	11/19/99	3	3.5	Beryllium	0.890	ug/g dry		481630.87	1349649.14
12636	12636-7-R	11/19/99	3	3.5	Thorium	6.19	ug/g dry		481630.87	1349649.14
12636	12636-7-R	11/19/99	3	3.5	Uranium, Total	17.9	ug/g dry		481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,1,1-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,1,2-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,1-Dichloroethane	2.8	ug/kg	J	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,1-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,2-Dichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	1,2-Dichloropropane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	2-Butanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	2-Hexanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	4-Methyl-2-Pentanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-P	11/19/99	3.5	4	Acetone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-P	11/19/99	3.5	4	Aroclor 1254	32	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Aroclor 1260	32	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Benzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	BromodiChloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Bromoform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Bromomethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Carbon Disulfide	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Carbon Tetrachloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Chlorobenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Chloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Chloroform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Chloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	cis-1,2-Dichloroethene	16.3	ug/kg	J	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	cis-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Dibromochloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Ethylbenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Methylene Chloride	4.6	ug/kg	BJ	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Styrene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Tetrachloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Toluene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	trans-1,2-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	trans-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12636	12636-8-L	11/19/99	3.5	4	Trichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Vinyl Chloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-8-L	11/19/99	3.5	4	Xylenes (Total)	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-13-R	11/19/99	6	6.5	Beryllium	0.707	ug/g dry		481630.87	1349649.14
12636	12636-13-R	11/19/99	6	6.5	Thorium	5.32	ug/g dry		481630.87	1349649.14
12636	12636-13-R	11/19/99	6	6.5	Uranium, Total	3.33	ug/g dry		481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,1,1-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,1,2-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,1-Dichloroethane	6.1	ug/kg	J	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,1-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,2-Dichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	1,2-Dichloropropane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	2-Butanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	2-Hexanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	4-Methyl-2-Pentanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Acetone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-P	11/19/99	6.5	7	Aroclor 1254	33	ug/kg	U	481630.87	1349649.14
12636	12636-14-P	11/19/99	6.5	7	Aroclor 1260	33	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Benzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	BromodiChloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Bromoform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Bromomethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Carbon Disulfide	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Carbon Tetrachloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Chlorobenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Chloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Chloroform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Chloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	cis-1,2-Dichloroethene	12.8	ug/kg	J	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	cis-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Dibromochloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Ethylbenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Methylene Chloride	4.2	ug/kg	BJ	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Styrene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Tetrachloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Toluene	50.0	ug/kg	U	481630.87	1349649.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12636	12636-14-L	11/19/99	6.5	7	trans-1,2-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	trans-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Trichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Vinyl Chloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-14-L	11/19/99	6.5	7	Xylenes (Total)	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-19-R	11/19/99	9	9.5	Beryllium	0.592	ug/g dry		481630.87	1349649.14
12636	12636-19-R	11/19/99	9	9.5	Thorium	4.58	ug/g dry		481630.87	1349649.14
12636	12636-19-R	11/19/99	9	9.5	Uranium, Total	1.45	ug/g dry		481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,1,1-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,1-Dichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,1-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	2-Butanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Acetone	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-P	11/19/99	9.5	10	Aroclor 1254	33	ug/kg	U	481630.87	1349649.14
12636	12636-20-P	11/19/99	9.5	10	Aroclor 1260	33	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Benzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Bromoform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Bromomethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Chloroethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Chloroform	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Chloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	cis-1,2-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Methylene Chloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Styrene	50.0	ug/kg	U	481630.87	1349649.14

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12636	12636-20-L	11/19/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Toluene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	trans-1,2-Dichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Trichloroethene	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481630.87	1349649.14
12636	12636-20-L	11/19/99	9.5	10	Xylenes (Total)	50.0	ug/kg	U	481630.87	1349649.14
12637	12637-1-R	11/19/99	0	0.5	Beryllium	1.27	ug/g dry		481630.47	1349670.84
12637	12637-1-R	11/19/99	0	0.5	Thorium	7.72	ug/g dry		481630.47	1349670.84
12637	12637-1-R	11/19/99	0	0.5	Uranium, Total	40.9	ug/g dry		481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,1,1-Trichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,1,2-Trichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,1-Dichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,1-Dichloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,2-Dichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	1,2-Dichloropropane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	2-Butanone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	2-Hexanone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	4-Methyl-2-Pentanone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Acetone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-P	11/19/99	0.5	1	Aroclor 1254	32	ug/kg	U	481630.47	1349670.84
12637	12637-2-P	11/19/99	0.5	1	Aroclor 1260	32	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Benzene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	BromodiChloromethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Bromoform	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Bromomethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Carbon Disulfide	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Carbon Tetrachloride	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Chlorobenzene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Chloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Chloroform	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Chloromethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	cis-1,2-Dichloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	cis-1,3-Dichloropropene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Dibromochloromethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Ethylbenzene	45.4	ug/kg	U	481630.47	1349670.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12637	12637-2-L	11/19/99	0.5	1	Methylene Chloride	6.1	ug/kg	BJ	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Styrene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Tetrachloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Toluene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	trans-1,2-Dichloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	trans-1,3-Dichloropropene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Trichloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Vinyl Chloride	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-2-L	11/19/99	0.5	1	Xylenes (Total)	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-7-R	11/19/99	3	3.5	Beryllium	0.836	ug/g dry		481630.47	1349670.84
12637	12637-7-R	11/19/99	3	3.5	Thorium	6.21	ug/g dry		481630.47	1349670.84
12637	12637-7-R	11/19/99	3	3.5	Uranium, Total	3.02	ug/g dry		481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,1,1-Trichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,1,2,2-Tetrachloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,1,2-Trichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,1-Dichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,1-Dichloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,2-Dichloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	1,2-Dichloropropane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	2-Butanone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	2-Hexanone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	4-Methyl-2-Pentanone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Acetone	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-P	11/19/99	3.5	4	Aroclor 1254	33	ug/kg	U	481630.47	1349670.84
12637	12637-8-P	11/19/99	3.5	4	Aroclor 1260	33	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Benzene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	BromodiChloromethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Bromoform	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Bromomethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Carbon Disulfide	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Carbon Tetrachloride	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Chlorobenzene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Chloroethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Chloroform	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Chloromethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	cis-1,2-Dichloroethene	2.9	ug/kg	J	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	cis-1,3-Dichloropropene	45.4	ug/kg	U	481630.47	1349670.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12637	12637-8-L	11/19/99	3.5	4	Dibromochloromethane	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Ethylbenzene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Methylene Chloride	2.7	ug/kg	BJ	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Styrene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Tetrachloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Toluene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	trans-1,2-Dichloroethene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	trans-1,3-Dichloropropene	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Trichloroethene	2.4	ug/kg	J	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Vinyl Chloride	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-8-L	11/19/99	3.5	4	Xylenes (Total)	45.4	ug/kg	U	481630.47	1349670.84
12637	12637-13-R	11/19/99	6	6.5	Beryllium	0.806	ug/g dry		481630.47	1349670.84
12637	12637-13-R	11/19/99	6	6.5	Thorium	5.81	ug/g dry		481630.47	1349670.84
12637	12637-13-R	11/19/99	6	6.5	Uranium, Total	1.63	ug/g dry		481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,1,1-Trichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,1,2-Trichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,1-Dichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,1-Dichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,2-Dichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	1,2-Dichloropropane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	2-Butanone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	2-Hexanone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	4-Methyl-2-Pentanone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Acetone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-P	11/19/99	6.5	7	Aroclor 1254	33	ug/kg	U	481630.47	1349670.84
12637	12637-14-P	11/19/99	6.5	7	Aroclor 1260	33	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Benzene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	BromodiChloromethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Bromoform	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Bromomethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Carbon Disulfide	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Carbon Tetrachloride	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Chlorobenzene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Chloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Chloroform	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Chloromethane	50.0	ug/kg	U	481630.47	1349670.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12637	12637-14-L	11/19/99	6.5	7	cis-1,2-Dichloroethene	15.5	ug/kg	J	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	cis-1,3-Dichloropropene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Dibromochloromethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Ethylbenzene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Methylene Chloride	4.7	ug/kg	BJ	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Styrene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Tetrachloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Toluene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	trans-1,2-Dichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	trans-1,3-Dichloropropene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Trichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Vinyl Chloride	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-14-L	11/19/99	6.5	7	Xylenes (Total)	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-19-R	11/19/99	9	9.5	Beryllium	0.668	ug/g dry		481630.47	1349670.84
12637	12637-19-R	11/19/99	9	9.5	Thorium	5.29	ug/g dry		481630.47	1349670.84
12637	12637-19-R	11/19/99	9	9.5	Uranium, Total	1.43	ug/g dry		481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	1,1,1-Trichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	1,1,2,2-Tetrachloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	1,1,2-Trichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L.	11/19/99	9.5	10	1,1-Dichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	1,1-Dichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	1,2-Dichloroethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	1,2-Dichloropropane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	2-Butanone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	2-Hexanone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	4-Methyl-2-Pentanone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Acetone	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-P	11/19/99	9.5	10	Aroclor 1254	33	ug/kg	U	481630.47	1349670.84
12637	12637-20-P	11/19/99	9.5	10	Aroclor 1260	33	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Benzene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	BromodiChloromethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Bromoform	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Bromomethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Carbon Disulfide	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Carbon Tetrachloride	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Chlorobenzene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Chloroethane	50.0	ug/kg	U	481630.47	1349670.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12637	12637-20-L	11/19/99	9.5	10	Chloroform	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Chloromethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	cis-1,2-Dichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	cis-1,3-Dichloropropene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Dibromochloromethane	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Ethylbenzene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Methylene Chloride	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Styrene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Tetrachloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Toluene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	trans-1,2-Dichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	trans-1,3-Dichloropropene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Trichloroethene	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Vinyl Chloride	50.0	ug/kg	U	481630.47	1349670.84
12637	12637-20-L	11/19/99	9.5	10	Xylenes (Total)	50.0	ug/kg	U	481630.47	1349670.84
12638	12638-1-R	12/2/99	0	0.5	Technetium 99	1.990	pCi/g dry	-	480891.15	1350211.26
12638	12638-1-R	12/2/99	0	0.5	Thorium	7.46	ug/g dry	J	480891.15	1350211.26
12638	12638-1-R	12/2/99	0	0.5	Uranium, Total	20.8	ug/g dry	J	480891.15	1350211.26
12638	12638-3-R	12/2/99	1	1.5	Technetium 99	.110	pCi/g dry	U	480891.15	1350211.26
12638	12638-3-R	12/2/99	1	1.5	Thorium	7.08	ug/g dry	J	480891.15	1350211.26
12638	12638-3-R	12/2/99	1	1.5	Uranium, Total	43.1	ug/g dry	J	480891.15	1350211.26
12638	12638-5-R	12/2/99	2	2.5	Technetium 99	.498	pCi/g dry	U	480891.15	1350211.26
12638	12638-5-R	12/2/99	2	2.5	Thorium	5.8	ug/g dry	J	480891.15	1350211.26
12638	12638-5-R	12/2/99	2	2.5	Uranium, Total	154.	ug/g dry	J	480891.15	1350211.26
12638	12638-7-R	12/2/99	3	3.5	Technetium 99	1.110	pCi/g dry	U	480891.15	1350211.26
12638	12638-7-R	12/2/99	3	3.5	Thorium	5.63	ug/g dry	J	480891.15	1350211.26
12638	12638-7-R	12/2/99	3	3.5	Uranium, Total	16.6	ug/g dry	J	480891.15	1350211.26
12638	12638-9-R	12/2/99	4	4.5	Technetium 99	2.250	pCi/g dry	-	480891.15	1350211.26
12638	12638-9-R	12/2/99	4	4.5	Thorium	6.11	ug/g dry	J	480891.15	1350211.26
12638	12638-9-R	12/2/99	4	4.5	Uranium, Total	1.51	ug/g dry	J	480891.15	1350211.26
12638	12638-11-R	12/2/99	5	5.5	Technetium 99	3.820	pCi/g dry	-	480891.15	1350211.26
12638	12638-11-R	12/2/99	5	5.5	Thorium	5.76	ug/g dry	J	480891.15	1350211.26
12638	12638-11-R	12/2/99	5	5.5	Uranium, Total	1.62	ug/g dry	J	480891.15	1350211.26
12638	12638-13-R	12/2/99	6	6.5	Technetium 99	.015	pCi/g dry	U	480891.15	1350211.26
12638	12638-13-R	12/2/99	6	6.5	Thorium	5.37	ug/g dry	J	480891.15	1350211.26
12638	12638-13-R	12/2/99	6	6.5	Uranium, Total	1.88	ug/g dry	J	480891.15	1350211.26
12638	12638-15-R	12/2/99	7	7.5	Technetium 99	.327	pCi/g dry	U	480891.15	1350211.26

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APPENDIX C
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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12638	12638-15-R	12/2/99	7	7.5	Thorium	5.51	ug/g dry	J	480891.15	1350211.26
12638	12638-15-R	12/2/99	7	7.5	Uranium, Total	1.28	ug/g dry	J	480891.15	1350211.26
12639	12639-1-R	12/2/99	0	0.5	Technetium 99	.382	pCi/g dry	U	480880.88	1350221.37
12639	12639-1-R	12/2/99	0	0.5	Thorium	6.91	ug/g dry	J	480880.88	1350221.37
12639	12639-1-R	12/2/99	0	0.5	Uranium, Total	58.2	ug/g dry	J	480880.88	1350221.37
12639	12639-3-R	12/2/99	1	1.5	Technetium 99	.817	pCi/g dry	U	480880.88	1350221.37
12639	12639-3-R	12/2/99	1	1.5	Thorium	6.23	ug/g dry	J	480880.88	1350221.37
12639	12639-3-R	12/2/99	1	1.5	Uranium, Total	7.42	ug/g dry	J	480880.88	1350221.37
12639	12639-5-R	12/2/99	2	2.5	Technetium 99	-.091	pCi/g dry	U	480880.88	1350221.37
12639	12639-5-R	12/2/99	2	2.5	Thorium	6.29	ug/g dry	J	480880.88	1350221.37
12639	12639-5-R	12/2/99	2	2.5	Uranium, Total	2.42	ug/g dry	J	480880.88	1350221.37
12639	12639-7-R	12/2/99	3	3.5	Technetium 99	.239	pCi/g dry	U	480880.88	1350221.37
12639	12639-7-R	12/2/99	3	3.5	Thorium	6.27	ug/g dry	J	480880.88	1350221.37
12639	12639-7-R	12/2/99	3	3.5	Uranium, Total	5.45	ug/g dry	J	480880.88	1350221.37
12639	12639-9-R	12/2/99	4	4.5	Technetium 99	.810	pCi/g dry	U	480880.88	1350221.37
12639	12639-9-R	12/2/99	4	4.5	Thorium	6.28	ug/g dry	J	480880.88	1350221.37
12639	12639-9-R	12/2/99	4	4.5	Uranium, Total	1.82	ug/g dry	J	480880.88	1350221.37
12639	12639-11-R	12/2/99	5	5.5	Technetium 99	-.195	pCi/g dry	U	480880.88	1350221.37
12639	12639-11-R	12/2/99	5	5.5	Thorium	6.21	ug/g dry	J	480880.88	1350221.37
12639	12639-11-R	12/2/99	5	5.5	Uranium, Total	1.67	ug/g dry	J	480880.88	1350221.37
12639	12639-13-R	12/2/99	6	6.5	Technetium 99	-.007	pCi/g dry	U	480880.88	1350221.37
12639	12639-13-R	12/2/99	6	6.5	Thorium	6.14	ug/g dry	J	480880.88	1350221.37
12639	12639-13-R	12/2/99	6	6.5	Uranium, Total	1.81	ug/g dry	J	480880.88	1350221.37
12639	12639-15-R	12/2/99	7	7.5	Technetium 99	1.800	pCi/g dry	-	480880.88	1350221.37
12639	12639-15-R	12/2/99	7	7.5	Thorium	6.02	ug/g dry	J	480880.88	1350221.37
12639	12639-15-R	12/2/99	7	7.5	Uranium, Total	1.78	ug/g dry	J	480880.88	1350221.37
12640	12640-1-R	12/2/99	0	0.5	Thorium	7.11	ug/g dry	J	480870.92	1350237.89
12640	12640-1-R	12/2/99	0	0.5	Uranium, Total	18.2	ug/g dry	J	480870.92	1350237.89
12640	12640-3-R	12/2/99	1	1.5	Thorium	7.25	ug/g dry	J	480870.92	1350237.89
12640	12640-3-R	12/2/99	1	1.5	Uranium, Total	1.39	ug/g dry	J	480870.92	1350237.89
12640	12640-5-R	12/2/99	2	2.5	Thorium	7.99	ug/g dry	J	480870.92	1350237.89
12640	12640-5-R	12/2/99	2	2.5	Uranium, Total	1.37	ug/g dry	J	480870.92	1350237.89
12640	12640-7-R	12/2/99	3	3.5	Thorium	7.86	ug/g dry	J	480870.92	1350237.89
12640	12640-7-R	12/2/99	3	3.5	Uranium, Total	2.29	ug/g dry	J	480870.92	1350237.89
12641	12641-1-R	12/2/99	0	0.5	Thorium	6.45	ug/g dry	J	480823.51	1350234.55
12641	12641-1-R	12/2/99	0	0.5	Uranium, Total	88.	ug/g dry	J	480823.51	1350234.55
12641	12641-3-R	12/2/99	1	1.5	Thorium	7.33	ug/g dry	J	480823.51	1350234.55

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12641	12641-3-R	12/2/99	1	1.5	Uranium, Total	1.47	ug/g dry	J	480823.51	1350234.55
12641	12641-5-R	12/2/99	2	2.5	Thorium	8.84	ug/g dry	J	480823.51	1350234.55
12641	12641-5-R	12/2/99	2	2.5	Uranium, Total	6.69	ug/g dry	J	480823.51	1350234.55
12641	12641-7-R	12/2/99	3	3.5	Thorium	7.99	ug/g dry	J	480823.51	1350234.55
12641	12641-7-R	12/2/99	3	3.5	Uranium, Total	2.29	ug/g dry	J	480823.51	1350234.55
12642	12642-1-R	12/2/99	0	0.5	Thorium	8.27	ug/g dry	J	480813.4	1350243.8
12642	12642-1-R	12/2/99	0	0.5	Uranium, Total	24.1	ug/g dry	J	480813.4	1350243.8
12642	12642-3-R	12/2/99	1	1.5	Thorium	8.56	ug/g dry	J	480813.4	1350243.8
12642	12642-3-R	12/2/99	1	1.5	Uranium, Total	1.57	ug/g dry	J	480813.4	1350243.8
12642	12642-5-R	12/2/99	2	2.5	Thorium	8.31	ug/g dry	J	480813.4	1350243.8
12642	12642-5-R	12/2/99	2	2.5	Uranium, Total	1.66	ug/g dry	J	480813.4	1350243.8
12642	12642-7-R	12/2/99	3	3.5	Thorium	8.44	ug/g dry	J	480813.4	1350243.8
12642	12642-7-R	12/2/99	3	3.5	Uranium, Total	1.57	ug/g dry	J	480813.4	1350243.8
12643	12643-1-R	12/2/99	0	0.5	Thorium	5.65	ug/g dry	J	480803.45	1350234.6
12643	12643-1-R	12/2/99	0	0.5	Uranium, Total	25.6	ug/g dry	J	480803.45	1350234.6
12643	12643-3-R	12/2/99	1	1.5	Thorium	6.29	ug/g dry	J	480803.45	1350234.6
12643	12643-3-R	12/2/99	1	1.5	Uranium, Total	1.6	ug/g dry	J	480803.45	1350234.6
12643	12643-5-R	12/2/99	2	2.5	Thorium	7.26	ug/g dry	J	480803.45	1350234.6
12643	12643-5-R	12/2/99	2	2.5	Uranium, Total	3.06	ug/g dry	J	480803.45	1350234.6
12643	12643-7-R	12/2/99	3	3.5	Thorium	6.73	ug/g dry	J	480803.45	1350234.6
12643	12643-7-R	12/2/99	3	3.5	Uranium, Total	1.9	ug/g dry	J	480803.45	1350234.6
12654	12654-8-R	12/29/99	3.5	4	Thorium	7.34	ug/g dry	-	481866.04	1350394.66
12654	12654-8-R	12/29/99	3.5	4	Uranium, Total	5.38	ug/g dry	-	481866.04	1350394.66
12654	12654-10-R	12/29/99	4.5	5	Thorium	7.13	ug/g dry	-	481866.04	1350394.66
12654	12654-10-R	12/29/99	4.5	5	Uranium, Total	4.25	ug/g dry	-	481866.04	1350394.66
12654	12654-12-R	12/29/99	5.5	6	Thorium	6.43	ug/g dry	-	481866.04	1350394.66
12654	12654-12-R	12/29/99	5.5	6	Uranium, Total	13.5	ug/g dry	-	481866.04	1350394.66
12654	12654-14-R	12/29/99	6.5	7	Thorium	5.1	ug/g dry	-	481866.04	1350394.66
12654	12654-14-R	12/29/99	6.5	7	Uranium, Total	15	ug/g dry	-	481866.04	1350394.66
12654	12654-16-R	12/29/99	7.5	8	Thorium	2.84	ug/g dry	-	481866.04	1350394.66
12654	12654-16-R	12/29/99	7.5	8	Uranium, Total	8.6	ug/g dry	-	481866.04	1350394.66
12654	12654-18-R	12/29/99	8.5	9	Thorium	1.98	ug/g dry	-	481866.04	1350394.66
12654	12654-18-R	12/29/99	8.5	9	Uranium, Total	14.2	ug/g dry	-	481866.04	1350394.66
12654	12654-20-R	12/29/99	9.5	10	Thorium	3.46	ug/g dry	-	481866.04	1350394.66
12654	12654-20-R	12/29/99	9.5	10	Uranium, Total	4.64	ug/g dry	-	481866.04	1350394.66
12654	12654-22-R	12/29/99	10.5	11	Thorium	3.34	ug/g dry	J	481866.04	1350394.66
12654	12654-22-R	12/29/99	10.5	11	Uranium, Total	3.06	ug/g dry	J	481866.04	1350394.66

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12654	12654-24-R	12/29/99	11.5	12	Thorium	2.09	ug/g dry	-	481866.04	1350394.66
12654	12654-24-R	12/29/99	11.5	12	Uranium, Total	2.86	ug/g dry	J	481866.04	1350394.66
12654	12654-26-R	12/29/99	12.5	13	Thorium	2.23	ug/g dry	J	481866.04	1350394.66
12654	12654-26-R	12/29/99	12.5	13	Uranium, Total	3.11	ug/g dry	J	481866.04	1350394.66
12654	12654-28-R	12/29/99	13.5	14	Thorium	3.31	ug/g dry	J	481866.04	1350394.66
12654	12654-28-R	12/29/99	13.5	14	Uranium, Total	3.55	ug/g dry	J	481866.04	1350394.66
12655	12655-20-P	2/8/00	9.5	10	Aroclor 1254	32.0	ug/kg	U	481035.35	1349572.19
12655	12655-20-P	2/8/00	9.5	10	Aroclor 1260	32.0	ug/kg	U	481035.35	1349572.19
12655	12655-22-P	2/8/00	10.5	11	Aroclor 1254	31.0	ug/kg	U	481035.35	1349572.19
12655	12655-22-P	2/8/00	10.5	11	Aroclor 1260	31.0	ug/kg	U	481035.35	1349572.19
12655	12655-24-P	2/8/00	11.5	12	Aroclor 1254	32.0	ug/kg	U	481035.35	1349572.19
12655	12655-24-P	2/8/00	11.5	12	Aroclor 1260	32.0	ug/kg	U	481035.35	1349572.19
12655	12655-26-P	2/8/00	12.5	13	Aroclor 1254	33.0	ug/kg	U	481035.35	1349572.19
12655	12655-26-P	2/8/00	12.5	13	Aroclor 1260	33.0	ug/kg	U	481035.35	1349572.19
12656	12656-5-P	2/7/00	2	2.5	Aroclor 1254	32.0	ug/kg	U	481017.49	1349572.7
12656	12656-5-P	2/7/00	2	2.5	Aroclor 1260	32.0	ug/kg	U	481017.49	1349572.7
12656	12656-9-P	2/7/00	4	4.5	Aroclor 1254	32.0	ug/kg	U	481017.49	1349572.7
12656	12656-9-P	2/7/00	4	4.5	Aroclor 1260	32.0	ug/kg	U	481017.49	1349572.7
12656	12656-13-P	2/7/00	6	6.5	Aroclor 1254	28.0	ug/kg	U	481017.49	1349572.7
12656	12656-13-P	2/7/00	6	6.5	Aroclor 1260	28.0	ug/kg	U	481017.49	1349572.7
12656	12656-17-P	2/7/00	8	8.5	Aroclor 1254	32.0	ug/kg	U	481017.49	1349572.7
12656	12656-17-P	2/7/00	8	8.5	Aroclor 1260	32.0	ug/kg	U	481017.49	1349572.7
12656	12656-21-P	2/7/00	10	10.5	Aroclor 1254	30.0	ug/kg	U	481017.49	1349572.7
12656	12656-21-P	2/7/00	10	10.5	Aroclor 1260	30.0	ug/kg	U	481017.49	1349572.7
12656	12656-26-P	2/7/00	12.5	13	Aroclor 1254	33.0	ug/kg	U	481017.49	1349572.7
12656	12656-26-P	2/7/00	12.5	13	Aroclor 1260	33.0	ug/kg	U	481017.49	1349572.7
12657	12657-5-P	2/8/00	2	2.5	Aroclor 1254	99.0	ug/kg	-	481032.798	1349559.64
12657	12657-5-P	2/8/00	2	2.5	Aroclor 1260	33.0	ug/kg	U	481032.798	1349559.64
12657	12657-9-P	2/8/00	4	4.5	Aroclor 1254	57.0	ug/kg	-	481032.798	1349559.64
12657	12657-9-P	2/8/00	4	4.5	Aroclor 1260	32.0	ug/kg	U	481032.798	1349559.64
12657	12657-13-P	2/8/00	6	6.5	Aroclor 1254	33.0	ug/kg	U	481032.798	1349559.64
12657	12657-13-P	2/8/00	6	6.5	Aroclor 1260	33.0	ug/kg	U	481032.798	1349559.64
12657	12657-17-P	2/8/00	8	8.5	Aroclor 1254	32.0	ug/kg	U	481032.798	1349559.64
12657	12657-17-P	2/8/00	8	8.5	Aroclor 1260	32.0	ug/kg	U	481032.798	1349559.64
12657	12657-21-P	2/8/00	10	10.5	Aroclor 1254	32.0	ug/kg	U	481032.798	1349559.64
12657	12657-21-P	2/8/00	10	10.5	Aroclor 1260	32.0	ug/kg	U	481032.798	1349559.64
12657	12657-26-P	2/8/00	12.5	13	Aroclor 1254	33.0	ug/kg	U	481032.798	1349559.64

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12657	12657-26-P	2/8/00	12.5	13	Aroclor 1260	33.0	ug/kg	U	481032.798	1349559.64
12658	12658-5-P	2/2/00	2	2.5	Aroclor 1254	32.0	ug/kg	U	481048.55	1349573.12
12658	12658-5-P	2/2/00	2	2.5	Aroclor 1260	32.0	ug/kg	U	481048.55	1349573.12
12658	12658-9-P	2/2/00	4	4.5	Aroclor 1254	33.0	ug/kg	U	481048.55	1349573.12
12658	12658-9-P	2/2/00	4	4.5	Aroclor 1260	33.0	ug/kg	U	481048.55	1349573.12
12658	12658-13-P	2/2/00	6	6.5	Aroclor 1254	32.0	ug/kg	U	481048.55	1349573.12
12658	12658-13-P	2/2/00	6	6.5	Aroclor 1260	32.0	ug/kg	U	481048.55	1349573.12
12658	12658-17-P	2/2/00	8	8.5	Aroclor 1254	33.0	ug/kg	U	481048.55	1349573.12
12658	12658-17-P	2/2/00	8	8.5	Aroclor 1260	33.0	ug/kg	U	481048.55	1349573.12
12658	12658-21-P	2/2/00	10	10.5	Aroclor 1254	30.0	ug/kg	U	481048.55	1349573.12
12658	12658-21-P	2/2/00	10	10.5	Aroclor 1260	30.0	ug/kg	U	481048.55	1349573.12
12658	12658-26-P	2/2/00	12.5	13	Aroclor 1254	31.0	ug/kg	U	481048.55	1349573.12
12658	12658-26-P	2/2/00	12.5	13	Aroclor 1260	31.0	ug/kg	U	481048.55	1349573.12
12659	12659-5-P	2/3/00	2	2.5	Aroclor 1254	150.0	ug/kg	-	481046.74	1349617.06
12659	12659-5-P	2/3/00	2	2.5	Aroclor 1260	32.0	ug/kg	U	481046.74	1349617.06
12659	12659-9-P	2/3/00	4	4.5	Aroclor 1254	42.0	ug/kg	-	481046.74	1349617.06
12659	12659-9-P	2/3/00	4	4.5	Aroclor 1260	32.0	ug/kg	U	481046.74	1349617.06
12659	12659-13-P	2/3/00	6	6.5	Aroclor 1254	31.0	ug/kg	U	481046.74	1349617.06
12659	12659-13-P	2/3/00	6	6.5	Aroclor 1260	31.0	ug/kg	U	481046.74	1349617.06
12659	12659-17-P	2/3/00	8	8.5	Aroclor 1254	31.0	ug/kg	U	481046.74	1349617.06
12659	12659-17-P	2/3/00	8	8.5	Aroclor 1260	31.0	ug/kg	U	481046.74	1349617.06
12659	12659-20-P	2/3/00	9.5	10	Aroclor 1254	32.0	ug/kg	U	481046.74	1349617.06
12659	12659-20-P	2/3/00	9.5	10	Aroclor 1260	32.0	ug/kg	U	481046.74	1349617.06
12660	12660-12-P	2/7/00	5.5	6	Aroclor 1254	32.0	ug/kg	U	481034.74	1349639.44
12660	12660-12-P	2/7/00	5.5	6	Aroclor 1260	32.0	ug/kg	U	481034.74	1349639.44
12660	12660-16-P	2/7/00	7.5	8	Aroclor 1254	31.0	ug/kg	U	481034.74	1349639.44
12660	12660-16-P	2/7/00	7.5	8	Aroclor 1260	31.0	ug/kg	U	481034.74	1349639.44
12660	12660-20-P	2/7/00	9.5	10	Aroclor 1254	31.0	ug/kg	U	481034.74	1349639.44
12660	12660-20-P	2/7/00	9.5	10	Aroclor 1260	31.0	ug/kg	U	481034.74	1349639.44
12661	12661-5-P	2/3/00	2	2.5	Aroclor 1254	31.0	ug/kg	U	481045.78	1349661.84
12661	12661-5-P	2/3/00	2	2.5	Aroclor 1260	31.0	ug/kg	U	481045.78	1349661.84
12661	12661-9-P	2/3/00	4	4.5	Aroclor 1254	32.0	ug/kg	U	481045.78	1349661.84
12661	12661-9-P	2/3/00	4	4.5	Aroclor 1260	32.0	ug/kg	U	481045.78	1349661.84
12661	12661-13-P	2/3/00	6	6.5	Aroclor 1254	32.0	ug/kg	U	481045.78	1349661.84
12661	12661-13-P	2/3/00	6	6.5	Aroclor 1260	32.0	ug/kg	U	481045.78	1349661.84
12661	12661-17-P	2/3/00	8	8.5	Aroclor 1254	32.0	ug/kg	U	481045.78	1349661.84
12661	12661-17-P	2/3/00	8	8.5	Aroclor 1260	32.0	ug/kg	U	481045.78	1349661.84

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12661	12661-20-P	2/3/00	9.5	10	Aroclor 1254	32.0	ug/kg	U	481045.78	1349661.84
12661	12661-20-P	2/3/00	9.5	10	Aroclor 1260	32.0	ug/kg	U	481045.78	1349661.84
12662	12662C-5-P	2/3/00	2	2.5	Aroclor 1254	57.0	ug/kg	J	481035.78	1349687.29
12662	12662C-5-P	2/3/00	2	2.5	Aroclor 1260	31.0	ug/kg	U	481035.78	1349687.29
12662	12662C-9-P	2/3/00	4	4.5	Aroclor 1254	490.0	ug/kg	-	481035.78	1349687.29
12662	12662C-9-P	2/3/00	4	4.5	Aroclor 1260	31.0	ug/kg	U	481035.78	1349687.29
12662	12662C-13-P	2/3/00	6	6.5	Aroclor 1254	2100.0	ug/kg	J	481035.78	1349687.29
12662	12662C-13-P	2/3/00	6	6.5	Aroclor 1260	32.0	ug/kg	U	481035.78	1349687.29
12662	12662C-17-P	2/3/00	8	8.5	Aroclor 1254	80.0	ug/kg	-	481035.78	1349687.29
12662	12662C-17-P	2/3/00	8	8.5	Aroclor 1260	31.0	ug/kg	U	481035.78	1349687.29
12662	12662C-20-P	2/3/00	9.5	10	Aroclor 1254	36.0	ug/kg	-	481035.78	1349687.29
12662	12662C-20-P	2/3/00	9.5	10	Aroclor 1260	31.0	ug/kg	U	481035.78	1349687.29
12663	12663-5-P	2/3/00	2	2.5	Aroclor 1254	31.0	ug/kg	U	481027.18	1349693.12
12663	12663-5-P	2/3/00	2	2.5	Aroclor 1260	31.0	ug/kg	U	481027.18	1349693.12
12663	12663-9-P	2/3/00	4	4.5	Aroclor 1254	32.0	ug/kg	U	481027.18	1349693.12
12663	12663-9-P	2/3/00	4	4.5	Aroclor 1260	32.0	ug/kg	U	481027.18	1349693.12
12663	12663-13-P	2/3/00	6	6.5	Aroclor 1254	33.0	ug/kg	U	481027.18	1349693.12
12663	12663-13-P	2/3/00	6	6.5	Aroclor 1260	33.0	ug/kg	U	481027.18	1349693.12
12663	12663-17-P	2/3/00	8	8.5	Aroclor 1254	32.0	ug/kg	U	481027.18	1349693.12
12663	12663-17-P	2/3/00	8	8.5	Aroclor 1260	32.0	ug/kg	U	481027.18	1349693.12
12663	12663-20-P	2/3/00	9.5	10	Aroclor 1254	30.0	ug/kg	U	481027.18	1349693.12
12663	12663-20-P	2/3/00	9.5	10	Aroclor 1260	30.0	ug/kg	U	481027.18	1349693.12
12664	12664-5-P	2/7/00	2	2.5	Aroclor 1254	33.0	ug/kg	U	481015.69	1349685.5
12664	12664-5-P	2/7/00	2	2.5	Aroclor 1260	33.0	ug/kg	U	481015.69	1349685.5
12664	12664-9-P	2/7/00	4	4.5	Aroclor 1254	31.0	ug/kg	U	481015.69	1349685.5
12664	12664-9-P	2/7/00	4	4.5	Aroclor 1260	31.0	ug/kg	U	481015.69	1349685.5
12664	12664-13-P	2/7/00	6	6.5	Aroclor 1254	33.0	ug/kg	U	481015.69	1349685.5
12664	12664-13-P	2/7/00	6	6.5	Aroclor 1260	33.0	ug/kg	U	481015.69	1349685.5
12664	12664-17-P	2/7/00	8	8.5	Aroclor 1254	33.0	ug/kg	U	481015.69	1349685.5
12664	12664-17-P	2/7/00	8	8.5	Aroclor 1260	33.0	ug/kg	U	481015.69	1349685.5
12664	12664-20-P	2/7/00	9.5	10	Aroclor 1254	30.0	ug/kg	U	481015.69	1349685.5
12664	12664-20-P	2/7/00	9.5	10	Aroclor 1260	30.0	ug/kg	U	481015.69	1349685.5
12665	12665-5-P	2/7/00	2	2.5	Aroclor 1254	30.0	ug/kg	U	481014.74	1349639.44
12665	12665-5-P	2/7/00	2	2.5	Aroclor 1260	30.0	ug/kg	U	481014.74	1349639.44
12665	12665-9-P	2/7/00	4	4.5	Aroclor 1254	30.0	ug/kg	U	481014.74	1349639.44
12665	12665-9-P	2/7/00	4	4.5	Aroclor 1260	30.0	ug/kg	U	481014.74	1349639.44
12665	12665-13-P	2/7/00	6	6.5	Aroclor 1254	28.0	ug/kg	U	481014.74	1349639.44

