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ADDENDUM NO. 2 TO THE IMPLEMENTATION PLAN FOR AREA 2, PHASE II - SUBAREA 3 (INFRASTRUCTURE) TRAILER COMPLEX AND AQUIFER PROJECT LAYDOWN AREAS

FERNALD CLOSURE PROJECT
FERNALD, OHIO

MAY 2005

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

20450-PL-0001
REVISION B
ADDENDUM 2

REVISION SUMMARY

Revision	Date	Description of Revision
B	8-5-03	Draft final version of plan submitted to agencies.
Addendum 1	11-12-04	Revised to include commitment made to the agencies in Section 1.4.2 of the plan to submit an addendum following completion of predesign investigations of Area 2, Phase II - Subarea 3 (Infrastructure) Subcontractor Laydown Area and Equipment Wash Facility
Revised Addendum 1	1-10-05	Revised to include comment responses from agencies.
Addendum 2	5-19-05	Revised to include commitment made to the agencies in Section 1.4.2 of the plan to submit an addendum following completion of predesign investigations of Area 2, Phase II - Subarea 3 (Infrastructure) Trailer Complex and Aquifer Project Laydown Areas

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LIST OF ACRONYMS AND ABBREVIATIONS

A2PII	Area 2, Phase II
ALARA	as low as reasonably achievable
AQL	Aquifer Project Laydown Area
ASCOC	area-specific constituent of concern
bcy	bank cubic yards
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	constituent of concern
DOE	U.S. Department of Energy
FCP	Fernald Closure Project
FRL	final remediation level
HDPE	high-density polyethylene
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
OSDF	On-Site Disposal Facility
OU	operable unit
pCi/g	picoCuries per gram
PSP	Project Specific Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SEP	Sitewide Excavation Plan
TCA	Trailer Complex Area
WAC	waste acceptance criteria

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1.0 INTRODUCTION

In August 2003, the Implementation Plan for Area 2, Phase II (A2PII) was submitted to the agencies (DOE 2003). A2PII was divided into four subareas: Subarea 1 (Arsenic Soil Contamination Area), Subarea 2 (Radium Hot Spot), Subarea 3 (Infrastructure), and Subarea 4 (Remaining Area). Due to incomplete characterization results and continued usage of Subarea 3 (Infrastructure) at the time of the August 2003 submittal, Subarea 3 (Infrastructure) was not addressed in the A2PII Implementation Plan; rather, a commitment was made in Section 1.4.2 of the Implementation Plan that the remedial design for Subarea 3 (Infrastructure) would be submitted to the agencies as an addendum to the Implementation Plan following completion of predesign investigations.

As defined in the A2PII Implementation Plan, the Subarea 3 (Infrastructure) components include:

- Trailer Complex Area
- Equipment Wash Facility Pad (including Basin 5)
- Subcontractor Laydown Area
- Aquifer Project Laydown Area
- Ditch and bank north of the former Active Flyash Pile
- Portion of the Impacted Material Haul Road and nearby former footprint of debris pile MTL-HRD-012

In addition, the Infrastructure subarea includes the water line that services both the Trailer Complex and the Equipment Wash Facility, a portion of the transfer line, and associated utilities. The removal of the at- and below-grade structures, roadways, and underground utilities, not related to groundwater remediation, is the primary scope of the remediation activities for Subarea 3 (Infrastructure).

The Addendum No. 1 to the Implementation Plan for Area 2, Phase II - Subarea 3 (Infrastructure) Subcontractor Laydown Area and Equipment Wash Facility was submitted to the agencies in November 2004 and was issued Final in January 2005 (DOE 2005a). That document addressed the predesign investigation, characterization data, and remedial design for the Equipment Wash Facility (including Basin 5), and the Subcontractor Laydown Area. The bank and a portion of the ditch north of the former Active Flyash Pile was included in the Excavation Plan for Stream Corridors Storm Sewer Outfall Ditch (DOE 2005b). This Excavation Plan was submitted to the agencies for review in January 2005.

This addendum to the A2PII Implementation Plan addresses the predesign investigation, characterization data, and remedial design for the Trailer Complex Area, the Aquifer Laydown Area (see design drawings 99X-5500-G-00885 and 99X-5500-G-00886 referenced in Appendix A), and the remainder of the ditch

north of the former Active Flyash Pile and is being submitted as Addendum No. 2 to the A2PII Implementation Plan. This addendum does not address other Subarea 3 (Infrastructure) components. Therefore, A2PII - Subarea 3 (Infrastructure) components listed above other than the Trailer Complex Area, the Aquifer Laydown Area, and a portion of the ditch north of the former Active Flyash Pile have been addressed previously in the August 2003 A2PII Implementation Plan or Addendum No. 1 to the A2PII Implementation Plan.

The remediation of the above-grade structures associated with the TS-8 tension support structure are addressed in the Operable Unit (OU) 3 Miscellaneous Small Structures Phase II Implementation Plan for Above-Grade Decontamination and Dismantlement (1751-PL-0004, DOE 2002) and therefore is not addressed in this addendum.

The remedial actions addressed in this A2PII Implementation Plan Addendum No. 2 include an estimated 400 bank cubic yards (bcy) of impacted soil, and 470 bcy of debris.

2.0 PREDESIGN INVESTIGATIONS AND CHARACTERIZATION DATA

2.1 SUMMARY OF THE RI/FS INVESTIGATION

Extensive soil sampling was performed at the FCP in the late 1980s and early 1990s as part of the OU5 Remedial Investigation and Feasibility Study (RI/FS, DOE 1995a and 1995b) to characterize the nature and extent of contamination resulting from uranium-metal production activities at the site. Information regarding soil sampling in A2PII, overall, can be found in the A2PII Implementation Plan. As outlined in the A2PII Implementation Plan, A2PII has four Subareas. Subareas 1, 2, and 4 have been dealt with under separate documentation.

Subarea 3 is further divided into several areas. This document only addresses the Trailer Complex Area (TCA) and the Aquifer Project Laydown Area (AQL). The boundaries of the areas to be covered in this document can be found in Figure 2-1. Other portions of Subarea 3 including the Impacted Material Haul Road, Equipment Wash Facility, Subcontractor Laydown Area, and the South Field Extraction System Valve House Area are being dealt with under separate documentation.

The real-time scans performed under the Project Specific Plan (PSP) for the Predesign of Area 2, Phase II - Subarea 3 (Supplement to 20300-PSP-0011) (DOE 2004) identified an above-final remediation level (FRL) reading for total uranium in the southeast portion of the AQL area (see Figure 2-2 and Section 2.4.2). Samples collected in association with PSP for the Predesign in A2PII Subarea 3 (see Figure 2-1) identified above-FRL readings for radium-226 and arsenic as discussed in Section 2.4.2.

One of the above-FRL areas (for radium-226 and arsenic) located within the A2PII - Subarea 3 Aquifer Project Laydown Area has been moved to a separate document due to its apparent continuity with an above-FRL radium-226 area found within the Storm Sewer Outfall Ditch area. Hereafter, information pertaining to the above-FRL area associated with A2P2-AQL2 and A2P2-AQL3 (see Figure 2-1) will be found in separate documentation.

Predesign investigations were performed, in general, to identify the extent of soil exceeding either the On-Site Disposal Facility (OSDF) waste acceptance criteria (WAC) or FRL. The specific goals of these investigations included filling data gaps and bounding any above-FRL areas. The following predesign investigation included information that forwarded and/or completed these goals:

- PSP for the Predesign of Area 2, Phase II - Subarea 3 (Supplement to 20300-PSP-0011) (DOE 2004)

  This PSP included approximately 17 borings involving the sampling of the TCA/AQL Area. Depths and analytes required varied depending on sample points and area sampled. Above-FRL results were horizontally bound by physical sampling and laterally bound by either physical sampling or real-time scanning.

The activities performed under this investigation are discussed in Section 2.4. The sampling locations collected under the Predesign PSP for A2PIIS3 related to the TCA/AQL are shown in Figure 2-1. Appendix B includes all available analytical results from the physical sampling during the predesign investigation for the TCA/AQL area.

In addition to the physical sampling conducted under the above PSPs, real-time scanning was performed according to the PSP for Predesign of A2PII - Subarea 3 (see Appendix C).

2.1.1 Preliminary Constituents of Concern

Based on the results for the RI/FS investigation, the Sitewide Excavation Plan (SEP, DOE 1998) presented a preliminary list of area-specific constituents of concern (ASCOCs) for Remediation Area 2 (see Table 2-1) and stated that a more thorough screening of ASCOCs would be performed for each area.

2.1.2 Hazardous Waste Management Units

There are no hazardous waste management units associated with this area.

2.1.3 Underground Storage Tanks

There are no underground storage tanks associated with this area.

2.1.4 Identification of Potentially Characteristic Areas

There are no potentially characteristic areas associated with this area.

2.1.5 High Leachability Zones.

No contamination zones fall within the high-leachability zone boundaries.

2.2 SUMMARY OF SURFACE AND SUBSURFACE PHYSICAL CONDITIONS

The areas of concern addressed by this document include the soils that fall within A2PIIS3 - TCA/AQL (see Figure 2-1 for location).

The TCA/AQL is a flat, irregularly shaped area bordered on the east by the Storm Sewer Outfall Ditch, the north by the Storm Water Retention Basin, the south by the former Active Flyash Pile and the west by the Area 2, Phase I and former Soil Stockpile 3 certified areas. Some of the area is covered with gravel or pavement. The remainder is undeveloped grassland. Miscellaneous debris can be found throughout. Various at and below-grade utilities can be found along the road in this area. All above-grade utilities (i.e., telephone poles) will remain and be addressed in other documentation. Of the below-grade utilities, those required to support continuing operations and/or post-closure treatment of ground water will remain and be addressed in other documentation. All other below-grade utilities will be removed at this time as part of the excavation effort.

2.3 IDENTIFICATION OF AREA-SPECIFIC CONSTITUENTS OF CONCERN

Section 2.1.1 of this document identified the preliminary list of constituents of concern (COCs) for A2PIIS3 - TCA/AQL. The data and the available results of predesign investigation were evaluated based on both the concentration and the persistence of the constituent within the TCA/AQL area. As described in detail in Section 2.4.2, two areas have been identified as above-FRL. The excavation in these areas will be driven by either radium-226 or total uranium. Table 2-2 presents the COC driving excavation for the TCA/AQL Area. This list will be used to verify that the planned remedial excavation limits are sufficient to capture the above-FRL contamination. Note that the ASCOC list will be reevaluated during the certification design process to determine which of the preliminary ASCOCs initially identified will be carried into certification.

2.3.1 On-Site Disposal Facility Waste Acceptance Criteria

The OSDF WAC were established in the OU2 and OU5 Records of Decision (RODs, DOE 1995c and 1996). Soil excavated from the TCA/AQL Area must meet these concentration-based WAC in the OU5 ROD to be eligible for disposal in the OSDF. If soil exceeds the OSDF radiological WAC, it will have to be segregated for off-site disposal. For the special case of soil with above-WAC organic COCs, disposal at the OSDF is permitted if the soil treatment results in the COC levels fall below the established WAC. Data collected for the TCA/AQL Area were compared to the OSDF WAC to identify areas that exceed the OSDF WAC. This comparison confirmed that there are no known areas within the TCA/AQL Area exceeding the OSDF WAC. However, through excavation control the possibility of finding above-WAC material still exists.

2.3.2 Final Remediation Levels for Soil

Like the OSDF WAC, the OU5 ROD established the FRLs for soil remediation. The FRLs associated with the TCA/AQL Area can be found in Table 2-2. Remediation in the TCA/AQL Area will remove contaminated soil until the residual contaminant concentrations are at or below the respective FRL. The FRL for total uranium is 82 milligrams per kilogram (mg/kg) and a goal driven by the as low as reasonably

achievable (ALARA) philosophy has been set to meet 50 mg/kg. 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 total uranium FRL of 82 mg/kg. Predesign sampling was performed to further delineate the above-FRL contamination as discussed in Section 2.4.

2.4 ANTICIPATED EXCAVATION BOUNDARIES

Excavation boundaries in the TCA/AQL Area are established based on the following information:

- Above-FRL areas for radiological and/or non-radiological parameters established based on bounding physical sample results, and
- Above-FRL areas for radiological parameters established based on real-time scanning results.

All of this information is combined to form a complete picture of the breadth of the excavation required in the TCA/AQL Area.

2.4.1 Above-WAC Material

No above-WAC areas were found within the TCA/AQL Area.

2.4.2 Above-FRL Material

Excavation boundaries for the TCA/AQL Area are established based on above-FRL contamination identified as a result of physical sampling or real-time scanning and bound by physical sampling or real-time scanning.

Physical samples and real-time scanning results collected in association with PSP for the Predesign of A2PII - Subarea 3 (Supplement to 20300-PSP-0011) for the TCA/AQL Area identified above-FRL conditions in two distinct areas within the TCA/AQL Area. These areas will be discussed in additional detail below in order of north to south and summarized in Table 2-3.

An area extending from boring location A2P2-TCA6N to A2P2-TCA8S2 (see Figure 2-1) has above-FRL radiological results for radium-226 [maximum of 1.89 picoCuries per gram (pCi/g) at boring location A2P2-TCA8S] and arsenic (maximum of 16.7 mg/kg at boring location A2P2-TCA8S). In addition to the above-mentioned locations, the boring locations included in this area are A2P2-TCA8, A2P2-TCA8S, A2P2-TCA8S2, A2P2-TCA8W, A2P2-TCA6, A2P2-TCA6N, and A2P2-TCA6E (see Figure 2-1). Because radium-226 was the most prevalent above-FRL constituent, it will be used to drive excavation. This area was collectively bound to an elevation of 571 feet using boring locations A2P2-TCA8S and A2P2-TCA6. Using boring locations A2P2-TCA6 and A2P2-TCA8 for reference, it

was laterally bound 5 feet to the north by A2P2-TCA6N, 5 feet to the east by A2P2-TCA6, 10 feet to the south by A2P2-TCA8S2, and 5 feet to the west by A2P2-TCA8W.

Although above-FRL arsenic was co-located with radium-226 and in some borings remains unbound, the corresponding depths display characteristics found in several adjacent areas. It is concluded that these levels are consistent with background conditions. This approach is more fully explained/discussed in Addendum to the Comprehensive Environmental Response, Compensation, and Liability Act) CERCLA/Resource Conservation and Recovery Act (RCRA) Background Soil Study (DOE 2001) (where results in the 12 to 36-inch interval ranged from below the FRL to 15.8 mg/kg) and was used in the approved Addendum No. 1 to the A2PII Implementation Plan for Subarea 3 (Infrastructure) Subcontractor Laydown Area and Equipment Wash Facility. No further investigation for this COC (i.e., arsenic) is planned.

Real-time measurement systems identified an above-FRL area for total uranium (156 mg/kg) in the Trailer Complex Area (see Location ID A2P2-SA3-P2-18 on Figure 2-1). This location was bound as a 31 cm reading. This translates into a reading covering 16.4 feet in diameter. This excavation will be controlled by follow-up real-time measurement systems to verify/confirm the complete removal of any total uranium contamination.