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12665	12665-13-P	2/7/00	6	6.5	Aroclor 1260	28.0	ug/kg	U	481014.74	1349639.44
12665	12665-17-P	2/7/00	8	8.5	Aroclor 1254	31.0	ug/kg	U	481014.74	1349639.44
12665	12665-17-P	2/7/00	8	8.5	Aroclor 1260	31.0	ug/kg	U	481014.74	1349639.44
12665	12665-20-P	2/7/00	9.5	10	Aroclor 1254	33.0	ug/kg	U	481014.74	1349639.44
12665	12665-20-P	2/7/00	9.5	10	Aroclor 1260	33.0	ug/kg	U	481014.74	1349639.44
12666	12666-1-R	2/22/00	0	0.5	Thorium	6.96	ug/g dry		481727.919	1349629.94
12666	12666-1-R	2/22/00	0	0.5	Uranium, Total	490	ug/g dry		481727.919	1349629.94
12666	12666-3-R	2/22/00	1	1.5	Thorium	4.23	ug/g dry		481727.919	1349629.94
12666	12666-3-R	2/22/00	1	1.5	Uranium, Total	43.9	ug/g dry		481727.919	1349629.94
12666	12666-5-L	2/22/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-5-L	2/22/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.919	1349629.94
12666	12666-5-L	2/22/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-5-L	2/22/00	2	2.5	Trichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-8-L	2/22/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-8-L	2/22/00	3.5	4	1,2-Dichloroethene(Total)	5	ug/kg	J	481727.919	1349629.94
12666	12666-8-L	2/22/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-8-L	2/22/00	3.5	4	Trichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-12-L	2/22/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-12-L	2/22/00	5.5	6	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.919	1349629.94
12666	12666-12-L	2/22/00	5.5	6	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-12-L	2/22/00	5.5	6	Trichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-16-L	2/22/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-16-L	2/22/00	7.5	8	1,2-Dichloroethene(Total)	27	ug/kg	J	481727.919	1349629.94
12666	12666-16-L	2/22/00	7.5	8	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-16-L	2/22/00	7.5	8	Trichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-20-L	2/22/00	9.5	10	1,1-Dichloroethene	10	ug/kg	J	481727.919	1349629.94
12666	12666-20-L	2/22/00	9.5	10	1,2-Dichloroethene(Total)	72	ug/kg		481727.919	1349629.94
12666	12666-20-L	2/22/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-20-L	2/22/00	9.5	10	Trichloroethene	7	ug/kg	J	481727.919	1349629.94
12666	12666-24-L	2/22/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-24-L	2/22/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.919	1349629.94
12666	12666-24-L	2/22/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-24-L	2/22/00	11.5	12	Trichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-28-L	2/22/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-28-L	2/22/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.919	1349629.94
12666	12666-28-L	2/22/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-28-L	2/22/00	13.5	14	Trichloroethene	50	ug/kg	U	481727.919	1349629.94

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12666	12666-32-L	2/22/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-32-L	2/22/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.919	1349629.94
12666	12666-32-L	2/22/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481727.919	1349629.94
12666	12666-32-L	2/22/00	15.5	16	Trichloroethene	50	ug/kg	U	481727.919	1349629.94
12667	12667-1-R	2/22/00	0	0.5	Thorium	4.76	ug/g dry		481726.635	1349614.06
12667	12667-1-R	2/22/00	0	0.5	Uranium, Total	42.5	ug/g dry		481726.635	1349614.06
12667	12667-3-R	2/22/00	1	1.5	Thorium	5.70	ug/g dry		481726.635	1349614.06
12667	12667-3-R	2/22/00	1	1.5	Uranium, Total	10.6	ug/g dry		481726.635	1349614.06
12667	12667-5-L	2/22/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-5-L	2/22/00	2	2.5	1,2-Dichloroethene(Total)	8	ug/kg	J	481726.635	1349614.06
12667	12667-5-L	2/22/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-5-L	2/22/00	2	2.5	Trichloroethene	5	ug/kg	J	481726.635	1349614.06
12667	12667-8-L	2/22/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-8-L	2/22/00	3.5	4	1,2-Dichloroethene(Total)	50	ug/kg	U	481726.635	1349614.06
12667	12667-8-L	2/22/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-8-L	2/22/00	3.5	4	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-12-L	2/22/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-12-L	2/22/00	5.5	6	1,2-Dichloroethene(Total)	6	ug/kg	J	481726.635	1349614.06
12667	12667-12-L	2/22/00	5.5	6	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-12-L	2/22/00	5.5	6	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-16-L	2/22/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-16-L	2/22/00	7.5	8	1,2-Dichloroethene(Total)	7	ug/kg	J	481726.635	1349614.06
12667	12667-16-L	2/22/00	7.5	8	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-16-L	2/22/00	7.5	8	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-20-L	2/22/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-20-L	2/22/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481726.635	1349614.06
12667	12667-20-L	2/22/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-20-L	2/22/00	9.5	10	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-24-L	2/22/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-24-L	2/22/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481726.635	1349614.06
12667	12667-24-L	2/22/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-24-L	2/22/00	11.5	12	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-28-L	2/22/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-28-L	2/22/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481726.635	1349614.06
12667	12667-28-L	2/22/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-28-L	2/22/00	13.5	14	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-32-L	2/22/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481726.635	1349614.06

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12667	12667-32-L	2/22/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481726.635	1349614.06
12667	12667-32-L	2/22/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481726.635	1349614.06
12667	12667-32-L	2/22/00	15.5	16	Trichloroethene	50	ug/kg	U	481726.635	1349614.06
12668	12668-1-R	2/17/00	0	0.5	Thorium	4.90	ug/g dry		481727.98	1349590.04
12668	12668-1-R	2/17/00	0	0.5	Uranium, Total	98.7	ug/g dry		481727.98	1349590.04
12668	12668-3-R	2/17/00	1	1.5	Thorium	4.85	ug/g dry		481727.98	1349590.04
12668	12668-3-R	2/17/00	1	1.5	Uranium, Total	4.50	ug/g dry		481727.98	1349590.04
12668	12668-5-L	2/17/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-5-L	2/17/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.98	1349590.04
12668	12668-5-L	2/17/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-5-L	2/17/00	2	2.5	Trichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-8-L	2/17/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-8-L	2/17/00	3.5	4	1,2-Dichloroethene(Total)	24	ug/kg	J	481727.98	1349590.04
12668	12668-8-L	2/17/00	3.5	4	Tetrachloroethene	12	ug/kg	J	481727.98	1349590.04
12668	12668-8-L	2/17/00	3.5	4	Trichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-12-L	2/17/00	5.5	6	1,1-Dichloroethene	7	ug/kg	J	481727.98	1349590.04
12668	12668-12-L	2/17/00	5.5	6	1,2-Dichloroethene(Total)	83	ug/kg		481727.98	1349590.04
12668	12668-12-L	2/17/00	5.5	6	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-12-L	2/17/00	5.5	6	Trichloroethene	11	ug/kg	J	481727.98	1349590.04
12668	12668-16-L	2/17/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-16-L	2/17/00	7.5	8	1,2-Dichloroethene(Total)	40	ug/kg	J	481727.98	1349590.04
12668	12668-16-L	2/17/00	7.5	8	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-16-L	2/17/00	7.5	8	Trichloroethene	5	ug/kg	J	481727.98	1349590.04
12668	12668-20-L	2/17/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-20-L	2/17/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.98	1349590.04
12668	12668-20-L	2/17/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-20-L	2/17/00	9.5	10	Trichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-24-L	2/17/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-24-L	2/17/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.98	1349590.04
12668	12668-24-L	2/17/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-24-L	2/17/00	11.5	12	Trichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-28-L	2/17/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-28-L	2/17/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.98	1349590.04
12668	12668-28-L	2/17/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-28-L	2/17/00	13.5	14	Trichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-32-L	2/17/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-32-L	2/17/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481727.98	1349590.04

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12668	12668-32-L	2/17/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481727.98	1349590.04
12668	12668-32-L	2/17/00	15.5	16	Trichloroethene	50	ug/kg	U	481727.98	1349590.04
12669	12669-1-R	2/17/00	0	0.5	Thorium	8.88	ug/g dry		481732.1	1349569.93
12669	12669-1-R	2/17/00	0	0.5	Uranium, Total	110	ug/g dry		481732.1	1349569.93
12669	12669-3-R	2/17/00	1	1.5	Thorium	9.15	ug/g dry		481732.1	1349569.93
12669	12669-3-R	2/17/00	1	1.5	Uranium, Total	103	ug/g dry		481732.1	1349569.93
12669	12669-5-L	2/17/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-5-L	2/17/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481732.1	1349569.93
12669	12669-5-L	2/17/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-5-L	2/17/00	2	2.5	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-8-L	2/17/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-8-L	2/17/00	3.5	4	1,2-Dichloroethene(Total)	18	ug/kg	J	481732.1	1349569.93
12669	12669-8-L	2/17/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-8-L	2/17/00	3.5	4	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-12-L	2/17/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-12-L	2/17/00	5.5	6	1,2-Dichloroethene(Total)	50	ug/kg	U	481732.1	1349569.93
12669	12669-12-L	2/17/00	5.5	6	Tetrachloroethene	17	ug/kg	J	481732.1	1349569.93
12669	12669-12-L	2/17/00	5.5	6	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-16-L	2/17/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-16-L	2/17/00	7.5	8	1,2-Dichloroethene(Total)	29	ug/kg	J	481732.1	1349569.93
12669	12669-16-L	2/17/00	7.5	8	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-16-L	2/17/00	7.5	8	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-20-L	2/17/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-20-L	2/17/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481732.1	1349569.93
12669	12669-20-L	2/17/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-20-L	2/17/00	9.5	10	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-24-L	2/17/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-24-L	2/17/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481732.1	1349569.93
12669	12669-24-L	2/17/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-24-L	2/17/00	11.5	12	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-28-L	2/17/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-28-L	2/17/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481732.1	1349569.93
12669	12669-28-L	2/17/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-28-L	2/17/00	13.5	14	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-32-L	2/17/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481732.1	1349569.93
12669	12669-32-L	2/17/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481732.1	1349569.93
12669	12669-32-L	2/17/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481732.1	1349569.93

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12669	12669-32-L	2/17/00	15.5	16	Trichloroethene	50	ug/kg	U	481732.1	1349569.93
12670	12670-1-R	2/15/00	0	0.5	Thorium	7.16	ug/g dry		481731.99	1349548.01
12670	12670-1-R	2/15/00	0	0.5	Uranium, Total	195	ug/g dry		481731.99	1349548.01
12670	12670-5-L	2/15/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-5-L	2/15/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01
12670	12670-5-L	2/15/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-5-R	2/15/00	2	2.5	Thorium	4.88	ug/g dry		481731.99	1349548.01
12670	12670-5-L	2/15/00	2	2.5	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-5-R	2/15/00	2	2.5	Uranium, Total	10.5	ug/g dry		481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-8-L	2/15/00	3.5	4	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-9-R	2/15/00	4	4.5	Thorium	4.62	ug/g dry		481731.99	1349548.01
12670	12670-9-R	2/15/00	4	4.5	Uranium, Total	1.61	ug/g dry		481731.99	1349548.01
12670	12670-16-L	2/15/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-16-L	2/15/00	7.5	8	1,2-Dichloroethene(Total)	43	ug/kg	J	481731.99	1349548.01
12670	12670-16-L	2/15/00	7.5	8	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-16-L	2/15/00	7.5	8	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-20-L	2/15/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-20-L	2/15/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01
12670	12670-20-L	2/15/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-20-L	2/15/00	9.5	10	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-24-L	2/15/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-24-L	2/15/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01
12670	12670-24-L	2/15/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-24-L	2/15/00	11.5	12	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-28-L	2/15/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-28-L	2/15/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01
12670	12670-28-L	2/15/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-28-L	2/15/00	13.5	14	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-32-L	2/15/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-32-L	2/15/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481731.99	1349548.01

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12670	12670-32-L	2/15/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481731.99	1349548.01
12670	12670-32-L	2/15/00	15.5	16	Trichloroethene	50	ug/kg	U	481731.99	1349548.01
12671	12671-1-L	2/15/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-1-L	2/15/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481705.49	1349550.02
12671	12671-1-L	2/15/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-1-R	2/15/00	0	0.5	Thorium	9.66	ug/g dry		481705.49	1349550.02
12671	12671-1-L	2/15/00	0	0.5	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-1-R	2/15/00	0	0.5	Uranium, Total	249	ug/g dry		481705.49	1349550.02
12671	12671-3-R	2/15/00	1	1.5	Thorium	9.09	ug/g dry		481705.49	1349550.02
12671	12671-3-R	2/15/00	1	1.5	Uranium, Total	155	ug/g dry		481705.49	1349550.02
12671	12671-5-L	2/15/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-5-L	2/15/00	2	2.5	1,2-Dichloroethene(Total)	14	ug/kg	J	481705.49	1349550.02
12671	12671-5-L	2/15/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-5-R	2/15/00	2	2.5	Thorium	9.06	ug/g dry		481705.49	1349550.02
12671	12671-5-L	2/15/00	2	2.5	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-5-R	2/15/00	2	2.5	Uranium, Total	37.3	ug/g dry		481705.49	1349550.02
12671	12671-7-R	2/15/00	3	3.5	Thorium	9.00	ug/g dry		481705.49	1349550.02
12671	12671-7-R	2/15/00	3	3.5	Uranium, Total	207	ug/g dry		481705.49	1349550.02
12671	12671-9-L	2/15/00	4	4.5	1,1-Dichloroethene	12	ug/kg	J	481705.49	1349550.02
12671	12671-9-L	2/15/00	4	4.5	1,2-Dichloroethene(Total)	90	ug/kg		481705.49	1349550.02
12671	12671-9-L	2/15/00	4	4.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-9-R	2/15/00	4	4.5	Thorium	9.42	ug/g dry		481705.49	1349550.02
12671	12671-9-L	2/15/00	4	4.5	Trichloroethene	22	ug/kg	J	481705.49	1349550.02
12671	12671-9-R	2/15/00	4	4.5	Uranium, Total	358	ug/g dry		481705.49	1349550.02
12671	12671-11-R	2/15/00	5	5.5	Thorium	6.01	ug/g dry		481705.49	1349550.02
12671	12671-11-R	2/15/00	5	5.5	Uranium, Total	36.1	ug/g dry		481705.49	1349550.02
12671	12671-13-L	2/15/00	6	6.5	1,1-Dichloroethene	11	ug/kg	J	481705.49	1349550.02
12671	12671-13-L	2/15/00	6	6.5	1,2-Dichloroethene(Total)	230	ug/kg		481705.49	1349550.02
12671	12671-13-L	2/15/00	6	6.5	Tetrachloroethene	20	ug/kg	J	481705.49	1349550.02
12671	12671-13-R	2/15/00	6	6.5	Thorium	8.99	ug/g dry		481705.49	1349550.02
12671	12671-13-L	2/15/00	6	6.5	Trichloroethene	25	ug/kg	J	481705.49	1349550.02
12671	12671-13-R	2/15/00	6	6.5	Uranium, Total	6.81	ug/g dry		481705.49	1349550.02
12671	12671-17-L	2/15/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-17-L	2/15/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481705.49	1349550.02
12671	12671-17-L	2/15/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-17-L	2/15/00	8	8.5	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-21-L	2/15/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12671	12671-21-L	2/15/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481705.49	1349550.02
12671	12671-21-L	2/15/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-21-L	2/15/00	10	10.5	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-25-L	2/15/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-25-L	2/15/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481705.49	1349550.02
12671	12671-25-L	2/15/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-25-L	2/15/00	12	12.5	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-29-L	2/15/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-29-L	2/15/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481705.49	1349550.02
12671	12671-29-L	2/15/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-29-L	2/15/00	14	14.5	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-32-L	2/15/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-32-L	2/15/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481705.49	1349550.02
12671	12671-32-L	2/15/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481705.49	1349550.02
12671	12671-32-L	2/15/00	15.5	16	Trichloroethene	50	ug/kg	U	481705.49	1349550.02
12672	12672-1-L	2/14/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-1-L	2/14/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02
12672	12672-1-L	2/14/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-1-R	2/14/00	0	0.5	Thorium	8.46	ug/g dry		481684.24	1349550.02
12672	12672-1-L	2/14/00	0	0.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-1-R	2/14/00	0	0.5	Uranium, Total	487	ug/g dry		481684.24	1349550.02
12672	12672-3-R	2/14/00	1	1.5	Thorium	8.10	ug/g dry		481684.24	1349550.02
12672	12672-3-R	2/14/00	1	1.5	Uranium, Total	131	ug/g dry		481684.24	1349550.02
12672	12672-5-L	2/14/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-5-L	2/14/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02
12672	12672-5-L	2/14/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-5-L	2/14/00	2	2.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-9-L	2/14/00	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-9-L	2/14/00	4	4.5	1,2-Dichloroethene(Total)	99	ug/kg		481684.24	1349550.02
12672	12672-9-L	2/14/00	4	4.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-9-L	2/14/00	4	4.5	Trichloroethene	42	ug/kg	J	481684.24	1349550.02
12672	12672-13-L	2/14/00	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-13-L	2/14/00	6	6.5	1,2-Dichloroethene(Total)	14	ug/kg	J	481684.24	1349550.02
12672	12672-13-L	2/14/00	6	6.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-13-L	2/14/00	6	6.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-17-L	2/14/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-17-L	2/14/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12672	12672-17-L	2/14/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-17-L	2/14/00	8	8.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-21-L	2/14/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-21-L	2/14/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02
12672	12672-21-L	2/14/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-21-L	2/14/00	10	10.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-25-L	2/14/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-25-L	2/14/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02
12672	12672-25-L	2/14/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-25-L	2/14/00	12	12.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-29-L	2/14/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-29-L	2/14/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02
12672	12672-29-L	2/14/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-29-L	2/14/00	14	14.5	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-32-L	2/14/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-32-L	2/14/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481684.24	1349550.02
12672	12672-32-L	2/14/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481684.24	1349550.02
12672	12672-32-L	2/14/00	15.5	16	Trichloroethene	50	ug/kg	U	481684.24	1349550.02
12673	12673-1-L	2/14/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-1-L	2/14/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-1-R	2/14/00	0	0.5	Beryllium	1.29	ug/g dry		481662.74	1349550.02
12673	12673-1-L	2/14/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-1-R	2/14/00	0	0.5	Thorium	7.89	ug/g dry		481662.74	1349550.02
12673	12673-1-L	2/14/00	0	0.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-1-R	2/14/00	0	0.5	Uranium, Total	42.9	ug/g dry		481662.74	1349550.02
12673	12673-5-L	2/14/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-5-L	2/14/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-5-R	2/14/00	2	2.5	Beryllium	1.33	ug/g dry		481662.74	1349550.02
12673	12673-5-L	2/14/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-5-R	2/14/00	2	2.5	Thorium	8.52	ug/g dry		481662.74	1349550.02
12673	12673-5-L	2/14/00	2	2.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-5-R	2/14/00	2	2.5	Uranium, Total	1.97	ug/g dry		481662.74	1349550.02
12673	12673-9-L	2/14/00	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-9-L	2/14/00	4	4.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-9-R	2/14/00	4	4.5	Beryllium	1.58	ug/g dry		481662.74	1349550.02
12673	12673-9-L	2/14/00	4	4.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-9-R	2/14/00	4	4.5	Thorium	8.30	ug/g dry		481662.74	1349550.02

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12673	12673-9-L	2/14/00	4	4.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-9-R	2/14/00	4	4.5	Uranium, Total	1.77	ug/g dry		481662.74	1349550.02
12673	12673-13-L	2/14/00	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-13-L	2/14/00	6	6.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-13-R	2/14/00	6	6.5	Beryllium	0.975	ug/g dry		481662.74	1349550.02
12673	12673-13-L	2/14/00	6	6.5	Tetrachloroethene	59	ug/kg		481662.74	1349550.02
12673	12673-13-R	2/14/00	6	6.5	Thorium	5.87	ug/g dry		481662.74	1349550.02
12673	12673-13-L	2/14/00	6	6.5	Trichloroethene	26	ug/kg	J	481662.74	1349550.02
12673	12673-13-R	2/14/00	6	6.5	Uranium, Total	2.15	ug/g dry		481662.74	1349550.02
12673	12673-17-L	2/14/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-17-L	2/14/00	8	8.5	1,2-Dichloroethene(Total)	5	ug/kg	J	481662.74	1349550.02
12673	12673-17-L	2/14/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-17-L	2/14/00	8	8.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-21-L	2/14/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-21-L	2/14/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-21-L	2/14/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-21-L	2/14/00	10	10.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-25-L	2/14/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-25-L	2/14/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-25-L	2/14/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-25-L	2/14/00	12	12.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-29-L	2/14/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-29-L	2/14/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.74	1349550.02
12673	12673-29-L	2/14/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-29-L	2/14/00	14	14.5	Trichloroethene	50	ug/kg	U	481662.74	1349550.02
12673	12673-32-L	2/14/00	15.5	16	1,1-Dichloroethene	10	ug/kg	U	481662.74	1349550.02
12673	12673-32-L	2/14/00	15.5	16	1,2-Dichloroethene(Total)	10	ug/kg	U	481662.74	1349550.02
12673	12673-32-L	2/14/00	15.5	16	Tetrachloroethene	10	ug/kg	U	481662.74	1349550.02
12673	12673-32-L	2/14/00	15.5	16	Trichloroethene	10	ug/kg	U	481662.74	1349550.02
12674	12674-1-L	2/16/00	0	0.5	1,1-Dichloroethene	6	ug/kg	J	481641.3	1349549.95
12674	12674-1-L	2/16/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-1-R	2/16/00	0	0.5	Beryllium	2.09	ug/g dry		481641.3	1349549.95
12674	12674-1-L	2/16/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-1-R	2/16/00	0	0.5	Thorium	8.97	ug/g dry		481641.3	1349549.95
12674	12674-1-L	2/16/00	0	0.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-1-R	2/16/00	0	0.5	Uranium, Total	21.7	ug/g dry		481641.3	1349549.95
12674	12674-5-L	2/16/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12674	12674-5-L	2/16/00	2	2.5	1,2-Dichloroethene(Total)	60	ug/kg		481641.3	1349549.95
12674	12674-5-R	2/16/00	2	2.5	Beryllium	0.921	ug/g dry		481641.3	1349549.95
12674	12674-5-L	2/16/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-5-R	2/16/00	2	2.5	Thorium	6.01	ug/g dry		481641.3	1349549.95
12674	12674-5-L	2/16/00	2	2.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-5-R	2/16/00	2	2.5	Uranium, Total	2.62	ug/g dry		481641.3	1349549.95
12674	12674-9-L	2/16/00	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-9-L	2/16/00	4	4.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-9-R	2/16/00	4	4.5	Beryllium	0.645	ug/g dry		481641.3	1349549.95
12674	12674-9-L	2/16/00	4	4.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-9-R	2/16/00	4	4.5	Thorium	4.77	ug/g dry		481641.3	1349549.95
12674	12674-9-L	2/16/00	4	4.5	Trichloroethene	7	ug/kg	J	481641.3	1349549.95
12674	12674-9-R	2/16/00	4	4.5	Uranium, Total	1.55	ug/g dry		481641.3	1349549.95
12674	12674-13-L	2/16/00	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-13-L	2/16/00	6	6.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-13-R	2/16/00	6	6.5	Beryllium	0.771	ug/g dry		481641.3	1349549.95
12674	12674-13-L	2/16/00	6	6.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-13-R	2/16/00	6	6.5	Thorium	5.51	ug/g dry		481641.3	1349549.95
12674	12674-13-L	2/16/00	6	6.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-13-R	2/16/00	6	6.5	Uranium, Total	1.85	ug/g dry		481641.3	1349549.95
12674	12674-17-L	2/16/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-17-L	2/16/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-17-R	2/16/00	8	8.5	Beryllium	0.857	ug/g dry		481641.3	1349549.95
12674	12674-17-L	2/16/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-17-R	2/16/00	8	8.5	Thorium	5.61	ug/g dry		481641.3	1349549.95
12674	12674-17-L	2/16/00	8	8.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-17-R	2/16/00	8	8.5	Uranium, Total	1.66	ug/g dry		481641.3	1349549.95
12674	12674-21-L	2/16/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-21-L	2/16/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-21-L	2/16/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-21-L	2/16/00	10	10.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-25-L	2/16/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-25-L	2/16/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-25-L	2/16/00	12	12.5	Tetrachloroethene	21	ug/kg	J	481641.3	1349549.95
12674	12674-25-L	2/16/00	12	12.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-29-L	2/16/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-29-L	2/16/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12674	12674-29-L	2/16/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-29-L	2/16/00	14	14.5	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-32-L	2/16/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-32-L	2/16/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481641.3	1349549.95
12674	12674-32-L	2/16/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481641.3	1349549.95
12674	12674-32-L	2/16/00	15.5	16	Trichloroethene	50	ug/kg	U	481641.3	1349549.95
12675	12675-1-L	2/14/00	0	0.5	1,1-Dichloroethene	6	ug/kg	J	481619.95	1349549.91
12675	12675-1-L	2/14/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.95	1349549.91
12675	12675-1-L	2/14/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-1-R	2/14/00	0	0.5	Thorium	7.78	ug/g dry		481619.95	1349549.91
12675	12675-1-L	2/14/00	0	0.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-1-R	2/14/00	0	0.5	Uranium, Total	1.85	ug/g dry		481619.95	1349549.91
12675	12675-3-R	2/14/00	1	1.5	Thorium	8.72	ug/g dry		481619.95	1349549.91
12675	12675-3-R	2/14/00	1	1.5	Uranium, Total	1.35	ug/g dry		481619.95	1349549.91
12675	12675-5-L	2/14/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-5-L	2/14/00	2	2.5	1,2-Dichloroethene(Total)	10	ug/kg	J	481619.95	1349549.91
12675	12675-5-L	2/14/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-5-L	2/14/00	2	2.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-9-L	2/14/00	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-9-L	2/14/00	4	4.5	1,2-Dichloroethene(Total)	9	ug/kg	J	481619.95	1349549.91
12675	12675-9-L	2/14/00	4	4.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-9-L	2/14/00	4	4.5	Trichloroethene	8	ug/kg	J	481619.95	1349549.91
12675	12675-13-L	2/14/00	6	6.5	1,1-Dichloroethene	6	ug/kg	J	481619.95	1349549.91
12675	12675-13-L	2/14/00	6	6.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.95	1349549.91
12675	12675-13-L	2/14/00	6	6.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-13-L	2/14/00	6	6.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	1,2-Dichloroethene(Total)	11	ug/kg	J	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-17-L	2/14/00	8	8.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-25-L	2/14/00	12	12.5	1,1-Dichloroethene	8	ug/kg	J	481619.95	1349549.91
12675	12675-25-L	2/14/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.95	1349549.91
12675	12675-25-L	2/14/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12675	12675-25-L	2/14/00	12	12.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-29-L	2/14/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-29-L	2/14/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.95	1349549.91
12675	12675-29-L	2/14/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-29-L	2/14/00	14	14.5	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-32-L	2/14/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-32-L	2/14/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.95	1349549.91
12675	12675-32-L	2/14/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481619.95	1349549.91
12675	12675-32-L	2/14/00	15.5	16	Trichloroethene	50	ug/kg	U	481619.95	1349549.91
12676	12676-1-L	2/11/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-1-L	2/11/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-1-L	2/11/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-1-R	2/11/00	0	0.5	Thorium	7.90	ug/g dry		481619.96	1349566.63
12676	12676-1-L	2/11/00	0	0.5	Trichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-1-R	2/11/00	0	0.5	Uranium, Total	10.4	ug/g dry		481619.96	1349566.63
12676	12676-3-R	2/11/00	1	1.5	Thorium	7.81	ug/g dry		481619.96	1349566.63
12676	12676-3-R	2/11/00	1	1.5	Uranium, Total	1.40	ug/g dry		481619.96	1349566.63
12676	12676-5-L	2/11/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-5-L	2/11/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-5-L	2/11/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-5-L	2/11/00	2	2.5	Trichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-9-L	2/11/00	4	4.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-9-L	2/11/00	4	4.5	1,2-Dichloroethene(Total)	18	ug/kg	J	481619.96	1349566.63
12676	12676-9-L	2/11/00	4	4.5	Tetrachloroethene	58	ug/kg		481619.96	1349566.63
12676	12676-9-L	2/11/00	4	4.5	Trichloroethene	66	ug/kg		481619.96	1349566.63
12676	12676-13-L	2/11/00	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-13-L	2/11/00	6	6.5	1,2-Dichloroethene(Total)	6	ug/kg	J	481619.96	1349566.63
12676	12676-13-L	2/11/00	6	6.5	Tetrachloroethene	21	ug/kg	J	481619.96	1349566.63
12676	12676-13-L	2/11/00	6	6.5	Trichloroethene	33	ug/kg	J	481619.96	1349566.63
12676	12676-17-L	2/11/00	8	8.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-17-L	2/11/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-17-L	2/11/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-17-L	2/11/00	8	8.5	Trichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-21-L	2/11/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-21-L	2/11/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-21-L	2/11/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-21-L	2/11/00	10	10.5	Trichloroethene	50	ug/kg	U	481619.96	1349566.63

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12676	12676-25-L	2/11/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-25-L	2/11/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-25-L	2/11/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-25-L	2/11/00	12	12.5	Trichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-29-L	2/11/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-29-L	2/11/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-29-L	2/11/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-29-L	2/11/00	14	14.5	Trichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-32-L	2/11/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-32-L	2/11/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.96	1349566.63
12676	12676-32-L	2/11/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481619.96	1349566.63
12676	12676-32-L	2/11/00	15.5	16	Trichloroethene	50	ug/kg	U	481619.96	1349566.63
12677	12677-1-L	2/11/00	0	0.5	1,1-Dichloroethene	7	ug/kg	J	481619.93	1349583.34
12677	12677-1-L	2/11/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-1-R	2/11/00	0	0.5	Beryllium	1.38	ug/g dry		481619.93	1349583.34
12677	12677-1-L	2/11/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-1-R	2/11/00	0	0.5	Thorium	7.00	ug/g dry		481619.93	1349583.34
12677	12677-1-L	2/11/00	0	0.5	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-1-R	2/11/00	0	0.5	Uranium, Total	14.3	ug/g dry		481619.93	1349583.34
12677	12677-5-L	2/11/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-5-L	2/11/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-5-R	2/11/00	2	2.5	Beryllium	1.26	ug/g dry		481619.93	1349583.34
12677	12677-5-L	2/11/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-5-R	2/11/00	2	2.5	Thorium	8.65	ug/g dry		481619.93	1349583.34
12677	12677-5-L	2/11/00	2	2.5	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-5-R	2/11/00	2	2.5	Uranium, Total	1.45	ug/g dry		481619.93	1349583.34
12677	12677-9-L	2/11/00	4	4.5	1,1-Dichloroethene	14	ug/kg	J	481619.93	1349583.34
12677	12677-9-L	2/11/00	4	4.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-9-R	2/11/00	4	4.5	Beryllium	0.975	ug/g dry		481619.93	1349583.34
12677	12677-9-L	2/11/00	4	4.5	Tetrachloroethene	99	ug/kg		481619.93	1349583.34
12677	12677-9-R	2/11/00	4	4.5	Thorium	5.99	ug/g dry		481619.93	1349583.34
12677	12677-9-L	2/11/00	4	4.5	Trichloroethene	17	ug/kg	J	481619.93	1349583.34
12677	12677-9-R	2/11/00	4	4.5	Uranium, Total	1.23	ug/g dry		481619.93	1349583.34
12677	12677-13-L	2/11/00	6	6.5	1,1-Dichloroethene	8	ug/kg	J	481619.93	1349583.34
12677	12677-13-L	2/11/00	6	6.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-13-R	2/11/00	6	6.5	Beryllium	0.936	ug/g dry		481619.93	1349583.34
12677	12677-13-L	2/11/00	6	6.5	Tetrachloroethene	64	ug/kg		481619.93	1349583.34

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12677	12677-13-R	2/11/00	6	6.5	Thorium	5.39	ug/g dry		481619.93	1349583.34
12677	12677-13-L	2/11/00	6	6.5	Trichloroethene	9	ug/kg	J	481619.93	1349583.34
12677	12677-13-R	2/11/00	6	6.5	Uranium, Total	1.29	ug/g dry		481619.93	1349583.34
12677	12677-17-L	2/11/00	8	8.5	1,1-Dichloroethene	7	ug/kg	J	481619.93	1349583.34
12677	12677-17-L	2/11/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-17-L	2/11/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-17-L	2/11/00	8	8.5	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-21-L	2/11/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-21-L	2/11/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-21-L	2/11/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-21-L	2/11/00	10	10.5	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-25-L	2/11/00	12	12.5	1,1-Dichloroethene	7	ug/kg	J	481619.93	1349583.34
12677	12677-25-L	2/11/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-25-L	2/11/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-25-L	2/11/00	12	12.5	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-29-L	2/11/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-29-L	2/11/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-29-L	2/11/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-29-L	2/11/00	14	14.5	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-32-L	2/11/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-32-L	2/11/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349583.34
12677	12677-32-L	2/11/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481619.93	1349583.34
12677	12677-32-L	2/11/00	15.5	16	Trichloroethene	50	ug/kg	U	481619.93	1349583.34
12678	12678-1-L	2/10/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-1-L	2/10/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-1-R	2/10/00	0	0.5	Beryllium	1.19	ug/g dry		481619.93	1349600.03
12678	12678-1-L	2/10/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-1-R	2/10/00	0	0.5	Thorium	7.75	ug/g dry		481619.93	1349600.03
12678	12678-1-L	2/10/00	0	0.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-1-R	2/10/00	0	0.5	Uranium, Total	1.41	ug/g dry		481619.93	1349600.03
12678	12678-5-L	2/10/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-5-L	2/10/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-5-R	2/10/00	2	2.5	Beryllium	1.44	ug/g dry		481619.93	1349600.03
12678	12678-5-L	2/10/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-5-R	2/10/00	2	2.5	Thorium	9.00	ug/g dry		481619.93	1349600.03
12678	12678-5-L	2/10/00	2	2.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-5-R	2/10/00	2	2.5	Uranium, Total	2.57	ug/g dry		481619.93	1349600.03

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12678	12678-9-L	2/10/00	4	4.5	1,1-Dichloroethene	5	ug/kg	J	481619.93	1349600.03
12678	12678-9-L	2/10/00	4	4.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-9-R	2/10/00	4	4.5	Beryllium	0.794	ug/g dry		481619.93	1349600.03
12678	12678-9-L	2/10/00	4	4.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-9-R	2/10/00	4	4.5	Thorium	5.08	ug/g dry		481619.93	1349600.03
12678	12678-9-L	2/10/00	4	4.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-9-R	2/10/00	4	4.5	Uranium, Total	1.30	ug/g dry		481619.93	1349600.03
12678	12678-13-L	2/10/00	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-13-L	2/10/00	6	6.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-13-R	2/10/00	6	6.5	Beryllium	0.861	ug/g dry		481619.93	1349600.03
12678	12678-13-L	2/10/00	6	6.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-13-R	2/10/00	6	6.5	Thorium	6.43	ug/g dry		481619.93	1349600.03
12678	12678-13-L	2/10/00	6	6.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-13-R	2/10/00	6	6.5	Uranium, Total	3.68	ug/g dry		481619.93	1349600.03
12678	12678-17-L	2/10/00	8	8.5	1,1-Dichloroethene	5	ug/kg	J	481619.93	1349600.03
12678	12678-17-L	2/10/00	8	8.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-17-L	2/10/00	8	8.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-17-L	2/10/00	8	8.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-21-L	2/10/00	10	10.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-21-L	2/10/00	10	10.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-21-L	2/10/00	10	10.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-21-L	2/10/00	10	10.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-25-L	2/10/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-25-L	2/10/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-25-L	2/10/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-25-L	2/10/00	12	12.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-29-L	2/10/00	14	14.5	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-29-L	2/10/00	14	14.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-29-L	2/10/00	14	14.5	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-29-L	2/10/00	14	14.5	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-32-L	2/10/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-32-L	2/10/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-32-L	2/10/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-32-L	2/10/00	15.5	16	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-36-L	2/10/00	17.5	18	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-36-L	2/10/00	17.5	18	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-36-L	2/10/00	17.5	18	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12678	12678-36-L	2/10/00	17.5	18	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-40-L	2/10/00	19.5	20	1,1-Dichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-40-L	2/10/00	19.5	20	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-40-L	2/10/00	19.5	20	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-40-L	2/10/00	19.5	20	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-44-L	2/10/00	21.5	22	1,1-Dichloroethene	6	ug/kg	J	481619.93	1349600.03
12678	12678-44-L	2/10/00	21.5	22	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-44-L	2/10/00	21.5	22	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-44-L	2/10/00	21.5	22	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-46-L	2/10/00	22.5	23	1,1-Dichloroethene	7	ug/kg	J	481619.93	1349600.03
12678	12678-46-L	2/10/00	22.5	23	1,2-Dichloroethene(Total)	50	ug/kg	U	481619.93	1349600.03
12678	12678-46-L	2/10/00	22.5	23	Tetrachloroethene	50	ug/kg	U	481619.93	1349600.03
12678	12678-46-L	2/10/00	22.5	23	Trichloroethene	50	ug/kg	U	481619.93	1349600.03
12679	12679-1-L	2/15/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-1-L	2/15/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-1-L	2/15/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-1-R	2/15/00	0	0.5	Thorium	6.18	ug/g dry		481635.34	1349572.19
12679	12679-1-L	2/15/00	0	0.5	Trichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-1-R	2/15/00	0	0.5	Uranium, Total	23.4	ug/g dry		481635.34	1349572.19
12679	12679-3-R	2/15/00	1	1.5	Thorium	10.2	ug/g dry		481635.34	1349572.19
12679	12679-3-R	2/15/00	1	1.5	Uranium, Total	7.08	ug/g dry		481635.34	1349572.19
12679	12679-5-L	2/15/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-5-L	2/15/00	2	2.5	1,2-Dichloroethene(Total)	22	ug/kg	J	481635.34	1349572.19
12679	12679-5-L	2/15/00	2	2.5	Tetrachloroethene	50	ug/kg		481635.34	1349572.19
12679	12679-5-L	2/15/00	2	2.5	Trichloroethene	11	ug/kg	J	481635.34	1349572.19
12679	12679-8-L	2/15/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-8-L	2/15/00	3.5	4	1,2-Dichloroethene(Total)	15	ug/kg	J	481635.34	1349572.19
12679	12679-8-L	2/15/00	3.5	4	Tetrachloroethene	18	ug/kg	J	481635.34	1349572.19
12679	12679-8-L	2/15/00	3.5	4	Trichloroethene	20	ug/kg	J	481635.34	1349572.19
12679	12679-12-L	2/15/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-12-L	2/15/00	5.5	6	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-12-L	2/15/00	5.5	6	Tetrachloroethene	82	ug/kg		481635.34	1349572.19
12679	12679-12-L	2/15/00	5.5	6	Trichloroethene	13	ug/kg	J	481635.34	1349572.19
12679	12679-16-L	2/15/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-16-L	2/15/00	7.5	8	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-16-L	2/15/00	7.5	8	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-16-L	2/15/00	7.5	8	Trichloroethene	50	ug/kg	U	481635.34	1349572.19