TABLE 2-1
PRELIMINARY ASCOCs FOR A2PIIS3

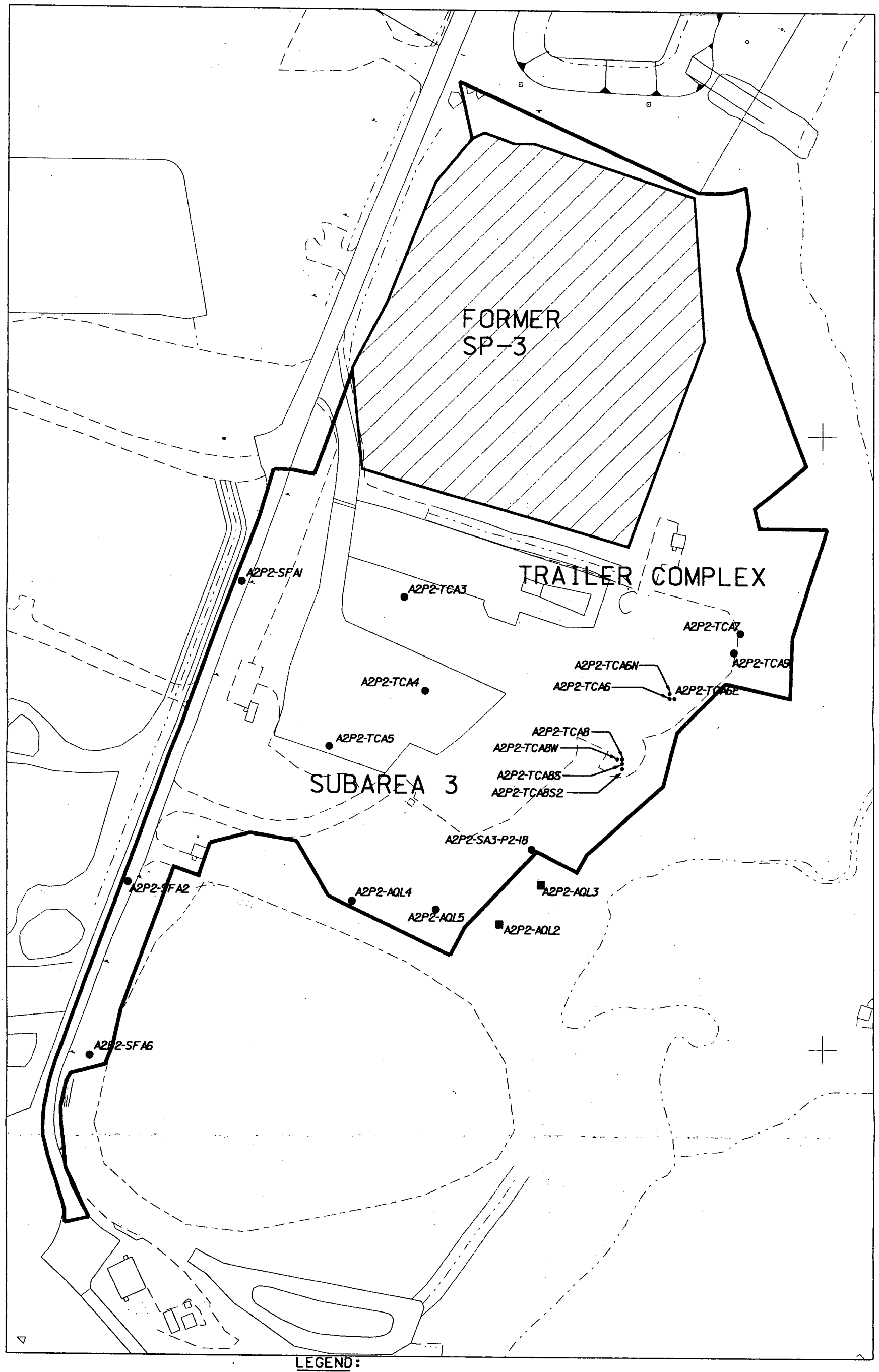
Primary COCs	FRL	Secondary COCs	FRL
Total Uranium	82.0 mg/kg	Arsenic	12.0 mg/kg
Radium-226	1.7 pCi/g	Beryllium	1.5 mg/kg
Radium-228	1.8 pCi/g	Lead	400.0 mg/kg
Thorium-228	1.7 pCi/g	Benzo(a)pyrene	2.0 mg/kg
Thorium-232	1.5 pCi/g	Dibenzo(a,h)anthracene	2.0 mg/kg
		Bromodichloromethane	4.0 mg/kg
		1,1-Dichloroethene	0.41 mg/kg
		Technetium-99	30.0 pCi/g
		Aroclor-1254	0.13 mg/kg
		Aroclor-1260	0.13 mg/kg
		Dieldrin	1.015 mg/kg
		Cesium-137	1.4 pCi/g
		Thorium-230	280 pCi/g

TABLE 2-2
ASCOCs THAT DRIVE EXCAVATION IN THE TCA AND AQL

Primary COCs	FRL	Secondary COCs	FRL
Total Uranium	82.0 mg/kg	None	
Radium-226	1.7 pCi/g		

TABLE 2-3
ABOVE-FRL AREAS AND COCs FOR TCA AND AQL

Above-FRL Area	Location	Contaminant Driving Excavation	Depth Interval
1	Northeastern portion of TCA	Radium-226	Elevation 571 throughout
2	Southeastern portion of AQL	Total Uranium	0.5' to 1.0' below native soil



LEGEND:

● SAMPLE LOCATION

■ POINTS MOVED TO SSOD IRDP

SCALE

100 50 0 100 FEET

DRAFT

FIGURE 2-1. BOUNDARIES AND SAMPLE LOCATIONS FOR TCA/AQL

STATE PLANAR COORDINATE SYSTEM 1983

18-MAY-2005

v:\82fm12\dgn\A2P2_426.DGN

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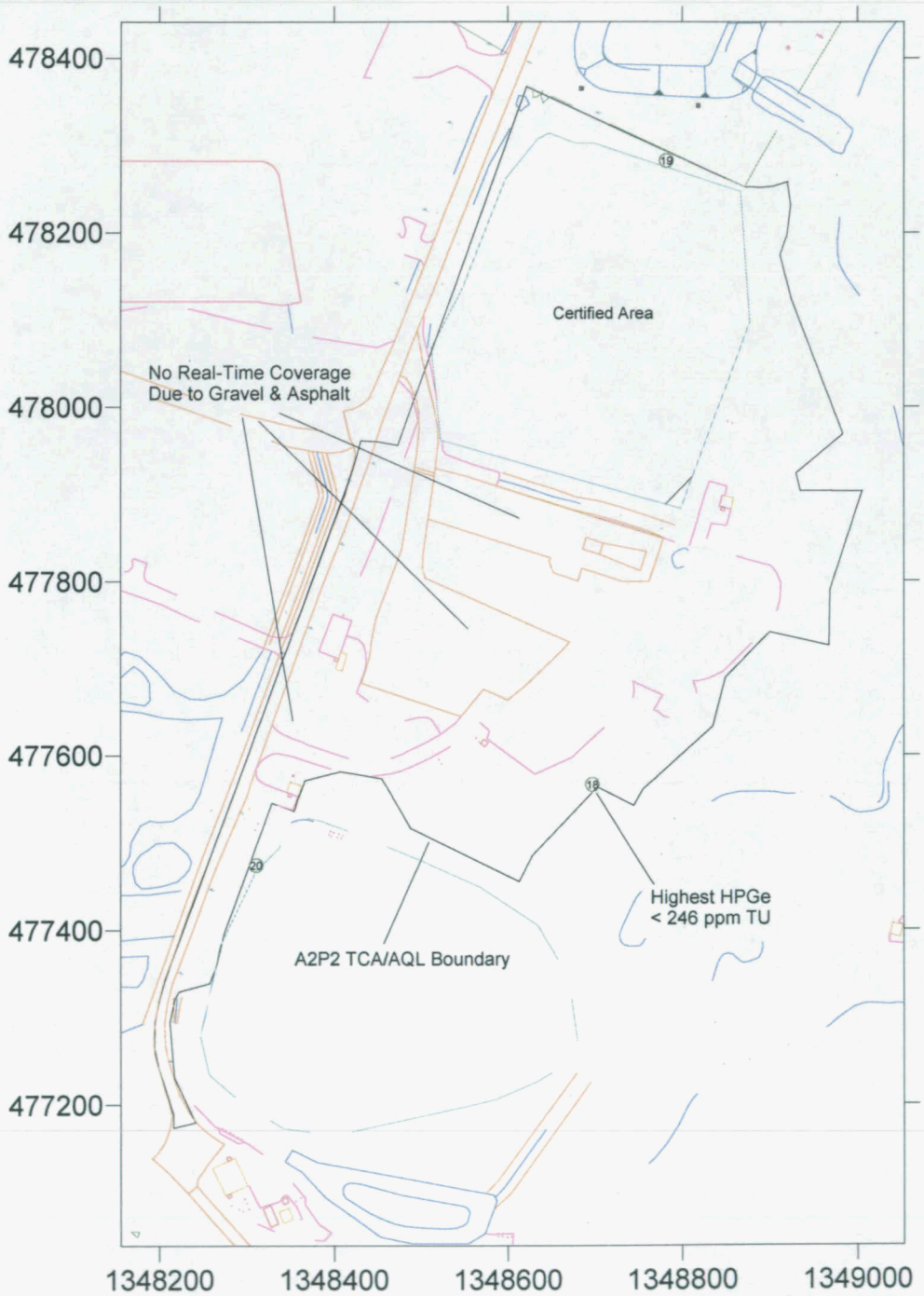
Figure 2-2

Area 2/Phase 2, Subarea 3, TCA/AQL Area Phase 2 Surface Measurements

Moisture Corrected Total Uranium
Field of View to Scale
HPGe Det. #: 40227
Measurement Dates: 11-23-2004 and 12-01-2004



HPGe @ 31 cm
Total U (ppm)
- 0 to 246
- 246 to 928
- 928 to 9999

RTIMP DWG Title: A2P2_SA3_TCA_P2_TU.srf
Project Name: Gen Char for Site Soil Remediation
Project #: 20300-PSP-0011
Verified By: M. Frank
Date Verified: 05-18-2005
Support Data: A2P2_SA3_TCA_SF_HPGe_31cm.xls

3.0 REMEDIAL ACTION APPROACH

This section describes the technical approach to the remedial action for Addendum No. 2, A2PII - Subarea 3 (Infrastructure) Trailer Complex and the Aquifer Project Laydown Areas. The remedial action approach discussed in this addendum follows the general guidance provided in Sections 3.0 and 4.0 and Appendix F of the SEP.

3.1 SITE PREPARATION

Site preparation activities associated with remediation include site boundaries and controls, surveying and site layout, and surface water management. Additional details are provided in the following text and in the referenced construction drawings and technical specifications (see Appendix A).

3.1.1 Site Boundaries and Controls

Construction safety fence will be installed around the perimeter of the work area. Fencing will not be installed over the roadway. Instead, rope gates will be strung over the roadway.

3.1.2 Surveying and Site Layout

The excavation area will be surveyed and staked to determine the limit of site work including limits of excavation, and surface water control. After remedial excavation, the area will be surveyed to determine final excavated volumes and to allow as-built drawings to be prepared.

3.1.3 Surface Water Management

Surface water will be collected within impacted soil excavations and the excavation to remove the below-grade structures at TS-8. Since the Storm Water Retention Basin is located approximately 700 feet north of the work area, water collected within these excavations will either be pumped to the Storm Water Retention Basin for subsequent Converted Advanced Waste Water Treatment Facility treatment or left in the excavation. Silt fence will be installed downgrade of areas where surface features (pads, pavement, gravel) are to be removed.

3.1.4 Utility Isolation and Removal

The majority of underground utilities located within the remediation area are needed to support the long term treatment of ground water or to support facilities that are used to treat groundwater. This includes pipelines to transport extracted groundwater for treatment, treated groundwater for injection, and gas and water lines. The only utilities within the remediation area to be removed are a few underground abandoned water lines in the vicinity of the trailer complex and one effluent line (FT 2"/4" HDPE Containment Pipe and East Pumping Station) located on the western side of the South Gravel Construction Road (see drawings 93X-5500-G-02025, 99X-5500-G-00885, and 99X-5500-G-00886). Due to the limited number

of utilities in this area, reduced or minimal risk of unknown utilities, and remote excavation locations, the isolation of utilities through trenching is not necessary for excavation. Physical isolation of each utility to be removed will be verified before the utility is removed. There are a number of overhead power and communication lines within and near the work area/haul route. Safe work practices will be used when working near overhead utilities. Penetration permits will be completed prior to any excavation.

3.2 SOIL EXCAVATION AND IMPACTED MATERIAL REMOVAL

The reinforced concrete foundations to TS-8, east pump station, and concrete pads will be broken, size reduced, loaded and hauled to the OSDF for placement. Likewise, impacted soil, asphalt pavement and subgrade gravel, gravel on the surface, and underground utilities will be excavated for disposal in the OSDF. Real-time monitoring will be performed on newly exposed soil lying below gravel, asphalt, and concrete surfaces. Real-time monitoring is required to identify above-WAC zones prior to general excavation operations; although, no above-WAC materials are anticipated under this scope of work. If above-WAC material is discovered within the excavation area, it will be excavated and hauled to an assigned above-WAC stockpile area for subsequent shipment to an off-site permitted disposal facility. Soil excavated to remove below-grade structures will be disposed as impacted material in the OSDF. A water truck will be used to support dust control during loading and excavation.

Due to the close proximity of the remediation area to the location of the former Active Flyash Pile (previously remediated under OU2 ROD), there is a possibility that unknown flyash may be exposed during soil excavation. If flyash is discovered, the excavation will be extended to chase flyash until either flyash can no longer be seen or the excavation encroaches upon utilities/infrastructure required to support post-closure treatment of groundwater; hence, the utilities to remain active as described in Section 3.1.4.

3.3 PRECERTIFICATION/CERTIFICATION

After removal of at-and below-grade debris and impacted soil, precertification and real-time monitoring will be performed. A Certification Design Letter and Certification PSP for the Trailer Complex and Aquifer Project Laydown Areas will be submitted at a future date, where certification samples will be collected for chemical and radiological analysis from the excavation.

After the certification samples have been taken and real-time monitoring confirms that no more soil needs to be removed, deeper excavations within the excavation area will be backfilled.

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APPENDIX A

LIST OF TECHNICAL SPECIFICATIONS AND DRAWINGS

APPENDIX A
LIST OF TECHNICAL SPECIFICATIONS AND DRAWINGS

Drawings

Drawing Number	Sheet	Title
99X-5500-G-00885	G-1	Trailer Complex/Aquifer Laydown Areas Excavation Plan (North)
99X-5500-G-00886	G-2	Trailer Complex/Aquifer Laydown Areas Excavation Plan (South)

Technical Specifications for SDFP Excavation for Remediation, Document 20300-TS-0001

Section	Title
02150	Traffic Control
02205	Impacted Material Excavation
02206	Earthwork for Remediation
02207	Area Isolation Trenching
02275	Surface Water Management and Erosion Control for Remediation

Specifications Referenced from OSDF Design:
OSDF Technical Specifications, Document 20104-TS-0002

Section	Title
02100	Surveying
02200	Earthwork
02215	Trenching and Backfilling
02230	Road Construction
02270	Surface Water Management and Erosion Control
02714	Geotextiles
02930	Vegetation

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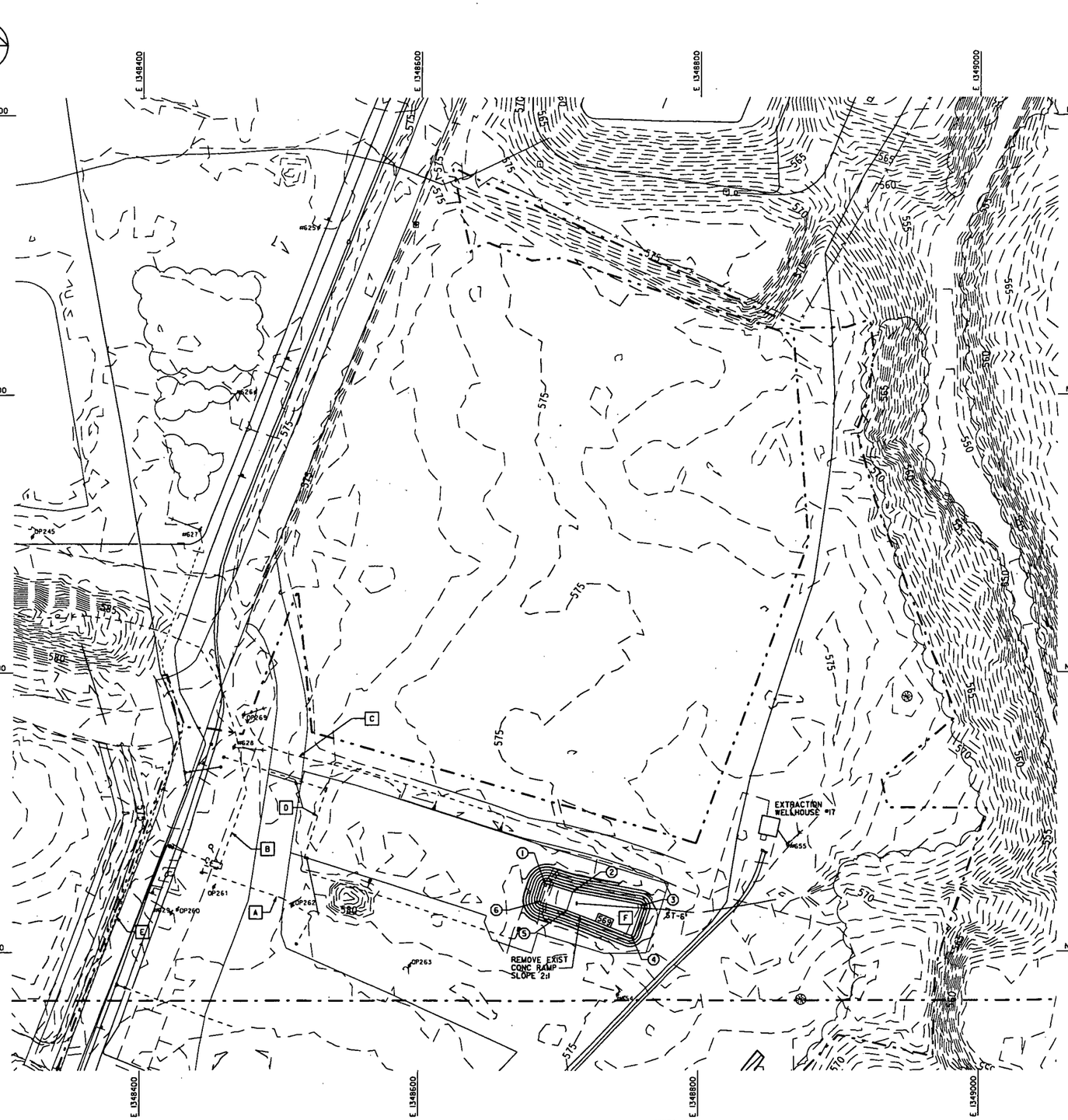


GRADING CONTROL POINTS			
PT. NO.	NORTHING	EASTING	ELEV
1	477849.1	1348690.6	569.0
2	477843.3	1348709.9	569.0
3	477833.1	1348758.4	569.0
4	477812.1	1348751.5	569.0
5	477830.1	1348705.8	569.0
6	477836.9	1348686.6	569.0

UTILITY GRID DRAWINGS

DRAWING NO.	TITLE
22A-5500-P-00689	GRID 30 UNDERGROUND UTILITIES
93X-5900-G-00341	EXISTING SITE AND UNDERGROUND PLAN GRID 68
93X-5500-G-02025	GRID 68 UNDERGROUND UTILITIES DETAIL

TECHNICAL REFERENCE DRAWINGS

DRAWING NO.	TITLE
17X-5500-G-00072	TS-8 IMPROVEMENTS CIVIL LAYOUT PLAN & DETAILS
17X-5500-G-00079	TS-8 IMPROVEMENTS LOADING DOCK PLAN
17X-5500-G-00080	TS-8 IMPROVEMENTS LOADING DOCK DETAILS
92X-5900-G-00134	CIVIL SITE DETAILS PUMP STATIONS

SCALE: 1"=30'

0 15 30 75 150

SCALE IN FEET

FCPSAE.DGN 5/30/03

GENERAL NOTES

1. GOVERNING THESE ACTIVITIES ARE THE LATEST REVISIONS OF TECHNICAL SPECIFICATIONS FOR SOIL AND DISPOSAL FACILITY PROJECT EXCAVATION FOR REMEDIATION (20300-TS-0001), AS WELL AS TECHNICAL SPECIFICATIONS FOR ON-SITE DISPOSAL FACILITY (PHASE V)(20105-TS-0001) REFERENCED THEREIN. TECHNICAL SPECIFICATION REFERENCED ARE APPLICABLE WHERE PERTINENT TO REMEDIAL ACTIVITY SCOPE SHOWN ON CONSTRUCTION DRAWING.
2. DO NOT REMOVE BELOW GRADE UTILITIES UNLESS SPECIFICALLY DESIGNATED FOR REMOVAL ON THIS DRAWING.
3. THE LOCATIONS OF EXISTING STRUCTURES AND UTILITIES ARE APPROXIMATE. IF UNIDENTIFIED UTILITIES ARE DISCOVERED, PROCEED AS DIRECTED BY THE CONSTRUCTION MANAGER.
4. IF FLYASH IS DISCOVERED, THE EXCAVATION WILL BE EXTENDED TO CHASE FLYASH UNTIL EITHER FLYASH CAN NO LONGER BE SEEN OR EXCAVATION ENCROACHES UPON UTILITIES/INFASTRUCTURE REQUIRED TO SUPPORT POST-CLOSURE TREATMENT OF GROUNDWATER.
5. WATER COLLECTED WITHIN EXCAVATIONS WILL EITHER BE PUMPED TO SWRB OR LEFT IN EXCAVATION. SILT FENCE WILL BE INSTALLED DOWNGRADE OF AREAS WHERE SURFACE FEATURES (PADS, PAVEMENT, GRAVEL) ARE TO BE REMOVED.
6. SEED AFFECTED AREAS USING TEMPORARY SEED MIX PER OSDF TECHNICAL SPECIFICATION SECTION 02930.
7. FOR UNDERGROUND UTILITIES INCLUSIVE OF THIS DRAWING, SEE DRAWINGS 22A-5500-P-00689 AND 93X-5900-G-00341.
8. PROTECT UTILITY POLES AND ABOVE GRADE ELECTRICAL LINES WITHIN REMEDIATION AREA.
9. PROTECT EXTRACTION WELLHOUSE #17.

KEYED NOTES

- A — REMOVE BELOW GRADE AIP POTABLE WATER LINE (DW-1") VERIFY PHYSICAL ISOLATION PRIOR TO REMOVAL.
- B — REMOVE BELOW GRADE AIP POTABLE WATER LINE (DW-2") VERIFY PHYSICAL ISOLATION PRIOR TO REMOVAL.
- C — REMOVE BELOW GRADE AIP ELECTRIC (1½" C). VERIFY PHYSICAL ISOLATION PRIOR TO REMOVAL.
- D — REMOVE OUT OF SERVICE BELOW GRADE FUEL GAS LINES (FG-3" AND FG-2"). PHYSICAL ISOLATION PRIOR TO REMOVAL.
- E — REMOVE BELOW GRADE AIP FT-2"/4" HDPE CONTAINMENT PIPE.
- F — REMOVE TS-8 FOUNDATIONS AND ST-6" DRAIN TILE. (SEE DRAWINGS 17X-5500-G-00072, 17X-5500-G-00079, AND 17X-5500-G-00080 FOR DETAILS).

PRELIMINARY
NOT FOR CONSTRUCTION

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
A	ISSUED FOR AGENCY REVIEW	5/18/05		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD CLOSURE PROJECT

THIS DRAWING PREPARED BY

FLUOR FERNALD, INC.

PROJECT NAME
SOIL REMEDIATION

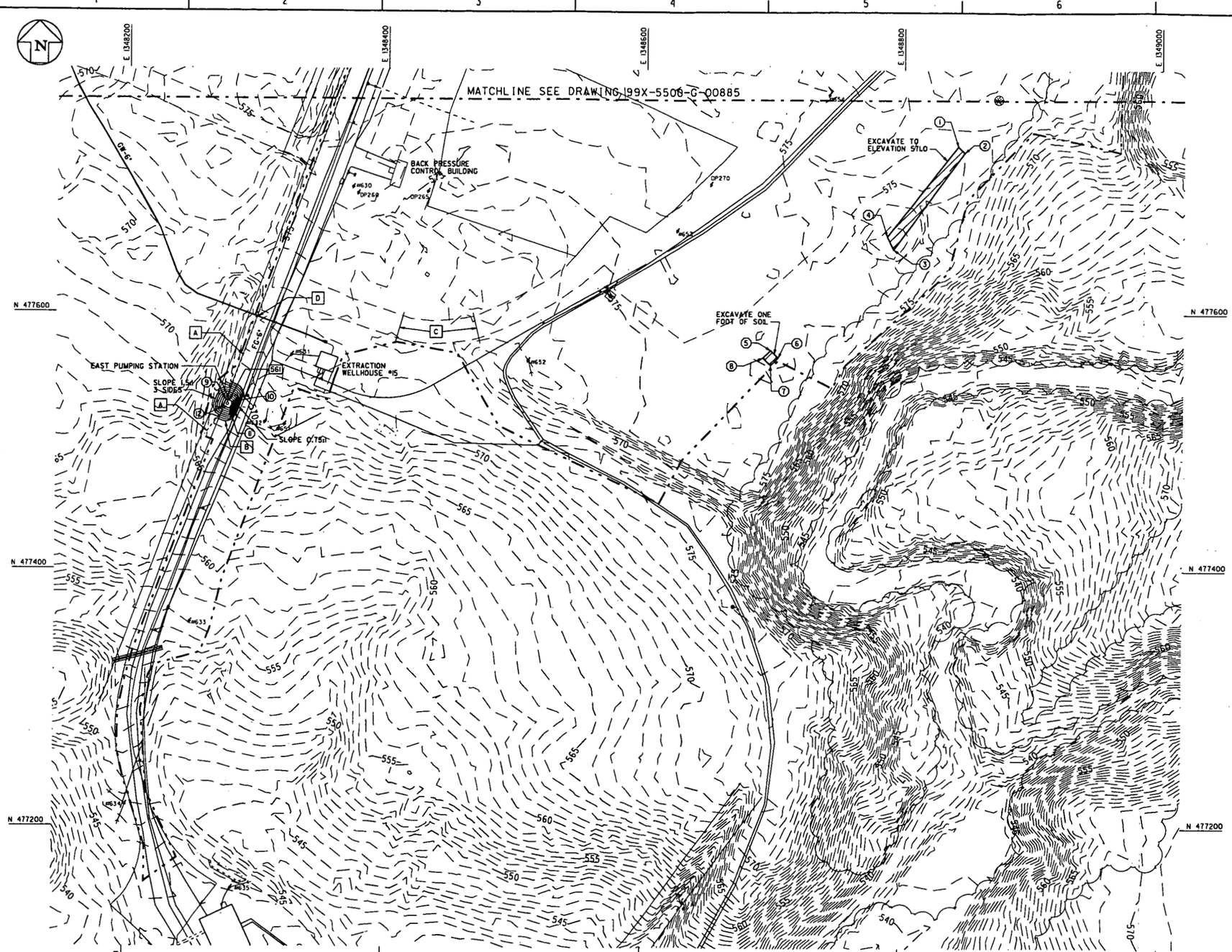
DRAWING TITLE
TRAILER COMPLEX/AQUIFER LAYDOWN AREAS
EXCAVATION PLAN (NORTH)

APPROVALS

COGNIZANT ENG.		SAFETY ENG.	
CIVIL & STR.		MAINTENANCE	
ELECTRICAL		FIRE PROTECT.	
ENGINEER		WASTE MANAGE	
INSTRUMENT		SECURITY	
MECHANICAL		QA	
		CONSTRUCTION	
CHECKED		CHARACTERIZATION	
APPROVED			

DRAWN BY	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
R.M. LINDGREN	20370	99X-5500-G-00885	G-1	A
RES PROJECT NO.	FILENAME 5500astro.dgn			

99xg0886 OSDF3 lind8392 05/18/2005 10:48:42 AM



AREA BOUNDARIES FOR SOIL REMOVAL			
PT. NO.	NORTHING	EASTING	ELEV
1	477730.0	1348842.0	571.0
2	477725.2	1348847.0	571.0
3	477650.2	1348792.0	571.0
4	477660.3	1348787.0	571.0
5	477571.8	1348698.0	574.0
6	477566.0	1348703.8	574.0
7	477560.2	1348698.0	574.0
8	477566.0	1348692.2	574.0
9	477531.7	1348276.1	561.0
10	477529.7	1348281.5	561.0
11	477524.4	1348279.5	561.0
12	477526.4	1348274.1	561.0

SCALE: 1"=30'

0 15 30 75 150

SCALE IN FEET

GENERAL NOTES

1. FOR CONSTRUCTION NOTES. SEE DRAWING 99X-5500-G-00855.
2. VERIFY THE LOCATION AND DEPTH OF THE 6 INCH FUEL GAS LINE (FG-6") PRIOR TO REMOVING EAST PUMP STATION. PROTECT FG-6" LINE.
3. DO NOT REMOVE BELOW GRADE UTILITIES UNLESS SPECIFICALLY DESIGNATED FOR REMOVAL ON THIS DRAWING.
4. FOR UNDERGROUND UTILITIES INCLUSIVE OF THIS DRAWING. SEE DRAWINGS 93X-5900-G-00341 AND 93X-5900-G-02025.
5. PROTECT EXTRACTION WELLHOUSE #17 AND BACK PRESSURE CONTROL BUILDING.

KEYED NOTES

- A — REMOVE BELOW GRADE AIP 2"/4" HDPE CONTAINMENT PIPE AND ST-4" HDPE OVERFLOW LINE.
- B — REMOVE EAST PUMPING STATION (SEE DRAWING 92X-5900-G-00134 FOR DETAILS). DUE TO EXCAVATION SLOPE REQUIRED TO PROTECT FG-6" LINE. DO NOT PLACE PERSONNEL IN EXCAVATION.
- C — REMOVE TWO 12" CMP CULVERT PIPES.
- D — PROTECT GW-6" HDPE LINE.

PRELIMINARY
NOT FOR CONSTRUCTION

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
A	ISSUED FOR AGENCY REVIEW	5/18/05		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD CLOSURE PROJECT

THIS DRAWING PREPARED BY
FLUOR FERNALD, INC.