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12679	12679-20-L	2/15/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-20-L	2/15/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-20-L	2/15/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-20-L	2/15/00	9.5	10	Trichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	Trichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-24-L	2/15/00	11.5	12	Trichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-28-L	2/15/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-28-L	2/15/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-28-L	2/15/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-28-L	2/15/00	13.5	14	Trichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-32-L	2/15/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-32-L	2/15/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481635.34	1349572.19
12679	12679-32-L	2/15/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481635.34	1349572.19
12679	12679-32-L	2/15/00	15.5	16	Trichloroethene	50	ug/kg	U	481635.34	1349572.19
12680	12680-1-L	2/16/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-1-L	2/16/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-1-L	2/16/00	0	0.5	Tetrachloroethene	65	ug/kg		481662.32	1349567.04
12680	12680-1-R	2/16/00	0	0.5	Thorium	8.16	ug/g dry		481662.32	1349567.04
12680	12680-1-L	2/16/00	0	0.5	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-1-R	2/16/00	0	0.5	Uranium, Total	25.8	ug/g dry		481662.32	1349567.04
12680	12680-3-R	2/16/00	1	1.5	Thorium	9.37	ug/g dry		481662.32	1349567.04
12680	12680-3-R	2/16/00	1	1.5	Uranium, Total	4.13	ug/g dry		481662.32	1349567.04
12680	12680-5-L	2/16/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-5-L	2/16/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-5-L	2/16/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-5-L	2/16/00	2	2.5	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-8-L	2/16/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-8-L	2/16/00	3.5	4	1,2-Dichloroethene(Total)	9	ug/kg	J	481662.32	1349567.04
12680	12680-8-L	2/16/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-8-L	2/16/00	3.5	4	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-12-L	2/16/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12680	12680-12-L	2/16/00	5.5	6	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-12-L	2/16/00	5.5	6	Tetrachloroethene	28	ug/kg	J	481662.32	1349567.04
12680	12680-12-L	2/16/00	5.5	6	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-16-L	2/16/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-16-L	2/16/00	7.5	8	1,2-Dichloroethene(Total)	20	ug/kg	J	481662.32	1349567.04
12680	12680-16-L	2/16/00	7.5	8	Tetrachloroethene	53	ug/kg		481662.32	1349567.04
12680	12680-16-L	2/16/00	7.5	8	Trichloroethene	38	ug/kg	J	481662.32	1349567.04
12680	12680-20-L	2/16/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-20-L	2/16/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-20-L	2/16/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-20-L	2/16/00	9.5	10	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-24-L	2/15/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-24-L	2/15/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-24-L	2/15/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-24-L	2/15/00	11.5	12	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-28-L	2/15/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-28-L	2/15/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-28-L	2/15/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-28-L	2/15/00	13.5	14	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-32-L	2/15/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-32-L	2/15/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481662.32	1349567.04
12680	12680-32-L	2/15/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481662.32	1349567.04
12680	12680-32-L	2/15/00	15.5	16	Trichloroethene	50	ug/kg	U	481662.32	1349567.04
12681	12681-1-L	2/16/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-1-L	2/16/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99
12681	12681-1-L	2/16/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-1-R	2/16/00	0	0.5	Thorium	5.29	ug/g dry		481683.53	1349566.99
12681	12681-1-L	2/16/00	0	0.5	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-1-R	2/16/00	0	0.5	Uranium, Total	42.9	ug/g dry		481683.53	1349566.99
12681	12681-3-R	2/16/00	1	1.5	Thorium	6.22	ug/g dry		481683.53	1349566.99
12681	12681-3-R	2/16/00	1	1.5	Uranium, Total	21.8	ug/g dry		481683.53	1349566.99
12681	12681-5-L	2/16/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-5-L	2/16/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99
12681	12681-5-L	2/16/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-5-L	2/16/00	2	2.5	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-8-L	2/16/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-8-L	2/16/00	3.5	4	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12681	12681-8-L	2/16/00	3.5	4	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-8-L	2/16/00	3.5	4	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-12-L	2/16/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-12-L	2/16/00	5.5	6	1,2-Dichloroethene(Total)	34	ug/kg	J	481683.53	1349566.99
12681	12681-12-L	2/16/00	5.5	6	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-12-L	2/16/00	5.5	6	Trichloroethene	9	ug/kg	J	481683.53	1349566.99
12681	12681-16-L	2/16/00	7.5	8	1,1-Dichloroethene	10	ug/kg	J	481683.53	1349566.99
12681	12681-16-L	2/16/00	7.5	8	1,2-Dichloroethene(Total)	300	ug/kg		481683.53	1349566.99
12681	12681-16-L	2/16/00	7.5	8	Tetrachloroethene	22	ug/kg	J	481683.53	1349566.99
12681	12681-16-L	2/16/00	7.5	8	Trichloroethene	99	ug/kg		481683.53	1349566.99
12681	12681-20-L	2/16/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-20-L	2/16/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99
12681	12681-20-L	2/16/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-20-L	2/16/00	9.5	10	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-24-L	2/16/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-24-L	2/16/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99
12681	12681-24-L	2/16/00	11.5	12	Tetrachloroethene	15	ug/kg	J	481683.53	1349566.99
12681	12681-24-L	2/16/00	11.5	12	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-28-L	2/16/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-28-L	2/16/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99
12681	12681-28-L	2/16/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-28-L	2/16/00	13.5	14	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-32-L	2/16/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-32-L	2/16/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481683.53	1349566.99
12681	12681-32-L	2/16/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481683.53	1349566.99
12681	12681-32-L	2/16/00	15.5	16	Trichloroethene	50	ug/kg	U	481683.53	1349566.99
12682	12682-22-L	2/22/00	10.5	11	1,1-Dichloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-22-L	2/22/00	10.5	11	1,2-Dichloroethene(Total)	50	ug/kg	U	481682.8	1349629.3
12682	12682-22-L	2/22/00	10.5	11	Tetrachloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-22-L	2/22/00	10.5	11	Trichloroethene	8	ug/kg	J	481682.8	1349629.3
12682	12682-24-L	2/22/00	11.5	12	1,1-Dichloroethene	21	ug/kg	J	481682.8	1349629.3
12682	12682-24-L	2/22/00	11.5	12	1,2-Dichloroethene(Total)	120	ug/kg		481682.8	1349629.3
12682	12682-24-L	2/22/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-24-L	2/22/00	11.5	12	Trichloroethene	24	ug/kg	J	481682.8	1349629.3
12682	12682-26-L	2/22/00	12.5	13	1,1-Dichloroethene	26	ug/kg	J	481682.8	1349629.3
12682	12682-26-L	2/22/00	12.5	13	1,2-Dichloroethene(Total)	94	ug/kg		481682.8	1349629.3
12682	12682-26-L	2/22/00	12.5	13	Tetrachloroethene	50	ug/kg	U	481682.8	1349629.3

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12682	12682-26-L	2/22/00	12.5	13	Trichloroethene	45	ug/kg	J	481682.8	1349629.3
12682	12682-28-L	2/22/00	13.5	14	1,1-Dichloroethene	27	ug/kg	J	481682.8	1349629.3
12682	12682-28-L	2/22/00	13.5	14	1,2-Dichloroethene(Total)	82	ug/kg		481682.8	1349629.3
12682	12682-28-L	2/22/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-28-L	2/22/00	13.5	14	Trichloroethene	170	ug/kg		481682.8	1349629.3
12682	12682-30-L	2/22/00	14.5	15	1,1-Dichloroethene	6	ug/kg	J	481682.8	1349629.3
12682	12682-30-L	2/22/00	14.5	15	1,2-Dichloroethene(Total)	19	ug/kg	J	481682.8	1349629.3
12682	12682-30-L	2/22/00	14.5	15	Tetrachloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-30-L	2/22/00	14.5	15	Trichloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-32-L	2/22/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-32-L	2/22/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481682.8	1349629.3
12682	12682-32-L	2/22/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481682.8	1349629.3
12682	12682-32-L	2/22/00	15.5	16	Trichloroethene	50	ug/kg	U	481682.8	1349629.3
12683	12683-22-L	2/22/00	10.5	11	1,1-Dichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-22-L	2/22/00	10.5	11	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.55	1349629.7
12683	12683-22-L	2/22/00	10.5	11	Tetrachloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-22-L	2/22/00	10.5	11	Trichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-24-L	2/22/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-24-L	2/22/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.55	1349629.7
12683	12683-24-L	2/22/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-24-L	2/22/00	11.5	12	Trichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-26-L	2/22/00	12.5	13	1,1-Dichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-26-L	2/22/00	12.5	13	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.55	1349629.7
12683	12683-26-L	2/22/00	12.5	13	Tetrachloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-26-L	2/22/00	12.5	13	Trichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-28-L	2/22/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-28-L	2/22/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.55	1349629.7
12683	12683-28-L	2/22/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-28-L	2/22/00	13.5	14	Trichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-30-L	2/22/00	14.5	15	1,1-Dichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-30-L	2/22/00	14.5	15	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.55	1349629.7
12683	12683-30-L	2/22/00	14.5	15	Tetrachloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-30-L	2/22/00	14.5	15	Trichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-32-L	2/22/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-32-L	2/22/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.55	1349629.7
12683	12683-32-L	2/22/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481657.55	1349629.7
12683	12683-32-L	2/22/00	15.5	16	Trichloroethene	50	ug/kg	U	481657.55	1349629.7

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12687	12687-27-L	2/23/00	13	13.5	1,1-Dichloroethene	26	ug/kg	J	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	1,1-Dichloroethene	6200	ug/kg	U	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	1,2-Dichloroethene(Total)	34	ug/kg	J	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	1,2-Dichloroethene(Total)	6200	ug/kg	U	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	Tetrachloroethene	67000	ug/kg	D	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	Tetrachloroethene	4500	ug/kg	E	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	Trichloroethene	6200	ug/kg	U	481657.76	1349609.58
12687	12687-27-L	2/23/00	13	13.5	Trichloroethene	460	ug/kg		481657.76	1349609.58
12687	12687-28-L	2/23/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481657.76	1349609.58
12687	12687-28-L	2/23/00	13.5	14	1,2-Dichloroethene(Total)	17	ug/kg	J	481657.76	1349609.58
12687	12687-28-L	2/23/00	13.5	14	Tetrachloroethene	880	ug/kg		481657.76	1349609.58
12687	12687-28-L	2/23/00	13.5	14	Trichloroethene	150	ug/kg		481657.76	1349609.58
12687	12687-30-L	2/23/00	14.5	15	1,1-Dichloroethene	50	ug/kg	U	481657.76	1349609.58
12687	12687-30-L	2/23/00	14.5	15	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.76	1349609.58
12687	12687-30-L	2/23/00	14.5	15	Tetrachloroethene	6	ug/kg	J	481657.76	1349609.58
12687	12687-30-L	2/23/00	14.5	15	Trichloroethene	50	ug/kg	U	481657.76	1349609.58
12687	12687-32-L	2/23/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481657.76	1349609.58
12687	12687-32-L	2/23/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481657.76	1349609.58
12687	12687-32-L	2/23/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481657.76	1349609.58
12687	12687-32-L	2/23/00	15.5	16	Trichloroethene	50	ug/kg	U	481657.76	1349609.58
12688	12688-1-L	2/15/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-1-L	2/15/00	0	0.5	1,2-Dichloroethene(Total)	15	ug/kg	J	481639.58	1349583.08
12688	12688-1-L	2/15/00	0	0.5	Tetrachloroethene	85	ug/kg		481639.58	1349583.08
12688	12688-1-R	2/15/00	0	0.5	Thorium	5.84	ug/g dry		481639.58	1349583.08
12688	12688-1-L	2/15/00	0	0.5	Trichloroethene	16	ug/kg	J	481639.58	1349583.08
12688	12688-1-R	2/15/00	0	0.5	Uranium, Total	176	ug/g dry		481639.58	1349583.08
12688	12688-3-R	2/15/00	1	1.5	Thorium	12.7	ug/g dry		481639.58	1349583.08
12688	12688-3-R	2/15/00	1	1.5	Uranium, Total	647	ug/g dry		481639.58	1349583.08
12688	12688-5-L	2/15/00	2	2.5	1,1-Dichloroethene	180	ug/kg	BJ	481639.58	1349583.08
12688	12688-5-L	2/15/00	2	2.5	1,2-Dichloroethene(Total)	1200	ug/kg	U	481639.58	1349583.08
12688	12688-5-L	2/15/00	2	2.5	Tetrachloroethene	2200	ug/kg		481639.58	1349583.08
12688	12688-5-L	2/15/00	2	2.5	Trichloroethene	1200	ug/kg	U	481639.58	1349583.08
12688	12688-8-L	2/15/00	3.5	4	1,1-Dichloroethene	140	ug/kg	BJ	481639.58	1349583.08
12688	12688-8-L	2/15/00	3.5	4	1,2-Dichloroethene(Total)	1200	ug/kg	U	481639.58	1349583.08
12688	12688-8-L	2/15/00	3.5	4	Tetrachloroethene	13000	ug/kg		481639.58	1349583.08
12688	12688-8-L	2/15/00	3.5	4	Trichloroethene	130	ug/kg	J	481639.58	1349583.08
12688	12688-12-L	2/15/00	5.5	6	1,1-Dichloroethene	870	ug/kg	BJ	481639.58	1349583.08

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12688	12688-12-L	2/15/00	5.5	6	1,2-Dichloroethene(Total)	6200	ug/kg	U	481639.58	1349583.08
12688	12688-12-L	2/15/00	5.5	6	Tetrachloroethene	110000	ug/kg		481639.58	1349583.08
12688	12688-12-L	2/15/00	5.5	6	Trichloroethene	3400	ug/kg	J	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	1,1-Dichloroethene	25000	ug/kg	U	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	1,1-Dichloroethene	67	ug/kg		481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	1,2-Dichloroethene(Total)	6	ug/kg	J	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	1,2-Dichloroethene(Total)	25000	ug/kg	U	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	Tetrachloroethene	350000	ug/kg	D	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	Tetrachloroethene	38000	ug/kg	E	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	Trichloroethene	25000	ug/kg	U	481639.58	1349583.08
12688	12688-15-L	2/15/00	7	7.5	Trichloroethene	440	ug/kg		481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	1,1-Dichloroethene	25000	ug/kg	U	481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	1,1-Dichloroethene	160	ug/kg		481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	1,2-Dichloroethene(Total)	25000	ug/kg	U	481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	1,2-Dichloroethene(Total)	50	ug/kg	U	481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	Tetrachloroethene	370000	ug/kg	D	481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	Tetrachloroethene	8400	ug/kg	E	481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	Trichloroethene	25000	ug/kg	U	481639.58	1349583.08
12688	12688-16-L	2/15/00	7.5	8	Trichloroethene	190	ug/kg		481639.58	1349583.08
12688	12688-20-L	2/15/00	9.5	10	1,1-Dichloroethene	11	ug/kg	J	481639.58	1349583.08
12688	12688-20-L	2/15/00	9.5	10	1,2-Dichloroethene(Total)	50	ug/kg	U	481639.58	1349583.08
12688	12688-20-L	2/15/00	9.5	10	Tetrachloroethene	19	ug/kg	J	481639.58	1349583.08
12688	12688-20-L	2/15/00	9.5	10	Trichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-24-L	2/15/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-24-L	2/15/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481639.58	1349583.08
12688	12688-24-L	2/15/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-24-L	2/15/00	11.5	12	Trichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-28-L	2/15/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-28-L	2/15/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481639.58	1349583.08
12688	12688-28-L	2/15/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-28-L	2/15/00	13.5	14	Trichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-32-L	2/15/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481639.58	1349583.08
12688	12688-32-L	2/15/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481639.58	1349583.08
12688	12688-32-L	2/15/00	15.5	16	Tetrachloroethene	14	ug/kg	J	481639.58	1349583.08
12688	12688-32-L	2/15/00	15.5	16	Trichloroethene	50	ug/kg	U	481639.58	1349583.08
12689	12689-1-L	2/24/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-1-L	2/24/00	0	0.5	1,2-Dichloroethene(Total)	350	ug/kg		481648.64	1349589.18

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12689	12689-1-L	2/24/00	0	0.5	Tetrachloroethene	32	ug/kg	J	481648.64	1349589.18
12689	12689-1-R	2/24/00	0	0.5	Thorium	7.72	ug/g dry		481648.64	1349589.18
12689	12689-1-L	2/24/00	0	0.5	Trichloroethene	6	ug/kg	J	481648.64	1349589.18
12689	12689-1-R	2/24/00	0	0.5	Uranium, Total	68.4	ug/g dry		481648.64	1349589.18
12689	12689-5-L	2/24/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-5-L	2/24/00	2	2.5	1,2-Dichloroethene(Total)	800	ug/kg		481648.64	1349589.18
12689	12689-5-L	2/24/00	2	2.5	Tetrachloroethene	200	ug/kg		481648.64	1349589.18
12689	12689-5-R	2/24/00	2	2.5	Thorium	9.02	ug/g dry		481648.64	1349589.18
12689	12689-5-L	2/24/00	2	2.5	Trichloroethene	33	ug/kg	J	481648.64	1349589.18
12689	12689-5-R	2/24/00	2	2.5	Uranium, Total	2.15	ug/g dry		481648.64	1349589.18
12689	12689-8-L	2/24/00	3.5	4	1,1-Dichloroethene	1200	ug/kg	U	481648.64	1349589.18
12689	12689-8-L	2/24/00	3.5	4	1,2-Dichloroethene(Total)	1200	ug/kg	U	481648.64	1349589.18
12689	12689-8-L	2/24/00	3.5	4	Tetrachloroethene	5000	ug/kg		481648.64	1349589.18
12689	12689-8-L	2/24/00	3.5	4	Trichloroethene	1200	ug/kg	U	481648.64	1349589.18
12689	12689-12-L	2/24/00	5.5	6	1,1-Dichloroethene	1200	ug/kg	U	481648.64	1349589.18
12689	12689-12-L	2/24/00	5.5	6	1,2-Dichloroethene(Total)	770	ug/kg	J	481648.64	1349589.18
12689	12689-12-L	2/24/00	5.5	6	Tetrachloroethene	2800	ug/kg		481648.64	1349589.18
12689	12689-12-L	2/24/00	5.5	6	Trichloroethene	1200	ug/kg	U	481648.64	1349589.18
12689	12689-16-L	2/24/00	7.5	8	1,1-Dichloroethene	1200	ug/kg	U	481648.64	1349589.18
12689	12689-16-L	2/24/00	7.5	8	1,2-Dichloroethene(Total)	1200	ug/kg	U	481648.64	1349589.18
12689	12689-16-L	2/24/00	7.5	8	Tetrachloroethene	25000	ug/kg		481648.64	1349589.18
12689	12689-16-L	2/24/00	7.5	8	Trichloroethene	800	ug/kg	J	481648.64	1349589.18
12689	12689-20-L	2/24/00	9.5	10	1,1-Dichloroethene	13	ug/kg	J	481648.64	1349589.18
12689	12689-20-L	2/24/00	9.5	10	1,2-Dichloroethene(Total)	27	ug/kg	J	481648.64	1349589.18
12689	12689-20-L	2/24/00	9.5	10	Tetrachloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-20-L	2/24/00	9.5	10	Trichloroethene	21	ug/kg	J	481648.64	1349589.18
12689	12689-24-L	2/24/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-24-L	2/24/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481648.64	1349589.18
12689	12689-24-L	2/24/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-24-L	2/24/00	11.5	12	Trichloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-28-L	2/24/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-28-L	2/24/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481648.64	1349589.18
12689	12689-28-L	2/24/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-28-L	2/24/00	13.5	14	Trichloroethene	50	ug/kg	U	481648.64	1349589.18
12689	12689-32-L	2/24/00	15.5	16	1,1-Dichloroethene	2500	ug/kg	U	481648.64	1349589.18
12689	12689-32-L	2/24/00	15.5	16	1,2-Dichloroethene(Total)	2500	ug/kg	U	481648.64	1349589.18
12689	12689-32-L	2/24/00	15.5	16	Tetrachloroethene	16000	ug/kg		481648.64	1349589.18

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12689	12689-32-L	2/24/00	15.5	16	Trichloroethene	2500	ug/kg	U	481648.64	1349589.18
12690	12690-1-L	2/23/00	0	0.5	1,1-Dichloroethene	13	ug/kg	J	481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	1,1-Dichloroethene	1200	ug/kg	U	481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	1,2-Dichloroethene(Total)	15000	ug/kg	D	481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	1,2-Dichloroethene(Total)	70	ug/kg		481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	Tetrachloroethene	20000	ug/kg	D	481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	Tetrachloroethene	2900	ug/kg	E	481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	Trichloroethene	8000	ug/kg	D	481658.61	1349579.16
12690	12690-1-L	2/23/00	0	0.5	Trichloroethene	490	ug/kg		481658.61	1349579.16
12690	12690-3-L	2/23/00	1	1.5	1,1-Dichloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-3-L	2/23/00	1	1.5	1,2-Dichloroethene(Total)	14	ug/kg	J	481658.61	1349579.16
12690	12690-3-L	2/23/00	1	1.5	Tetrachloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-3-L	2/23/00	1	1.5	Trichloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-5-L	2/23/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-5-L	2/23/00	2	2.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481658.61	1349579.16
12690	12690-5-L	2/23/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-5-L	2/23/00	2	2.5	Trichloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-8-L	2/23/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481658.61	1349579.16
12690	12690-8-L	2/23/00	3.5	4	1,2-Dichloroethene(Total)	9	ug/kg	J	481658.61	1349579.16
12690	12690-8-L	2/23/00	3.5	4	Tetrachloroethene	38	ug/kg	J	481658.61	1349579.16
12690	12690-8-L	2/23/00	3.5	4	Trichloroethene	11	ug/kg	J	481658.61	1349579.16
12691	12691-1-L	2/23/00	0	0.5	1,1-Dichloroethene	3800	ug/kg	DJ	481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	1,1-Dichloroethene	50	ug/kg		481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	1,2-Dichloroethene(Total)	77000	ug/kg	D	481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	1,2-Dichloroethene(Total)	1600	ug/kg		481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	Tetrachloroethene	200000	ug/kg	D	481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	Tetrachloroethene	1300	ug/kg	E	481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	Trichloroethene	79000	ug/kg	D	481668.57	1349589.11
12691	12691-1-L	2/23/00	0	0.5	Trichloroethene	1000	ug/kg		481668.57	1349589.11
12691	12691-3-L	2/23/00	1	1.5	1,1-Dichloroethene	50	ug/kg	U	481668.57	1349589.11
12691	12691-3-L	2/23/00	1	1.5	1,2-Dichloroethene(Total)	51	ug/kg		481668.57	1349589.11
12691	12691-3-L	2/23/00	1	1.5	Tetrachloroethene	50	ug/kg	U	481668.57	1349589.11
12691	12691-3-L	2/23/00	1	1.5	Trichloroethene	50	ug/kg	U	481668.57	1349589.11
12691	12691-5-L	2/23/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481668.57	1349589.11
12691	12691-5-L	2/23/00	2	2.5	1,2-Dichloroethene(Total)	440	ug/kg		481668.57	1349589.11
12691	12691-5-L	2/23/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481668.57	1349589.11
12691	12691-5-L	2/23/00	2	2.5	Trichloroethene	50	ug/kg	U	481668.57	1349589.11

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12691	12691-8-L	2/23/00	3.5	4	1,1-Dichloroethene	50	ug/kg	U	481668.57	1349589.11
12691	12691-8-L	2/23/00	3.5	4	1,2-Dichloroethene(Total)	92	ug/kg		481668.57	1349589.11
12691	12691-8-L	2/23/00	3.5	4	Tetrachloroethene	240	ug/kg		481668.57	1349589.11
12691	12691-8-L	2/23/00	3.5	4	Trichloroethene	180	ug/kg		481668.57	1349589.11
12692	12692-1-L	2/23/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-1-L	2/23/00	0	0.5	1,2-Dichloroethene(Total)	360	ug/kg		481658.551	1349599.21
12692	12692-1-L	2/23/00	0	0.5	Tetrachloroethene	27	ug/kg	J	481658.551	1349599.21
12692	12692-1-L	2/23/00	0	0.5	Trichloroethene	57	ug/kg		481658.551	1349599.21
12692	12692-5-L	2/23/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-5-L	2/23/00	2	2.5	1,2-Dichloroethene(Total)	680	ug/kg		481658.551	1349599.21
12692	12692-5-L	2/23/00	2	2.5	Tetrachloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-5-L	2/23/00	2	2.5	Trichloroethene	12	ug/kg	J	481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	1,1-Dichloroethene	11	ug/kg	J	481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	1,1-Dichloroethene	1200	ug/kg	U	481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	1,2-Dichloroethene(Total)	1200	ug/kg	U	481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	1,2-Dichloroethene(Total)	1200	ug/kg		481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	Tetrachloroethene	19000	ug/kg	D	481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	Tetrachloroethene	240	ug/kg		481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	Trichloroethene	1300	ug/kg	D	481658.551	1349599.21
12692	12692-8-L	2/23/00	3.5	4	Trichloroethene	290	ug/kg		481658.551	1349599.21
12692	12692-12-L	2/23/00	5.5	6	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-12-L	2/23/00	5.5	6	1,2-Dichloroethene(Total)	20	ug/kg	J	481658.551	1349599.21
12692	12692-12-L	2/23/00	5.5	6	Tetrachloroethene	70	ug/kg		481658.551	1349599.21
12692	12692-12-L	2/23/00	5.5	6	Trichloroethene	89	ug/kg		481658.551	1349599.21
12692	12692-16-L	2/23/00	7.5	8	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-16-L	2/23/00	7.5	8	1,2-Dichloroethene(Total)	31	ug/kg	J	481658.551	1349599.21
12692	12692-16-L	2/23/00	7.5	8	Tetrachloroethene	52	ug/kg		481658.551	1349599.21
12692	12692-16-L	2/23/00	7.5	8	Trichloroethene	85	ug/kg		481658.551	1349599.21
12692	12692-20-L	2/23/00	9.5	10	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-20-L	2/23/00	9.5	10	1,2-Dichloroethene(Total)	42	ug/kg	J	481658.551	1349599.21
12692	12692-20-L	2/23/00	9.5	10	Tetrachloroethene	19	ug/kg	J	481658.551	1349599.21
12692	12692-20-L	2/23/00	9.5	10	Trichloroethene	60	ug/kg		481658.551	1349599.21
12692	12692-24-L	2/23/00	11.5	12	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-24-L	2/23/00	11.5	12	1,2-Dichloroethene(Total)	50	ug/kg	U	481658.551	1349599.21
12692	12692-24-L	2/23/00	11.5	12	Tetrachloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-24-L	2/23/00	11.5	12	Trichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-28-L	2/23/00	13.5	14	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12692	12692-28-L	2/23/00	13.5	14	1,2-Dichloroethene(Total)	50	ug/kg	U	481658.551	1349599.21
12692	12692-28-L	2/23/00	13.5	14	Tetrachloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-28-L	2/23/00	13.5	14	Trichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-32-L	2/23/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-32-L	2/23/00	15.5	16	1,2-Dichloroethene(Total)	50	ug/kg	U	481658.551	1349599.21
12692	12692-32-L	2/23/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481658.551	1349599.21
12692	12692-32-L	2/23/00	15.5	16	Trichloroethene	50	ug/kg	U	481658.551	1349599.21
12693	12693-1-L	2/23/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-1-L	2/23/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481667.57	1349611.39
12693	12693-1-L	2/23/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-1-R	2/23/00	0	0.5	Thorium	8.03	ug/g dry		481667.57	1349611.39
12693	12693-1-L	2/23/00	0	0.5	Trichloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-1-R	2/23/00	0	0.5	Uranium, Total	35.6	ug/g dry		481667.57	1349611.39
12693	12693-5-L	2/23/00	2	2.5	1,1-Dichloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-5-L	2/23/00	2	2.5	1,2-Dichloroethene(Total)	24	ug/kg	J	481667.57	1349611.39
12693	12693-5-L	2/23/00	2	2.5	Tetrachloroethene	25	ug/kg	J	481667.57	1349611.39
12693	12693-5-R	2/23/00	2	2.5	Thorium	9.05	ug/g dry		481667.57	1349611.39
12693	12693-5-L	2/23/00	2	2.5	Trichloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-5-R	2/23/00	2	2.5	Uranium, Total	6.56	ug/g dry		481667.57	1349611.39
12693	12693-8-L	2/23/00	3.5	4	1,1-Dichloroethene	78	ug/kg		481667.57	1349611.39
12693	12693-8-L	2/23/00	3.5	4	1,2-Dichloroethene(Total)	480	ug/kg		481667.57	1349611.39
12693	12693-8-L	2/23/00	3.5	4	Tetrachloroethene	270	ug/kg		481667.57	1349611.39
12693	12693-8-R	2/23/00	3.5	4	Thorium	9.13	ug/g dry		481667.57	1349611.39
12693	12693-8-L	2/23/00	3.5	4	Trichloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-8-R	2/23/00	3.5	4	Uranium, Total	4.98	ug/g dry		481667.57	1349611.39
12693	12693-12-L	2/23/00	5.5	6	1,1-Dichloroethene	1200	ug/kg	U	481667.57	1349611.39
12693	12693-12-L	2/23/00	5.5	6	1,2-Dichloroethene(Total)	810	ug/kg	J	481667.57	1349611.39
12693	12693-12-L	2/23/00	5.5	6	Tetrachloroethene	4900	ug/kg		481667.57	1349611.39
12693	12693-12-R	2/23/00	5.5	6	Thorium	9.09	ug/g dry		481667.57	1349611.39
12693	12693-12-L	2/23/00	5.5	6	Trichloroethene	1200	ug/kg	U	481667.57	1349611.39
12693	12693-12-R	2/23/00	5.5	6	Uranium, Total	18.4	ug/g dry		481667.57	1349611.39
12693	12693-16-L	2/23/00	7.5	8	1,1-Dichloroethene	1000	ug/kg	J	481667.57	1349611.39
12693	12693-16-L	2/23/00	7.5	8	1,2-Dichloroethene(Total)	2800	ug/kg		481667.57	1349611.39
12693	12693-16-L	2/23/00	7.5	8	Tetrachloroethene	7300	ug/kg		481667.57	1349611.39
12693	12693-16-R	2/23/00	7.5	8	Thorium	4.56	ug/g dry		481667.57	1349611.39
12693	12693-16-L	2/23/00	7.5	8	Trichloroethene	5200	ug/kg		481667.57	1349611.39
12693	12693-16-R	2/23/00	7.5	8	Uranium, Total	7.74	ug/g dry		481667.57	1349611.39

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BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12693	12693-19-L	2/23/00	9	9.5	1,1,1-Trichloroethane	360000	ug/kg		481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,1,2,2-Tetrachloroethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,1,2-Trichloroethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,1-Dichloroethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,1-Dichloroethene	9000	ug/kg	J	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,2-Dichloroethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,2-Dichloroethene(Total)	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	1,2-Dichloropropane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	2-Butanone	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	2-Hexanone	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	4-Methyl-2-Pentanone	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Acetone	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Benzene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	BromodiChloromethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Bromoform	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Bromomethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Carbon Disulfide	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Carbon Tetrachloride	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Chlorobenzene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Chloroethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Chloroform	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Chloromethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	cis-1,2-Dichloroethene	NR	ug/kg		481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	cis-1,3-Dichloropropene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Dibromochloromethane	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Ethylbenzene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Methylene Chloride	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Styrene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Tetrachloroethene	20000	ug/kg	J	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Toluene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	trans-1,2-Dichloroethene	NR	ug/kg		481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	trans-1,3-Dichloropropene	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Trichloroethene	40000	ug/kg		481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Vinyl Chloride	25000	ug/kg	U	481667.57	1349611.39
12693	12693-19-L	2/23/00	9	9.5	Xylenes (Total)	25000	ug/kg	U	481667.57	1349611.39
12693	12693-20-L	2/23/00	9.5	10	1,1-Dichloroethene	12000	ug/kg	U	481667.57	1349611.39
12693	12693-20-L	2/23/00	9.5	10	1,2-Dichloroethene(Total)	1200	ug/kg	U	481667.57	1349611.39

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12693	12693-20-L	2/23/00	9.5	10	Tetrachloroethene	15000	ug/kg		481667.57	1349611.39
12693	12693-20-R	2/23/00	9.5	10	Thorium	4.45	ug/g dry		481667.57	1349611.39
12693	12693-20-L	2/23/00	9.5	10	Trichloroethene	14000	ug/kg		481667.57	1349611.39
12693	12693-20-R	2/23/00	9.5	10	Uranium, Total	2.20	ug/g dry		481667.57	1349611.39
12693	12693-24-L	2/23/00	11.5	12	1,1-Dichloroethene	12000	ug/kg	U	481667.57	1349611.39
12693	12693-24-L	2/23/00	11.5	12	1,2-Dichloroethene(Total)	12000	ug/kg	U	481667.57	1349611.39
12693	12693-24-L	2/23/00	11.5	12	Tetrachloroethene	180000	ug/kg		481667.57	1349611.39
12693	12693-24-R	2/23/00	11.5	12	Thorium	4.54	ug/g dry		481667.57	1349611.39
12693	12693-24-L	2/23/00	11.5	12	Trichloroethene	8400	ug/kg	J	481667.57	1349611.39
12693	12693-24-R	2/23/00	11.5	12	Uranium, Total	2.11	ug/g dry		481667.57	1349611.39
12693	12693-28-L	2/23/00	13.5	14	1,1-Dichloroethene	6200	ug/kg	U	481667.57	1349611.39
12693	12693-28-L	2/23/00	13.5	14	1,2-Dichloroethene(Total)	1700	ug/kg	J	481667.57	1349611.39
12693	12693-28-L	2/23/00	13.5	14	Tetrachloroethene	74000	ug/kg		481667.57	1349611.39
12693	12693-28-R	2/23/00	13.5	14	Thorium	4.89	ug/g dry		481667.57	1349611.39
12693	12693-28-L	2/23/00	13.5	14	Trichloroethene	8400	ug/kg		481667.57	1349611.39
12693	12693-28-R	2/23/00	13.5	14	Uranium, Total	1.86	ug/g dry		481667.57	1349611.39
12693	12693-32-L	2/23/00	15.5	16	1,1-Dichloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-32-L	2/23/00	15.5	16	1,2-Dichloroethene(Total)	10	ug/kg	J	481667.57	1349611.39
12693	12693-32-L	2/23/00	15.5	16	Tetrachloroethene	50	ug/kg	U	481667.57	1349611.39
12693	12693-32-R	2/23/00	15.5	16	Thorium	3.26	ug/g dry		481667.57	1349611.39
12693	12693-32-L	2/23/00	15.5	16	Trichloroethene	31	ug/kg	J	481667.57	1349611.39
12693	12693-32-R	2/23/00	15.5	16	Uranium, Total	1.97	ug/g dry		481667.57	1349611.39
12694	12694-1-L	2/28/00	0	0.5	1,1,1-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,1,2-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,1-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,1-Dichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,2-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	1,2-Dichloropropane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	2-Butanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	2-Hexanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	4-Methyl-2-Pentanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Acetone	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Benzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	BromodiChloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Bromoform	50	ug/kg	U	481763.01	1349601.98

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12694	12694-1-L	2/28/00	0	0.5	Bromomethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Carbon Disulfide	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Carbon Tetrachloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Chlorobenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Chloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Chloroform	8	ug/kg	J	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Chloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	cis-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	cis-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Dibromochloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Ethylbenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Methylene Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Styrene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Tetrachloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-R	2/28/00	0	0.5	Thorium	6.51	ug/g dry		481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Toluene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	trans-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	trans-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Trichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-R	2/28/00	0	0.5	Uranium, Total	13.1	ug/g dry		481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Vinyl Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-1-L	2/28/00	0	0.5	Xylenes (Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,1,1-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,1,2-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,1-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,1-Dichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,2-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	1,2-Dichloropropane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	2-Butanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	2-Hexanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	4-Methyl-2-Pentanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Acetone	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Benzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	BromodiChloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Bromoform	50	ug/kg	U	481763.01	1349601.98

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12694	12694-7-L	2/28/00	3	3.5	Bromomethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Carbon Disulfide	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Carbon Tetrachloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Chlorobenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Chloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Chloroform	8	ug/kg	J	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Chloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	cis-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	cis-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Dibromochloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Ethylbenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Methylene Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Styrene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Tetrachloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-R	2/28/00	3	3.5	Thorium	1.03	ug/g dry		481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Toluene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	trans-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	trans-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Trichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-R	2/28/00	3	3.5	Uranium, Total	18.2	ug/g dry		481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Vinyl Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-7-L	2/28/00	3	3.5	Xylenes (Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,1,1-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,1,2-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,1-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,1-Dichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,2-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	1,2-Dichloropropane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	2-Butanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	2-Hexanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	4-Methyl-2-Pentanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Acetone	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Benzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	BromodiChloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Bromoform	50	ug/kg	U	481763.01	1349601.98

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12694	12694-13-L	2/28/00	6	6.5	Bromomethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Carbon Disulfide	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Carbon Tetrachloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Chlorobenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Chloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Chloroform	11	ug/kg	J	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Chloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	cis-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	cis-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Dibromochloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Ethylbenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Methylene Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Styrene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Tetrachloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Toluene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	trans-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	trans-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Trichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Vinyl Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-13-L	2/28/00	6	6.5	Xylenes (Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,1,1-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,1,2-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,1-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,1-Dichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,2-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	1,2-Dichloropropane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	2-Butanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	2-Hexanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	4-Methyl-2-Pentanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Acetone	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Benzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	BromodiChloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Bromoform	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Bromomethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Carbon Disulfide	50	ug/kg	U	481763.01	1349601.98