PROJECT NAME
SOIL REMEDIATION

DRAWING TITLE
TRAILER COMPLEX/AQUIFER LAYDOWN AREAS
EXCAVATION PLAN (SOUTH)

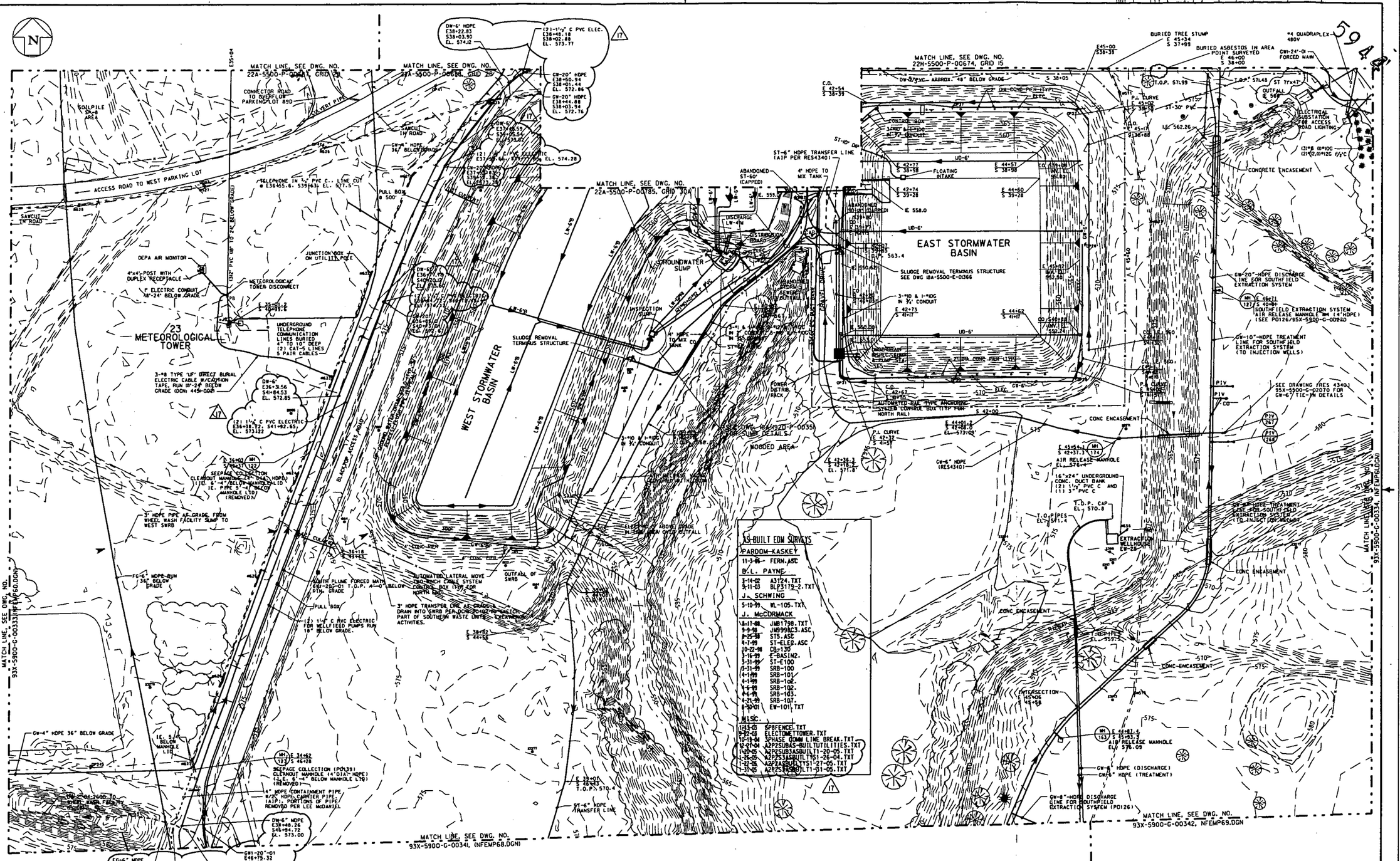
APPROVALS

COGNIZANT ENG.		SAFETY ENG.	
CIVIL & STR.		MAINTENANCE	
ELECTRICAL		FIRE PROTECT.	
ENGINEER		WASTE MANAGE	
INSTRUMENT		SECURITY	
MECHANICAL		QA	
		CONSTRUCTION	
CHECKED		CHARACTERIZATION	
APPROVED			

DRAWN BY	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
R.J.L. LINDGREN	20620	99X-5500-G-00886	G-2	A
RES PROJECT NO.	FILENAME 5500ex170.dgn			

FCP5AE.DGN 5/30/03

22ap0689 OSDF3 lind8392 05/18/2005 10:52:20 AM



NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					16	ADDED COMM. LINE BREAK TO T-557 PER E. HARMAN SURVEY	8-29-01	GEP	GEP	
						3 PHASE COMM. LINE BREAK.TXT				
					15	AS-BUILT PER RES 4340 AND B.L. PAYNE SURVEY BLP3179-2.TXT	4-8-01	GEP	GEP	
					14	AS-BUILT PER WORK COMPLETED DCN: 445I-002 AND MAG.	1-3-01	GEP	GEP	
	-					SURVEY 'ELECTOMETTOWER.TXT 9/22/03'				
17	ADD AS-BUILT SURVEYS BY E. HARMAN DATED	7-4-5	GEP	GEP	13	AJP, FT-2"/4" HDPE AND EAST/WEST SEEPAGE COLLECTION	1-3-01	RML	GEP	
	12/17/04, 1/26/05 & 1/31/05, GENERAL REV.					SYSTEMS PER LEE McDANIEL, GENERAL UPDATE				22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0°-30'
DECIMALS
.1 ± .5
.03 ± .025
.005 ± .0025
.0005 ± .0005
FINAL RELEASE DATE

APPROVALS					
CIVIL & STR.				SAFETY ENG.	
ELECTRICAL				MAINTENANCE	
ENGINEER				O.A.	
INSTRUMENT					
MECHANICAL				FMC PROJECT	
				WASTE MANAGE	
CHECKED	GEP			O.O.E.	
APPROVED	EZ. PAR		5/25/05	SECURITY	

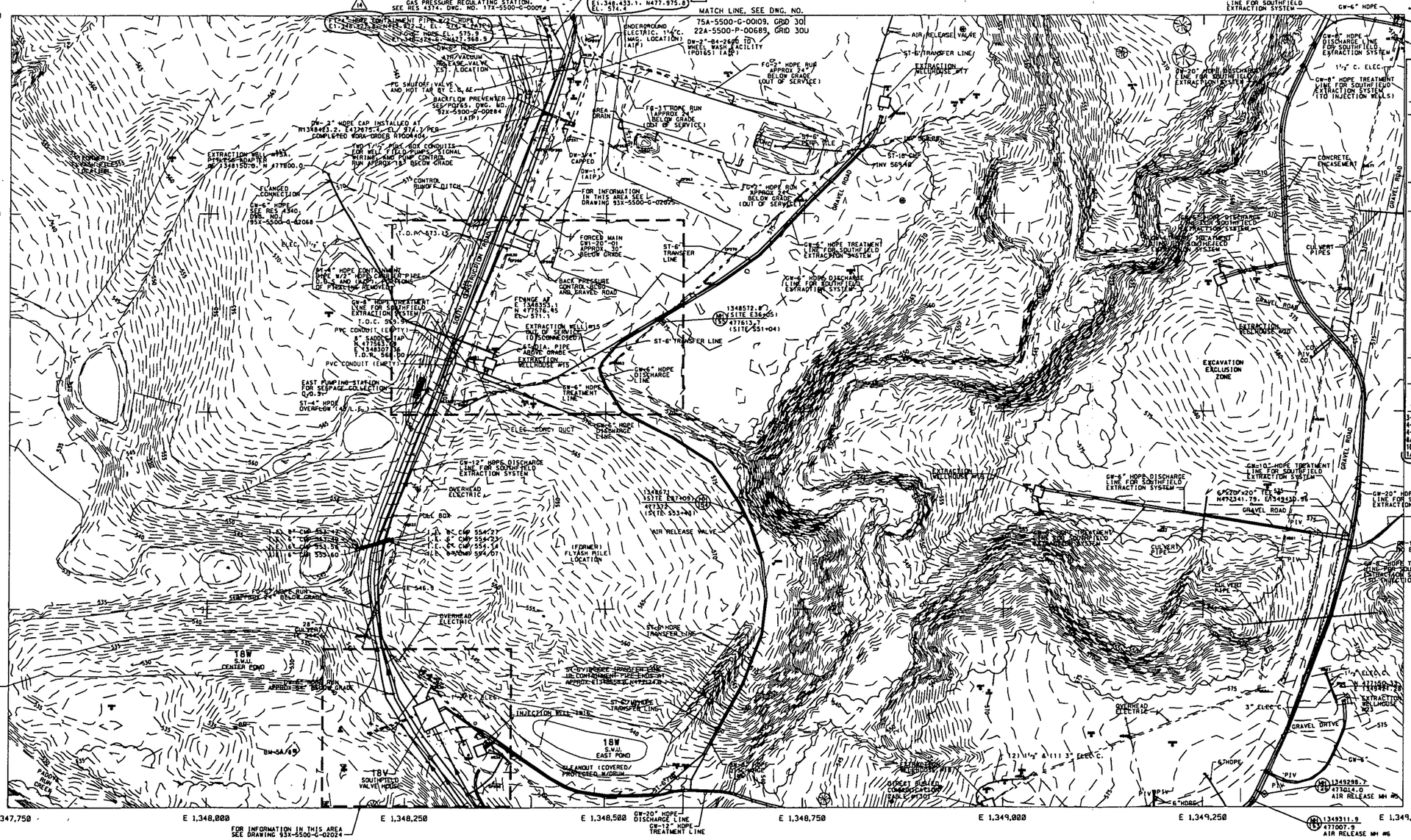
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

STORMWATER BASINS — YARD AREA
GRID 30
UNDERGROUND UTILITIES
SCALE 1"=40'
DATE 7/28/98
DRAWN M.E. TILLMAN
22A-5500-P-00689 | 17

FILE NAME: /UNDER/22AP0689.DGN

nfemp68 OSDF3 lind8392 05/18/2005 10:54:55 AM

5944



SHEET INDEX

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
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			108	109	110	111	
			112	113	114	115	
			116	117	118	119	

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°

LEGEND

HYDRANT	UNKNOWN UTILITY	FENCE
MANHOLE	VALVE BOX	RAILROAD
CATCH BASIN	BUILDING	TREE LINE
AIR MONITOR STATION (AMS)	HEADWALL	SHRUB LINE
2134 MONITORING WELL	SURVEY CONTROL POINT	GUARD RAIL
TRANSMISSION TOWER	GATE	RETAINING WALL
ELECTRICAL TRANSFORMER	GRID TICK	RIVER, STREAM
POST INDICATOR VALVE	PROPANE TANK	580 MAJOR CONTOUR
POWER POLE	SWAMP	MINOR CONTOUR
LIGHT POLE	RIPRAP AREA	580 MAJOR DEP CONTOUR
SIGN	PILE OUTLINE	MINOR DEP CONTOUR
POST	X 578.1 SPOT ELEVATION	PAVED ROADWAY
DECIDUOUS TREE	X 567.7 WATER ELEVATION	UNPAVED ROADWAY
CONIFEROUS TREE	575.8, 575.8 ROOF STACK OR VENT	ABOVEGROUND PIPE
SHRUB		FEMP BOUNDARY
DRAINAGE FLOW		OE OVERHEAD ELECTRIC

50 0 50 100 150

SCALE IN FEET
1 FOOT CONTOUR INTERVAL

DIGITAL MAPPING BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 04/09/92.

REFERENCE FILES
/usr1/amk/apgt/apgt0a000.001
/ou5/po126/95g00254.dgn (Southfield Ext. Sys.)
/ou5/po126/95g00253.dgn
/ou5/po126/95g01000.dgn
/ou5/po126/skg03728.dgn
/ou5/po126/as built transfer.dgn
/ou5/po126/95g00252.dgn
/ou5/po126/95g00265.dgn
/ou5/po126/95g00250.dgn
/ou5/po169/95g00305.dgn

PRELIMINARY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	OPERATOR INITIALS AND DATE	DOE INITIALS AND DATE
14	ADDED 1-13-05 SURVEY AND CALLOUTS, A.T.F. - TRAILER T-138 & TS-8 ELECT. ISOLATED PER W.O. TK013534 AND TK013691		GEP 2-2-05	

INDEX CODE				CAD FILE NAME
PLANT	DOC.	S	SUB NO	
75X	5900	G	00280	NFEMP68.DGN

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - CHAS. T. MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
PHOTOGRAMMETRIC MAPPING
OU3/P034

DRAWING TITLE
CIVIL
EXISTING SITE AND UTILITY PLAN
GRID 68

DRAWN BY	DATE	DESIGNED, CHECKED BY	DATE	CHECKED BY	DATE
B. FUGATE, R. BELL	18-12-92	S. SLIJEPCEVIC	12-15-92	M. DONOHOO	18-26-92

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1"=50'	

SUBMITTED FOR APPROVAL: SUKOMAL K. TALUKDER 12-18-92 (A-E DATE)
APPROVAL RECOMMENDED: OPERATING CONTRACTOR DATE
DRAWING APPROVED: DOE DATE

DOE PROJECT NO.	OPER. CONTR. PROJ. NO.	DRAWING NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.3.1.1 00-9070I	93X-5900-G-00341	G0068	14

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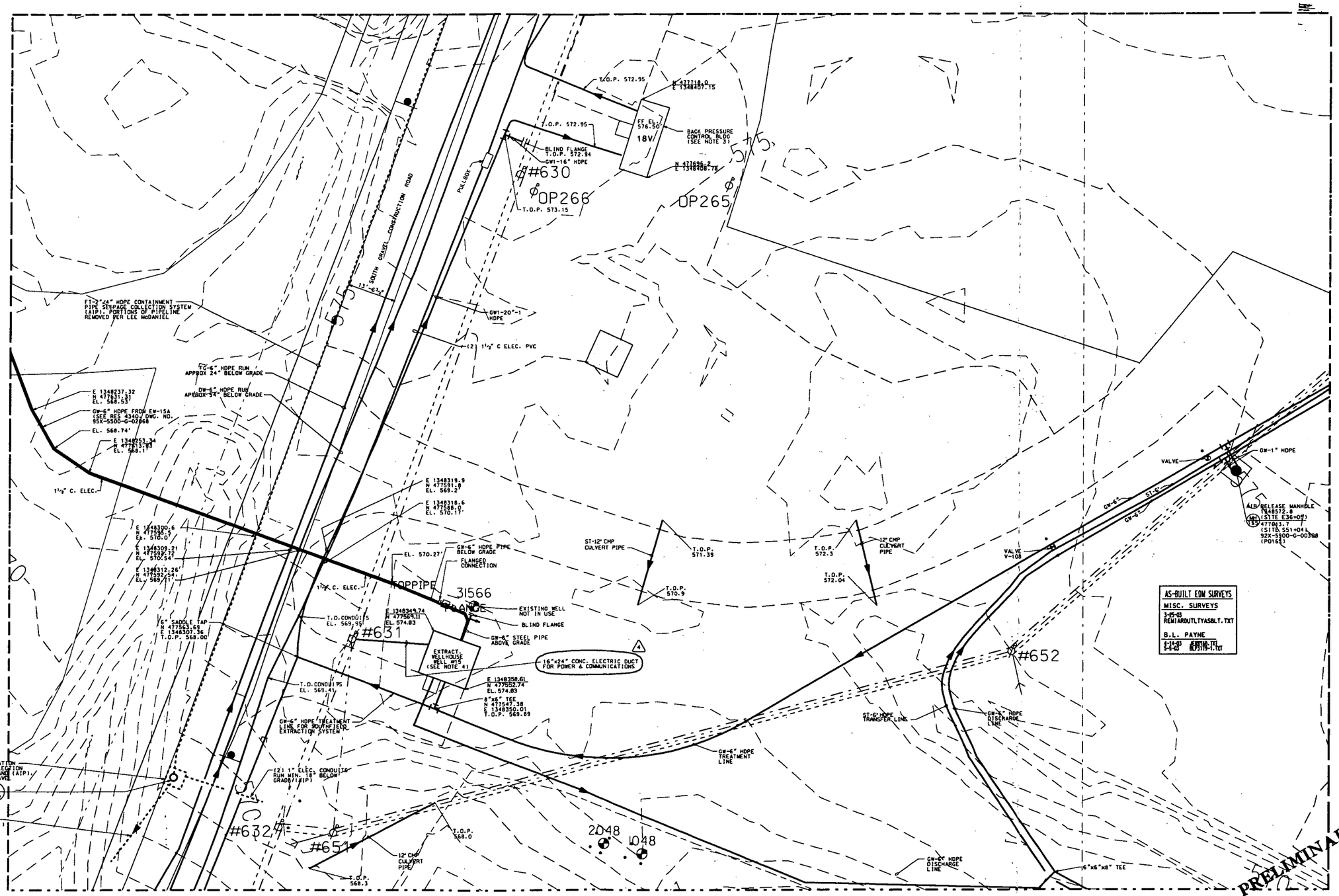
5944



PLAN DETAIL

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME IN THE DIRECTORY BELOW.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. FOR DETAILS ON BACK PRESSURE CONTROL BUILDING SEE DRAWING 93X-5900-A-00393.
4. FOR DETAILS ON EXTRACTION WELLHOUSE BUILDING SEE DRAWING 93X-5900-A-00224 & 93X-5900-G-00253.

FORMAT REVISED 2/3/94
FORMAT REVISED 2/15/96 FOF5.DGN

NO.	REVISIONS	DATE	DWN. BY	APPD.
4	ADDED ELECTRIC DUCT CALLOUT FOR EW-15	2-28-95	GEP	
3	ADDED CONDUIT TO EW-15A PER RES 4340	4-5-94	GEP	GEP
2	A.I.P. EAST SEEPAGE COLLECTION SYSTEM PER LEE McDANIEL.	7-5-93	GEP	GEP
	GENERAL UPDATE. ADDED GW-6' FOR EW-15A & SURVEY TABLE			
1	REMOVED ST-8" & REALIGN DITCH RIP-RAP	3-25-93	RML	GEP
0	ISSUED FOR REFERENCE TO DWG. 93X-5900-G-00341	1-8-93	GES	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					95X-5500-G-02068
					95X-5900-G-00219
					93X-5900-G-00341

NOTE: FLUOR DANIEL FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING
EXISTING ATTACHED SET OF COMPONENTS CONFIRMED AS ACCURATE AS PER CONTROL DRAWINGS. EXCEPTIONS SEE NOTES.
COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.				SAFETY ENG.	
ELECTRICAL				MAINTENANCE	
ENGINEER				FIRE PROTECT.	
INSTRUMENT				WASTE MANAGE	
MECHANICAL				SECURITY	
				PROJECTS	
CHECKED	GEP				
APPROVED	G.E. PAUL	1/20/99			

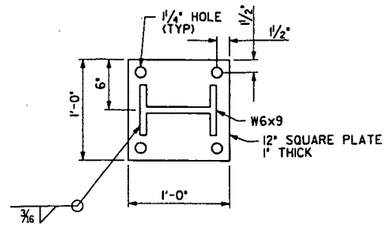
Fernald Environmental Management Project
FLUOR DANIEL FERNALD
U.S. DEPARTMENT OF ENERGY

SOUTH FIELD AREA — NFEMP68
GRID 68
UNDERGROUND UTILITIES DETAIL
SCALE: 1"=10'

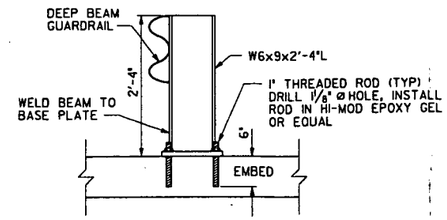
DATE 10-29-98
DRAWN G. SCHWARZMAN
93X-5500-G-02025 | 4

FILE NAME: /nfemp/nfemp68b.dgn

5944



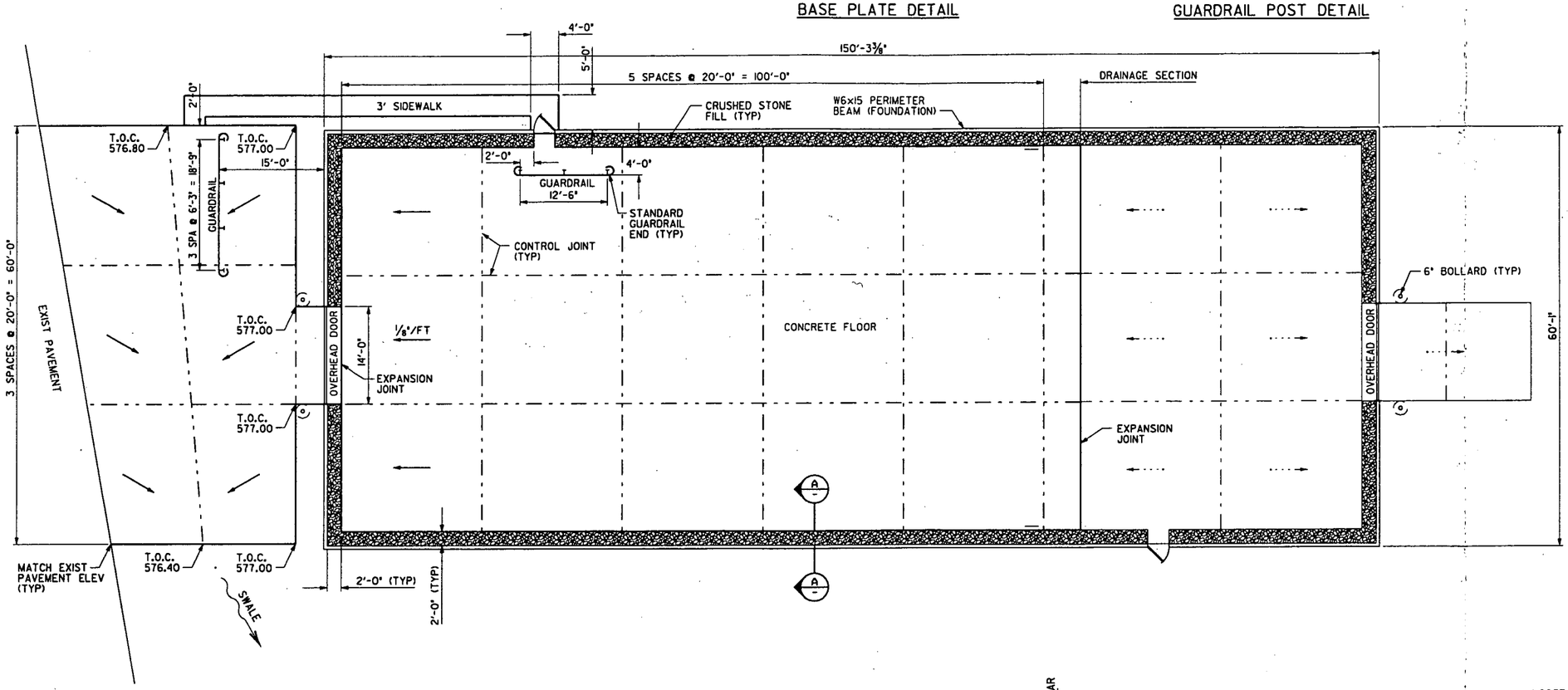
BASE PLATE DETAIL

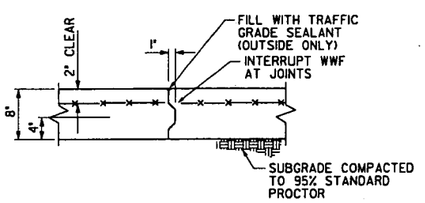


GUARDRAIL POST DETAIL

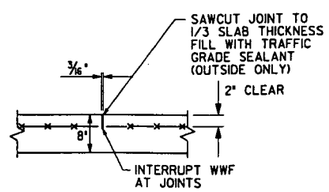
CONSTRUCTION NOTES

1. TOP OF CONCRETE TO MATCH TOP OF W6X15 PERIMETER BEAM UNLESS NOTED OTHERWISE.
2. CONCRETE TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE AIR ENTRAINED.
3. GRANULAR BASE MATERIAL TO ODOT ITEM 304.
4. SAW CUT CONTROL JOINTS TO ONE THIRD OF SLAB THICKNESS OR INSTALL CONSTRUCTION JOINTS AS NEEDED. MAXIMUM JOINT SPACING TO BE 20'-0".
5. WELDED WIRE FABRIC TO MEET ASTM A185, UNCOATED. PROVIDE FLAT SHEETS, NOT ROLLS.
6. DOWELS TO BE SMOOTH ROUND BARS MEETING ASTM A36. AT EXPANSION JOINTS, DOWELS SHALL BE GREASED AT ONE END OF BAR.
7. ~~6' CHAIN LINK FENCE SHALL REMAIN IN PLACE UNTIL JUST PRIOR TO THE DRAINAGE SECTION CONCRETE PLACEMENT.~~
8. ALL GUARDRAIL AND GUARDRAIL HARDWARE TO BE GALVANIZED.
9. PROVIDE AS-BUILT SURVEY WHEN COMPLETED.



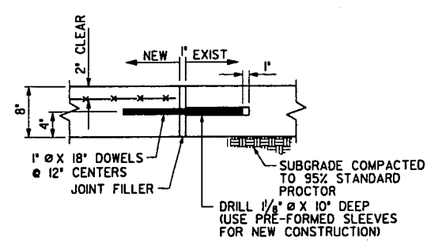


TYP CONSTRUCTION JOINT DETAIL



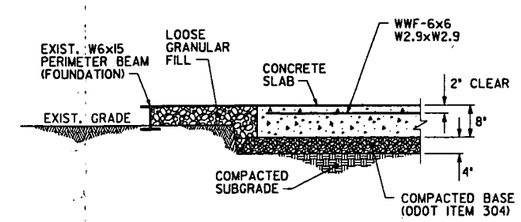
TYP CONTROL JOINT DETAIL

MAXIMUM SPACING SHALL BE 20'-0" OC



TYP EXPANSION JOINT DETAIL

DOWEL END IN EXIST CONCRETE TO RECEIVE GREASE OR OIL COATING



SECTION A
NTS

NO.	REVISIONS	DATE	DWN. BY	APPD.
2	REMOVED TENT CANOPY, NOT CONSTRUCTED	0/0/03	GEP	GEP
1	AS-BUILT PER WORK COMPLETED DCN 4374-002	1/3/03	GEP	GEP
	TO ADD 15'x40' TENT CANOPY			
0	ISSUED CFC	4/15/02	RML	GEP

REF. DWG. NO.

FF4.DGN 3/22/00

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — LEVEL X — SAFETY

SYSTEMS, STRUCTURES OR COMPONENTS REFLECTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

MICHAEL BORGMAN 4/16/02
COGNIZANT ENGINEER DATE

APPROVALS					
CIVIL & STR.	MICHAEL BORGMAN	4/16/02	SAFETY ENG.		
ELECTRICAL			MAINTENANCE		
ENGINEER			FIRE PROTECT.		
INSTRUMENT			WASTE MANAGE		
MECHANICAL			SECURITY		
			PROJECTS		
CHECKED	GEP				
APPROVED	G.E. PAUL	4/16/02			

Fernald Environmental Management Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

GRID NFEMP68 — RIMIA STORAGE AREA

TS-8 IMPROVEMENTS

CIVIL LAYOUT PLAN & DETAILS

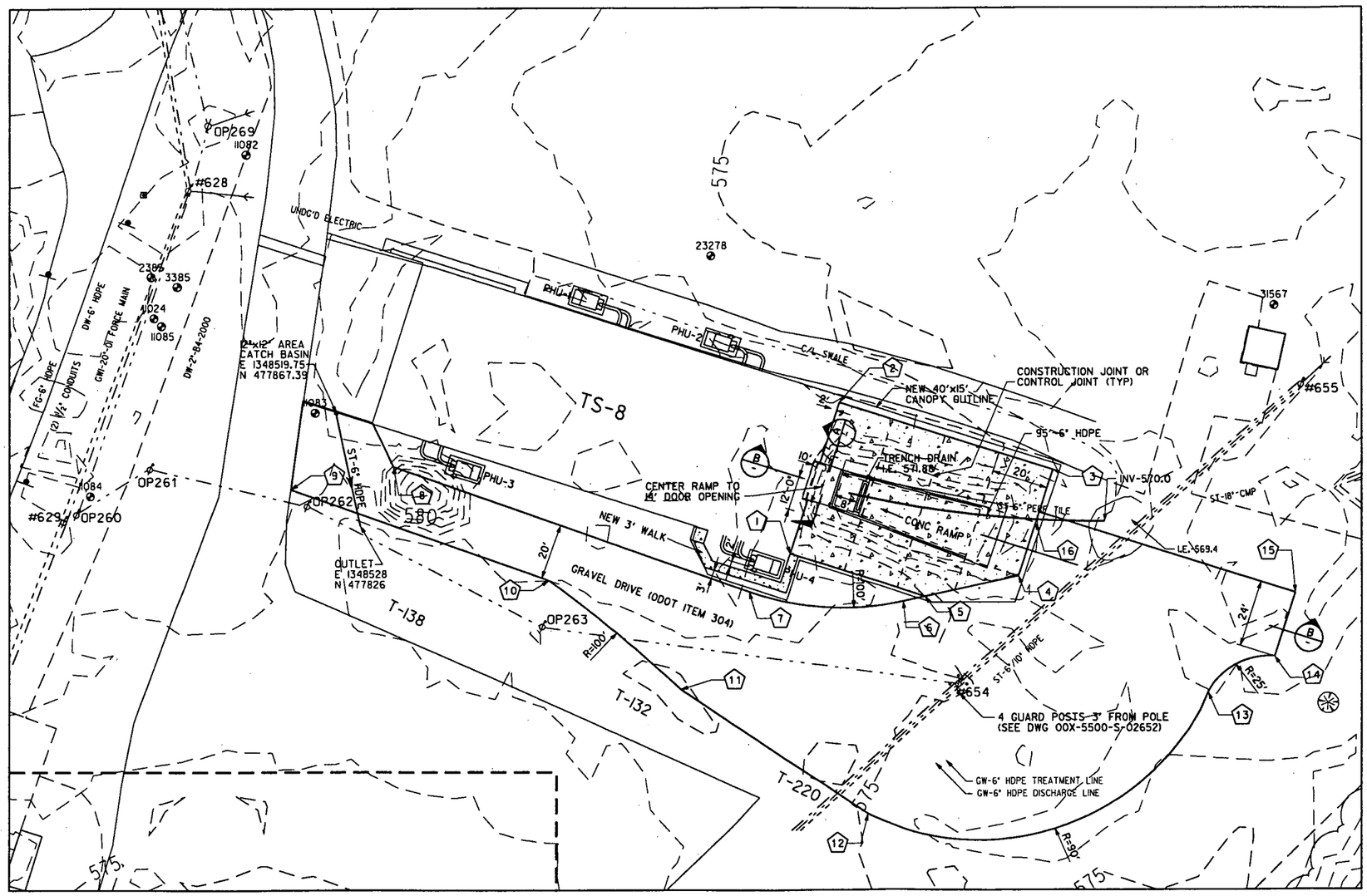
SCALE: ⅛" = 1'-0"

RES #4374
DATE 4/05/02
DRAWN R.M. LINDGREN

17X-5500-G-00072 | 2

FILE NAME: /res4374/17xg0072.dgn

17xg0072 CADD9 paul7461 05/13/2005 10:13:05 AM



CONSTRUCTION NOTES

1. SEE DRAWING 17X-5500-G-00080 FOR LOADING DOCK DETAILS AND DOCK CANOPY LOCATION.
2. CONCRETE TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE AIR ENTRAINED.
3. GRANULAR BASE MATERIAL TO ODOT ITEM 304.
4. SAW CUT CONTROL JOINTS TO ONE THIRD OF SLAB THICKNESS OR INSTALL CONSTRUCTION JOINTS AS NEEDED. MAXIMUM JOINT SPACING TO BE 20'-0".
5. WELDED WIRE FABRIC TO MEET ASTM A185, UNCOATED. PROVIDE FLAT SHEETS, NOT ROLLS.
6. DOWELS TO BE SMOOTH ROUND BARS MEETING ASTM A36. AT EXPANSION JOINTS, DOWELS SHALL BE GREASED AT ONE END OF BAR.
7. ALL GUARDRAIL AND GUARDRAIL HARDWARE TO BE GALVANIZED.
8. DOCK CANOPY: TENT STRUCTURE, 24'Wx15'L, HEIGHT AS REQUIRED TO COVER 14'x14' OVERHEAD DOOR IN LOCATION SHOWN, SIDE WALLS TO GROUND LEVEL. PROVIDE FULL END PANEL TO BE FASTENED ONTO OVERHEAD DOOR FRAME WITH METAL STRIPS AND SELF-DRILLING SCREWS. FIELD CUT OVERHEAD DOOR OPENING AFTER ATTACHMENT TO FRAME. TENT FRAME TO BE DESIGNED FOR ANCHORING TO CONCRETE SLAB. DESIGN STRUCTURE TO MEET OHIO BUILDING CODE REQUIREMENTS. TENT FABRIC TO BE 25 OZ. PVC FABRIC WITH POLYESTER SCRIM, SOLID WHITE COLOR, FLAME RETARDANT WITH LACQUERED WEATHER RESISTANT COATING. 'BIG TOP PORTABLE FABRIC STRUCTURES' OR EQUAL.
9. PROVIDE AS-BUILT SURVEY WHEN COMPLETED.