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12694	12694-19-L	2/28/00	9	9.5	Carbon Tetrachloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Chlorobenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Chloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Chloroform	9	ug/kg	J	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Chloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	cis-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	cis-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Dibromochloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Ethylbenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Methylene Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Styrene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Tetrachloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Toluene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	trans-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	trans-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Trichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Vinyl Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-19-L	2/28/00	9	9.5	Xylenes (Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,1,1-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,1,2-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,1-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,1-Dichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,2-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	1,2-Dichloropropane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	2-Butanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	2-Hexanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	4-Methyl-2-Pentanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Acetone	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Benzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	BromodiChloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Bromoform	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Bromomethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Carbon Disulfide	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Carbon Tetrachloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Chlorobenzene	50	ug/kg	U	481763.01	1349601.98

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12694	12694-25-L	2/28/00	12	12.5	Chloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Chloroform	8	ug/kg	J	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Chloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	cis-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	cis-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Dibromochloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Ethylbenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Methylene Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Styrene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Tetrachloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Toluene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	trans-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	trans-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Trichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Vinyl Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-25-L	2/28/00	12	12.5	Xylenes (Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,1,1-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,1,2,2-Tetrachloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,1,2-Trichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,1-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,1-Dichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,2-Dichloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,2-Dichloroethene(Total)	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	1,2-Dichloropropane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	2-Butanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	2-Hexanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	4-Methyl-2-Pentanone	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Acetone	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Benzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	BromodiChloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Bromoform	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Bromomethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Carbon Disulfide	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Carbon Tetrachloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Chlorobenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Chloroethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Chloroform	50	ug/kg	U	481763.01	1349601.98

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
12694	12694-31-L	2/28/00	15	15.5	Chloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	cis-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	cis-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Dibromochloromethane	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Ethylbenzene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Methylene Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Styrene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Tetrachloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Toluene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	trans-1,2-Dichloroethene	NR	ug/kg		481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	trans-1,3-Dichloropropene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Trichloroethene	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Vinyl Chloride	50	ug/kg	U	481763.01	1349601.98
12694	12694-31-L	2/28/00	15	15.5	Xylenes (Total)	50	ug/kg	U	481763.01	1349601.98
A3-KC01	A3-KC01-1	12/2/98	0	0.5	Lead	44.4	ug/g dry	-	482192.39	1349421.64
A3-KC01	A3-KC01-1	12/2/98	0	0.5	Thorium, Total	11	ug/g dry	-	482192.39	1349421.64
A3-KC01	A3-KC01-1	12/2/98	0	0.5	Uranium, Total	13.2	ug/g dry	-	482192.39	1349421.64
A3-KC02	A3-KC02-1	12/2/98	0	0.5	Lead	25.7	ug/g dry	-	482191.07	1349498.1
A3-KC02	A3-KC02-1	12/2/98	0	0.5	Thorium, Total	7.05	ug/g dry	-	482191.07	1349498.1
A3-KC02	A3-KC02-1	12/2/98	0	0.5	Uranium, Total	13.5	ug/g dry	-	482191.07	1349498.1
A3-KC03	A3-KC03-1	12/2/98	0	0.5	Lead	22.5	ug/g dry	-	482188.13	1349603.17
A3-KC03	A3-KC03-1	12/2/98	0	0.5	Thorium, Total	8.17	ug/g dry	-	482188.13	1349603.17
A3-KC03	A3-KC03-1	12/2/98	0	0.5	Uranium, Total	22.8	ug/g dry	-	482188.13	1349603.17
A3-KC04	A3-KC04-1	12/2/98	0	0.5	Lead	147	ug/g dry	-	482185.04	1349704.61
A3-KC04	A3-KC04-1	12/2/98	0	0.5	Thorium, Total	13.2	ug/g dry	-	482185.04	1349704.61
A3-KC04	A3-KC04-1	12/2/98	0	0.5	Uranium, Total	210	ug/g dry	-	482185.04	1349704.61
A3-KC04	A3-KC04-3	12/2/98	1	1.5	Thorium, Total	8.58	ug/g dry	NV	482185.04	1349704.61
A3-KC04	A3-KC04-3	12/2/98	1	1.5	Uranium, Total	36.9	ug/g dry	NV	482185.04	1349704.61
A3-KC04	A3-KC04-7	12/2/98	3	3.5	Thorium, Total	8.65	ug/g dry	NV	482185.04	1349704.61
A3-KC04	A3-KC04-7	12/2/98	3	3.5	Uranium, Total	6.97	ug/g dry	NV	482185.04	1349704.61
A3-KC04A	A3-KC04A-1	4/7/99	0	0.5	Lead (TCLP)	25.5	ug/L	U NV	482185.04	1349704.61
A3-KC05	A3-KC05-1	12/3/98	0	0.5	Lead	15.3	ug/g dry	-	482148.77	1349357.82
A3-KC05	A3-KC05-1	12/3/98	0	0.5	Thorium, Total	7.67	ug/g dry	-	482148.77	1349357.82
A3-KC05	A3-KC05-1	12/3/98	0	0.5	Uranium, Total	7.07	ug/g dry	-	482148.77	1349357.82
A3-KC06	A3-KC06-1	12/7/98	0	0.5	Lead	13.1	ug/g dry	NV	482084.45	1349356.21
A3-KC06	A3-KC06-1	12/7/98	0	0.5	Thorium, Total	6.15	ug/g dry	NV	482084.45	1349356.21
A3-KC06	A3-KC06-1	12/7/98	0	0.5	Uranium, Total	36.7	ug/g dry	NV	482084.45	1349356.21

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-KC07	A3-KC07-1	12/7/98	0	0.5	Lead	14.7	ug/g dry	NV	482094.82	1349393.97
A3-KC07	A3-KC07-1	12/7/98	0	0.5	Lead (TCLP)	352	ug/L	U	482094.82	1349393.97
A3-KC07	A3-KC07-1	12/7/98	0	0.5	Thorium, Total	6.49	ug/g dry	NV	482094.82	1349393.97
A3-KC07	A3-KC07-1	12/7/98	0	0.5	Uranium, Total	1.7	ug/g dry	NV	482094.82	1349393.97
A3-KC08	A3-KC08-1	12/7/98	0	0.5	Lead	16	ug/g dry	NV	482060.26	1349451.82
A3-KC08	A3-KC08-1	12/7/98	0	0.5	Thorium, Total	7.24	ug/g dry	NV	482060.26	1349451.82
A3-KC08	A3-KC08-1	12/7/98	0	0.5	Uranium, Total	1.71	ug/g dry	NV	482060.26	1349451.82
A3-KC09	A3-KC09-1	12/7/98	0	0.5	Lead	12.3	ug/g dry	NV	482091.26	1349504.16
A3-KC09	A3-KC09-1	12/7/98	0	0.5	Lead (TCLP)	352	ug/L	U	482091.26	1349504.16
A3-KC09	A3-KC09-1	12/7/98	0	0.5	Thorium, Total	6.06	ug/g dry	NV	482091.26	1349504.16
A3-KC09	A3-KC09-1	12/7/98	0	0.5	Uranium, Total	1.53	ug/g dry	NV	482091.26	1349504.16
A3-KC10	A3-KC10-1	12/7/98	0	0.5	Lead	10.5	ug/g dry	NV	482075.3	1349560.85
A3-KC10	A3-KC10-1	12/7/98	0	0.5	Thorium, Total	5.71	ug/g dry	NV	482075.3	1349560.85
A3-KC10	A3-KC10-1	12/7/98	0	0.5	Uranium, Total	3.5	ug/g dry	NV	482075.3	1349560.85
A3-KC11	A3-KC11-1	12/7/98	0	0.5	Lead	11.3	ug/g dry	NV	482089.66	1349609.2
A3-KC11	A3-KC11-1	12/7/98	0	0.5	Lead (TCLP)	352	ug/L	U	482089.66	1349609.2
A3-KC11	A3-KC11-1	12/7/98	0	0.5	Thorium, Total	5.78	ug/g dry	NV	482089.66	1349609.2
A3-KC11	A3-KC11-1	12/7/98	0	0.5	Uranium, Total	1.35	ug/g dry	NV	482089.66	1349609.2
A3-KC12	A3-KC12-1	12/7/98	0	0.5	Lead	11.4	ug/g dry	NV	482052.96	1349657.38
A3-KC12	A3-KC12-1	12/7/98	0	0.5	Thorium, Total	5.85	ug/g dry	NV	482052.96	1349657.38
A3-KC12	A3-KC12-1	12/7/98	0	0.5	Uranium, Total	3.43	ug/g dry	NV	482052.96	1349657.38
A3-KC13	A3-KC13-1	12/7/98	0	0.5	Lead	15	ug/g dry	NV	482086.95	1349711.51
A3-KC13	A3-KC13-1	12/7/98	0	0.5	Lead (TCLP)	352	ug/L	U	482086.95	1349711.51
A3-KC13	A3-KC13-1	12/7/98	0	0.5	Thorium, Total	7.34	ug/g dry	NV	482086.95	1349711.51
A3-KC13	A3-KC13-1	12/7/98	0	0.5	Uranium, Total	1.5	ug/g dry	NV	482086.95	1349711.51
A3-KC14	A3-KC14-1	12/3/98	0	0.5	Lead	16.6	ug/g dry	-	482069.38	1349808.29
A3-KC14	A3-KC14-1	12/3/98	0	0.5	Thorium, Total	8.43	ug/g dry	-	482069.38	1349808.29
A3-KC14	A3-KC14-1	12/3/98	0	0.5	Uranium, Total	8.59	ug/g dry	-	482069.38	1349808.29
A3-KC15	A3-KC15-1	12/2/98	0	0.5	Lead	27.1	ug/g dry	-	482130.9	1349803.82
A3-KC15	A3-KC15-1	12/2/98	0	0.5	Thorium, Total	6.74	ug/g dry	-	482130.9	1349803.82
A3-KC15	A3-KC15-1	12/2/98	0	0.5	Uranium, Total	21.1	ug/g dry	-	482130.9	1349803.82
A3-KC16	A3-KC16-1	12/2/98	0	0.5	Lead	33.7	ug/g dry	-	482149.92	1349726.05
A3-KC16	A3-KC16-1	12/2/98	0	0.5	Thorium, Total	7.54	ug/g dry	-	482149.92	1349726.05
A3-KC16	A3-KC16-1	12/2/98	0	0.5	Uranium, Total	41.2	ug/g dry	-	482149.92	1349726.05
A3-KC17	A3-KC17-1	12/3/98	0	0.5	Lead	13	ug/g dry	-	482103.04	1349373.8
A3-KC17	A3-KC17-1	12/3/98	0	0.5	Thorium, Total	6.82	ug/g dry	-	482103.04	1349373.8
A3-KC17	A3-KC17-1	12/3/98	0	0.5	Uranium, Total	1.58	ug/g dry	-	482103.04	1349373.8

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-KC18	A3-KC18-1	12/3/98	0	0.5	Lead	11.7	ug/g dry	-	482099.9	1349449.57
A3-KC18	A3-KC18-1	12/3/98	0	0.5	Thorium, Total	6.93	ug/g dry	-	482099.9	1349449.57
A3-KC18	A3-KC18-1	12/3/98	0	0.5	Uranium, Total	1.56	ug/g dry	-	482099.9	1349449.57
A3-KC19	A3-KC19-1	12/3/98	0	0.5	Lead	13.4	ug/g dry	J	482098.1	1349561.1
A3-KC19	A3-KC19-1	12/3/98	0	0.5	Thorium, Total	6.71	ug/g dry	J	482098.1	1349561.1
A3-KC19	A3-KC19-1	12/3/98	0	0.5	Uranium, Total	6.09	ug/g dry	J	482098.1	1349561.1
A3-KC20	A3-KC20-1	12/3/98	0	0.5	Lead	12.7	ug/g dry	-	482095.66	1349667.6
A3-KC20	A3-KC20-1	12/3/98	0	0.5	Thorium, Total	6.38	ug/g dry	-	482095.66	1349667.6
A3-KC20	A3-KC20-1	12/3/98	0	0.5	Uranium, Total	1.6	ug/g dry	-	482095.66	1349667.6
A3-KC21	A3-KC21-1	12/3/98	0	0.5	Lead	16.4	ug/g dry	-	482088.12	1349763.97
A3-KC21	A3-KC21-1	12/3/98	0	0.5	Thorium, Total	8.02	ug/g dry	-	482088.12	1349763.97
A3-KC21	A3-KC21-1	12/3/98	0	0.5	Uranium, Total	1.83	ug/g dry	-	482088.12	1349763.97
A3-MB01	A3-MB01-1	12/10/98	0	0.5	Lead	21	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-1	12/10/98	0	0.5	Lead (TCLP)	31	ug/L	U NV	481032.02	1349535.99
A3-MB01	A3-MB01-1	12/10/98	0	0.5	Thorium, Total	5.76	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-1	12/10/98	0	0.5	Trichloroethene (TCLP)	3	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-1	12/10/98	0	0.5	Uranium, Total	17.5	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-3	12/10/98	1	1.5	Thorium, Total	5.82	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-3	12/10/98	1	1.5	Trichloroethene (TCLP)	3	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-3	12/10/98	1	1.5	Uranium, Total	18.2	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-5	12/10/98	2	2.5	Thorium, Total	7.4	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-5	12/10/98	2	2.5	Trichloroethene (TCLP)	6	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-5	12/10/98	2	2.5	Uranium, Total	19.6	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-7	12/10/98	3	3.5	Thorium, Total	18	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-7	12/10/98	3	3.5	Trichloroethene (TCLP)	6	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-7	12/10/98	3	3.5	Uranium, Total	406	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-9	12/10/98	4	4.5	Thorium, Total	4.55	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-9	12/10/98	4	4.5	Trichloroethene (TCLP)	470	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-9	12/10/98	4	4.5	Uranium, Total	1.47	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-11	12/10/98	5	5.5	Thorium, Total	4.63	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-11	12/10/98	5	5.5	Trichloroethene (TCLP)	1100	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-11	12/10/98	5	5.5	Uranium, Total	1.34	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-13	12/10/98	6	6.5	Thorium, Total	5.2	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-13	12/10/98	6	6.5	Trichloroethene (TCLP)	1600	ug/L	J	481032.02	1349535.99
A3-MB01	A3-MB01-13	12/10/98	6	6.5	Uranium, Total	1.45	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-15	12/10/98	7	7.5	Thorium, Total	4.89	ug/g dry	NV	481032.02	1349535.99
A3-MB01	A3-MB01-15	12/10/98	7	7.5	Trichloroethene (TCLP)	530	ug/L	J	481032.02	1349535.99

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB01	A3-MB01-15	12/10/98	7	7.5	Uranium, Total	3.07	ug/g dry	NV	481032.02	1349535.99
A3-MB02	A3-MB02-1	12/14/98	0	0.5	Lead	16.4	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-1	12/14/98	0	0.5	Lead (TCLP)	278	ug/L	NV	481031.61	1349523.37
A3-MB02	A3-MB02-1	12/14/98	0	0.5	Thorium, Total	5.58	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-1	12/14/98	0	0.5	Trichloroethene (TCLP)	5	ug/L	UJ	481031.61	1349523.37
A3-MB02	A3-MB02-1	12/14/98	0	0.5	Uranium, Total	15	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-1	12/14/98	0	0.5	Thorium, Total	7.19	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-3	12/14/98	1	1.5	Trichloroethene (TCLP)	6	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-3	12/14/98	1	1.5	Uranium, Total	24.3	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-3	12/14/98	1	1.5	Thorium, Total	7.63	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-5	12/14/98	2	2.5	Trichloroethene (TCLP)	12	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-5	12/14/98	2	2.5	Uranium, Total	66.1	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-5	12/14/98	2	2.5	Thorium, Total	6.65	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-7	12/14/98	3	3.5	Trichloroethene (TCLP)	97	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-7	12/14/98	3	3.5	Uranium, Total	74.7	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-7	12/14/98	3	3.5	Thorium, Total	6.08	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-9	12/14/98	4	4.5	Trichloroethene (TCLP)	22	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-9	12/14/98	4	4.5	Uranium, Total	52.3	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-9	12/14/98	4	4.5	Thorium, Total	5.62	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-11	12/14/98	5	5.5	Trichloroethene (TCLP)	320	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-11	12/14/98	5	5.5	Uranium, Total	26.6	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-11	12/14/98	5	5.5	Thorium, Total	5.54	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-13	12/14/98	6	6.5	Trichloroethene (TCLP)	1700	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-13	12/14/98	6	6.5	Uranium, Total	8.79	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-13	12/14/98	6	6.5	Thorium, Total	5.38	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-15	12/14/98	7	7.5	Trichloroethene (TCLP)	470	ug/L	J	481031.61	1349523.37
A3-MB02	A3-MB02-15	12/14/98	7	7.5	Uranium, Total	6.03	ug/g dry	NV	481031.61	1349523.37
A3-MB02	A3-MB02-15	12/14/98	7	7.5	Lead	9.95	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-1	12/10/98	0	0.5	Lead (TCLP)	31	ug/L	U NV	481035.5	1349542.9
A3-MB03	A3-MB03-1	12/10/98	0	0.5	Thorium, Total	4.85	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-1	12/10/98	0	0.5	Trichloroethene (TCLP)	5	ug/L	U	481035.5	1349542.9
A3-MB03	A3-MB03-1	12/10/98	0	0.5	Uranium, Total	6.41	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-1	12/10/98	0	0.5	Thorium, Total	5.62	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-3	12/10/98	1	1.5	Trichloroethene (TCLP)	5	ug/L	U	481035.5	1349542.9
A3-MB03	A3-MB03-3	12/10/98	1	1.5	Uranium, Total	15.9	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-3	12/10/98	1	1.5	Thorium, Total	7.28	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-5	12/10/98	2	2.5	Trichloroethene (TCLP)	5	ug/L	U	481035.5	1349542.9
A3-MB03	A3-MB03-5	12/10/98	2	2.5						

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB03	A3-MB03-5	12/10/98	2	2.5	Uranium, Total	18.8	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-7	12/10/98	3	3.5	Thorium, Total	12.8	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-7	12/10/98	3	3.5	Trichloroethene (TCLP)	16	ug/L	-	481035.5	1349542.9
A3-MB03	A3-MB03-7	12/10/98	3	3.5	Uranium, Total	219	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-9	12/10/98	4	4.5	Thorium, Total	5.04	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-9	12/10/98	4	4.5	Trichloroethene (TCLP)	4	ug/L	J	481035.5	1349542.9
A3-MB03	A3-MB03-9	12/10/98	4	4.5	Uranium, Total	15.2	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-11	12/10/98	5	5.5	Thorium, Total	4.76	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-11	12/10/98	5	5.5	Trichloroethene (TCLP)	1500	ug/L	J	481035.5	1349542.9
A3-MB03	A3-MB03-11	12/10/98	5	5.5	Uranium, Total	2.29	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-13	12/10/98	6	6.5	Thorium, Total	4.94	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-13	12/10/98	6	6.5	Trichloroethene (TCLP)	1800	ug/L	-	481035.5	1349542.9
A3-MB03	A3-MB03-13	12/10/98	6	6.5	Uranium, Total	1.58	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-15	12/10/98	7	7.5	Thorium, Total	5.42	ug/g dry	NV	481035.5	1349542.9
A3-MB03	A3-MB03-15	12/10/98	7	7.5	Trichloroethene (TCLP)	1800	ug/L	J	481035.5	1349542.9
A3-MB03	A3-MB03-15	12/10/98	7	7.5	Uranium, Total	2.23	ug/g dry	NV	481035.5	1349542.9
A3-MB04	A3-MB04-1	12/9/98	0	0.5	Lead	20.3	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-1	12/9/98	0	0.5	Lead (TCLP)	37	ug/L	NV	481032.98	1349551.07
A3-MB04	A3-MB04-1	12/9/98	0	0.5	Thorium, Total	6.33	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-1	12/9/98	0	0.5	Trichloroethene (TCLP)	8	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-1	12/9/98	0	0.5	Uranium, Total	26	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-3	12/9/98	1	1.5	Thorium, Total	5.41	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-3	12/9/98	1	1.5	Trichloroethene (TCLP)	5	ug/L	UJ	481032.98	1349551.07
A3-MB04	A3-MB04-3	12/9/98	1	1.5	Uranium, Total	14.4	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-5	12/9/98	2	2.5	Thorium, Total	6.18	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-5	12/9/98	2	2.5	Trichloroethene (TCLP)	1	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-5	12/9/98	2	2.5	Uranium, Total	14.5	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-7	12/9/98	3	3.5	Thorium, Total	19.3	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-7	12/9/98	3	3.5	Trichloroethene (TCLP)	1	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-7	12/9/98	3	3.5	Uranium, Total	349	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-9	12/9/98	4	4.5	Thorium, Total	5.15	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-9	12/9/98	4	4.5	Trichloroethene (TCLP)	2	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-9	12/9/98	4	4.5	Uranium, Total	31.5	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-11	12/9/98	5	5.5	Thorium, Total	5.45	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-11	12/9/98	5	5.5	Trichloroethene (TCLP)	310	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-11	12/9/98	5	5.5	Uranium, Total	2.36	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-13	12/9/98	6	6.5	Thorium, Total	4.75	ug/g dry	NV	481032.98	1349551.07

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB04	A3-MB04-13	12/9/98	6	6.5	Trichloroethene (TCLP)	220	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-13	12/9/98	6	6.5	Uranium, Total	3.26	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-15	12/9/98	7	7.5	Thorium, Total	4.52	ug/g dry	NV	481032.98	1349551.07
A3-MB04	A3-MB04-15	12/9/98	7	7.5	Trichloroethene (TCLP)	200	ug/L	J	481032.98	1349551.07
A3-MB04	A3-MB04-15	12/9/98	7	7.5	Uranium, Total	1.43	ug/g dry	NV	481032.98	1349551.07
A3-MB05	A3-MB05-1	12/10/98	0	0.5	Lead	14.9	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-1	12/10/98	0	0.5	Lead (TCLP)	31	ug/L	U NV	481024.97	1349535.52
A3-MB05	A3-MB05-1	12/10/98	0	0.5	Thorium, Total	4.57	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-1	12/10/98	0	0.5	Trichloroethene (TCLP)	2	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-1	12/10/98	0	0.5	Uranium, Total	15.7	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-3	12/10/98	1	1.5	Thorium, Total	5.1	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-3	12/10/98	1	1.5	Trichloroethene (TCLP)	100	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-3	12/10/98	1	1.5	Uranium, Total	2.63	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-5	12/10/98	2	2.5	Thorium, Total	4.42	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-5	12/10/98	2	2.5	Trichloroethene (TCLP)	1100	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-5	12/10/98	2	2.5	Uranium, Total	3.46	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-7	12/10/98	3	3.5	Thorium, Total	3.94	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-7	12/10/98	3	3.5	Trichloroethene (TCLP)	1800	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-7	12/10/98	3	3.5	Uranium, Total	1.36	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-9	12/10/98	4	4.5	Thorium, Total	4.97	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-9	12/10/98	4	4.5	Trichloroethene (TCLP)	170	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-9	12/10/98	4	4.5	Uranium, Total	1.9	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-11	12/10/98	5	5.5	Thorium, Total	4.49	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-11	12/10/98	5	5.5	Trichloroethene (TCLP)	860	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-11	12/10/98	5	5.5	Uranium, Total	1.36	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-13	12/10/98	6	6.5	Thorium, Total	4.4	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-13	12/10/98	6	6.5	Trichloroethene (TCLP)	520	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-13	12/10/98	6	6.5	Uranium, Total	1.39	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-15	12/10/98	7	7.5	Thorium, Total	4.85	ug/g dry	NV	481024.97	1349535.52
A3-MB05	A3-MB05-15	12/10/98	7	7.5	Trichloroethene (TCLP)	13	ug/L	J	481024.97	1349535.52
A3-MB05	A3-MB05-15	12/10/98	7	7.5	Uranium, Total	2.11	ug/g dry	NV	481024.97	1349535.52
A3-MB06	A3-MB06-1	12/9/98	0	0.5	Lead	36.7	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-1	12/9/98	0	0.5	Lead (TCLP)	37	ug/L	NV	481027.8	1349684.86
A3-MB06	A3-MB06-1	12/9/98	0	0.5	Thorium, Total	7.1	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-1	12/9/98	0	0.5	Uranium, Total	104	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-3	12/9/98	1	1.5	Lead	9.66	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-3	12/9/98	1	1.5	Lead (TCLP)	45	ug/L	NV	481027.8	1349684.86

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB06	A3-MB06-3	12/9/98	1	1.5	Thorium, Total	4.52	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-3	12/9/98	1	1.5	Uranium, Total	12.8	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-5	12/9/98	2	2.5	Lead	7.65	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-5	12/9/98	2	2.5	Lead (TCLP)	53	ug/L	NV	481027.8	1349684.86
A3-MB06	A3-MB06-5	12/9/98	2	2.5	Thorium, Total	3.5	ug/g dry	NV	481027.8	1349684.86
A3-MB06	A3-MB06-5	12/9/98	2	2.5	Uranium, Total	2.18	ug/g dry	NV	481027.8	1349684.86
A3-MB07	A3-MB07-1	12/9/98	0	0.5	Lead	11.5	ug/g dry	NV	481032.79	1349680.69
A3-MB07	A3-MB07-1	12/9/98	0	0.5	Thorium, Total	3.31	ug/g dry	NV	481032.79	1349680.69
A3-MB07	A3-MB07-1	12/9/98	0	0.5	Uranium, Total	11.1	ug/g dry	NV	481032.79	1349680.69
A3-MB08	A3-MB08-1	12/9/98	0	0.5	Lead	16.7	ug/g dry	NV	481033.09	1349690.87
A3-MB08	A3-MB08-1	12/9/98	0	0.5	Thorium, Total	4.81	ug/g dry	NV	481033.09	1349690.87
A3-MB08	A3-MB08-1	12/9/98	0	0.5	Uranium, Total	44.5	ug/g dry	NV	481033.09	1349690.87
A3-MB09	A3-MB09-1	12/8/98	0	0.5	Lead	8.63	ug/g dry	NV	481017.29	1349691.1
A3-MB09	A3-MB09-1	12/8/98	0	0.5	Thorium, Total	3.38	ug/g dry	NV	481017.29	1349691.1
A3-MB09	A3-MB09-1	12/8/98	0	0.5	Uranium, Total	11.9	ug/g dry	NV	481017.29	1349691.1
A3-MB10	A3-MB10-1	12/8/99	0	0.5	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB10	A3-MB10-4	12/8/99	1.5	2	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB10	A3-MB10-6	12/8/99	2.5	3	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB10	A3-MB10-8	12/8/99	3.5	4	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB10	A3-MB10-10	12/8/99	4.5	5	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB10	A3-MB10-12	12/8/99	5.5	6	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB10	A3-MB10-14	12/8/99	6.5	7	Trichloroethene (TCLP)	5	ug/L	J	481040	1349523.37
A3-MB10	A3-MB10-16	12/8/99	7.5	8	Trichloroethene (TCLP)	12	ug/L	J	481040	1349523.37
A3-MB10	A3-MB10-18	12/8/99	8.5	9	Trichloroethene (TCLP)	40	ug/L	J	481040	1349523.37
A3-MB10	A3-MB10-20	12/8/99	9.5	10	Trichloroethene (TCLP)	200	ug/L	-	481040	1349523.37
A3-MB10	A3-MB10-22	12/8/99	10.5	11	Trichloroethene (TCLP)	5	ug/L	J	481040	1349523.37
A3-MB10	A3-MB10-24	12/8/99	11.5	12	Trichloroethene (TCLP)	50	ug/L	U	481040	1349523.37
A3-MB11	A3-MB11-1	12/13/99	0	0.5	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-4	12/13/99	1.5	2	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-6	12/13/99	2.5	3	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-8	12/13/99	3.5	4	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-10	12/13/99	4.5	5	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-12	12/13/99	5.5	6	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-14	12/13/99	6.5	7	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-16	12/13/99	7.5	8	Trichloroethene (TCLP)	50	ug/L	U	481039	1349536
A3-MB11	A3-MB11-18	12/13/99	8.5	9	Trichloroethene (TCLP)	650	ug/L	-	481039	1349536
A3-MB11	A3-MB11-20	12/13/99	9.5	10	Trichloroethene (TCLP)	410	ug/L	-	481039	1349536

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB11	A3-MB11-22	12/13/99	10.5	11	Trichloroethene (TCLP)	57	ug/L	-	481039	1349536
A3-MB11	A3-MB11-24	12/13/99	11.5	12	Trichloroethene (TCLP)	11	ug/L	J	481039	1349536
A3-MB12	A3-MB12-1	12/13/99	0	0.5	Trichloroethene (TCLP)	22	ug/L	J	481038	1349547.84
A3-MB12	A3-MB12-4	12/13/99	1.5	2	Trichloroethene (TCLP)	50	ug/L	U	481038	1349547.84
A3-MB12	A3-MB12-6	12/13/99	2.5	3	Trichloroethene (TCLP)	50	ug/L	U	481038	1349547.84
A3-MB12	A3-MB12-8	12/13/99	3.5	4	Trichloroethene (TCLP)	50	ug/L	U	481038	1349547.84
A3-MB12	A3-MB12-10	12/13/99	4.5	5	Trichloroethene (TCLP)	50	ug/L	U	481038	1349547.84
A3-MB12	A3-MB12-12	12/13/99	5.5	6	Trichloroethene (TCLP)	51	ug/L	-	481038	1349547.84
A3-MB12	A3-MB12-14	12/13/99	6.5	7	Trichloroethene (TCLP)	170	ug/L	-	481038	1349547.84
A3-MB12	A3-MB12-16	12/13/99	7.5	8	Trichloroethene (TCLP)	390	ug/L	-	481038	1349547.84
A3-MB12	A3-MB12-18	12/13/99	8.5	9	Trichloroethene (TCLP)	100	ug/L	-	481038	1349547.84
A3-MB12	A3-MB12-20	12/13/99	9.5	10	Trichloroethene (TCLP)	17	ug/L	J	481038	1349547.84
A3-MB12	A3-MB12-22	12/13/99	10.5	11	Trichloroethene (TCLP)	50	ug/L	U	481038	1349547.84
A3-MB12	A3-MB12-24	12/13/99	11.5	12	Trichloroethene (TCLP)	25	ug/L	J	481038	1349547.84
A3-MB14	A3-MB14-1	12/9/99	0	0.5	Trichloroethene (TCLP)	50	ug/L	U	481025	1349523.37
A3-MB14	A3-MB14-4	12/9/99	1.5	2	Trichloroethene (TCLP)	94	ug/L	-	481025	1349523.37
A3-MB14	A3-MB14-6	12/9/99	2.5	3	Trichloroethene (TCLP)	66	ug/L	-	481025	1349523.37
A3-MB14	A3-MB14-8	12/9/99	3.5	4	Trichloroethene (TCLP)	1800	ug/L	-	481025	1349523.37
A3-MB14	A3-MB14-10	12/9/99	4.5	5	Trichloroethene (TCLP)	3500	ug/L	-	481025	1349523.37
A3-MB14	A3-MB14-12	12/9/99	5.5	6	Trichloroethene (TCLP)	5300	ug/L	-	481025	1349523.37
A3-MB14	A3-MB14-14	12/9/99	6.5	7	Trichloroethene (TCLP)	420	ug/L	-	481025	1349523.37
A3-MB14	A3-MB14-16	12/9/99	7.5	8	Trichloroethene (TCLP)	19	ug/L	J	481025	1349523.37
A3-MB14	A3-MB14-18	12/9/99	8.5	9	Trichloroethene (TCLP)	50	ug/L	U	481025	1349523.37
A3-MB14	A3-MB14-20	12/9/99	9.5	10	Trichloroethene (TCLP)	50	ug/L	U	481025	1349523.37
A3-MB14	A3-MB14-22	12/9/99	10.5	11	Trichloroethene (TCLP)	50	ug/L	U	481025	1349523.37
A3-MB14	A3-MB14-24	12/9/99	11.5	12	Trichloroethene (TCLP)	50	ug/L	U	481025	1349523.37
A3-MB14	A3-MB14-27	12/9/99	13	13.5	Trichloroethene (TCLP)	50	ug/L	U	481025	1349523.37
A3-MB15	A3-MB15-1	12/9/99	0	0.5	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-4	12/9/99	1.5	2	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-6	12/9/99	2.5	3	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-8	12/9/99	3.5	4	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-10	12/9/99	4.5	5	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-12	12/9/99	5.5	6	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-14	12/9/99	6.5	7	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-16	12/9/99	7.5	8	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-18	12/9/99	8.5	9	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-20	12/9/99	9.5	10	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB15	A3-MB15-22	12/9/99	10.5	11	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB15	A3-MB15-24	12/9/99	11.5	12	Trichloroethene (TCLP)	50	ug/L	U	481017	1349536
A3-MB16	A3-MB16-1	12/9/99	0	0.5	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB16	A3-MB16-4	12/9/99	1.5	2	Trichloroethene (TCLP)	320	ug/L	-	481025	1349545.5
A3-MB16	A3-MB16-6	12/9/99	2.5	3	Trichloroethene (TCLP)	480	ug/L	-	481025	1349545.5
A3-MB16	A3-MB16-8	12/9/99	3.5	4	Trichloroethene (TCLP)	520	ug/L	-	481025	1349545.5
A3-MB16	A3-MB16-10	12/9/99	4.5	5	Trichloroethene (TCLP)	5	ug/L	J	481025	1349545.5
A3-MB16	A3-MB16-12	12/9/99	5.5	6	Trichloroethene (TCLP)	10	ug/L	J	481025	1349545.5
A3-MB16	A3-MB16-14	12/9/99	6.5	7	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB16	A3-MB16-16	12/9/99	7.5	8	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB16	A3-MB16-18	12/9/99	8.5	9	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB16	A3-MB16-20	12/9/99	9.5	10	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB16	A3-MB16-22	12/9/99	10.5	11	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB16	A3-MB16-24	12/9/99	11.5	12	Trichloroethene (TCLP)	50	ug/L	U	481025	1349545.5
A3-MB17	A3-MB17-1	12/13/99	0	0.5	Trichloroethene (TCLP)	50	ug/L	U	481033.5	1349539.19
A3-MB17	A3-MB17-4	12/13/99	1.5	2	Trichloroethene (TCLP)	50	ug/L	U	481033.5	1349539.19
A3-MB17	A3-MB17-6	12/13/99	2.5	3	Trichloroethene (TCLP)	50	ug/L	U	481033.5	1349539.19
A3-MB17	A3-MB17-8	12/13/99	3.5	4	Trichloroethene (TCLP)	99	ug/L	-	481033.5	1349539.19
A3-MB17	A3-MB17-10	12/13/99	4.5	5	Trichloroethene (TCLP)	1700	ug/L	-	481033.5	1349539.19
A3-MB17	A3-MB17-12	12/13/99	5.5	6	Trichloroethene (TCLP)	3800	ug/L	-	481033.5	1349539.19
A3-MB17	A3-MB17-14	12/13/99	6.5	7	Trichloroethene (TCLP)	2000	ug/L	-	481033.5	1349539.19
A3-MB17	A3-MB17-16	12/13/99	7.5	8	Trichloroethene (TCLP)	1300	ug/L	-	481033.5	1349539.19
A3-MB18	A3-MB18-1	2/9/00	0	0.5	Trichloroethene (TCLP)	0.091	mg/L		481016.97	1349545.46
A3-MB18	A3-MB18-3	2/9/00	1	1.5	Trichloroethene (TCLP)	0.086	mg/L		481016.97	1349545.46
A3-MB18	A3-MB18-5	2/9/00	2	2.5	Trichloroethene (TCLP)	0.05	mg/L	U	481016.97	1349545.46
A3-MB18	A3-MB18-7	2/9/00	3	3.5	Trichloroethene (TCLP)	0.05	mg/L	U	481016.97	1349545.46
A3-MB18	A3-MB18-9	2/9/00	4	4.5	Trichloroethene (TCLP)	0.05	mg/L	U	481016.97	1349545.46
A3-MB18	A3-MB18-11	2/9/00	5	5.5	Trichloroethene (TCLP)	0.05	mg/L	U	481016.97	1349545.46
A3-MB18	A3-MB18-13	2/9/00	6	6.5	Trichloroethene (TCLP)	0.05	mg/L	U	481016.97	1349545.46
A3-MB18	A3-MB18-15	2/9/00	7	7.5	Trichloroethene (TCLP)	0.05	mg/L	U	481016.97	1349545.46
A3-MB19	A3-MB19-1	2/8/00	0	0.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.95	1349555.49
A3-MB19	A3-MB19-3	2/8/00	1	1.5	Trichloroethene (TCLP)	0.265	mg/L		481024.95	1349555.49
A3-MB19	A3-MB19-5	2/8/00	2	2.5	Trichloroethene (TCLP)	0.106	mg/L		481024.95	1349555.49
A3-MB19	A3-MB19-7	2/8/00	3	3.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.95	1349555.49
A3-MB19	A3-MB19-9	2/8/00	4	4.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.95	1349555.49
A3-MB19	A3-MB19-11	2/8/00	5	5.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.95	1349555.49
A3-MB19	A3-MB19-13	2/8/00	6	6.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.95	1349555.49