LOCATIONS OF IMPROVEMENTS

PT	NORTH	EAST	DESCRIPTION
1	N 477816.5	E 1348681.7	COR CONC
2	N 477870.8	E 1348698.9	COR CONC
3	N 477846.6	E 1348775.2	COR CONC
4	N 477808.5	E 1348763.1	COR CONC
5	N 477801.2	E 1348729.9	COR CONC
6	N 477799.5	E 1348722.0	PC GRAVEL
7	N 477802.9	E 1348667.2	PT GRAVEL
8	N 477847.9	E 1348540.3	COR GRAVEL
9	N 477839.7	E 1348503.5	GRAVEL @ ROAD
10	N 477807.0	E 1348595.7	PT GRAVEL
11	N 477768.0	E 1348643.0	PC GRAVEL
12	N 477723.5	E 1348709.2	PT GRAVEL
13	N 477766.8	E 1348830.5	PRC GRAVEL
14	N 477779.5	E 1348854.3	PC/COR GRAVEL
15	N 477802.4	E 1348861.6	COR GRAVEL
16	N 477827.5	E 1348769.1	INT GRAVEL/CONC

NO.	REVISIONS	DATE	DWN. BY	APPD.
1	AS-BUILT PER DCN 4374-002 AND RED-LINES	8-3-03	GES	GEP
0	ISSUED CFC	7/10/02	RML	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
1	AS-BUILT PER DCN 4374-002 AND RED-LINES	8-3-03	GES	GEP	00X-5500-S-02652
0	ISSUED CFC	7/10/02	RML	GEP	17X-5500-S-00080

FF4.DGN 3/22/00

NOTE:
FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING
SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.
M.J. BORCHAM 7/10/02
COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.	M.J. BORCHAM	7/10/02	SAFETY ENG.		
ELECTRICAL			MAINTENANCE		
ENGINEER			FIRE PROTECT.		
INSTRUMENT			WASTE MANAGE		
MECHANICAL			SECURITY		
			PROJECTS		
CHECKED	GEP				
APPROVED	G.E. PAUL	7/10/02			

Fernald Environmental Management Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

GRID NFEMP68 RIMIA STORAGE AREA

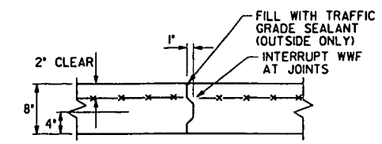
TS-8 IMPROVEMENTS
LOADING DOCK PLAN
SCALE: 1" = 20'

RES 4374
DATE 6/20/02
DRAWN R.M. LINDGREN

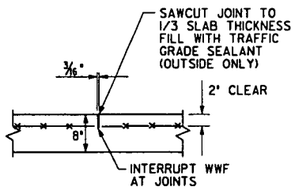
17X-5500-G-00079 | 1

FILE NAME: /res4374/17xg0079.dgn

17xg0079 CADD9 paul7461 05/13/2005 10:14:15 AM

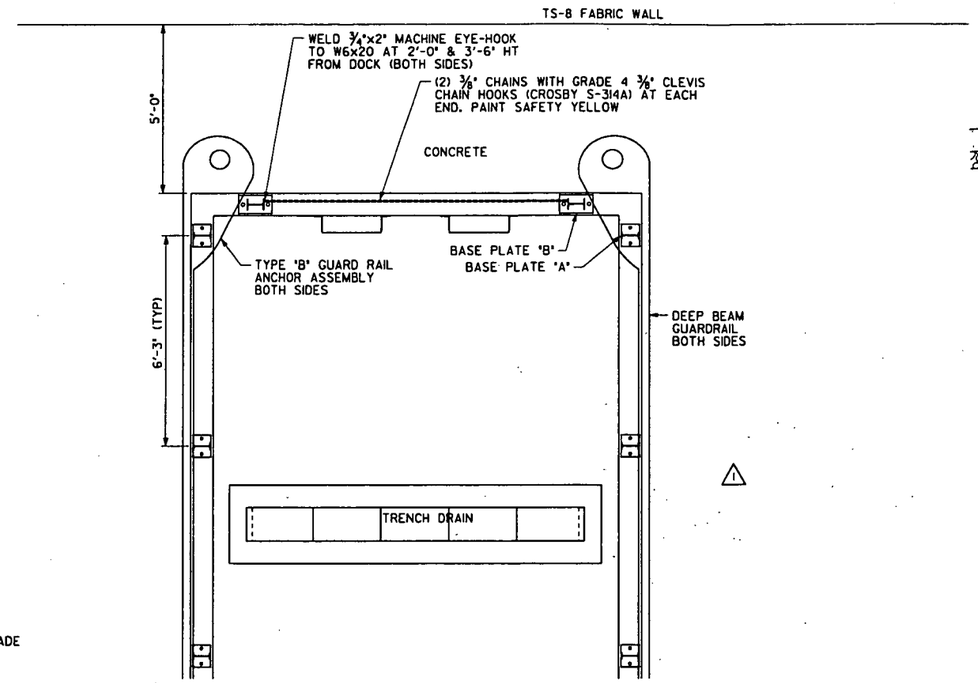


CONSTRUCTION JOINT DETAIL
NTS

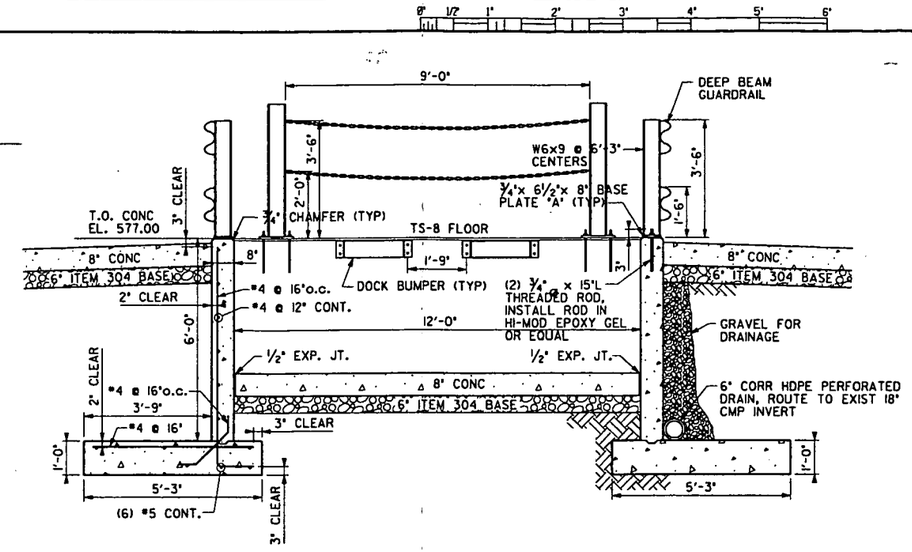


MAXIMUM SPACING SHALL BE 20'-0" OC

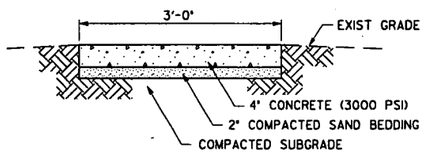
CONTROL JOINT DETAIL
NTS



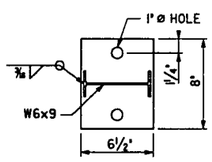
RAMP AT TS-8 DETAIL
SCALE: 1"=2'-0"



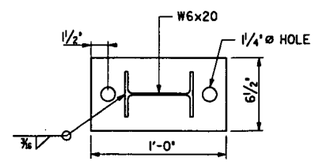
RAMP SECTION "A"
SCALE: 1"=2'-0"



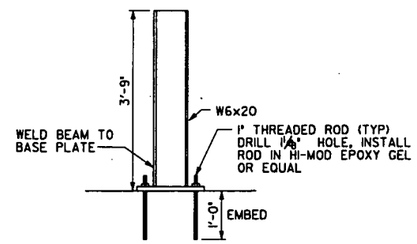
CONCRETE WALK DETAIL
NTS



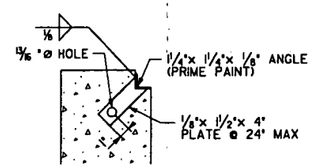
BASE PLATE "A"
NTS



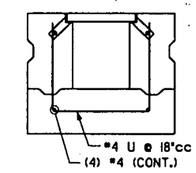
BASE PLATE "B"
NTS



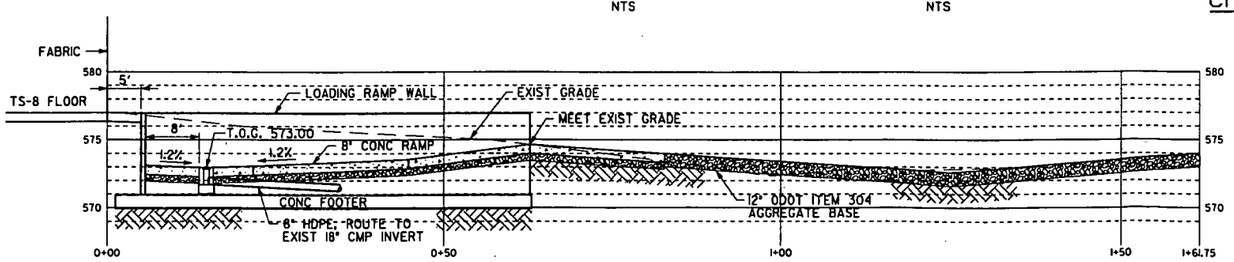
CHAIN POST DETAIL
NTS



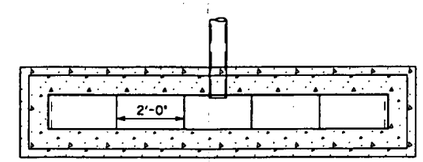
TRENCH DRAIN ANGLE DETAIL
NTS



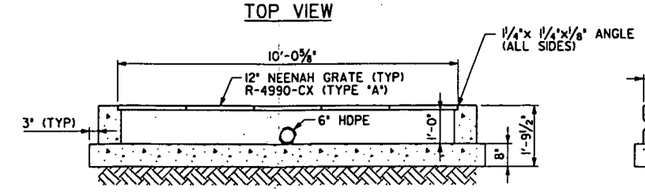
TRENCH DRAIN STEEL DETAIL
NTS



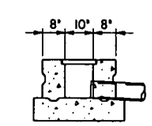
RAMP PROFILE "B"
SCALE: HOR 1"=10'-0"
VER 1"=5'-0"



TOP VIEW



FRONT VIEW



SIDE VIEW

TRENCH DRAIN DETAIL
NTS

NO.	REVISIONS	DATE	DWN. BY	APPD.
2	REMOVED TENT CANOPY, NOT CONTRUCTED	12/2/03	GEP	GEP
1	AS-BUILT PER WORK COMPLETED DCN 4374-002	6/3/03	GEP	GEP
	TO ADD 15'x40' TENT CANOPY			
0	ISSUED CFC	7/10/02	RML	GEP

REF. DWG. NO.: 17X-5500-G-00079

FF4.DGN 3/22/00

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — YES X NO

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

M.J. BORDMAN 7/10/02
COGNIZANT ENGINEER DATE

APPROVALS					
CIVIL & STR.	M.J. BORDMAN	7/10/02	SAFETY ENG.		
ELECTRICAL			MAINTENANCE		
ENGINEER			FIRE PROTECT.		
INSTRUMENT			WASTE MANAGE		
MECHANICAL			SECURITY		
			PROJECTS		
CHECKED	GEP				
APPROVED	G.E. PAUL	7/10/02			

Fernald Environmental Management Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

GRID NFEMP 68 — RIMIA STORAGE AREA

TS-8 IMPROVEMENTS
LOADING DOCK DETAILS
SCALE: 1" = 10'

RES 4374
DATE 6/25/02
DRAWN R.M. LINDGREN

17X-5500-S-00080 | 2

FILE NAME: /res4374/17xs0080.dgn

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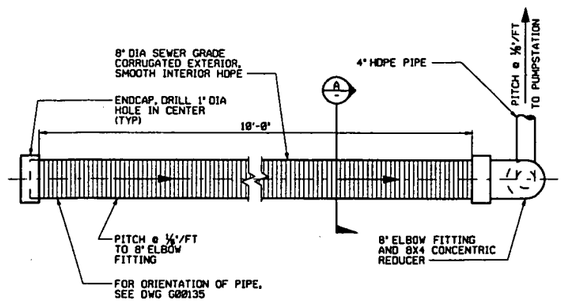
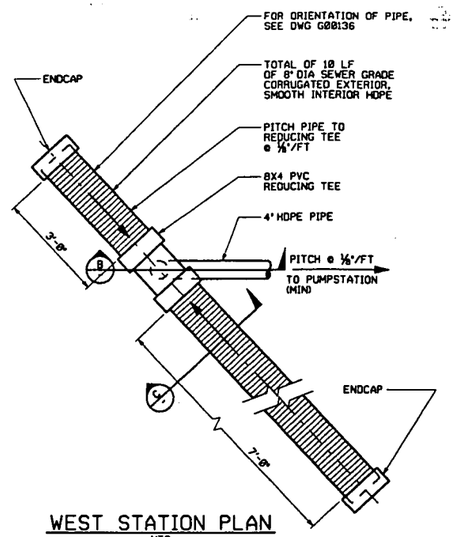
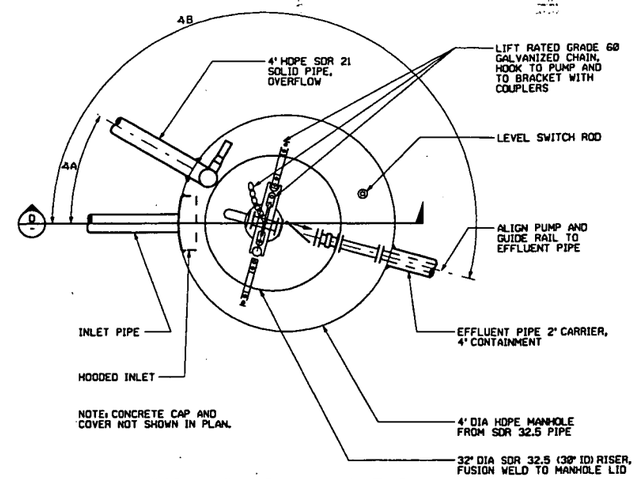


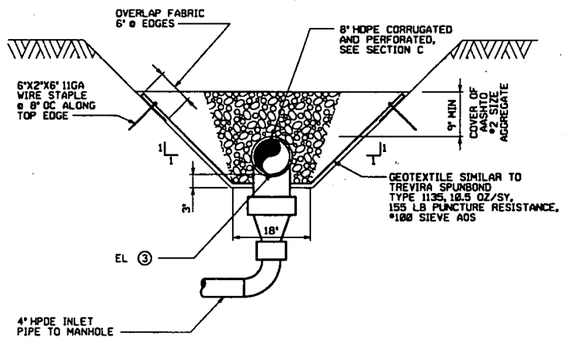
EAST STATION PLAN
NTS



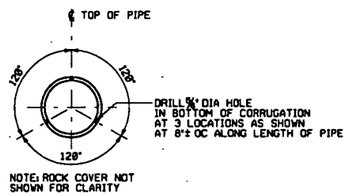
WEST STATION PLAN
NTS



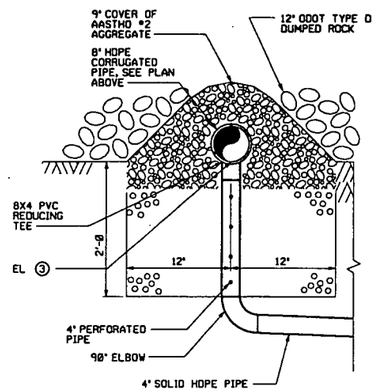
TYPICAL PUMP MANHOLE PLAN
1"=1'-0"



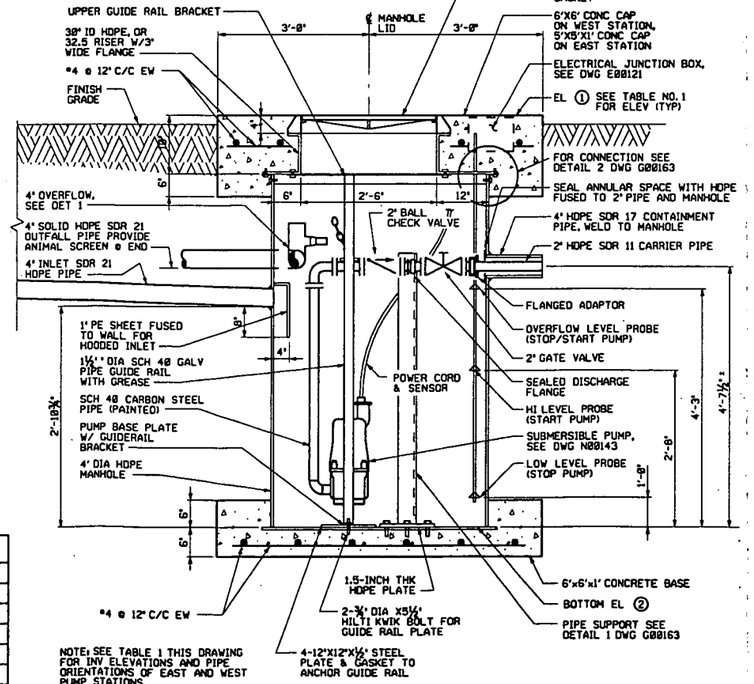
EAST STATION SECTION (A)
NTS



SECTION (C)
1½"=1'-0"

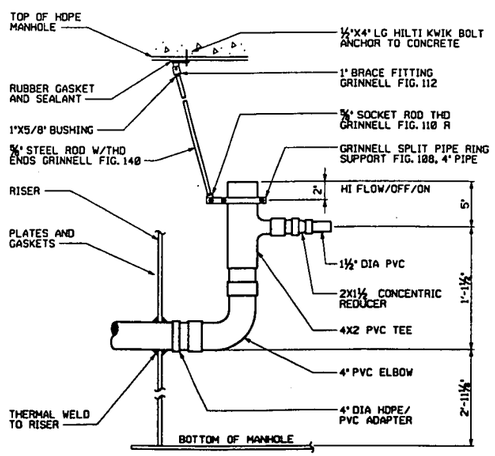


WEST STATION SECTION (B)
NTS



NOTE: SEE TABLE 1 THIS DRAWING FOR INV ELEVATIONS AND PIPE ORIENTATIONS OF EAST AND WEST PUMP STATIONS.

TYPICAL PUMP STATION MANHOLE SECTION (D)
NTS



DETAIL (1)
1½"=1'-0"

TABLE NO. 1		
	EAST PUMP STA	WEST PUMP STA
ELEV ①	568.50	556.50
ELEV ②	561.50	550.00
ELEV ③	566.00	554.75
4A	280°-15'	21°
4B	72°-24'	183°

NOTES

GENERAL:

1. UNLESS OTHERWISE NOTED ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JANUARY 1, 1995.
2. AGGREGATE TO BE ODOT ITEM 703, AASHTO M43 AT THE SIZE INDICATED.

PIPE:

3. HDPE CORRUGATED PIPE SHALL BE SIMILAR TO ADVANCED DRAINAGE SYSTEMS (ADS) N-12 PIPE (SMOOTH INTERIOR, CORRUGATED EXTERIOR). FITTINGS TO BE COMPATIBLE WITH PIPE.
4. DUAL CONTAINMENT PIPE SHALL BE HDPE MATERIALS. SEE SPECIFICATIONS DWG 92X-5900-G-00173.
5. PENETRATIONS TO MANHOLE ARE TO BE WATERTIGHT. USE GASKETS OR THERMAL FUSE PIPE TO WALL.
6. PVC SHALL BE SCHEDULE 40 ASTM D1784 MATERIAL UNLESS OTHERWISE NOTED.

CONCRETE:

7. ODOT ITEM 499, CLASS C 4000 PSI AT 28 DAYS.
8. TOP SLOPE OF CONCRETE CAP AT EAST PUMP STATION SHALL MATCH EXISTING SLOPE OF ROAD.
9. EAST STATION SHALL HAVE NO. 6 REBAR AT 6" OC EACHWAY 2" FROM BOTTOM. REBAR TO BE ASTM A615, 60 KSI YIELD GRADE.
10. FOR DRAWING INDEX, SEE DRAWING 92X-5900-X-00140.
11. FOR VALVE SPECIFICATIONS, SEE DRAWING 92X-5900-G-00163.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00140	DRAWING INDEX
92X-5900-G-00135	GRADING PLAN - EAST PUMP STATION
92X-5900-G-00136	GRADING PLAN - WEST PUMP STATION
92X-5900-G-00163	SITE DETAILS
92X-5900-E-00121	PLANS
92X-5900-N-00143	PIPING AND INSTRUMENTATION DIAGRAM

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
1	DRAWING REVISED PER AS-BUILT CONDITIONS FROM DRAWINGS FURNISHED BY FERMCO		N/A	
0	CERTIFIED FOR CONSTRUCTION	HH 04/13/95	STG 04/19/95	

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
SEEPAGE COLLECTION & REMOVAL OF SEDIMENT
REMOVAL ACTION NO. 30

DRAWING TITLE
CIVIL
SITE DETAILS
PUMP STATIONS

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
K.L. RABBITT	03/30/95	ED J. KUBRIN	04/12/95	K. GERARD	03/28/95

PLANT/BLDG. NO. | FLOOR | SCALE: AS SHOWN | CLASS

SUBMITTED FOR APPROVAL: H. HUME 04/13/95
FERMCO CAU APPROVAL: STEPHEN T. GARLAND 04/19/95

A-E DOE PROJECT NO.	TEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.2.6 00-90701	92X-5900-G-00134	G0006	1

PROTHEES UNDER PARSONS PROJECT ORDER NUMBER: CRU2/P0139

5944

92g00134 CADD9 paul7461 05/17/2005 08:50:20 AM

APPENDIX B

PREDESIGN CHARACTERIZATION DATA FOR THE TRAILER COMPLEX AND AQUIFER PROJECT LAYDOWN AREAS

APPENDIX B
PREDESIGN CHARACTERIZATION DATA FOR THE TRAILER COMPLEX AND AQUIFER PROJECT LAYDOWN AREAS

Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Arsenic		7.02	mg/kg	
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Radium-226		0.981	pCi/g	
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Benzo(a)pyrene	<	38.9	ug/kg	U
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Beryllium		0.68	mg/kg	
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Dibenzo(a,h)anthracene	<	38.9	ug/kg	U
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Lead		13.4	mg/kg	J
A2P2-AQL4	A2P2-AQL4^1-MRS	8/3/2004	0	0.5	Uranium, Total		8.32	mg/kg	
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Arsenic		6.21	mg/kg	
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Radium-226		1.23	pCi/g	
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Benzo(a)pyrene		83.1	ug/kg	
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Beryllium		0.578	mg/kg	
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Dibenzo(a,h)anthracene	<	39.8	ug/kg	U
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Lead		19.7	mg/kg	J
A2P2-AQL5	A2P2-AQL5^1-MRS	8/3/2004	0	0.5	Uranium, Total		11.5	mg/kg	
A2P2-SFA1	A2P2-SFA1^1-MS	7/26/2004	0	0.5	Arsenic		7.98	mg/kg	
A2P2-SFA1	A2P2-SFA1^1-MS	7/26/2004	0	0.5	Benzo(a)pyrene	<	74.2	ug/kg	U
A2P2-SFA1	A2P2-SFA1^1-MS	7/26/2004	0	0.5	Beryllium		0.853	mg/kg	
A2P2-SFA1	A2P2-SFA1^1-MS	7/26/2004	0	0.5	Dibenzo(a,h)anthracene	<	74.2	ug/kg	U
A2P2-SFA1	A2P2-SFA1^1-MS	7/26/2004	0	0.5	Lead		14.6	mg/kg	J
A2P2-SFA1	A2P2-SFA1^1-R	7/26/2004	0	0.5	Uranium, Total		4.73	mg/kg	
A2P2-SFA1	A2P2-SFA1^8-MS	7/26/2004	3.5	4	Arsenic		5.12	mg/kg	J
A2P2-SFA1	A2P2-SFA1^8-MS	7/26/2004	3.5	4	Benzo(a)pyrene	<	80.9	ug/kg	U
A2P2-SFA1	A2P2-SFA1^8-MS	7/26/2004	3.5	4	Beryllium		0.356	mg/kg	
A2P2-SFA1	A2P2-SFA1^8-MS	7/26/2004	3.5	4	Dibenzo(a,h)anthracene	<	80.9	ug/kg	U
A2P2-SFA1	A2P2-SFA1^8-MS	7/26/2004	3.5	4	Lead		8.15	mg/kg	J
A2P2-SFA1	A2P2-SFA1^8-R	7/26/2004	3.5	4	Uranium, Total		3.67	mg/kg	
A2P2-SFA2	A2P2-SFA2^1-MS	7/26/2004	0	0.5	Arsenic		7.52	mg/kg	
A2P2-SFA2	A2P2-SFA2^1-MS	7/26/2004	0	0.5	Benzo(a)pyrene	<	74.2	ug/kg	U
A2P2-SFA2	A2P2-SFA2^1-MS	7/26/2004	0	0.5	Beryllium		0.225	mg/kg	

APPENDIX B
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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-SFA2	A2P2-SFA2^1-MS	7/26/2004	0	0.5	Dibenzo(a,h)anthracene	<	74.2	ug/kg	U
A2P2-SFA2	A2P2-SFA2^1-MS	7/26/2004	0	0.5	Lead		6.87	mg/kg	J
A2P2-SFA2	A2P2-SFA2^1-R	7/26/2004	0	0.5	Uranium, Total		3.86	mg/kg	
A2P2-SFA2	A2P2-SFA2^8-MS	7/26/2004	3.5	4	Arsenic		3.09	mg/kg	J
A2P2-SFA2	A2P2-SFA2^8-MS	7/26/2004	3.5	4	Benzo(a)pyrene	<	77.6	ug/kg	U
A2P2-SFA2	A2P2-SFA2^8-MS	7/26/2004	3.5	4	Beryllium		0.143	mg/kg	J
A2P2-SFA2	A2P2-SFA2^8-MS	7/26/2004	3.5	4	Dibenzo(a,h)anthracene	<	77.6	ug/kg	U
A2P2-SFA2	A2P2-SFA2^8-MS	7/26/2004	3.5	4	Lead		4.69	mg/kg	J
A2P2-SFA2	A2P2-SFA2^8-R	7/26/2004	3.5	4	Uranium, Total		4.49	mg/kg	
A2P2-SFA6	A2P2-SFA6^1-MS	7/27/2004	0	0.5	Arsenic		4.69	mg/kg	J
A2P2-SFA6	A2P2-SFA6^1-MS	7/27/2004	0	0.5	Benzo(a)pyrene	<	76.6	ug/kg	U
A2P2-SFA6	A2P2-SFA6^1-MS	7/27/2004	0	0.5	Beryllium		0.283	mg/kg	
A2P2-SFA6	A2P2-SFA6^1-MS	7/27/2004	0	0.5	Dibenzo(a,h)anthracene	<	76.6	ug/kg	U
A2P2-SFA6	A2P2-SFA6^1-MS	7/27/2004	0	0.5	Lead		6.47	mg/kg	J
A2P2-SFA6	A2P2-SFA6^1-R	7/27/2004	0	0.5	Uranium, Total		3.43	mg/kg	
A2P2-SFA6	A2P2-SFA6^5-MS	7/27/2004	2	2.5	Arsenic		5.35	mg/kg	
A2P2-SFA6	A2P2-SFA6^5-MS	7/27/2004	2	2.5	Benzo(a)pyrene	<	71.5	ug/kg	U
A2P2-SFA6	A2P2-SFA6^5-MS	7/27/2004	2	2.5	Beryllium		0.255	mg/kg	
A2P2-SFA6	A2P2-SFA6^5-MS	7/27/2004	2	2.5	Dibenzo(a,h)anthracene	<	71.5	ug/kg	U
A2P2-SFA6	A2P2-SFA6^5-MS	7/27/2004	2	2.5	Lead		6.17	mg/kg	J
A2P2-SFA6	A2P2-SFA6^5-R	7/27/2004	2	2.5	Uranium, Total		5.56	mg/kg	
A2P2-SFA6	A2P2-SFA6^8-MS	7/27/2004	3.5	4	Arsenic		3.58	mg/kg	J
A2P2-SFA6	A2P2-SFA6^8-MS	7/27/2004	3.5	4	Benzo(a)pyrene	<	69.9	ug/kg	U
A2P2-SFA6	A2P2-SFA6^8-MS	7/27/2004	3.5	4	Beryllium		0.115	mg/kg	J
A2P2-SFA6	A2P2-SFA6^8-MS	7/27/2004	3.5	4	Dibenzo(a,h)anthracene	<	69.9	ug/kg	U
A2P2-SFA6	A2P2-SFA6^8-MS	7/27/2004	3.5	4	Lead		5.37	mg/kg	J
A2P2-SFA6	A2P2-SFA6^8-R	7/27/2004	3.5	4	Uranium, Total		2.46	mg/kg	
A2P2-TCA3	A2P2-TCA3^1-MRS	7/30/2004	0	0.5	Uranium, Total		7.28	mg/kg	
A2P2-TCA3	A2P2-TCA3^1-SM	10/19/2004	0	0.5	Arsenic		5.91	mg/kg	