000901

APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-MB19	A3-MB19-15	2/8/00	7	7.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.95	1349555.49
A3-MB20	A3-MB20A-1	2/9/00	0	0.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-3	2/9/00	1	1.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-5	2/9/00	2	2.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-7	2/9/00	3	3.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-9	2/9/00	4	4.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-11	2/9/00	5	5.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-13	2/9/00	6	6.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20-15	2/9/00	7	7.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20-17	2/9/00	8	8.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20-19	2/9/00	9	9.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20-21	2/9/00	10	10.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-23	2/9/00	11	11.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB20	A3-MB20A-25	2/9/00	12	12.5	Trichloroethene (TCLP)	0.05	mg/L	U	481049.96	1349535.98
A3-MB21	A3-MB21-1	2/9/00	0	0.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-3	2/9/00	1	1.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-5	2/9/00	2	2.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-7	2/9/00	3	3.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-9	2/9/00	4	4.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-11	2/9/00	5	5.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-13	2/9/00	6	6.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-15	2/9/00	7	7.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-17	2/9/00	8	8.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB21	A3-MB21-19	2/9/00	9	9.5	Trichloroethene (TCLP)	0.05	mg/L	U	481024.92	1349513.43
A3-MB22	A3-MB22A-1	2/10/0	0	0.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-3	2/10/0	1	1.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-5	2/10/0	2	2.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-7	2/9/00	3	3.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-9	2/9/00	4	4.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-11	2/9/00	5	5.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-13	2/9/00	6	6.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-15	2/9/00	7	7.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-17	2/9/00	8	8.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-MB22	A3-MB22A-19	2/9/00	9	9.5	Trichloroethene (TCLP)	0.05	mg/L	U	481015.95	1349523.32
A3-SM01	A3-SM01-1	2/17/99	0	0.5	Lead	32.3	ug/g dry	NV	482091.88	1349939.04
A3-SM01	A3-SM01-1	2/17/99	0	0.5	Thorium, Total	4.96	ug/g dry	NV	482091.88	1349939.04
A3-SM01	A3-SM01-1	2/17/99	0	0.5	Uranium, Total	27.7	ug/g dry	NV	482091.88	1349939.04

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-SM02	A3-SM02-1	2/17/99	0	0.5	Lead	47.4	ug/g dry	NV	482087.56	1350109.51
A3-SM02	A3-SM02-1	2/17/99	0	0.5	Thorium, Total	4.19	ug/g dry	NV	482087.56	1350109.51
A3-SM02	A3-SM02-1	2/17/99	0	0.5	Uranium, Total	31.6	ug/g dry	NV	482087.56	1350109.51
A3-SM03	A3-SM03-1	2/16/99	0	0.5	Lead	23.3	ug/g dry	NV	482052.82	1349894.23
A3-SM03	A3-SM03-1	2/16/99	0	0.5	Thorium, Total	8.26	ug/g dry	NV	482052.82	1349894.23
A3-SM03	A3-SM03-1	2/16/99	0	0.5	Uranium, Total	34.3	ug/g dry	NV	482052.82	1349894.23
A3-SM04	A3-SM04-1	2/16/99	0	0.5	Lead	16	ug/g dry	NV	482046.92	1349974.13
A3-SM04	A3-SM04-1	2/16/99	0	0.5	Lead (TCLP)	25.5	ug/L	U NV	482046.92	1349974.13
A3-SM04	A3-SM04-1	2/16/99	0	0.5	Thorium, Total	7.37	ug/g dry	NV	482046.92	1349974.13
A3-SM04	A3-SM04-1	2/16/99	0	0.5	Uranium, Total	4.41	ug/g dry	NV	482046.92	1349974.13
A3-SM05	A3-SM05-1	2/17/99	0	0.5	Lead	22.8	ug/g dry	NV	482046.07	1350055.46
A3-SM05	A3-SM05-1	2/17/99	0	0.5	Thorium, Total	6.11	ug/g dry	NV	482046.07	1350055.46
A3-SM05	A3-SM05-1	2/17/99	0	0.5	Uranium, Total	39	ug/g dry	NV	482046.07	1350055.46
A3-SM05	A3-SM05-7	2/17/99	3	3.5	Thorium, Total	5.93	ug/g dry	NV	482046.07	1350055.46
A3-SM05	A3-SM05-7	2/17/99	3	3.5	Uranium, Total	1.25	ug/g dry	NV	482046.07	1350055.46
A3-SM06	A3-SM06-1	2/17/99	0	0.5	Lead	32	ug/g dry	NV	482046.42	1350153.93
A3-SM06	A3-SM06-1	2/17/99	0	0.5	Thorium, Total	10.9	ug/g dry	NV	482046.42	1350153.93
A3-SM06	A3-SM06-1	2/17/99	0	0.5	Uranium, Total	78.9	ug/g dry	NV	482046.42	1350153.93
A3-SM07	A3-SM07-1	2/18/99	0	0.5	Lead	17.3	ug/g dry	NV	482044.25	1350354.18
A3-SM07	A3-SM07-1	2/18/99	0	0.5	Thorium, Total	7.87	ug/g dry	NV	482044.25	1350354.18
A3-SM07	A3-SM07-1	2/18/99	0	0.5	Uranium, Total	12.4	ug/g dry	NV	482044.25	1350354.18
A3-SM08	A3-SM08-1	2/18/99	0	0.5	Lead	24.4	ug/g dry	NV	482046.49	1350453.45
A3-SM08	A3-SM08-1	2/18/99	0	0.5	Thorium, Total	9.51	ug/g dry	NV	482046.49	1350453.45
A3-SM08	A3-SM08-1	2/18/99	0	0.5	Uranium, Total	41.7	ug/g dry	NV	482046.49	1350453.45
A3-SM09	A3-SM09-1	2/16/99	0	0.5	Lead	14.9	ug/g dry	NV	481959.43	1349899.36
A3-SM09	A3-SM09-1	2/16/99	0	0.5	Thorium, Total	6.62	ug/g dry	NV	481959.43	1349899.36
A3-SM09	A3-SM09-1	2/16/99	0	0.5	Uranium, Total	6.07	ug/g dry	NV	481959.43	1349899.36
A3-SM10	A3-SM10-1	2/17/99	0	0.5	Lead	10.7	ug/g dry	NV	481991.64	1350000.23
A3-SM10	A3-SM10-1	2/17/99	0	0.5	Thorium, Total	5.16	ug/g dry	NV	481991.64	1350000.23
A3-SM10	A3-SM10-1	2/17/99	0	0.5	Uranium, Total	2.06	ug/g dry	NV	481991.64	1350000.23
A3-SM11	A3-SM11-1	2/18/99	0	0.5	Lead	11.5	ug/g dry	NV	481988.79	1350088.32
A3-SM11	A3-SM11-1	2/18/99	0	0.5	Thorium, Total	5.75	ug/g dry	NV	481988.79	1350088.32
A3-SM11	A3-SM11-1	2/18/99	0	0.5	Uranium, Total	110	ug/g dry	NV	481988.79	1350088.32
A3-SM11	A3-SM11-7	2/18/99	3	3.5	Thorium, Total	4.6	ug/g dry	NV	481988.79	1350088.32
A3-SM11	A3-SM11-7	2/18/99	3	3.5	Uranium, Total	2.02	ug/g dry	NV	481988.79	1350088.32
A3-SM12	A3-SM12-1	2/17/99	0	0.5	Lead	67.4	ug/g dry	NV	482001.59	1350280.09
A3-SM12	A3-SM12-1	2/17/99	0	0.5	Thorium, Total	16.7	ug/g dry	NV	482001.59	1350280.09

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-SM12	A3-SM12-1	2/17/99	0	0.5	Uranium, Total	158	ug/g dry	NV	482001.59	1350280.09
A3-SM12	A3-SM12-7	2/17/99	3	3.5	Thorium, Total	5.43	ug/g dry	NV	482001.59	1350280.09
A3-SM12	A3-SM12-7	2/17/99	3	3.5	Uranium, Total	1.39	ug/g dry	NV	482001.59	1350280.09
A3-SM13	A3-SM13-1	2/18/99	0	0.5	Lead	47.6	ug/g dry	NV	481998.53	1350427.31
A3-SM13	A3-SM13-1	2/18/99	0	0.5	Thorium, Total	17.1	ug/g dry	NV	481998.53	1350427.31
A3-SM13	A3-SM13-1	2/18/99	0	0.5	Uranium, Total	111	ug/g dry	NV	481998.53	1350427.31
A3-SM13	A3-SM13-7	2/18/99	3	3.5	Thorium, Total	4.85	ug/g dry	NV	481998.53	1350427.31
A3-SM13	A3-SM13-7	2/18/99	3	3.5	Uranium, Total	4.47	ug/g dry	NV	481998.53	1350427.31
A3-SM14	A3-SM14-1	2/18/99	0	0.5	Lead	128	ug/g dry	NV	481997.08	1350526.62
A3-SM14	A3-SM14-1	2/18/99	0	0.5	Thorium, Total	4.7	ug/g dry	NV	481997.08	1350526.62
A3-SM14	A3-SM14-1	2/18/99	0	0.5	Uranium, Total	110	ug/g dry	NV	481997.08	1350526.62
A3-SM15	A3-SM15-1	2/16/99	0	0.5	Lead	16.6	ug/g dry	NV	481901.19	1349902.45
A3-SM15	A3-SM15-1	2/16/99	0	0.5	Thorium, Total	7.45	ug/g dry	NV	481901.19	1349902.45
A3-SM15	A3-SM15-1	2/16/99	0	0.5	Uranium, Total	138	ug/g dry	NV	481901.19	1349902.45
A3-SM15	A3-SM15-7	2/16/99	3	3.5	Thorium, Total	7.83	ug/g dry	NV	481901.19	1349902.45
A3-SM15	A3-SM15-7	2/16/99	3	3.5	Uranium, Total	5.99	ug/g dry	NV	481901.19	1349902.45
A3-SM16	A3-SM16-1	2/16/99	0	0.5	Lead	15.8	ug/g dry	NV	481823.26	1349887.87
A3-SM16	A3-SM16-1	2/16/99	0	0.5	Thorium, Total	8.17	ug/g dry	NV	481823.26	1349887.87
A3-SM16	A3-SM16-1	2/16/99	0	0.5	Uranium, Total	40.9	ug/g dry	NV	481823.26	1349887.87
A3-SM16	A3-SM16-7	2/16/99	3	3.5	Thorium, Total	5.11	ug/g dry	NV	481823.26	1349887.87
A3-SM16	A3-SM16-7	2/16/99	3	3.5	Uranium, Total	12.5	ug/g dry	NV	481823.26	1349887.87
A3-SM17	A3-SM17-1	2/3/99	0	0.5	Lead	86.9	ug/g dry	NV	481883.25	1350179.59
A3-SM17	A3-SM17-1	2/3/99	0	0.5	Thorium, Total	52.6	ug/g dry	NV	481883.25	1350179.59
A3-SM17	A3-SM17-1	2/3/99	0	0.5	Uranium, Total	127	ug/g dry	NV	481883.25	1350179.59
A3-SM17	A3-SM17-7	2/3/99	3	3.5	Thorium, Total	5.16	ug/g dry	NV	481883.25	1350179.59
A3-SM17	A3-SM17-7	2/3/99	3	3.5	Uranium, Total	1.67	ug/g dry	NV	481883.25	1350179.59
A3-SM18	A3-SM18-1	2/3/99	0	0.5	Lead	269	ug/g dry	NV	481882.95	1350253.17
A3-SM18	A3-SM18-1A	2/3/99	0	0.5	Lead (TCLP)	1170	ug/L	NV	481882.95	1350253.17
A3-SM18	A3-SM18-1	2/3/99	0	0.5	Thorium, Total	127	ug/g dry	NV	481882.95	1350253.17
A3-SM18	A3-SM18-1	2/3/99	0	0.5	Uranium, Total	156	ug/g dry	NV	481882.95	1350253.17
A3-SM18	A3-SM18-7	2/3/99	3	3.5	Thorium, Total	5.96	ug/g dry	NV	481882.95	1350253.17
A3-SM18	A3-SM18-7	2/3/99	3	3.5	Uranium, Total	3.08	ug/g dry	NV	481882.95	1350253.17
A3-SM19	A3-SM19-1	2/4/99	0	0.5	Lead	44.3	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-1	2/4/99	0	0.5	Thorium, Total	10.9	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-1	2/4/99	0	0.5	Uranium, Total	89.8	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-10	2/4/99	4.5	5	Thorium, Total	8.3	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-10	2/4/99	4.5	5	Uranium, Total	1.41	ug/g dry	NV	481881.65	1350348.19

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-SM19	A3-SM19-20	2/4/99	9.5	10	Thorium, Total	6.36	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-20	2/4/99	9.5	10	Uranium, Total	1.53	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-30	2/4/99	14.5	15	Thorium, Total	4.33	ug/g dry	NV	481881.65	1350348.19
A3-SM19	A3-SM19-30	2/4/99	14.5	15	Uranium, Total	2.07	ug/g dry	NV	481881.65	1350348.19
A3-SM20	A3-SM20-1	2/11/99	0	0.5	Lead	19	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-1	2/11/99	0	0.5	Thorium, Total	9.51	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-1	2/11/99	0	0.5	Uranium, Total	195	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-10	2/11/99	4.5	5	Thorium, Total	9.14	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-10	2/11/99	4.5	5	Uranium, Total	1.64	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-20	2/11/99	9.5	10	Thorium, Total	5.6	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-20	2/11/99	9.5	10	Uranium, Total	1.37	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-30	2/11/99	14.5	15	Thorium, Total	7.11	ug/g dry	NV	481883.42	1350459.54
A3-SM20	A3-SM20-30	2/11/99	14.5	15	Uranium, Total	2.01	ug/g dry	NV	481883.42	1350459.54
A3-SM21	A3-SM21-1	2/3/99	0	0.5	Lead	48	ug/g dry	NV	481823.97	1350203.47
A3-SM21	A3-SM21-1	2/3/99	0	0.5	Thorium, Total	21.2	ug/g dry	NV	481823.97	1350203.47
A3-SM21	A3-SM21-1	2/3/99	0	0.5	Uranium, Total	79.1	ug/g dry	NV	481823.97	1350203.47
A3-SM22	A3-SM22-1	2/2/99	0	0.5	Lead	777	ug/g dry	NV	481843.48	1350278.53
A3-SM22	A3-SM22-1	2/2/99	0	0.5	Lead (TCLP)	1480	ug/L	NV	481843.48	1350278.53
A3-SM22	A3-SM22-1	2/2/99	0	0.5	Thorium, Total	42.2	ug/g dry	NV	481843.48	1350278.53
A3-SM22	A3-SM22-1	2/2/99	0	0.5	Uranium, Total	151	ug/g dry	NV	481843.48	1350278.53
A3-SM22	A3-SM22-7	2/2/99	3	3.5	Thorium, Total	9.62	ug/g dry	NV	481843.48	1350278.53
A3-SM22	A3-SM22-7	2/2/99	3	3.5	Uranium, Total	36.9	ug/g dry	NV	481843.48	1350278.53
A3-SM23	A3-SM23-1	2/8/99	0	0.5	Lead	410	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-1A	2/8/99	0	0.5	Lead (TCLP)	85.1	ug/L	NV	481822.48	1350401.36
A3-SM23	A3-SM23-1	2/8/99	0	0.5	Thorium, Total	25.3	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-1	2/8/99	0	0.5	Uranium, Total	283	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-10	2/8/99	4.5	5	Thorium, Total	7.69	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-10	2/8/99	4.5	5	Uranium, Total	3.16	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-20	2/8/99	9.5	10	Thorium, Total	6.36	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-20	2/8/99	9.5	10	Uranium, Total	1.84	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-30	2/8/99	14.5	15	Thorium, Total	6.48	ug/g dry	NV	481822.48	1350401.36
A3-SM23	A3-SM23-30	2/8/99	14.5	15	Uranium, Total	1.84	ug/g dry	NV	481822.48	1350401.36
A3-SM24	A3-SM24-1	2/1/99	0	0.5	Lead	2800	ug/g dry	NV	481858.32	1350495.79
A3-SM24	A3-SM24-1	2/1/99	0	0.5	Lead (TCLP)	1380	ug/L	NV	481858.32	1350495.79
A3-SM24	A3-SM24-1	2/1/99	0	0.5	Thorium, Total	38.3	ug/g dry	NV	481858.32	1350495.79
A3-SM24	A3-SM24-1	2/1/99	0	0.5	Uranium, Total	365	ug/g dry	NV	481858.32	1350495.79
A3-SM24	A3-SM24-5	2/8/99	2	2.5	Thorium, Total	6.75	ug/g dry	NV	481858.32	1350495.79

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-SM24	A3-SM24-5	2/8/99	2	2.5	Uranium, Total	13.8	ug/g dry	NV	481858.32	1350495.79
A3-SM25	A3-SM25-1	2/1/99	0	0.5	Lead	20.9	ug/g dry	NV	481716.02	1350002.3
A3-SM25	A3-SM25-1	2/1/99	0	0.5	Lead (TCLP)	255	ug/L	U NV	481716.02	1350002.3
A3-SM25	A3-SM25-1	2/1/99	0	0.5	Thorium, Total	11	ug/g dry	NV	481716.02	1350002.3
A3-SM25	A3-SM25-1	2/1/99	0	0.5	Uranium, Total	56.2	ug/g dry	NV	481716.02	1350002.3
A3-SM26	A3-SM26-1	2/1/99	0	0.5	Lead	3840	ug/g dry	NV	481723.02	1350057.13
A3-SM26	A3-SM26-1	2/1/99	0	0.5	Lead (TCLP)	255	ug/L	U NV	481723.02	1350057.13
A3-SM26	A3-SM26-1	2/1/99	0	0.5	Thorium, Total	35	ug/g dry	NV	481723.02	1350057.13
A3-SM26	A3-SM26-1	2/1/99	0	0.5	Uranium, Total	310	ug/g dry	NV	481723.02	1350057.13
A3-SM26	A3-SM26-3	2/1/99	1	1.5	Lead	12.4	ug/g dry	NV	481723.02	1350057.13
A3-SM26	A3-SM26-3	2/1/99	1	1.5	Lead (TCLP)	255	ug/L	U NV	481723.02	1350057.13
A3-SM26	A3-SM26-3	2/1/99	1	1.5	Thorium, Total	6.58	ug/g dry	NV	481723.02	1350057.13
A3-SM26	A3-SM26-3	2/1/99	1	1.5	Uranium, Total	71.6	ug/g dry	NV	481723.02	1350057.13
A3-SM27	A3-SM27-1	2/1/99	0	0.5	Lead	34.2	ug/g dry	NV	481713.44	1350119.08
A3-SM27	A3-SM27-1	2/1/99	0	0.5	Lead (TCLP)	314	ug/L	NV	481713.44	1350119.08
A3-SM27	A3-SM27-1	2/1/99	0	0.5	Thorium, Total	28.4	ug/g dry	NV	481713.44	1350119.08
A3-SM27	A3-SM27-1	2/1/99	0	0.5	Uranium, Total	84.6	ug/g dry	NV	481713.44	1350119.08
A3-SM28	A3-SM28-1	2/2/99	0	0.5	Lead	30.3	ug/g dry	NV	481744.35	1350268.75
A3-SM28	A3-SM28-1	2/2/99	0	0.5	Thorium, Total	15.4	ug/g dry	NV	481744.35	1350268.75
A3-SM28	A3-SM28-1	2/2/99	0	0.5	Uranium, Total	67	ug/g dry	NV	481744.35	1350268.75
A3-SM29	A3-SM29-1	2/2/99	0	0.5	Lead	44.2	ug/g dry	NV	481753.89	1350345.83
A3-SM29	A3-SM29-1	2/2/99	0	0.5	Thorium, Total	12.2	ug/g dry	NV	481753.89	1350345.83
A3-SM29	A3-SM29-1	2/2/99	0	0.5	Uranium, Total	55.1	ug/g dry	NV	481753.89	1350345.83
A3-SM30	A3-SM30-1	2/4/99	0	0.5	Lead	70.6	ug/g dry	NV	481750.41	1350454.14
A3-SM30	A3-SM30-1	2/4/99	0	0.5	Thorium, Total	26.8	ug/g dry	NV	481750.41	1350454.14
A3-SM30	A3-SM30-1	2/4/99	0	0.5	Uranium, Total	331	ug/g dry	NV	481750.41	1350454.14
A3-SM30	A3-SM30-7	2/4/99	3	3.5	Thorium, Total	6.49	ug/g dry	NV	481750.41	1350454.14
A3-SM30	A3-SM30-7	2/4/99	3	3.5	Uranium, Total	1.7	ug/g dry	NV	481750.41	1350454.14
A3-SM31	A3-SM31-1	1/28/99	0	0.5	Lead	106	ug/g dry	NV	481752.48	1350541.8
A3-SM31	A3-SM31-1A	1/28/99	0	0.5	Lead (TCLP)	772	ug/L	NV	481752.48	1350541.8
A3-SM31	A3-SM31-1	1/28/99	0	0.5	Thorium, Total	37.4	ug/g dry	NV	481752.48	1350541.8
A3-SM31	A3-SM31-1	1/28/99	0	0.5	Uranium, Total	199	ug/g dry	NV	481752.48	1350541.8
A3-SM31	A3-SM31-7	1/28/99	3	3.5	Thorium, Total	10.5	ug/g dry	NV	481752.48	1350541.8
A3-SM31	A3-SM31-7	1/28/99	3	3.5	Uranium, Total	5.63	ug/g dry	NV	481752.48	1350541.8
A3-SM32	A3-SM32-1	2/3/99	0	0.5	Lead	20.1	ug/g dry	NV	481701.2	1349943.3
A3-SM32	A3-SM32-1	2/3/99	0	0.5	Thorium, Total	9.89	ug/g dry	NV	481701.2	1349943.3
A3-SM32	A3-SM32-1	2/3/99	0	0.5	Uranium, Total	57.8	ug/g dry	NV	481701.2	1349943.3

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APPENDIX C
PREDESIGN CHARACTERIZATION DATA

BORING	SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (feet)		PARAMETER	RESULT	UNITS	QUALIFIER	NORTHING	EASTING
			TOP	BOTTOM						
A3-SM32	A3-SM32-7	2/3/99	3	3.5	Thorium, Total	9.59	ug/g dry	NV	481701.2	1349943.3
A3-SM32	A3-SM32-7	2/3/99	3	3.5	Uranium, Total	3.22	ug/g dry	NV	481701.2	1349943.3
A3-SM33	A3-SM33-1	2/3/99	0	0.5	Lead	29.9	ug/g dry	NV	481701.92	1350053.56
A3-SM33	A3-SM33-1	2/3/99	0	0.5	Lead (TCLP)	255	ug/L	U NV	481701.92	1350053.56
A3-SM33	A3-SM33-1	2/3/99	0	0.5	Thorium, Total	17.4	ug/g dry	NV	481701.92	1350053.56
A3-SM33	A3-SM33-1	2/3/99	0	0.5	Uranium, Total	83.8	ug/g dry	NV	481701.92	1350053.56
A3-SM34	A3-SM34-1	2/3/99	0	0.5	Lead	16.2	ug/g dry	NV	481703.21	1350146.59
A3-SM34	A3-SM34-1	2/3/99	0	0.5	Thorium, Total	8.22	ug/g dry	NV	481703.21	1350146.59
A3-SM34	A3-SM34-1	2/3/99	0	0.5	Uranium, Total	32.5	ug/g dry	NV	481703.21	1350146.59
A3-SM34	A3-SM34-7	2/3/99	3	3.5	Thorium, Total	4.99	ug/g dry	NV	481703.21	1350146.59
A3-SM34	A3-SM34-7	2/3/99	3	3.5	Uranium, Total	1.7	ug/g dry	NV	481703.21	1350146.59
A3-SM35	A3-SM35-1	2/11/99	0	0.5	Lead	17.5	ug/g dry	NV	481652.48	1350301.22
A3-SM35	A3-SM35-1	2/11/99	0	0.5	Thorium, Total	6.87	ug/g dry	NV	481652.48	1350301.22
A3-SM35	A3-SM35-1	2/11/99	0	0.5	Uranium, Total	21.9	ug/g dry	NV	481652.48	1350301.22
A3-SM36	A3-SM36-1	2/2/99	0	0.5	Lead	28.4	ug/g dry	NV	481652.43	1350402.28
A3-SM36	A3-SM36-1	2/2/99	0	0.5	Thorium, Total	12.7	ug/g dry	NV	481652.43	1350402.28
A3-SM36	A3-SM36-1	2/2/99	0	0.5	Uranium, Total	116	ug/g dry	NV	481652.43	1350402.28
A3-SM37	A3-SM37-1	2/8/99	0	0.5	Lead	10.5	ug/g dry	NV	481652.62	1350502
A3-SM37	A3-SM37-1	2/8/99	0	0.5	Thorium, Total	5.73	ug/g dry	NV	481652.62	1350502
A3-SM37	A3-SM37-1	2/8/99	0	0.5	Uranium, Total	3.8	ug/g dry	NV	481652.62	1350502
A3-SM37	A3-SM37-7	2/8/99	3	3.5	Thorium, Total	4.67	ug/g dry	NV	481652.62	1350502
A3-SM37	A3-SM37-7	2/8/99	3	3.5	Uranium, Total	2.74	ug/g dry	NV	481652.62	1350502
A3-SM38	A3-SM38-1	1/28/99	0	0.5	Lead	17	ug/g dry	NV	481852.59	1350580.24
A3-SM38	A3-SM38-1	1/28/99	0	0.5	Thorium, Total	7.23	ug/g dry	NV	481852.59	1350580.24
A3-SM38	A3-SM38-1	1/28/99	0	0.5	Uranium, Total	26.4	ug/g dry	NV	481852.59	1350580.24
A3-SM38	A3-SM38-7	1/28/99	3	3.5	Thorium, Total	3.22	ug/g dry	NV	481852.59	1350580.24
A3-SM38	A3-SM38-7	1/28/99	3	3.5	Uranium, Total	4.17	ug/g dry	NV	481852.59	1350580.24

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Appendix D

APPENDIX D

DETERMINATION OF EXCAVATION VOLUMES

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APPENDIX D
DETERMINATION OF EXCAVATION VOLUMES

D.1 CONCRETE VOLUMES

Tables D-1 and D-2 summarize concrete to be removed from Areas 3A and 4A (approximately 18,300 yd^3 and 25,100 yd^3, respectively). Volumes are tabulated by pad number or colloquial name. Parsons transcribed foundation information from as-built drawings and calculated most of the volumes by computer. Lockwood Greene Technologies (LGT) computed the volumes for five entries as denoted by the footnotes. The volumes for exterior slabs, roads, and aprons were determined based on a field inventory and manual calculations. The balance of the LGT-generated volumes in Tables D-1 and D-2 was based on manual takeoffs from reference drawings.

D.2 IMPACTED SOIL AND DEBRIS VOLUMES

Table D-3 summarizes the volume of impacted soil and debris to be excavated and delivered to the OSDF from Areas 3A and 4A (168,100 yd^3 and 172,300 yd^3, respectively). Volumes for concrete slabs/foundations and concrete roads/aprons were transposed from Tables D-1 and D-2. The volumes for asphalt were calculated manually following a field inventory by LGT. The below-waste acceptance criteria (WAC) soil volumes (142,300 yd^3 and 141,900 yd^3) were gleaned from Table D-4. Volumes for other debris within the excavation boundary, such as concrete ductbank, utility pipe/bedding, and manholes/catch basins are based on LGT's manual takeoffs from reference drawings.

D.3 BELOW-WAC SOIL VOLUME

Table D-4 outlines the methodical computation of the below-WAC soil (total) volume (284,200 yd^3). LGT's Title II computer excavation model was the basis of the gross volume (356,700 yd^3). Microstation and Siteworks were used to compute the volume of the mass between the existing surface grade and the design surface noted on the Title II drawings. Subsequently, the gross volume was adjusted to account for miscellaneous soil and debris constituents within the excavation boundary.

Void volumes (12,300 yd^3) due to subgrade structures (e.g. basements and sumps) were estimated by manual takeoffs from reference drawings and deducted from the gross volume. The volumes for concrete slabs/foundations, concrete roads/aprons, and asphalt (30,600 yd^3, 12,800 yd^3, and 1,700 yd^3, respectively) were deducted from the gross volume.

Field sampling was performed by Fluor Fernald to define the above-WAC and Resource Conservation and Recovery Act (RCRA) contamination areas. Surface coordinates and depth for each are outlined on the Title II design drawings. Volumes of the resultant above-WAC and RCRA masses were calculated by computer. The volumes (14,200 yd^3 and 600 yd^3, respectively) were deducted from the gross volume. Excavated side slopes (2H:1V) were not included in the volume estimate of above-WAC and RCRA soil.

Underground utility structures were estimated by manual takeoffs from reference drawings. The volumes for concrete ductbanks and manhole/catch basins (1,300 yd^3 and 500 yd^3, respectively) were deducted from the gross volume.

Since existing surface stockpiles in Area 3A were not included in the existing surface topography, their volume (1,500 yd^3) was determined and added to the gross volume. The adjustments to the computer-generated gross volume yielded the below-WAC soil (total) volume (284,200 yd^3).

Below-WAC soil is divided into two volumes: above the final remediation level (FRL) and below the FRL. The volume estimate for above-FRL soil was obtained from the three-dimensional model for total uranium contamination lying above the final excavation surface (64,000 yd^3), plus the assumption that approximately 40 percent of the top 2 feet of material to be removed from Area 3A/4A is contaminated soil (51,000 yd^3). A volume estimate for below-FRL soil was obtained by subtracting the above-FRL soil volume from the total below-WAC soil volume (i.e., 284,200 – 115,000 = 169,200 yd^3). Below-FRL soil is removed when building structures are excavated and contamination is absent, and when safe slopes are constructed to reach contamination. Therefore, the below-FRL volume of 169,200 yd^3 is divided into soil excavated to remove structures and soil excavated to remove contamination.

To provide the volume estimate for only removing structures, the total soil volume excavated when both structures and uranium contamination overlap (125,000 yd^3) was subtracted from the total soil volume that would have to be excavated for structures only (150,000 yd^3). This result (25,000 yd^3) was added to the additional soil volume required to excavate foundations that occur beneath contaminated soil (88,000 yd^3). This gives a total of 113,000 yd^3 of below-FRL soil excavated for building

structures. The below-FRL soil volume removed to reach contamination was obtained by subtracting the below-FRL soil associated with removing structures from the total below-FRL soil volume (169,200 - 113,000 = 56,200 yd^3).

D.4 VOLUMES BY FISCAL YEAR

Table D-5 segregates the waste streams by fiscal year in which they will be excavated. The distribution is based on the production rates derived in LGT's construction schedule and cost estimate documents (20800-CE-0001 and 20800-CE-0002). The disposition of each waste stream is tabulated.

The total length of utility pipe (57,100 and 10,300, or 67,400 lineal feet) is noted. The utility pipe located below design surface shown on the Title II drawings will be removed by trenching. The total trenching expected below the design surface (34,300 lineal feet and 7,300 lineal feet) is 41,600 lineal feet. The mathematical difference between the two (67,400 - 41,600 or 25,800 lineal feet) yields the length of utility pipe debris to be removed during general soil excavation activities.

TABLE D-1
AREA 3A CONCRETE VOLUME

PAD	QTY (ft^3)	QTY (yd^3)
10E	2,342	87
32A & B	9,025	334
64N	7,314	271
64S	6,688	248
65N	6,137	227
65S	6,049	224
81	6,647	246
9A-E	18,269	677
9A-N	11,684	433
9A-S	19,909	737
9F	572	21
PLT 9 PAD (74K)	7,378	273
10A/ Precip	2,069	77
10A	43,847	1,624
10B	2,223	82
10C	3,904	145
10D	1,794	66
20B	4,537	168
20H	7,949	294
38A	917	34
38B	99	4
12A-E	24,205	896
12A-W	27,202	1,007
12B	1,721	64
12C	2,616	97
12D	6,063	225
19A	28,592	1,059
19D	12,342	457
19C & 19E	3,676	136
20A	1,236	46
20C	9,703	359
24B	1,814	67
Guard Tower #4	89	3
Oil Storage Tank	565	21
Clearwell	1,124	42
East Reactivator	1,732	64
Propane Tanks	1,544	57
West Reactivator	1,733	64
Exterior slabs, roads and aprons[1]	189,297	7,011
Pipe Rack Fdns.[1]	3,888	144
NE Sump	759	28
69 [1]	4,725	175
Totals	**493,938**	**18,294**

[1] Quantities estimated by LGT

TABLE D-2
AREA 4A CONCRETE VOLUME

PAD	QTY (ft^3)	QTY (yd^3)
Pipe Rack Fdns.[1]	3,969	147
Exterior slabs, roads and aprons[1]	144,153	5,339
Plant 5, including 55	109,863	4,069
Plant 6	288,189	10,674
4A	57,574	2,132
4B	10,451	387
4C	3,091	114
7A	20,248	750
7A-B	39,703	1,470
Totals	**677,214**	**25,082**

[1] Quantities estimated by LGT

TABLE D-3
TOTAL IMPACTED SOIL AND DEBRIS TO BE DELIVERED TO THE OSDF

	Area 3A	Area 4A
Bldg. Concrete Slabs and Fdns. [1]	11,000 yd^3	19,600 yd^3
Concrete Roads and Apron [2]	7,300 yd^3	5,500 yd^3
Asphalt [2]	1,200 yd^3	500 yd^3
Below - WAC Soil [3]	142,300 yd^3	141,900 yd^3
Concrete Ductbank [4]	100 yd^3	1,200 yd3
Utility Pipe and Bedding [5]	5,900 yd^3	3,400 yd^3
Manhole/ Catch Basins [4]	300 yd^3	200 yd^3
Total	**168,100 yd^3**	**172,300 yd^3**

[1] Based on Parsons' Concrete Volume Reports.
[2] Based on field walkdowns performed by LGT
[3] Based on three-dimensional excavation model minus other waste streams (i.e., concrete, asphalt, basement voids, above-WAC soil, RCRA soil), but including existing soil stockpiles. See Table D-4 for details
[4] Based on take-offs from existing utility drawings
[5] Estimate of pipe bedding that is below the design grade. It is based on a take-off of the existing utility drawings

TABLE D-4
VOLUME SUMMARY

	Area 3A	Area 4A	Total
Gross Volume [1]	173,500 yd^3	183,200 yd^3	356,700 yd^3
Basement Void Volume [2]	(4,700) yd^3	(7,600) yd^3	(12,300) yd^3
Bldg. Concrete Slabs and Fdns. [3]	(11,000) yd3	(19,600) yd3	(30,600) yd3
Concrete Roads and Apron [4]	(7,300) yd^3	(5,500) yd^3	(12,800) yd^3
Asphalt [4]	(1,200) yd^3	(500) yd^3	(1,700) yd^3
Concrete Ductbank [5]	(100) yd^3	(1,200) yd^3	(1,300) yd^3
Manhole/ Catch Basins [5]	(300) yd^3	(200) yd^3	(500) yd^3
Above-WAC Soil [6]	(7,500) yd^3	(6,700) yd^3	(14,200) yd^3
RCRA Soil [6]	(600) yd^3	-	(600) yd^3
Existing Surface Stockpiles [7]	1,500 yd^3	-	1,500 yd^3
Below-WAC Soil (Total)	142,300 yd^3	141,900 yd^3	284,200 yd^3
Above-FRL Soil (Total)	-	-	115,000 yd^3
Below-FRL Soil (Total)	-	-	169,200 yd^3
Below-FRL Soil (Structures)	-	-	113,000 yd^3
Below-FRL Soil (Contamination)	-	-	56,200 yd^3

[1] Based on the three-dimensional excavation model for 90% EPA review
[2] Based on as-built drawings of the production area buildings
[3] Based on the Parsons' Concrete Volume Reports
[4] Based on field walkdowns performed by LGT (includes organic and radiological)
[5] Based on take-off from existing utility drawings
[6] Based on coordinates provided by Fluor Fernald
[7] Based on input from Fluor Fernald

TABLE D-5
WASTE VOLUME BY FISCAL YEAR

Waste Stream	Disposition	Unit	FY2001	FY2002	FY2003	FY2004
Concrete Debris[1]	OSDF	yd^3	1700	17,000	26,100	400
Asphalt	OSDF	yd^3	0	1200	500	0
Above-WAC Soil (organic)	Treatment Area	yd^3	500	700	0	0
Above-WAC Soil (radiological)	SP7	yd^3	2500	3800	6700	0
Below-WAC[2]	OSDF	yd^3	14,200	134,000	105,700	39,600
RCRA Soil	Treatment Area	yd^3	300	300	0	0
Special Material – Prohibited[3]	SMTA	yd^3	0	100	100	150
Utility Pipe						
Total-Less than 12" diameter	OSDF	ft	0	32,500	17,900	6700
Total-12" diameter and greater	OSDF	ft	0	4200	4400	1700
Below Design Grade in Trench-Less than 12" diameter	OSDF	ft	0	22,800	8400	3100
Below Design Grade in Trench-12" diameter and greater	OSDF	ft	0	3700	2600	1000

[1] Includes building slabs, foundations, roads, aprons, manholes, catch basins and ductbanks
[2] Includes below-WAC soil and pipe bedding below design grade
[3] Quantities estimated by Fluor Fernald

Appendix E

APPENDIX E

GEOSTATISTICAL MODELING FOR TITLE II EXCAVATION DESIGN

APPENDIX E
GEOSTATISTICAL MODELING FOR TITLE II EXCAVATION DESIGN

E.1 INTRODUCTION

Total uranium soil concentration data were used to create a geostatistical model of subsurface contamination in Areas 3A and 4A. Model results depict subsurface contamination levels at excavation depths and horizontal extents beyond those required to remove at- and below-grade structures and contamination identified by physical samples. This appendix presents the input data and methodology used to create the geostatistical model.

E.2 PRELIMINARY DATA ANALYSIS

Total uranium soil concentration data were pulled from the Sitewide Environmental Database (SED) and combined with sample data collected during the remedial investigation. Preliminary analysis of the SED data revealed a sample population with a significant portion of the samples having a mid-point depth of less than or equal to 0.5 feet (Figure E-1). Over 800 samples, or approximately 30 percent of the SED data population, were in this category. This category corresponds to the bias placed on surface sampling activities at the Fernald site. Since the top foot of soil will be removed from the Former Production Area, these surface samples were eliminated from the subsurface modeling data to eliminate bias in the subsurface kriging results.

E.3 SUBSURFACE DATA STATISTICS

The final subsurface total uranium concentration data set for Areas 3A and 4A consisted of 1761 soil samples from depths of 0.75 feet to approximately 35 feet below the surface. Approximately 20 soil samples were included with sample depths of greater than 35 feet to 150 feet below the surface. Total uranium concentrations ranged from 0.53 to 125000 mg/kg with median and average concentrations of 8.01 and 364 mg/kg respectively. A frequency plot of the sample population by action levels is shown on Figure E-2. The horizontal and vertical sample distributions are shown on Figures E-3, E-4, and E-5.

E.4 VARIOGRAM MODELING

The subsurface total uranium concentration data were analyzed for spatial correlation distances using SAGE 2001, a spatial and geostatistical modeling software package from Isaaks and Company. Based on the input data, SAGE 2001 computes three-dimensional sample variograms in multiple directions and finds the best fit to all the calculated variograms simultaneously.

In preparation for variogram calculations, the sample data set was translated to the coordinate origin (0,0,0) and scaled in the vertical direction by a factor of 13.9 so that the data distribution was approximately the same size in the vertical and horizontal directions. These translation and scaling steps eliminate any numerical problems due to the large state planer coordinate values and allows variograms at all dip angles to be fitted simultaneously. After the fitting function was determined, the vertical variogram range was scaled back down by the same scale factor.

Variograms were calculated using a 50-foot lag spacing with a 45 percent tolerance (i.e., samples were paired at each lag step if they were separated by the total lag distance + or - 22.5 feet). Azimuth and dip increments were 30 degrees with a 22.5 degree angular tolerance (i.e. a three-dimensional cone spanning a 45 degree angle directed at 0, 30, 60, and 90 degrees in dip and at 0, 30, 60, 90, 120, 150, 180, etc. in azimuth). The resulting 37 variograms (Attachment EI) were fit with an exponential function to evaluate the three-dimensional spatial correlation. The resulting ranges and the three-dimensional spatial correlation ellipsoid are shown in Attachment EII. As shown on the first page of Attachment EII, there is mild anisotropy observed in the horizontal direction: 85.9 feet in the east-west direction and 100.0 feet in the north-south direction. Based on these results, the data are assumed to be horizontally isotropic and a horizontal search radius of 100 feet was used for kriging.

The vertical variogram range is 253.6 (Attachment EII). Scaling this value down by a factor of 13.9 as noted above, results in a vertical search range for kriging of 18.2 feet, which is significantly larger than vertical ranges used previously for soil modeling at the Fernald site. A careful evaluation of the 90 degree dip variogram shown in Attachment EI indicates that the fitted curve levels off very slowly with increasing lag distance and the curve is below the variogram data points beyond a lag distance of about 112 feet. After examining the individual points on the 90 degree dip variogram, a revised vertical range was picked (about 100 to 112 feet) where the variogram points tend to flatten significantly. Base on this observation, the vertical search range for kriging was set at 7.5 feet (104 feet divided by the 13.9 vertical scale factor used before fitting). This value is consistent with previous modeling at the Fernald site.

E.5 KRIGING AND MODEL RESULTS

The rectangular model grid used for kriging the total uranium soil contamination in Areas 3A and 4A extends from an Easting and Northing of 1349200 feet and 479900 feet at the southwest corner to 1350800 feet and 482300 feet at the northeast corner (1983 State Planer coordinates) (Figure E-6). The

model extent was 2400 feet north-south and 1600 feet east-west. A grid cell size of 32 feet by 32 feet (illustrated in the upper right hand corner of Figure E-6) was chosen because it provided sufficient horizontal resolution with a model size of 75 cells by 50 cells and allows for convenient kriging run times.

Vertically, the model consisted of 36 horizontal layers each 1 foot in thickness extending from a top elevation of 590 feet amsl to a bottom elevation of 555 feet amsl. These elevations are bounded by the topographic surface and the top of the Great Miami Aquifer (Figure E-7).

The Mining Visualization System (MVS) by C Tech Development Corporation was used to do ordinary kriging and visualization of the contaminated soil volumes. After kriged estimates were made for each grid cell, the model top was cut by the site topographic surface (soil piles removed), and the model bottom was cut by the top of the Great Miami Aquifer. The final excavation surface for Areas 3A and 4A was placed in the model as an intermediate surface between the model top and bottom. The MVS Explode and Scale module was used to visually separate and display contaminated soil volumes above the excavation surface from soil volumes below the excavation surface. An isometric view of the model surfaces is shown on Figure E-7 with the highest and lowest relative elevations for each layer shown in red and blue respectively. An isometric view of the contaminated soil volume above the excavation surface is shown on Figure E-8.

E.6 MODEL VALIDATION

The variograms constructed from the total uranium soil concentration, kriging results, and general modeling approach were peer-reviewed by DOE personnel at Argonne National Laboratories. Similar variogram results were obtained from analysis of the input data set and the modeling methodology was found to be consistent with standard modeling practices.

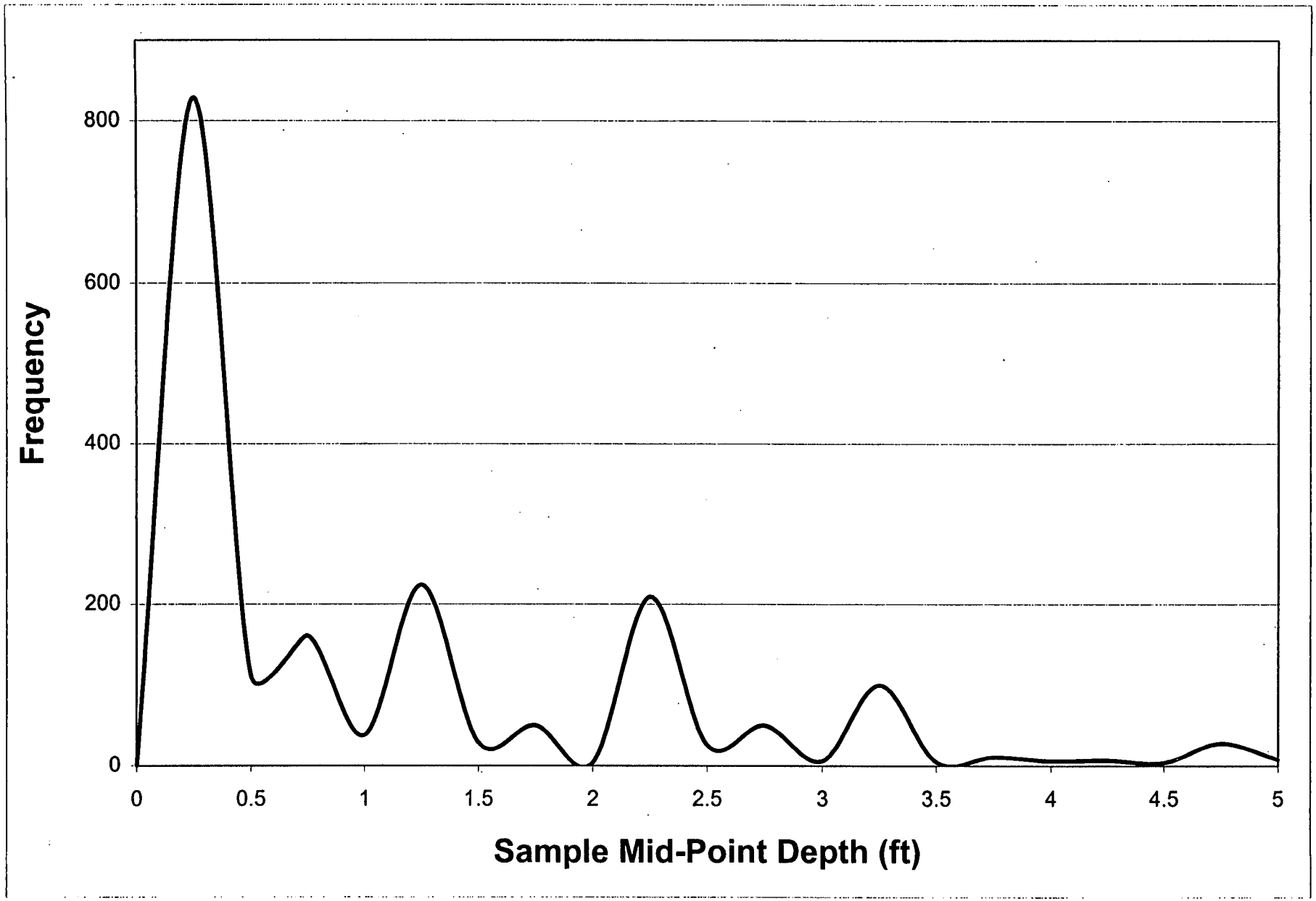


Figure E-1. Frequency of Total Uranium Soil Sample Depths

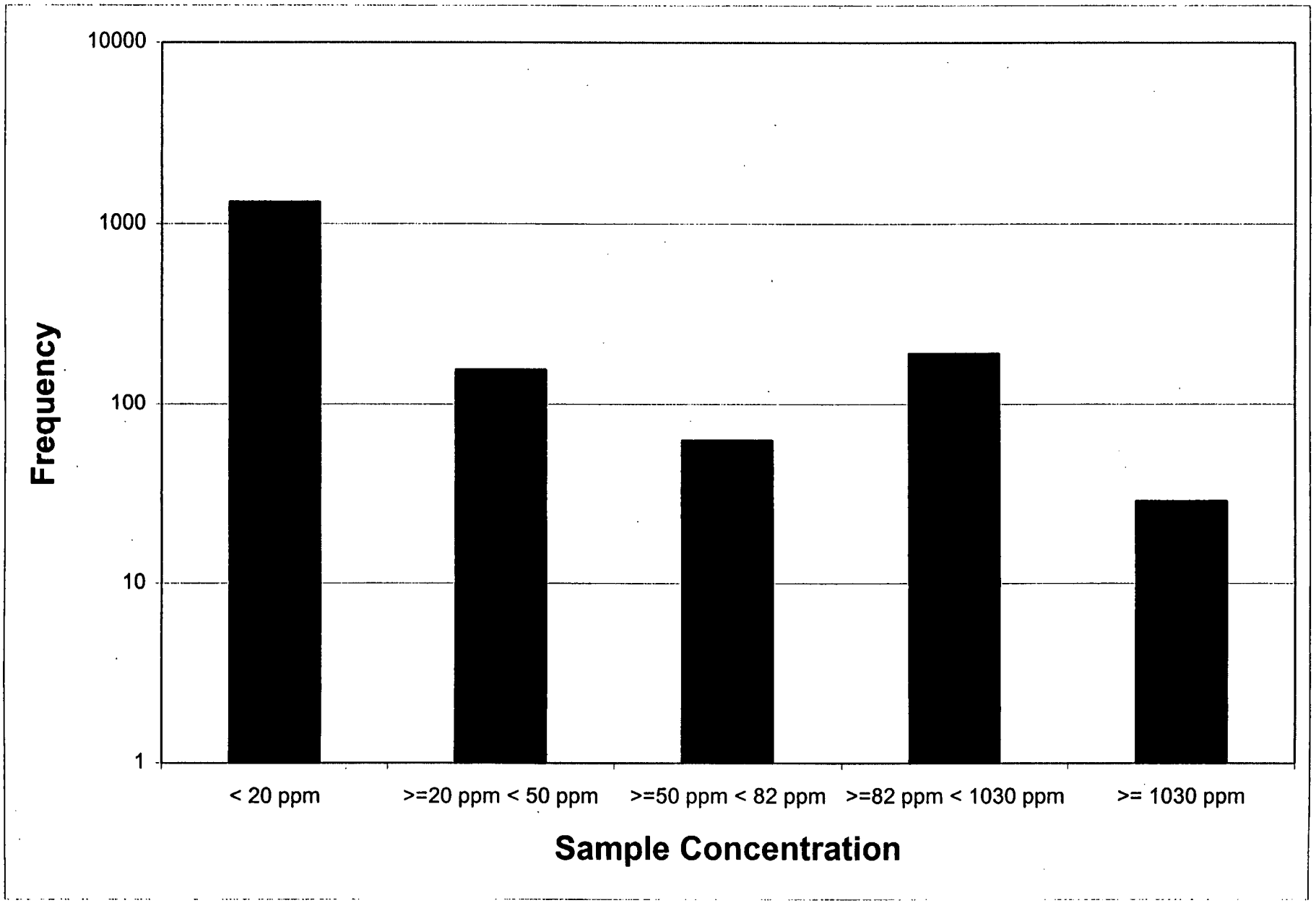


Figure E-2. Frequency of Sub-surfa tal Uranium Soil Concentrations

000922

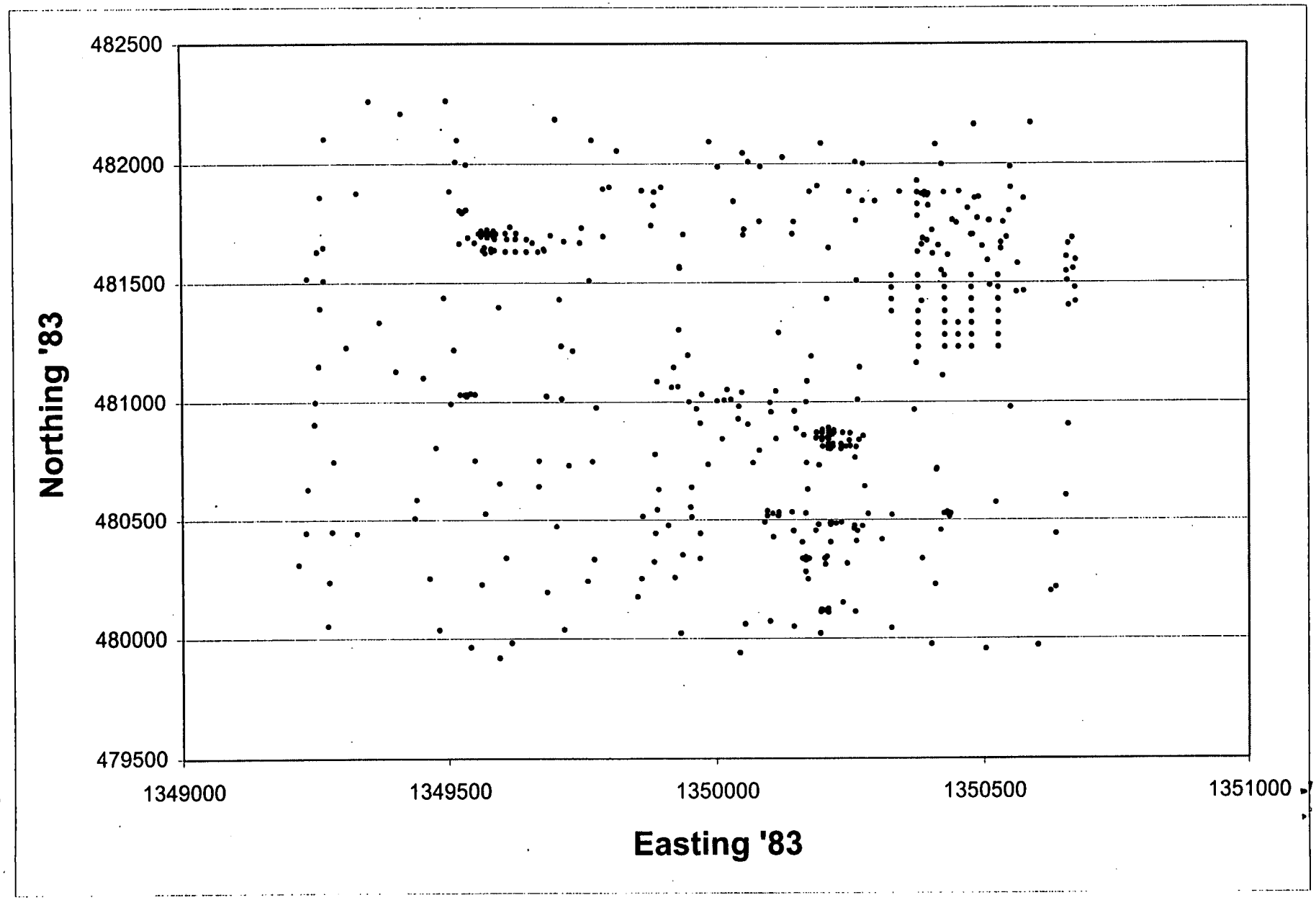


Figure E-3. Horizontal Distribution of Total Uranium Sub-surface Soil Samples

000923

E-2888

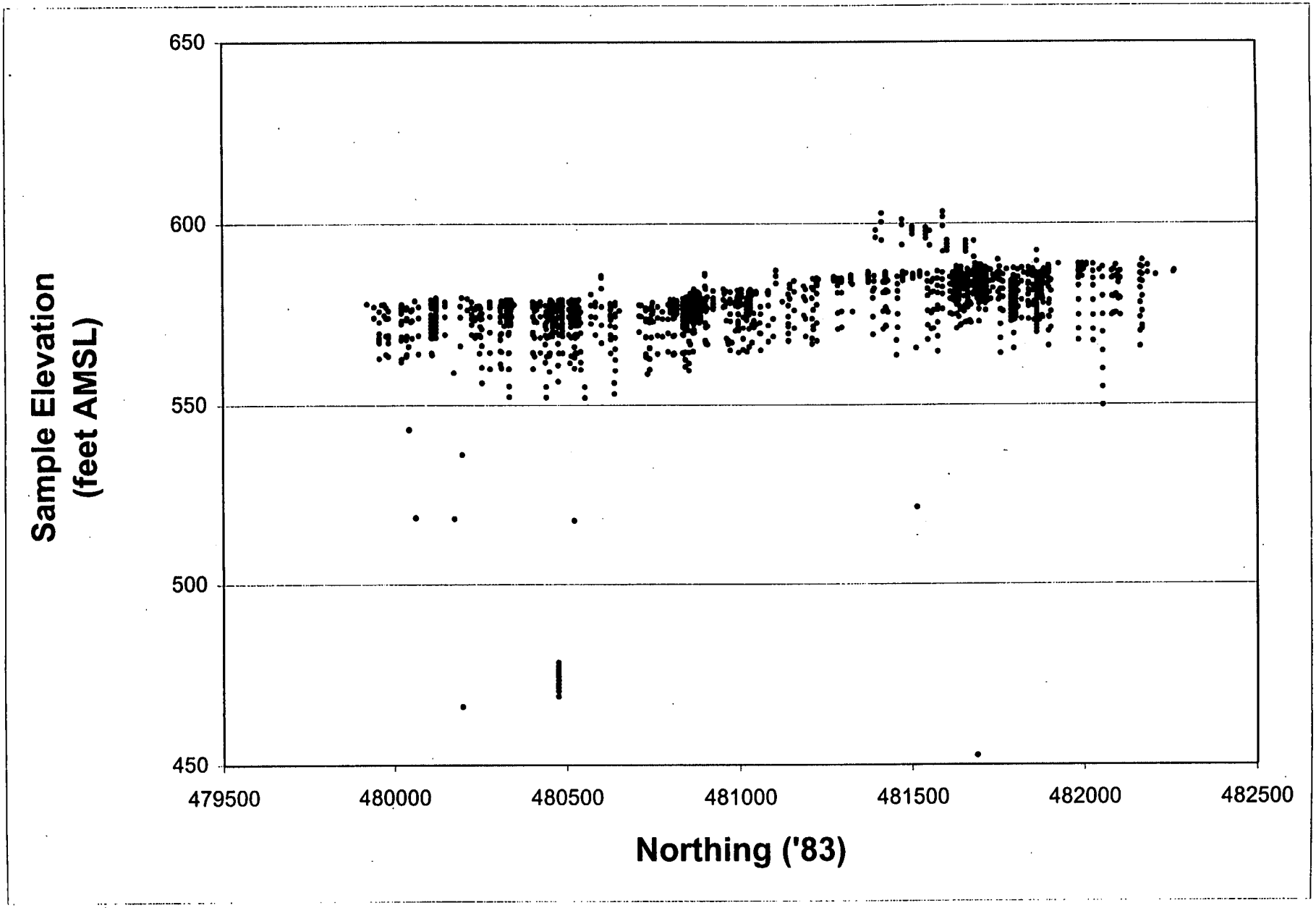


Figure E-4. Vertical Distribution of Total Ura Sub-surface Soil Samples (Looking West)

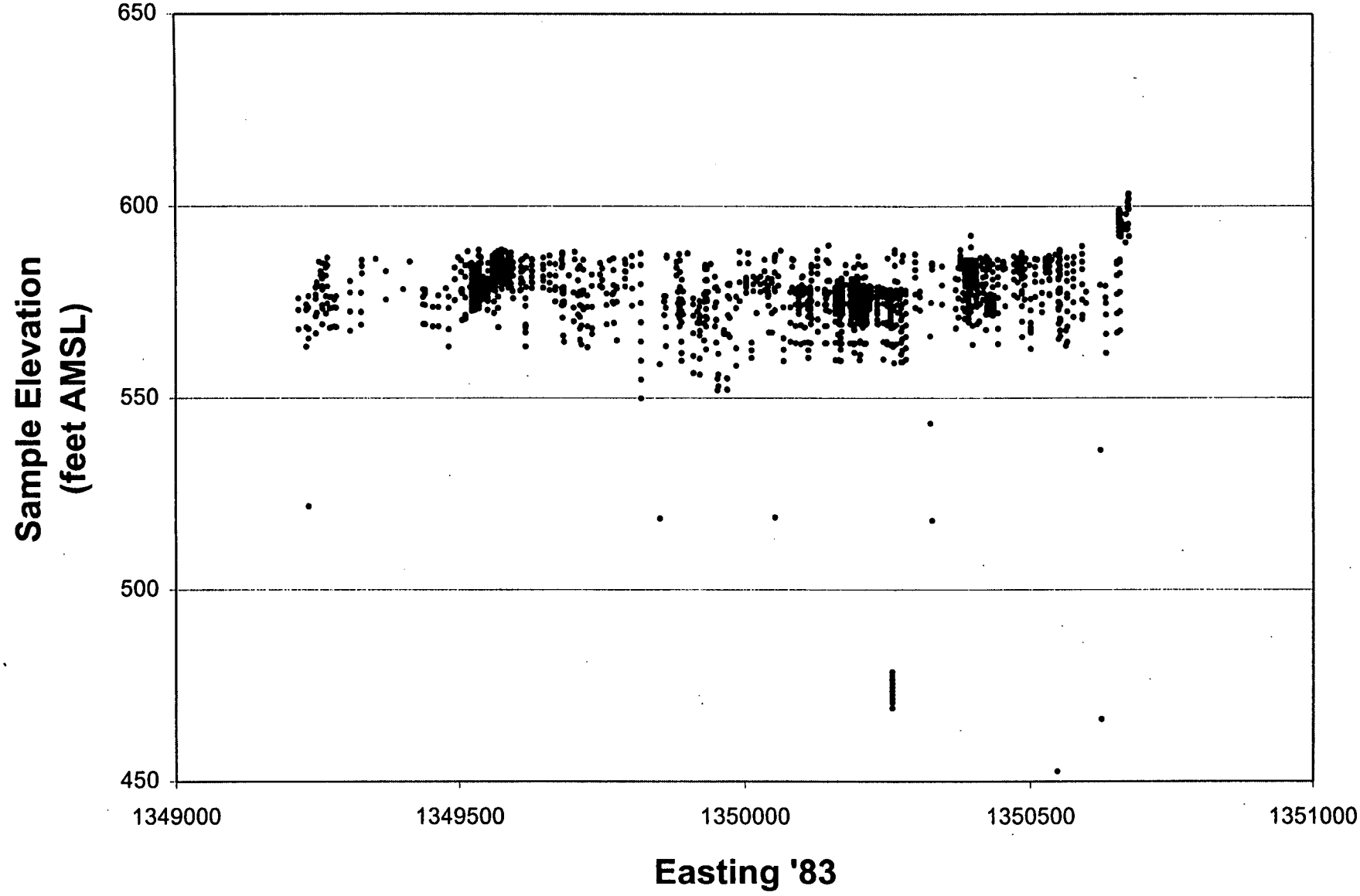
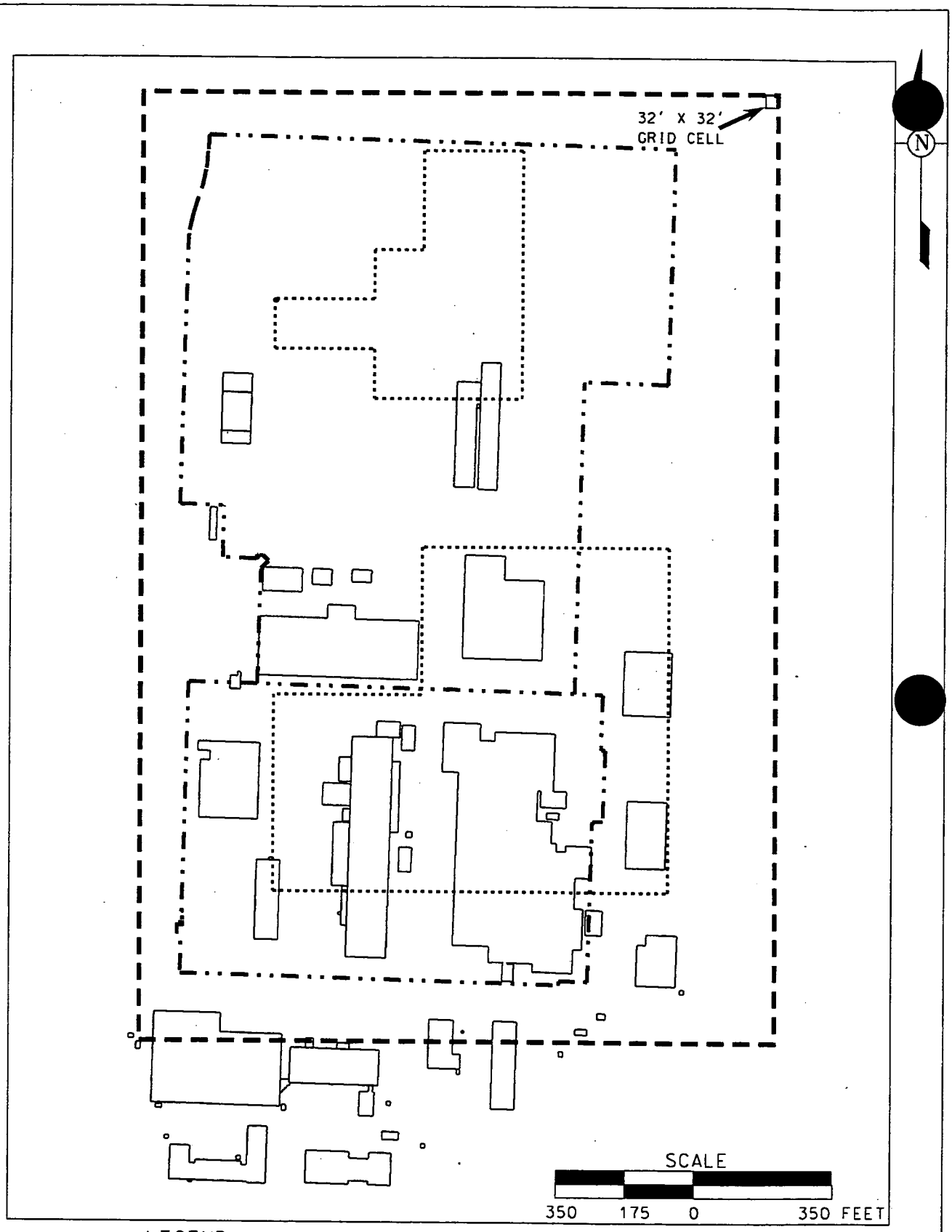


Figure E-5. Vertical distribution of Total Uranium Sub-surface Soil Samples (Looking North)



LEGEND:

- MODEL AREA
- ZONES OF HIGH LEACHABILITY
- BUILDING FOOTPRINTS
- EXCAVATION BOUNDARIES

DRAFT

STATE PLANAR COORDINATE SYSTEM 1983

28-JAN-2000

FIGURE E-6. RECTANGULAR MODEL GRID

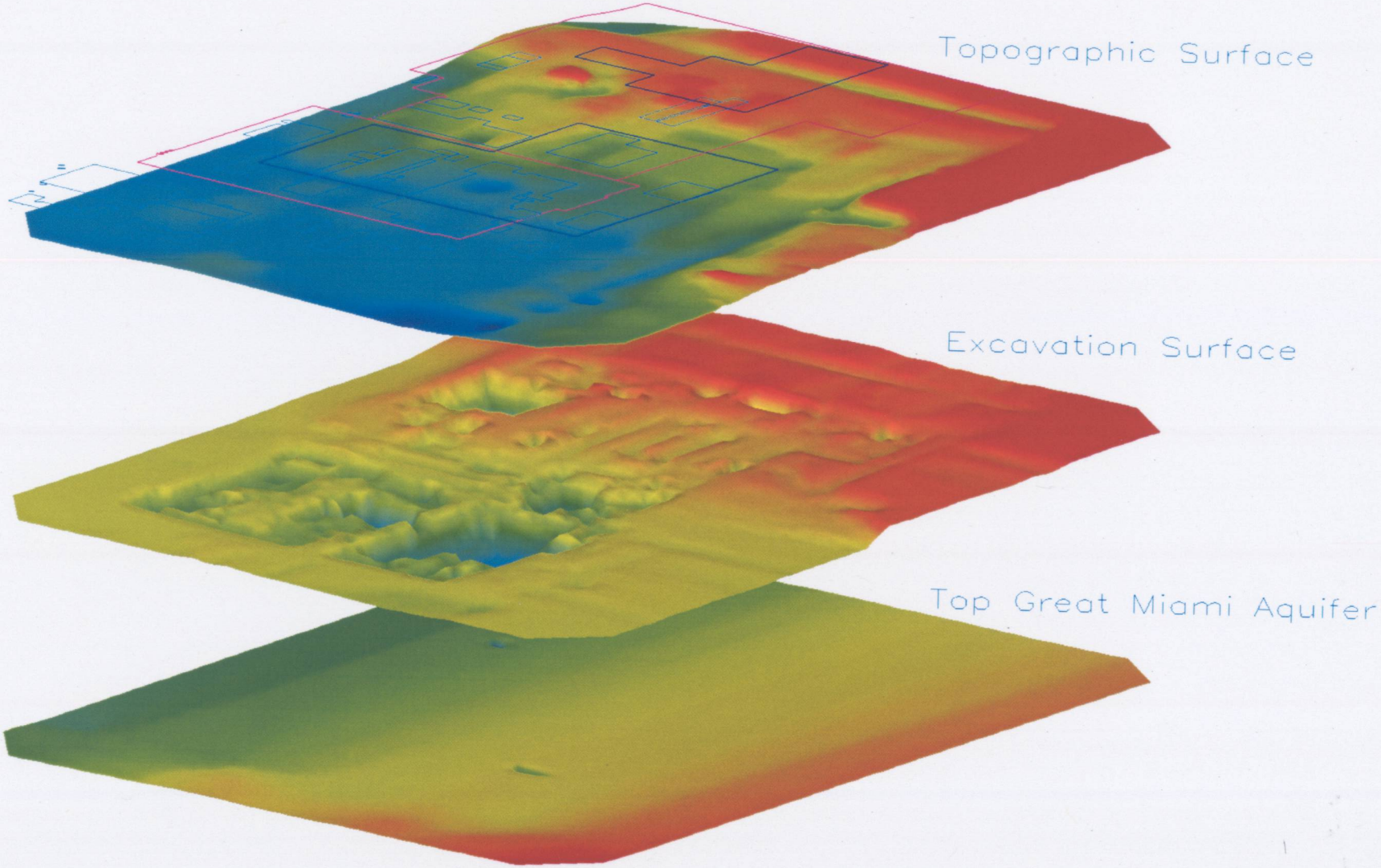


Figure E.7 Model Layers

000927

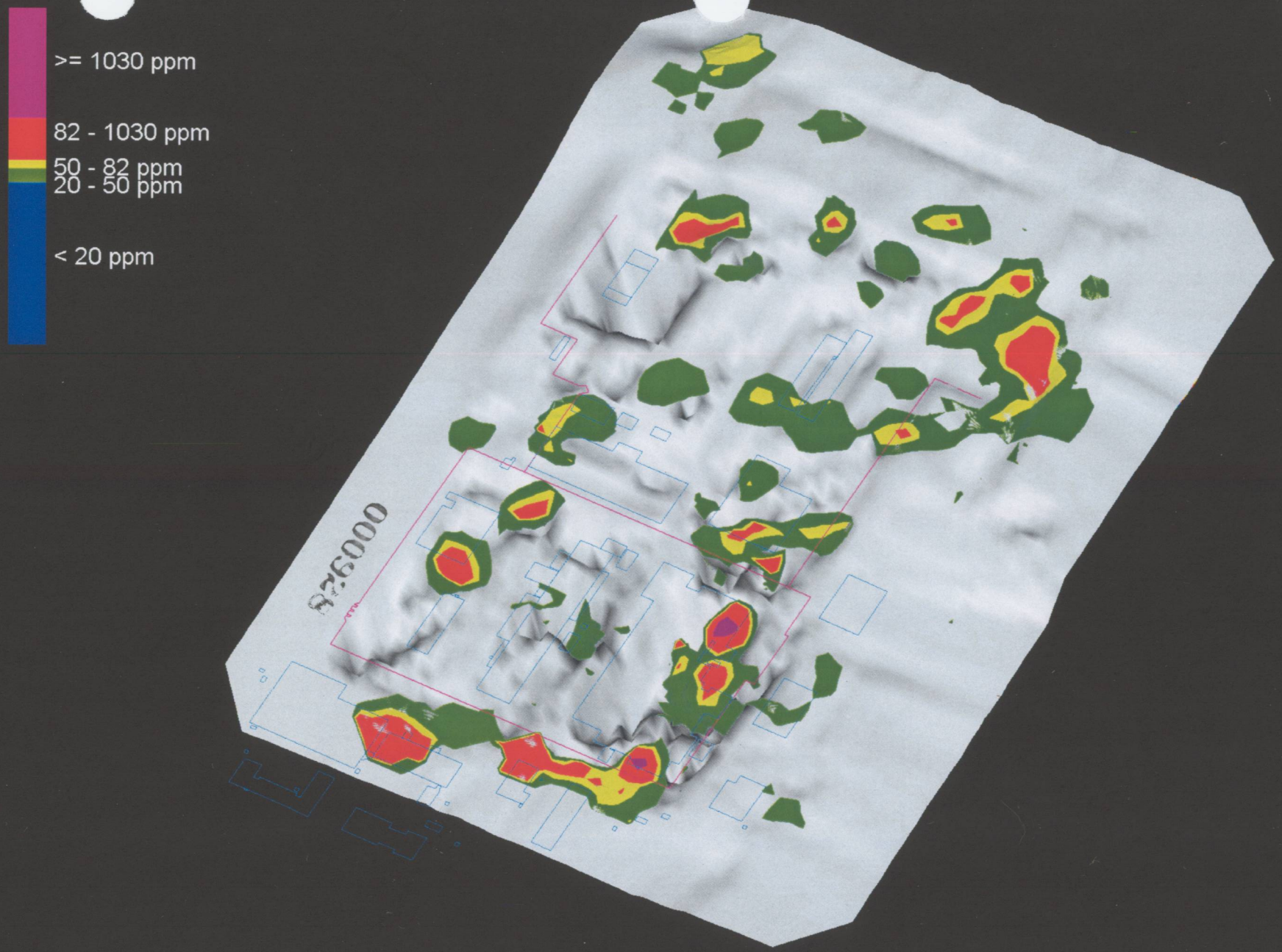
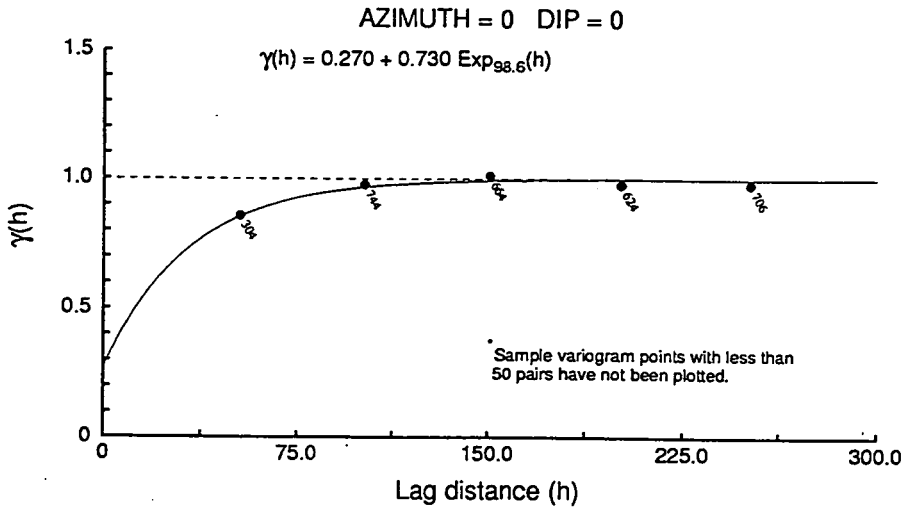
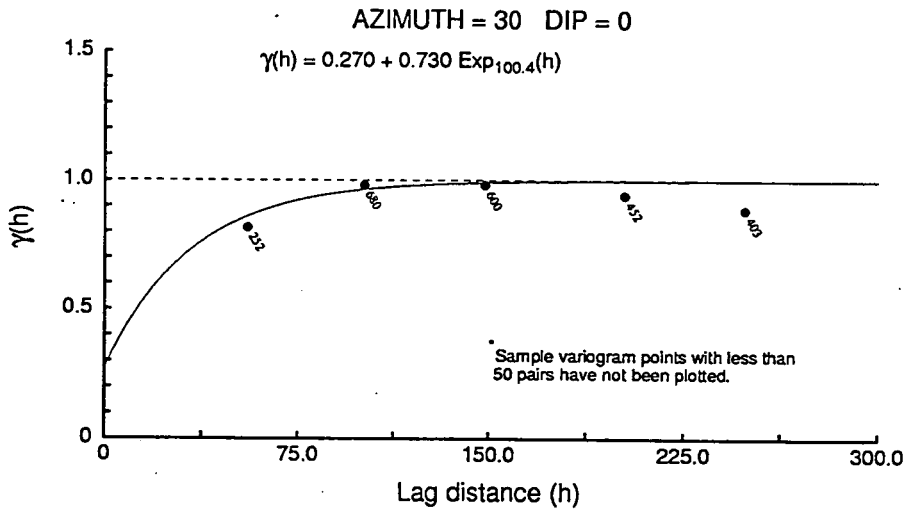


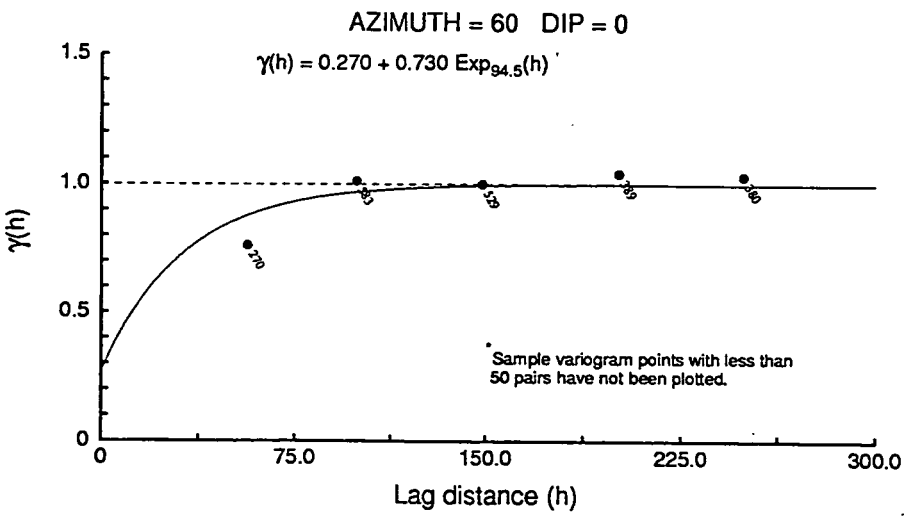
Figure E.8 Excavation Surface and Total Uranium Contamination

ATTACHMENT E-I

Calculate Sample Variograms







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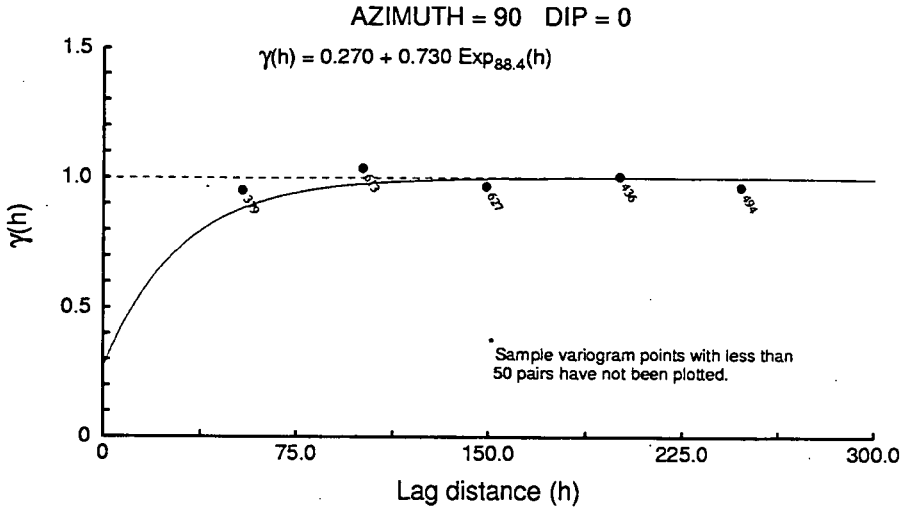
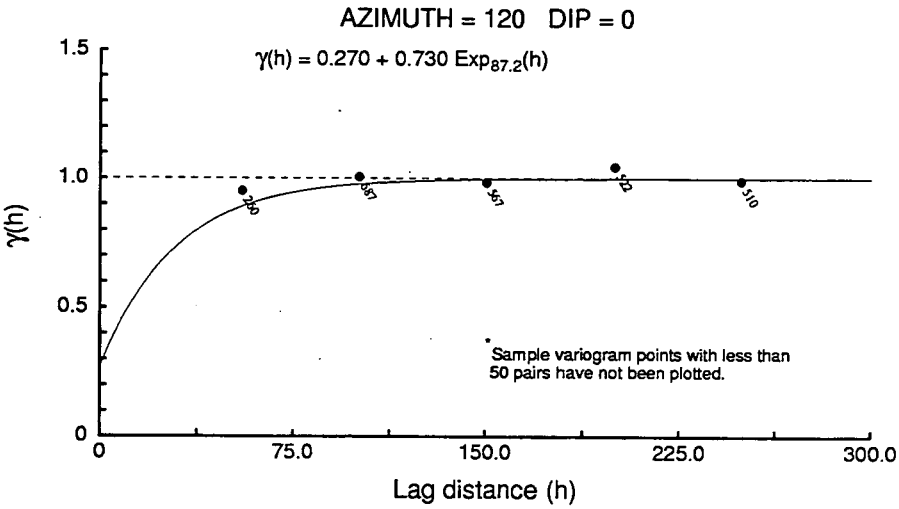
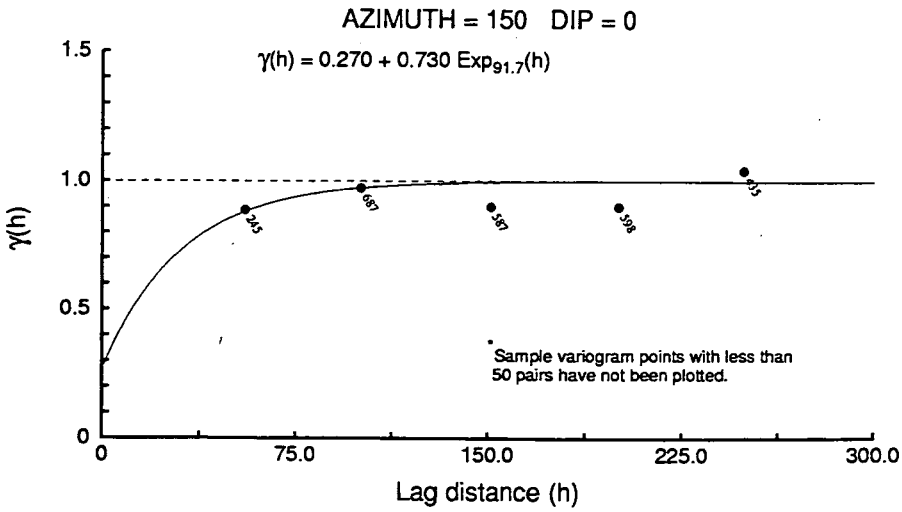
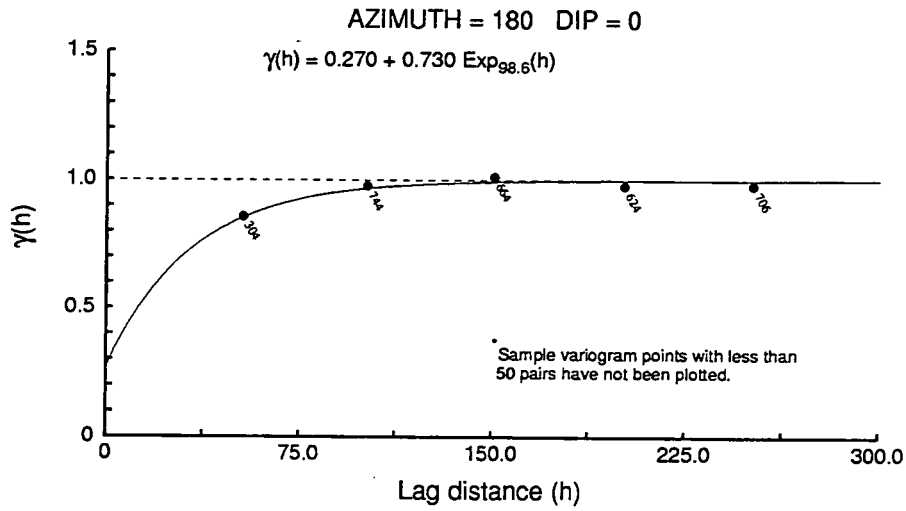
Calculate Sample Variograms








AZIMUTH = 180 DIP = 0
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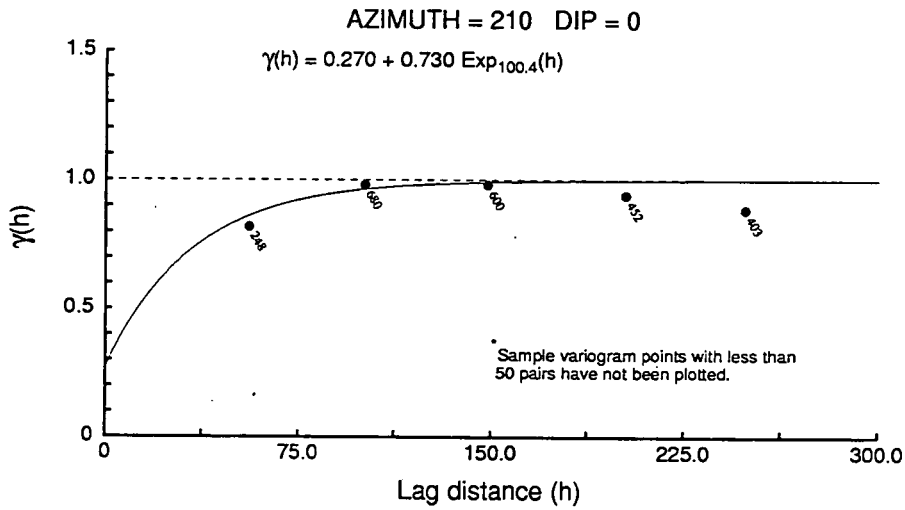
1.5
1.0
0.5
0
γ(h)
304
744
664
624
706
Sample variogram points with less than 50 pairs have not been plotted.
0
75.0
150.0
225.0
300.0
Lag distance (h)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1.0
0.5
0
γ(h)
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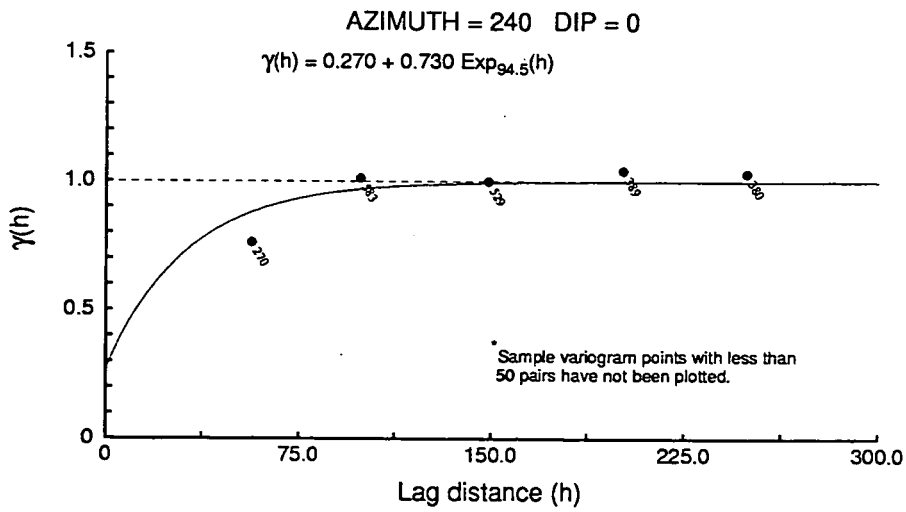
680
600
452
403
Sample variogram points with less than 50 pairs have not been plotted.
0
75.0
150.0
225.0
300.0
Lag distance (h)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1.0
0.5
0
γ(h)
270
583
579
769
580
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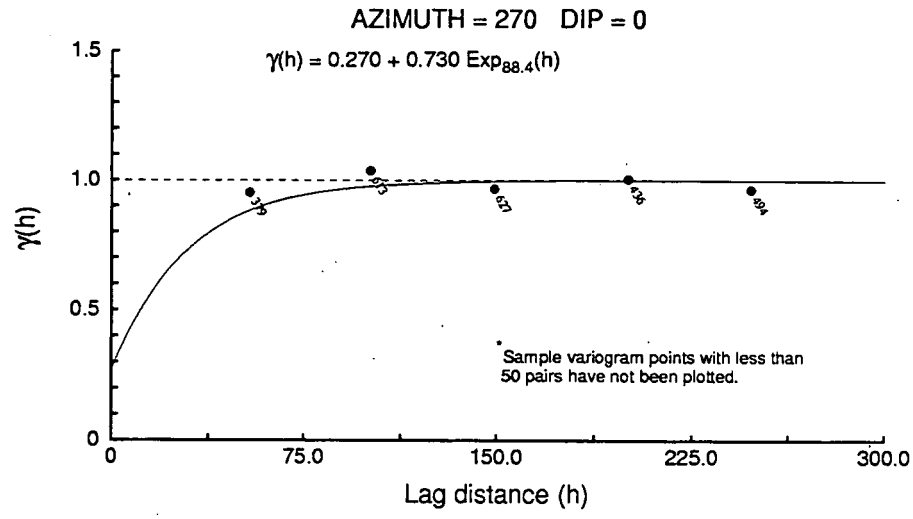
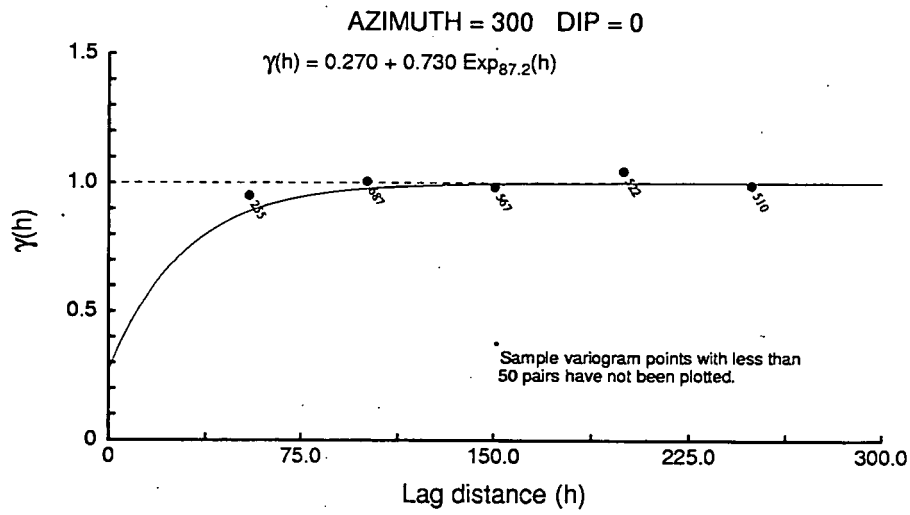
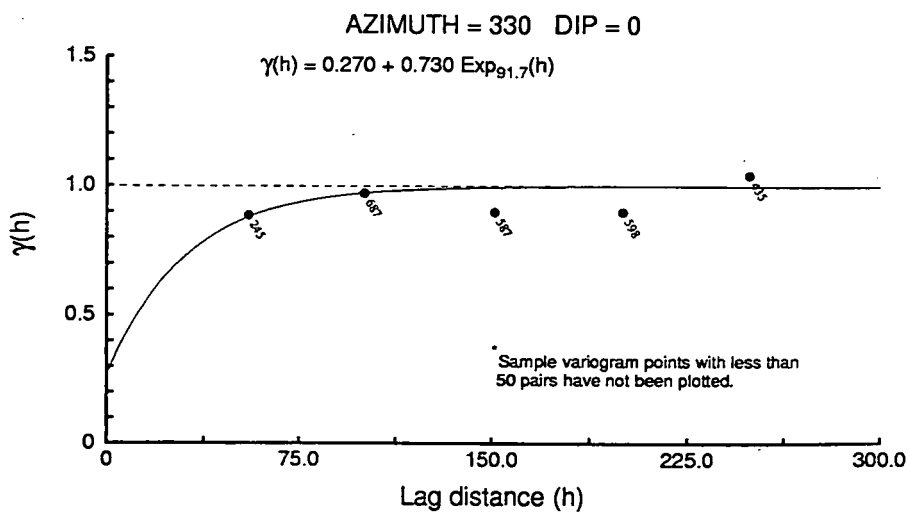
0
75.0
150.0
225.0
300.0
Lag distance (h)

Calculate Sample Variograms







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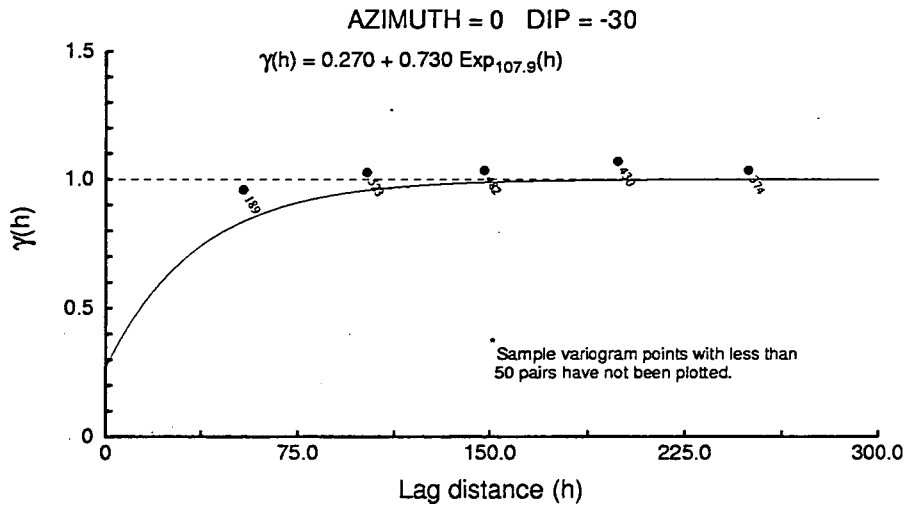
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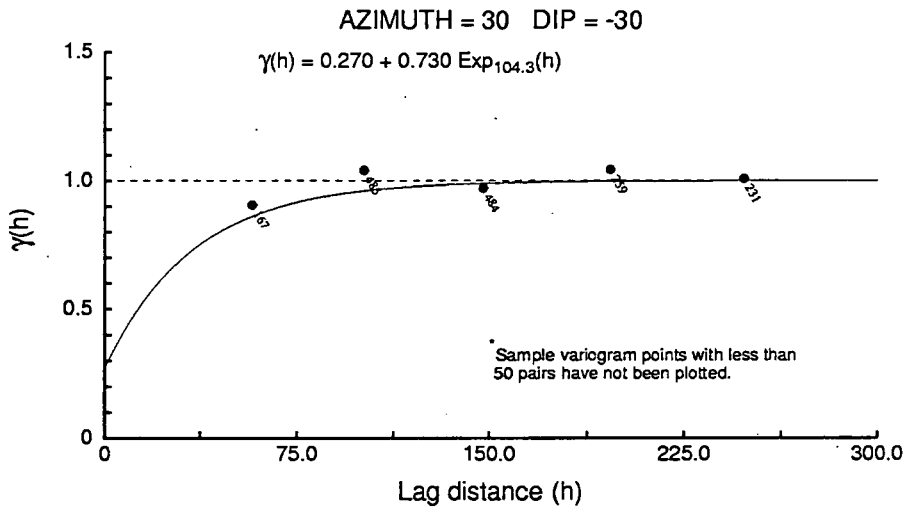
1.0
0.5
0
γ(h)
189
573
562
430
774
Sample variogram points with less than 50 pairs have not been plotted.
0
75.0
150.0
225.0
300.0
Lag distance (h)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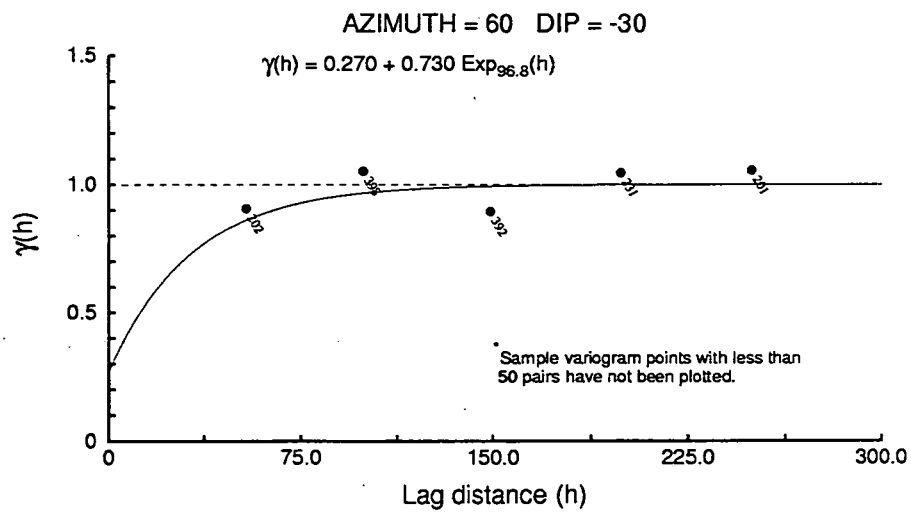
1.0
0.5
0
γ(h)
67
494
759
231
Sample variogram points with less than 50 pairs have not been plotted.
0
75.0
150.0
225.0
300.0
Lag distance (h)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γ(h) = 0.270 + 0.730 Exp96.8(h)
1.5
1.0
0.5
0
γ(h)
102
392
231
201
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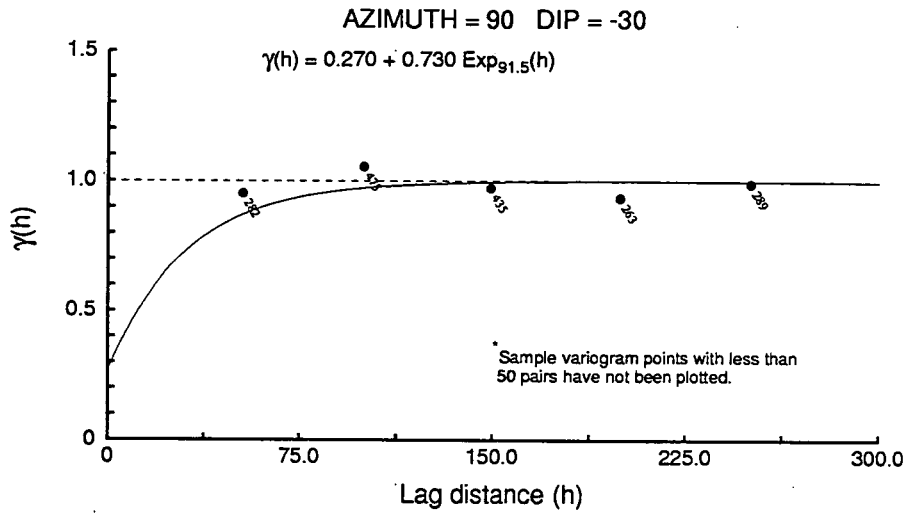
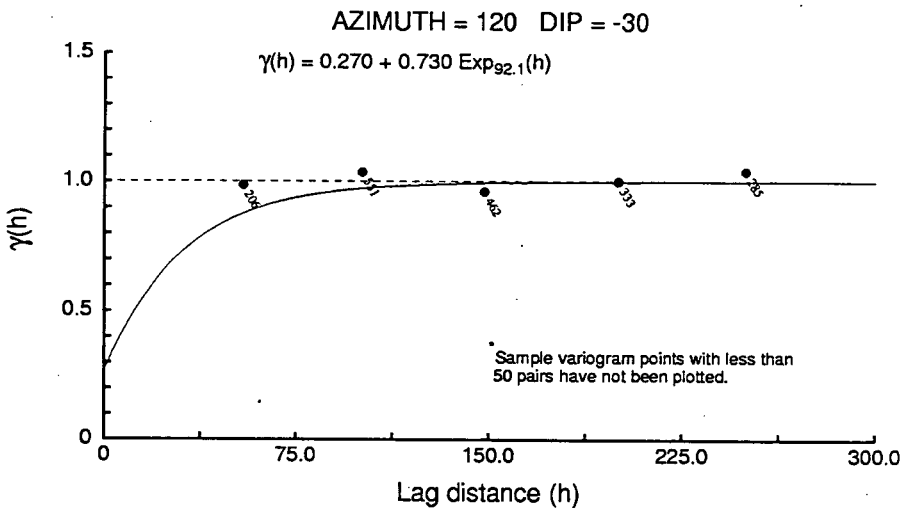
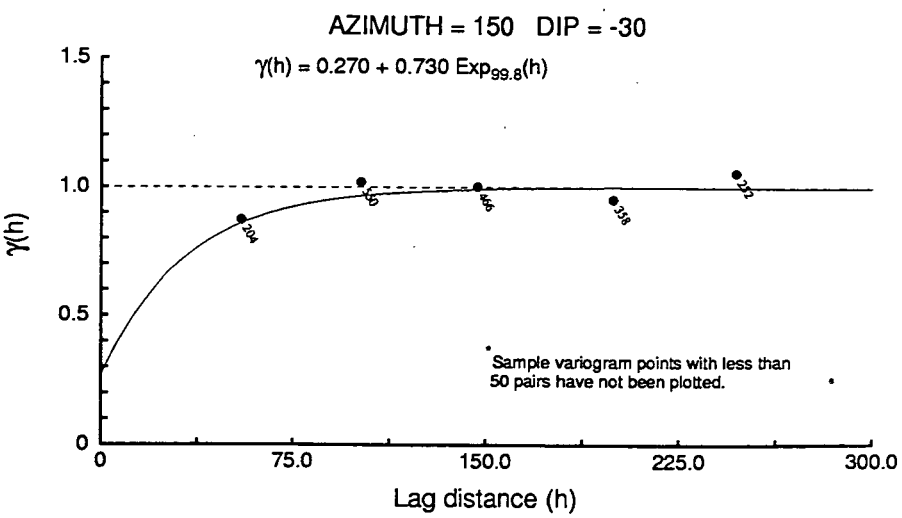
0
75.0
150.0
225.0
300.0
Lag distance (h)

Calculate Sample Variograms







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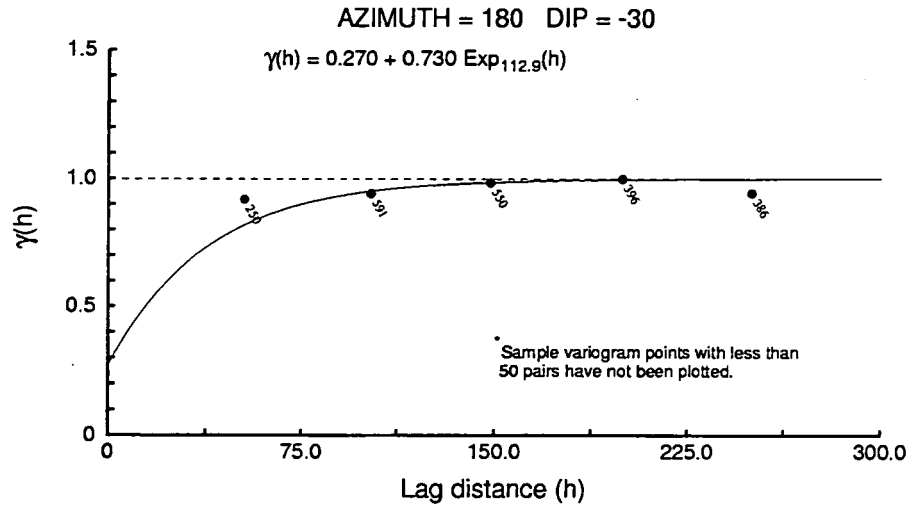
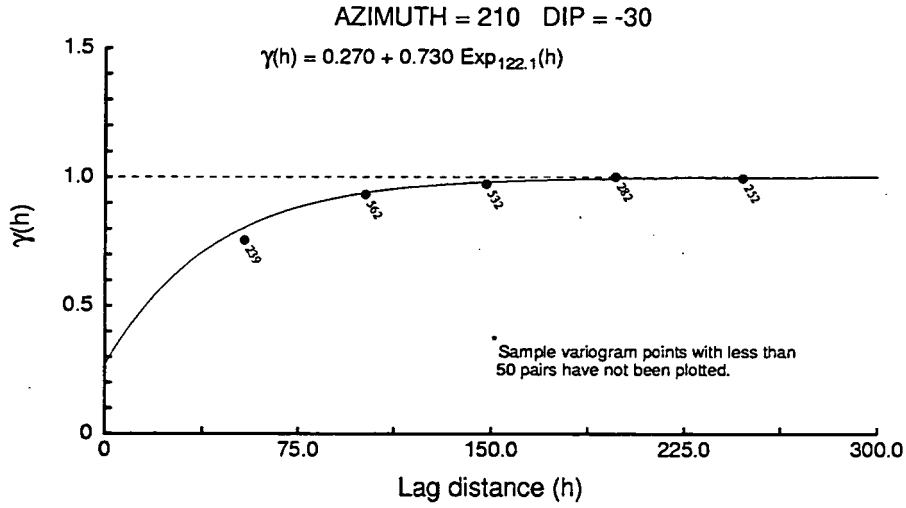
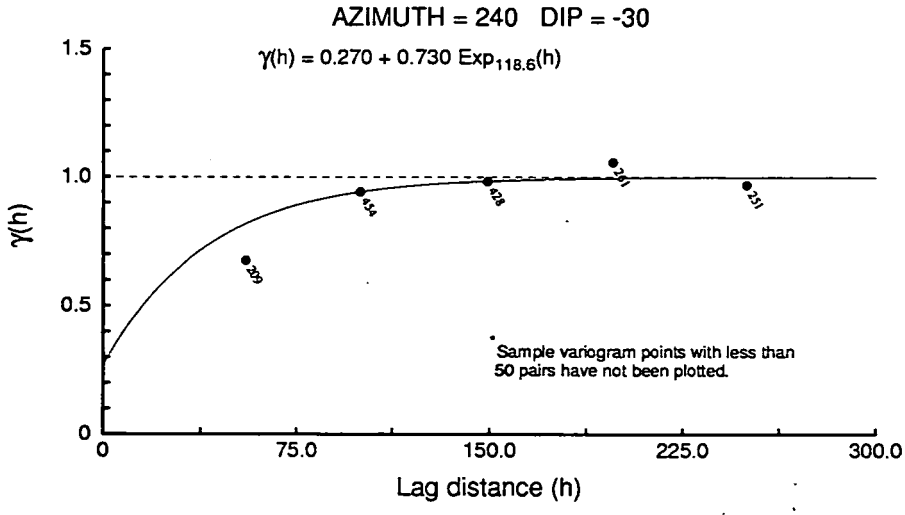
Calculate Sample Variograms

2888







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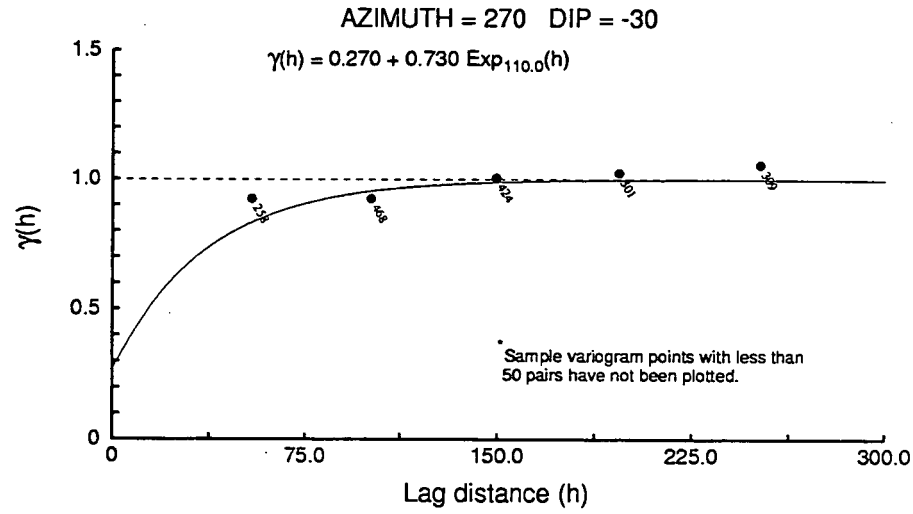
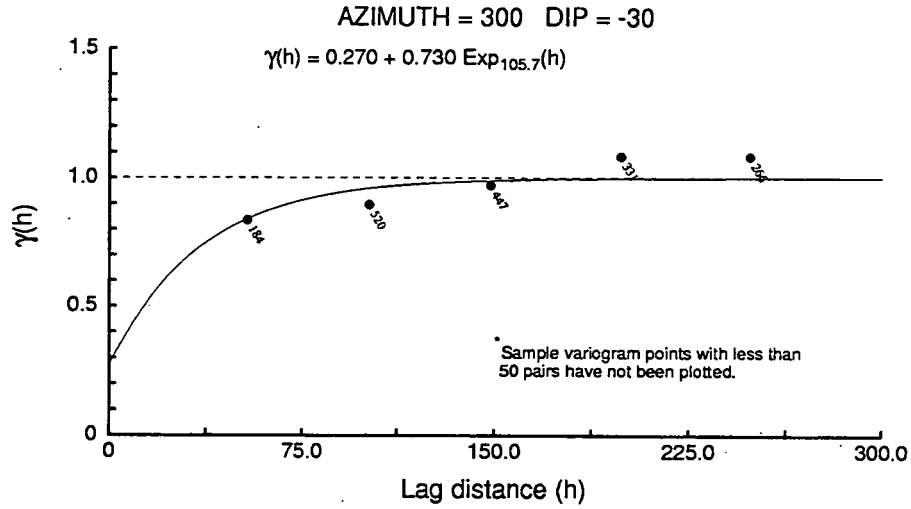
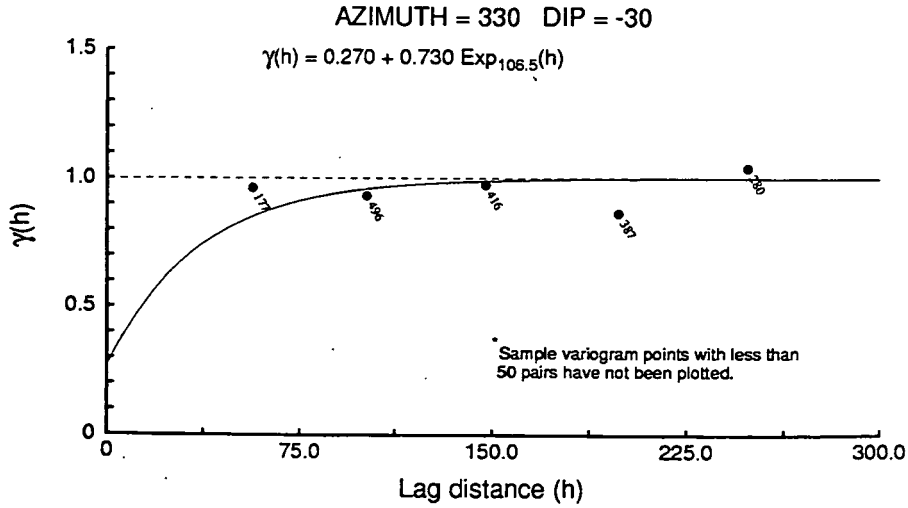
Calculate Sample Variograms







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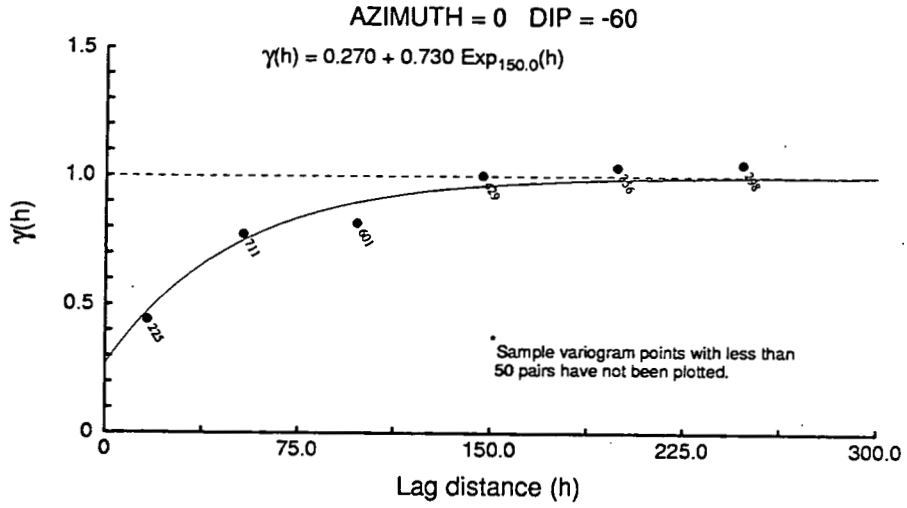
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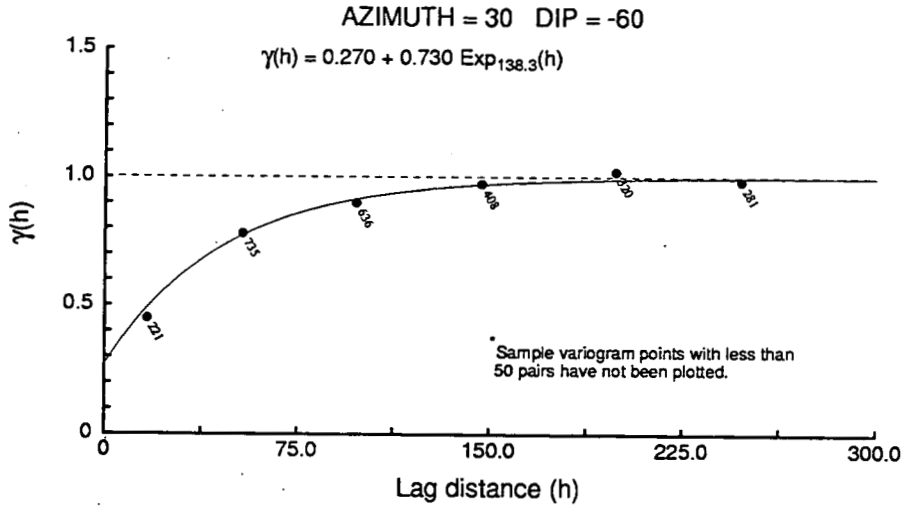
γ(h)
1.5
1.0
0.5
0
0
75.0
150.0
225.0
300.0
Lag distance (h)
225
711
601
929
936
928
Sample variogram points with less than 50 pairs have not been plotted.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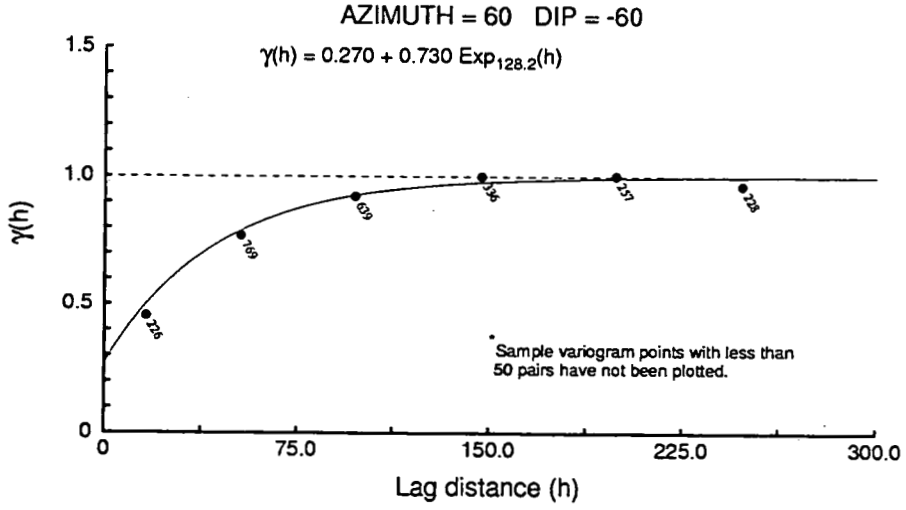
1.0
0.5
0
0
75.0
150.0
225.0
300.0
Lag distance (h)
221
715
636
408
920
281
Sample variogram points with less than 50 pairs have not been plotted.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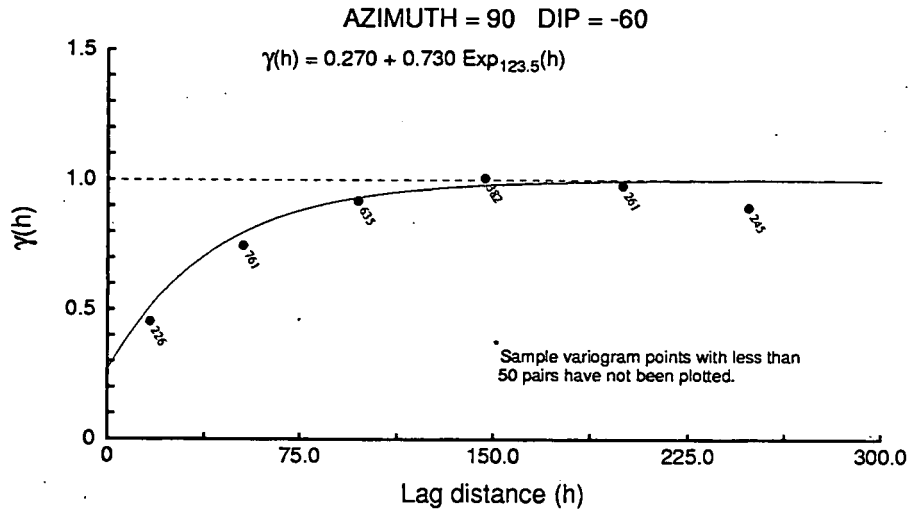
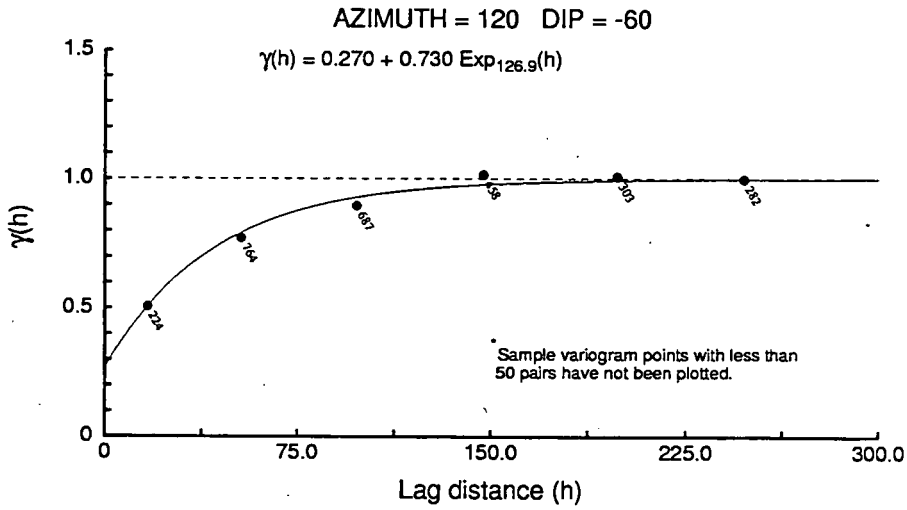
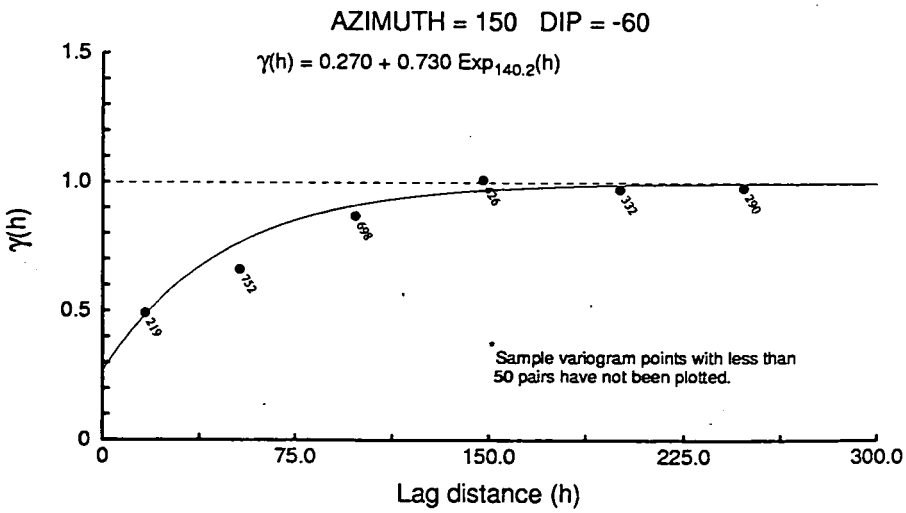
1.0
0.5
0
0
75.0
150.0
225.0
300.0
Lag distance (h)
226
769
639
936
937
928
Sample variogram points with less than 50 pairs have not been plotted.

Calculate Sample Variograms







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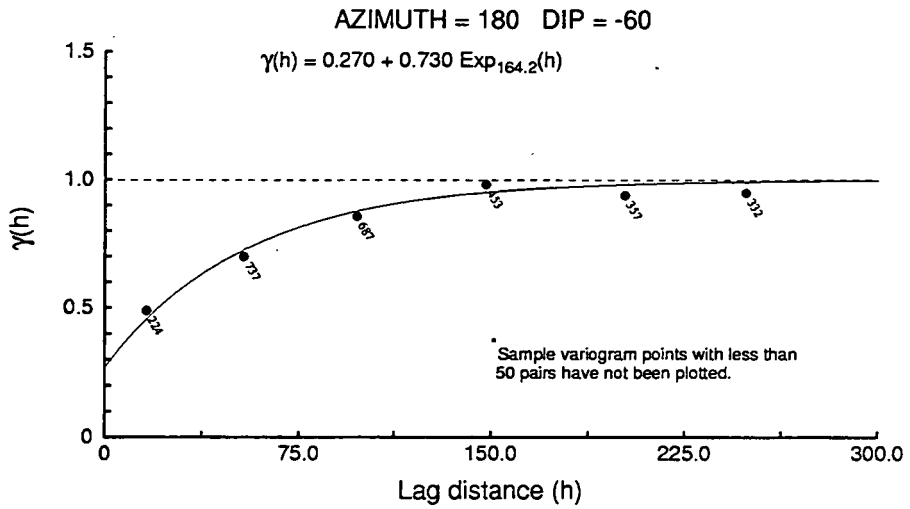
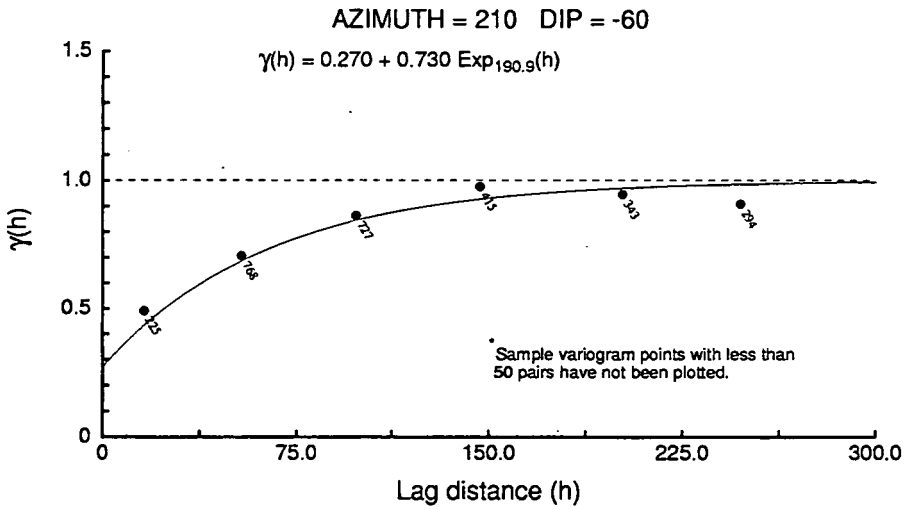
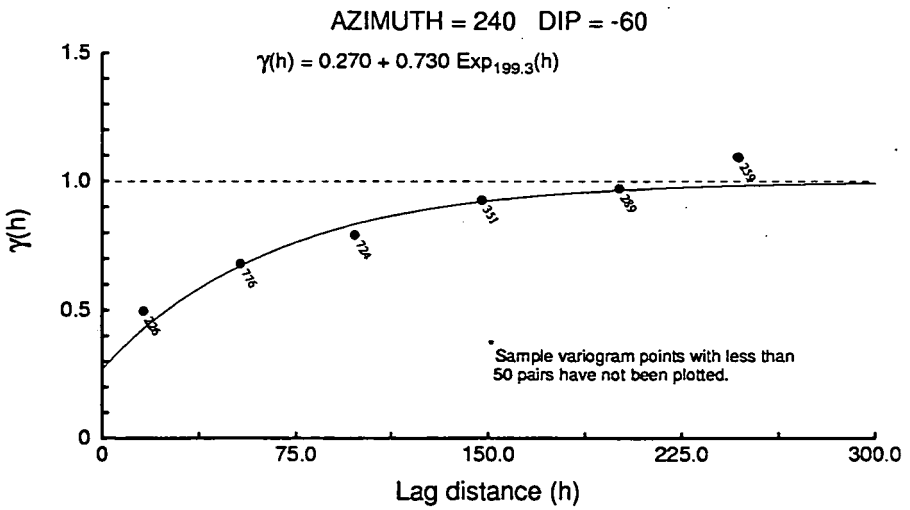
Calculate Sample Variograms







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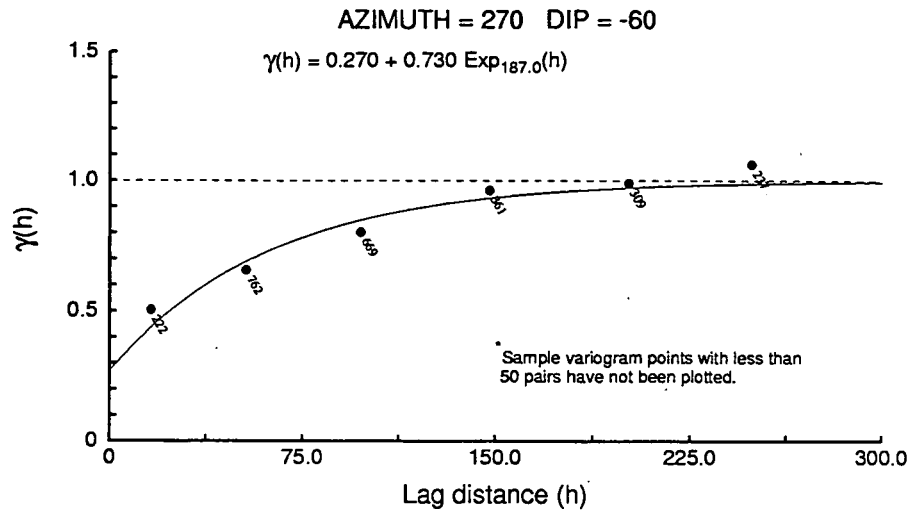
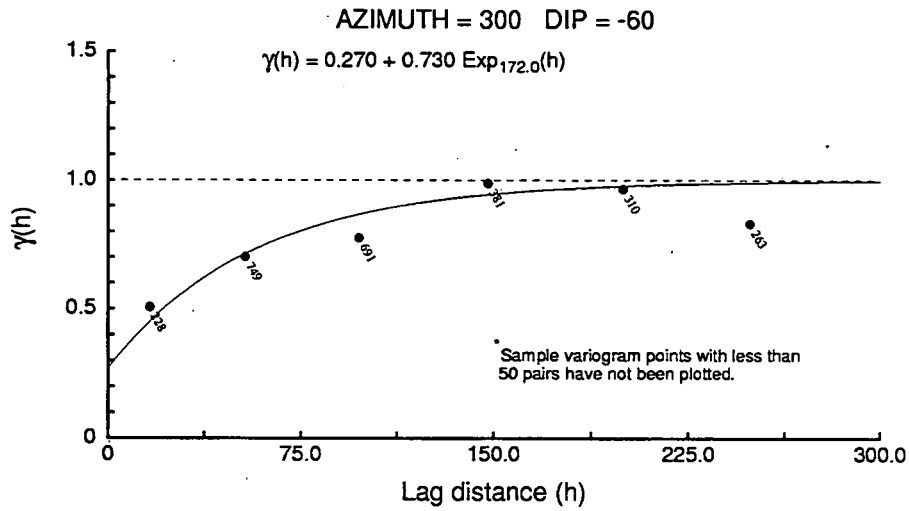
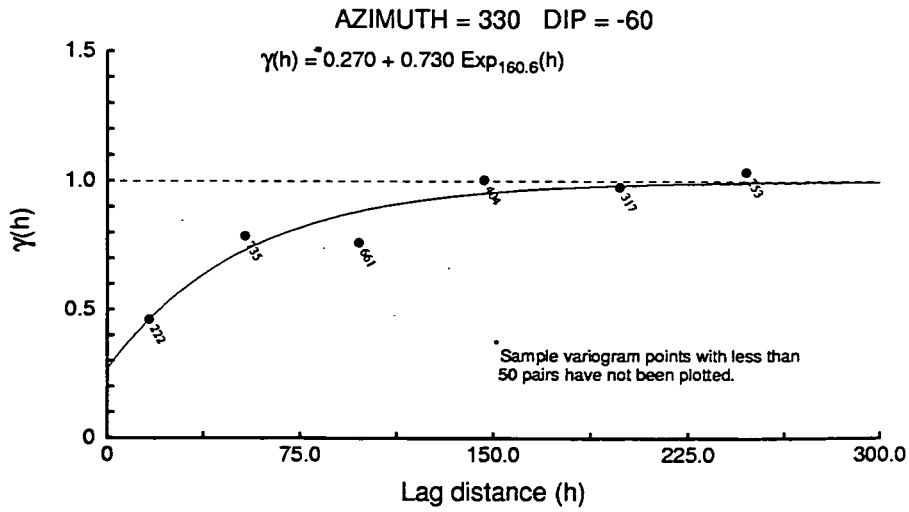
Calculate Sample Variograms







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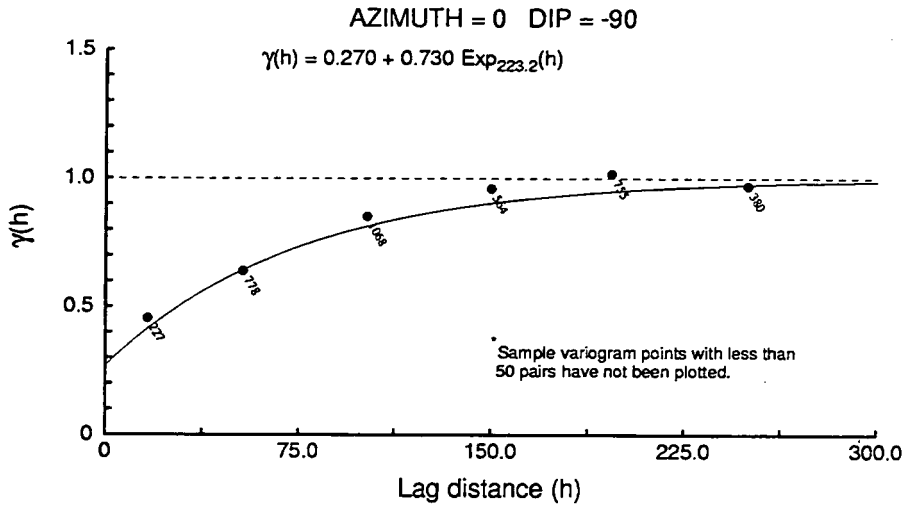
Calculate Sample Variograms

2888



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ATTACHMENT E-II

Calculate Sample Variograms

Sage95 Rotation Conventions

Nugget ==> 0.270
C1 ==> 0.730

First Structure -- Exponential with Practical Range

RH Rotation about the Z axis ==> -18
RH Rotation about the Y' axis ==> 9
RH Rotation about the X' axis ==> -7

Range along the Z axis	==> 253.6	Azimuth ==> 69	Dip ==> 78
Range along the Y axis	==> 100.0	Azimuth ==> 17	Dip ==> -7
Range along the X axis	==> 85.9	Azimuth ==> 108	Dip ==> -9

Modeling Criteria

Minimum number pairs req'd ==> 50
Sample variogram points weighted by # pairs

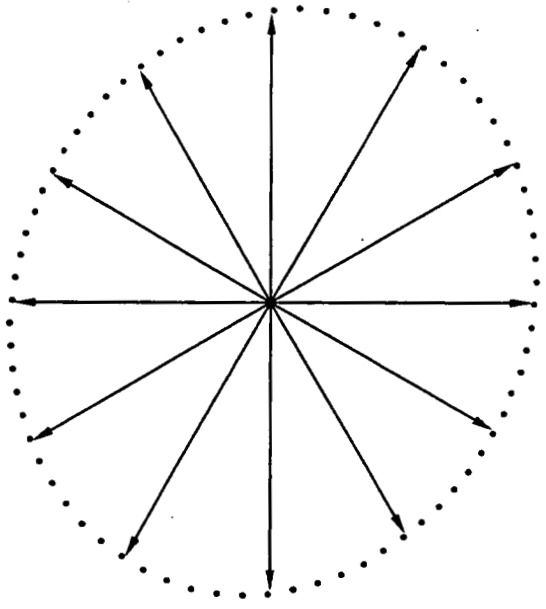
Calculate Sample Variograms

2888

Structure Number 1

Rose Diagram of Ranges Dipping 0 Degrees
Scale:

200 Units

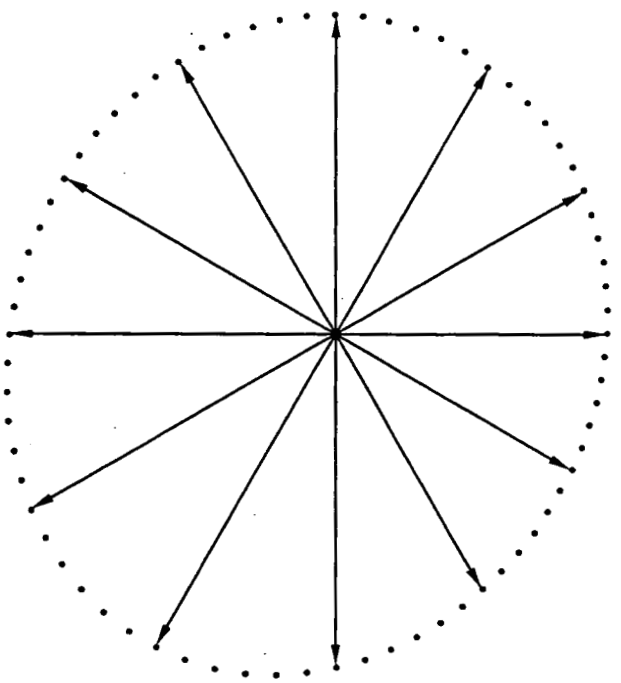


Calculate Sample Variograms

Structure Number 1

Rose Diagram of Ranges Dipping 30 Degrees
Scale:

200 Units

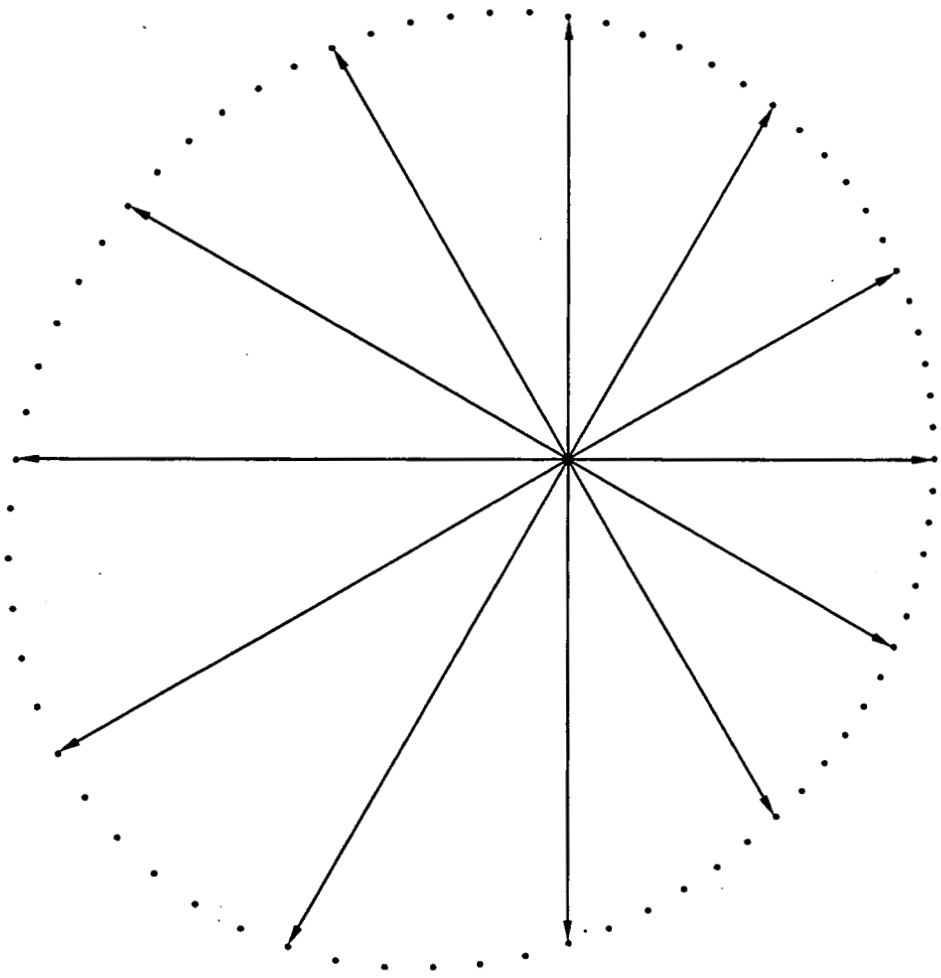


Calculate Sample Variograms

Structure Number 1

Rose Diagram of Ranges Dipping 60 Degrees
Scale:

200 Units



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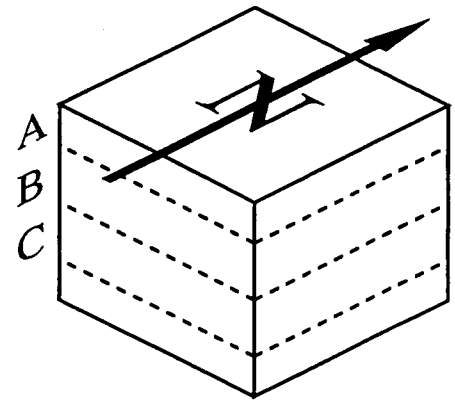
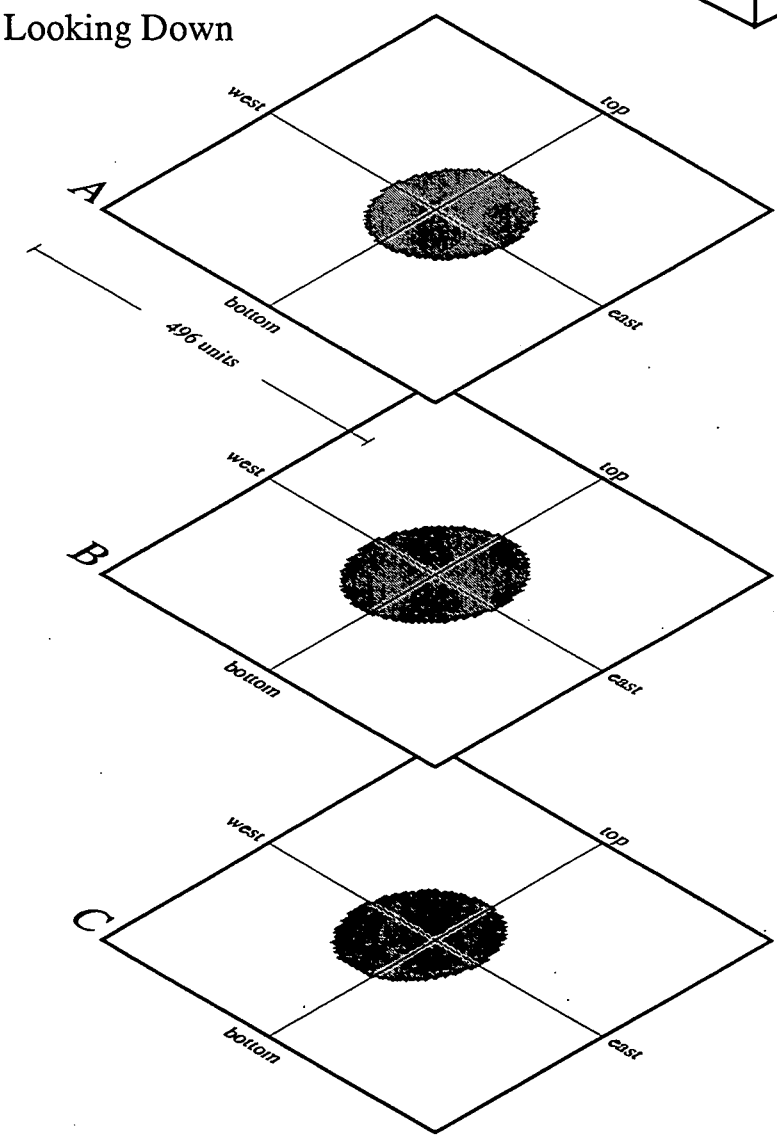
Horizontal Slices Through the Ellipsoids

Reference Cube



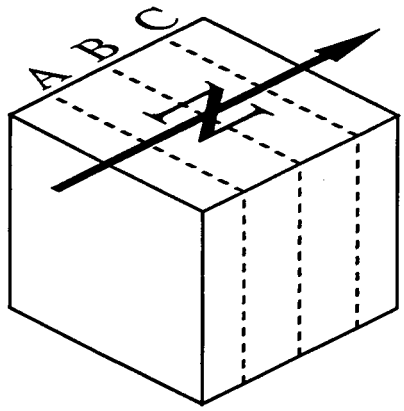
X-Y Planes Looking Down



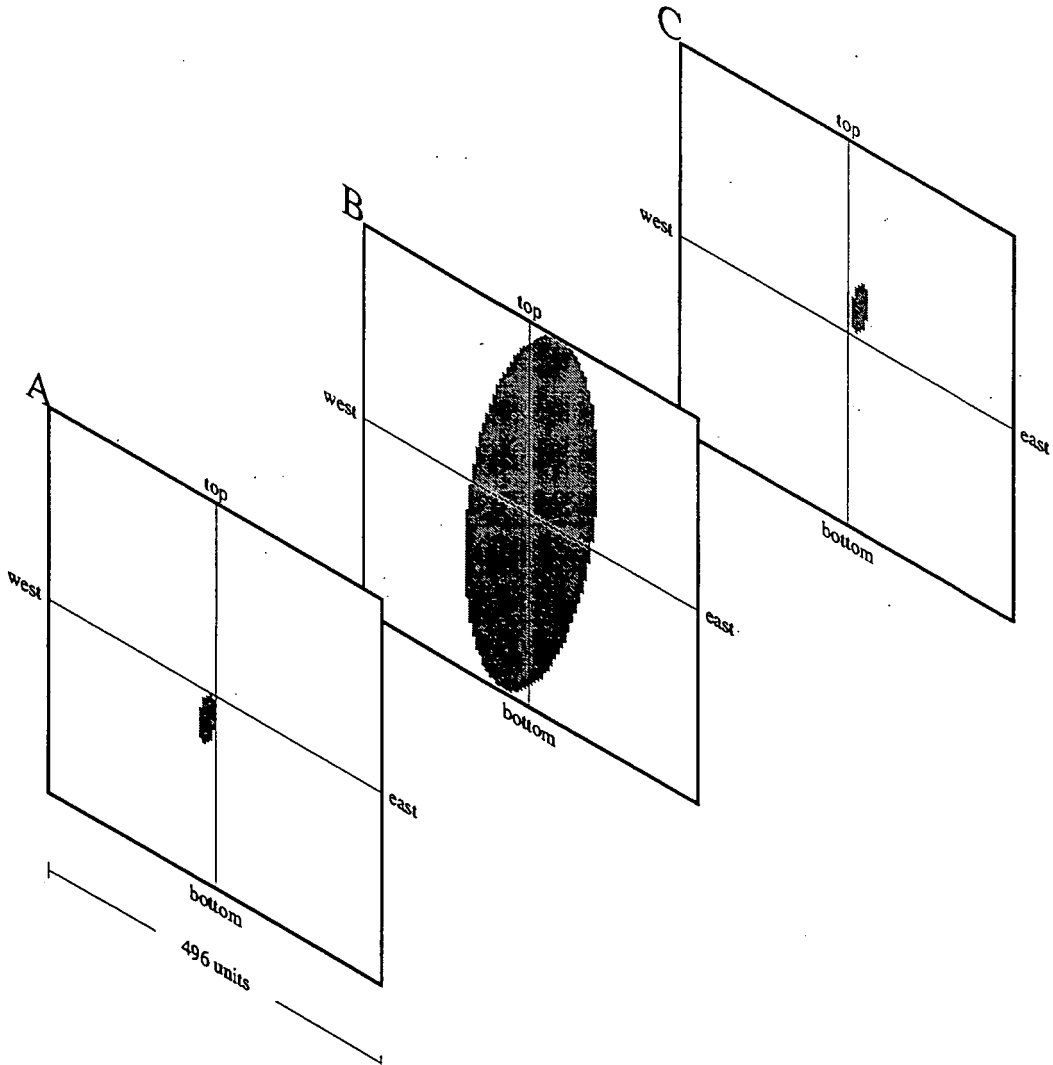
Note -- the orientation, dip and lengths of the ellipsoid axes in these figures may be "apparent" rather than "

Cross Section Views Through the Ellipsoids

Reference Cube



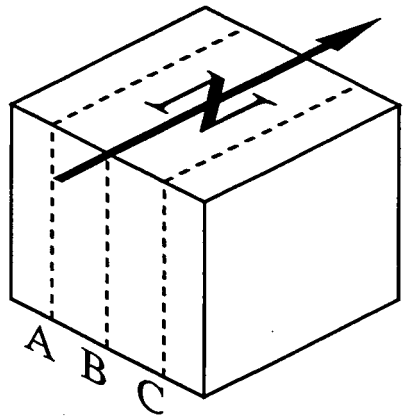
X-Z Planes Looking North



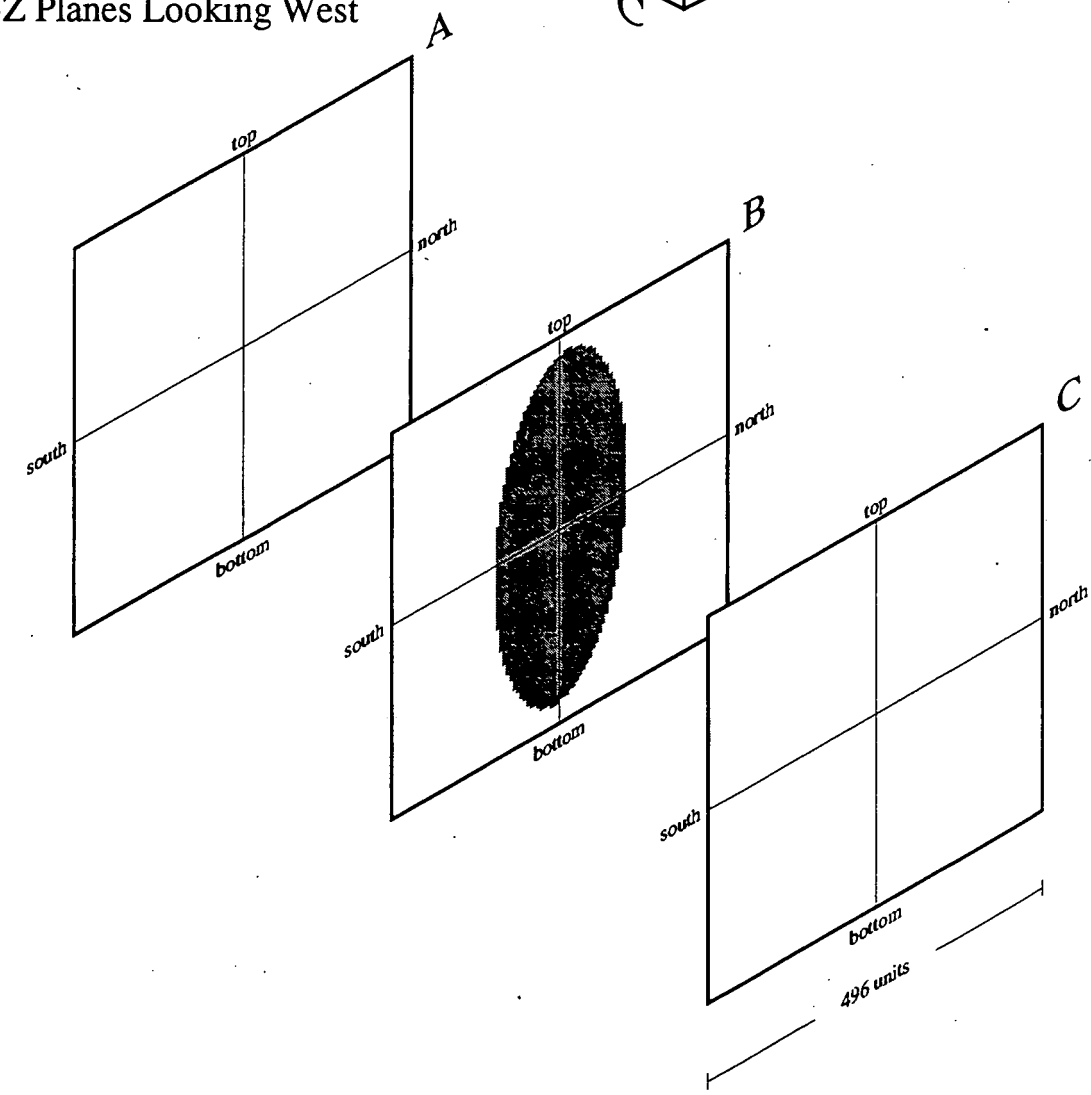
Note -- the orientation, dip and lengths of the ellipsoid axes in these figures may be "apparent" rather than "true".

Long Section Views Through the Ellipsoids

Reference Cube



Y-Z Planes Looking West



Note -- the orientation, dip and lengths of the ellipsoid axes in these figures may be "apparent" rather than "