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA3	A2P2-TCA3^1-SM	10/19/2004	0	0.5	Benzo(a)pyrene	<	36.5	ug/kg	U
A2P2-TCA3	A2P2-TCA3^1-SM	10/19/2004	0	0.5	Beryllium		0.539	mg/kg	
A2P2-TCA3	A2P2-TCA3^1-SM	10/19/2004	0	0.5	Dibenzo(a,h)anthracene	<	18.2	ug/kg	U
A2P2-TCA3	A2P2-TCA3^1-SM	10/19/2004	0	0.5	Lead		13.9	mg/kg	J
A2P2-TCA3	A2P2-TCA3^3-MRS	7/30/2004	1	1.5	Uranium, Total		6.02	mg/kg	
A2P2-TCA3	A2P2-TCA3^3-SM	10/19/2004	1	1.5	Arsenic		6.12	mg/kg	
A2P2-TCA3	A2P2-TCA3^3-SM	10/19/2004	1	1.5	Benzo(a)pyrene	<	39.5	ug/kg	U
A2P2-TCA3	A2P2-TCA3^3-SM	10/19/2004	1	1.5	Beryllium		0.479	mg/kg	
A2P2-TCA3	A2P2-TCA3^3-SM	10/19/2004	1	1.5	Dibenzo(a,h)anthracene	<	19.8	ug/kg	U
A2P2-TCA3	A2P2-TCA3^3-SM	10/19/2004	1	1.5	Lead		11.2	mg/kg	J
A2P2-TCA3	A2P2-TCA3^5-MRS	7/30/2004	2	2.5	Uranium, Total		3.84	mg/kg	
A2P2-TCA3	A2P2-TCA3^5-SM	10/19/2004	2	2.5	Arsenic		6.5	mg/kg	
A2P2-TCA3	A2P2-TCA3^5-SM	10/19/2004	2	2.5	Benzo(a)pyrene	<	41.2	ug/kg	U
A2P2-TCA3	A2P2-TCA3^5-SM	10/19/2004	2	2.5	Beryllium		0.578	mg/kg	
A2P2-TCA3	A2P2-TCA3^5-SM	10/19/2004	2	2.5	Dibenzo(a,h)anthracene	<	20.6	ug/kg	U
A2P2-TCA3	A2P2-TCA3^5-SM	10/19/2004	2	2.5	Lead		9.86	mg/kg	J
A2P2-TCA3	A2P2-TCA3^7-MRS	7/30/2004	3	3.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA3	A2P2-TCA3^7-SM	10/19/2004	3	3.5	Arsenic		4.97	mg/kg	
A2P2-TCA3	A2P2-TCA3^7-SM	10/19/2004	3	3.5	Benzo(a)pyrene	<	39.2	ug/kg	U
A2P2-TCA3	A2P2-TCA3^7-SM	10/19/2004	3	3.5	Beryllium		0.488	mg/kg	
A2P2-TCA3	A2P2-TCA3^7-SM	10/19/2004	3	3.5	Dibenzo(a,h)anthracene	<	19.6	ug/kg	U
A2P2-TCA3	A2P2-TCA3^7-SM	10/19/2004	3	3.5	Lead		9.1	mg/kg	J
A2P2-TCA4	A2P2-TCA4^1-MRS	7/9/2004	0	0.5	Arsenic	<	0.977	mg/kg	U
A2P2-TCA4	A2P2-TCA4^1-MRS	7/9/2004	0	0.5	Benzo(a)pyrene	<	78.5	ug/kg	U
A2P2-TCA4	A2P2-TCA4^1-MRS	7/9/2004	0	0.5	Beryllium		0.38	mg/kg	
A2P2-TCA4	A2P2-TCA4^1-MRS	7/9/2004	0	0.5	Dibenzo(a,h)anthracene	<	78.5	ug/kg	U
A2P2-TCA4	A2P2-TCA4^1-MRS	7/9/2004	0	0.5	Lead		10.3	mg/kg	J
A2P2-TCA4	A2P2-TCA4^1-MRS	7/9/2004	0	0.5	Uranium, Total		3.25	mg/kg	
A2P2-TCA4	A2P2-TCA4^3-MRS	7/9/2004	1	1.5	Arsenic		7.07	mg/kg	

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA4	A2P2-TCA4^3-MRS	7/9/2004	1	1.5	Benzo(a)pyrene	<	82.3	ug/kg	U
A2P2-TCA4	A2P2-TCA4^3-MRS	7/9/2004	1	1.5	Beryllium		0.613	mg/kg	
A2P2-TCA4	A2P2-TCA4^3-MRS	7/9/2004	1	1.5	Dibenzo(a,h)anthracene	<	82.3	ug/kg	U
A2P2-TCA4	A2P2-TCA4^3-MRS	7/9/2004	1	1.5	Lead		14.1	mg/kg	J
A2P2-TCA4	A2P2-TCA4^3-MRS	7/9/2004	1	1.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA4	A2P2-TCA4^5-MRS	7/9/2004	2	2.5	Arsenic		5.34	mg/kg	J
A2P2-TCA4	A2P2-TCA4^5-MRS	7/9/2004	2	2.5	Benzo(a)pyrene	<	81.9	ug/kg	U
A2P2-TCA4	A2P2-TCA4^5-MRS	7/9/2004	2	2.5	Beryllium		0.6	mg/kg	
A2P2-TCA4	A2P2-TCA4^5-MRS	7/9/2004	2	2.5	Dibenzo(a,h)anthracene	<	81.9	ug/kg	U
A2P2-TCA4	A2P2-TCA4^5-MRS	7/9/2004	2	2.5	Lead		11.2	mg/kg	J
A2P2-TCA4	A2P2-TCA4^5-MRS	7/9/2004	2	2.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA4	A2P2-TCA4^7-MRS	7/9/2004	3	3.5	Arsenic		3.06	mg/kg	J
A2P2-TCA4	A2P2-TCA4^7-MRS	7/9/2004	3	3.5	Benzo(a)pyrene	<	85	ug/kg	U
A2P2-TCA4	A2P2-TCA4^7-MRS	7/9/2004	3	3.5	Beryllium		0.66	mg/kg	
A2P2-TCA4	A2P2-TCA4^7-MRS	7/9/2004	3	3.5	Dibenzo(a,h)anthracene	<	85	ug/kg	U
A2P2-TCA4	A2P2-TCA4^7-MRS	7/9/2004	3	3.5	Lead		12.5	mg/kg	J
A2P2-TCA4	A2P2-TCA4^7-MRS	7/9/2004	3	3.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA5	A2P2-TCA5^1-MRS	7/9/2004	0	0.5	Arsenic	<	0.987	mg/kg	U
A2P2-TCA5	A2P2-TCA5^1-MRS	7/9/2004	0	0.5	Benzo(a)pyrene		47.9	ug/kg	J
A2P2-TCA5	A2P2-TCA5^1-MRS	7/9/2004	0	0.5	Beryllium		0.38	mg/kg	
A2P2-TCA5	A2P2-TCA5^1-MRS	7/9/2004	0	0.5	Dibenzo(a,h)anthracene	<	74.1	ug/kg	U
A2P2-TCA5	A2P2-TCA5^1-MRS	7/9/2004	0	0.5	Lead		8.54	mg/kg	J
A2P2-TCA5	A2P2-TCA5^1-MRS	7/9/2004	0	0.5	Uranium, Total		4.79	mg/kg	
A2P2-TCA5	A2P2-TCA5^3-MRS	7/9/2004	1	1.5	Arsenic		7.35	mg/kg	J
A2P2-TCA5	A2P2-TCA5^3-MRS	7/9/2004	1	1.5	Benzo(a)pyrene	<	72	ug/kg	U
A2P2-TCA5	A2P2-TCA5^3-MRS	7/9/2004	1	1.5	Beryllium		0.244	mg/kg	
A2P2-TCA5	A2P2-TCA5^3-MRS	7/9/2004	1	1.5	Dibenzo(a,h)anthracene	<	72	ug/kg	U
A2P2-TCA5	A2P2-TCA5^3-MRS	7/9/2004	1	1.5	Lead		8.46	mg/kg	J
A2P2-TCA5	A2P2-TCA5^3-MRS	7/9/2004	1	1.5	Uranium, Total	<	0	mg/kg	U

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA5	A2P2-TCA5^5-MRS	7/9/2004	2	2.5	Arsenic		4.25	mg/kg	J
A2P2-TCA5	A2P2-TCA5^5-MRS	7/9/2004	2	2.5	Benzo(a)pyrene	<	73.2	ug/kg	U
A2P2-TCA5	A2P2-TCA5^5-MRS	7/9/2004	2	2.5	Beryllium		0.118	mg/kg	J
A2P2-TCA5	A2P2-TCA5^5-MRS	7/9/2004	2	2.5	Dibenzo(a,h)anthracene	<	73.2	ug/kg	U
A2P2-TCA5	A2P2-TCA5^5-MRS	7/9/2004	2	2.5	Lead		5.96	mg/kg	J
A2P2-TCA5	A2P2-TCA5^5-MRS	7/9/2004	2	2.5	Uranium, Total		4.76	mg/kg	
A2P2-TCA5	A2P2-TCA5^7-MRS	7/9/2004	3	3.5	Arsenic		7.79	mg/kg	J
A2P2-TCA5	A2P2-TCA5^7-MRS	7/9/2004	3	3.5	Benzo(a)pyrene	<	73.2	ug/kg	U
A2P2-TCA5	A2P2-TCA5^7-MRS	7/9/2004	3	3.5	Beryllium		0.354	mg/kg	
A2P2-TCA5	A2P2-TCA5^7-MRS	7/9/2004	3	3.5	Dibenzo(a,h)anthracene	<	73.2	ug/kg	U
A2P2-TCA5	A2P2-TCA5^7-MRS	7/9/2004	3	3.5	Lead		12.3	mg/kg	J
A2P2-TCA5	A2P2-TCA5^7-MRS	7/9/2004	3	3.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA6	A2P2-TCA6^1-L	7/8/2004	0	0.5	1,1-Dichloroethene	<	1.14	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-L	7/8/2004	0	0.5	Bromodichloromethane	<	1.14	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Aroclor-1254	<	9.97	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Aroclor-1260	<	9.97	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Arsenic	<	3.16	mg/kg	J
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Radium-226		1.32	pCi/g	
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Benzo(a)pyrene	<	79.6	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Beryllium		0.395	mg/kg	
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Dibenzo(a,h)anthracene	<	79.6	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Dieldrin	<	0.797	ug/kg	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Lead		11.1	mg/kg	J
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Technetium-99	<	0.0772	pCi/g	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Thorium-230		0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^1-MPRS	7/8/2004	0	0.5	Uranium, Total		3.78	mg/kg	
A2P2-TCA6	A2P2-TCA6^3-L	7/8/2004	1	1.5	1,1-Dichloroethene	<	1.23	ug/kg	U
A2P2-TCA6	A2P2-TCA6^3-L	7/8/2004	1	1.5	Bromodichloromethane	<	1.23	ug/kg	U

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Aroclor-1254	<	10.4	ug/kg	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Aroclor-1260	<	10.4	ug/kg	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Arsenic	<	4.13	mg/kg	J
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Radium-226		1.75	pCi/g	
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Benzo(a)pyrene	<	83	ug/kg	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Beryllium		0.702	mg/kg	
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Dibenzo(a,h)anthracene	<	83	ug/kg	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Dieldrin	<	0.829	ug/kg	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Lead		13	mg/kg	J
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Technetium-99	<	-0.0697	pCi/g	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Thorium-230		0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^3-MPRS	7/8/2004	1	1.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA6	A2P2-TCA6^5-L	7/8/2004	2	2.5	1,1-Dichloroethene	<	1.17	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-L	7/8/2004	2	2.5	Bromodichloromethane	<	1.17	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Aroclor-1254	<	9.79	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Aroclor-1260	<	9.79	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Arsenic	<	3.73	mg/kg	J
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Radium-226		1.15	pCi/g	
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Benzo(a)pyrene	<	78.1	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Beryllium		0.696	mg/kg	
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Dibenzo(a,h)anthracene	<	78.1	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Dieldrin	<	0.783	ug/kg	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Lead		11.3	mg/kg	J
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Technetium-99	<	-0.227	pCi/g	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Thorium-230		0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^5-MPRS	7/8/2004	2	2.5	Uranium, Total	<	0.335	mg/kg	U
A2P2-TCA6	A2P2-TCA6^7-L	7/8/2004	3	3.5	1,1-Dichloroethene	<	1.19	ug/kg	U

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA6	A2P2-TCA6^7-L	7/8/2004	3	3.5	Bromodichloromethane	<	1.19	ug/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Aroclor-1254	<	9.7	ug/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Aroclor-1260	<	9.7	ug/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Radium-226		1.1	pCi/g	
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Arsenic	<	1.05	mg/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Benzo(a)pyrene	<	78	ug/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Beryllium		0.556	mg/kg	
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Dibenzo(a,h)anthracene	<	78	ug/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Dieldrin	<	0.776	ug/kg	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Lead		7.03	mg/kg	J
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Technetium-99	<	-0.215	pCi/g	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Thorium-230		0	pCi/g	U
A2P2-TCA6	A2P2-TCA6^7-MPRS	7/8/2004	3	3.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA6E	A2P2-TCA6E^1-MR	10/19/2004	3	3.5	Arsenic		5.82	mg/kg	
A2P2-TCA6E	A2P2-TCA6E^1-MR	10/19/2004	3	3.5	Radium-226		1.45	pCi/g	
A2P2-TCA6E	A2P2-TCA6E^7-MR	10/19/2004	3	3.5	Arsenic		6.11	mg/kg	
A2P2-TCA6E	A2P2-TCA6E^7-MR	10/19/2004	3	3.5	Radium-226		0.957	pCi/g	
A2P2-TCA6N	A2P2-TCA6N^1-MR	10/19/2004	0	0.5	Arsenic		12.4	mg/kg	
A2P2-TCA6N	A2P2-TCA6N^1-MR	10/19/2004	0	0.5	Radium-226		1.62	pCi/g	
A2P2-TCA6N	A2P2-TCA6N^7-MR	10/19/2004	3	3.5	Arsenic		5.27	mg/kg	
A2P2-TCA6N	A2P2-TCA6N^7-MR	10/19/2004	3	3.5	Radium-226		0.991	pCi/g	
A2P2-TCA7	A2P2-TCA7^1-L	7/8/2004	0	0.5	1,1-Dichloroethene	<	1.09	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^1-L	7/8/2004	0	0.5	Bromodichloromethane	<	1.09	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Aroclor-1254	<	9.11	ug/kg	U
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Aroclor-1260	<	9.11	ug/kg	U
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Arsenic	<	1.09	mg/kg	J
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Radium-226		0.905	pCi/g	
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Benzo(a)pyrene	<	72.9	ug/kg	U

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Beryllium		0.347	mg/kg	
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Cesium-137		0.0542	pCi/g	
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Dibenzo(a,h)anthracene	<	72.9	ug/kg	U
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Dieldrin	<	0.729	ug/kg	U
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Lead		10.3	mg/kg	J
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Technetium-99	<	0.155	pCi/g	U
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Thorium-230		0	pCi/g	U
A2P2-TCA7	A2P2-TCA7^1-MPRS	7/8/2004	0	0.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA7	A2P2-TCA7^3-L	7/8/2004	1	1.5	1,1-Dichloroethene	<	1.01	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^3-L	7/8/2004	1	1.5	Bromodichloromethane	<	1.01	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Aroclor-1254	<	8.86	ug/kg	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Aroclor-1260	<	8.86	ug/kg	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Arsenic	<	2.64	mg/kg	J
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Radium-226		0.865	pCi/g	
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Benzo(a)pyrene	<	70.9	ug/kg	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Beryllium		0.358	mg/kg	
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Dibenzo(a,h)anthracene	<	70.9	ug/kg	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Dieldrin	<	0.709	ug/kg	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Lead		9.16	mg/kg	J
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Technetium-99	<	0.024	pCi/g	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Thorium-230		0	pCi/g	U
A2P2-TCA7	A2P2-TCA7^3-MPRS	7/8/2004	1	1.5	Uranium, Total		5.23	mg/kg	
A2P2-TCA7	A2P2-TCA7^5-L	7/8/2004	2	2.5	1,1-Dichloroethene	<	1.01	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^5-L	7/8/2004	2	2.5	Bromodichloromethane	<	1.01	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Aroclor-1254	<	8.75	ug/kg	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Aroclor-1260	<	8.75	ug/kg	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Arsenic	<	1.58	mg/kg	J
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Radium-226		0.849	pCi/g	

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Benzo(a)pyrene	<	70.2	ug/kg	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Beryllium		0.338	mg/kg	
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Cesium-137		0.0968	pCi/g	
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Dibenzo(a,h)anthracene	<	70.2	ug/kg	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Dieldrin	<	0.7	ug/kg	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Lead		9.02	mg/kg	J
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Technetium-99	<	0.227	pCi/g	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Thorium-230		0	pCi/g	U
A2P2-TCA7	A2P2-TCA7^5-MPRS	7/8/2004	2	2.5	Uranium, Total		8.29	mg/kg	
A2P2-TCA7	A2P2-TCA7^7-L	7/8/2004	3	3.5	1,1-Dichloroethene	<	1.01	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^7-L	7/8/2004	3	3.5	Bromodichloromethane	<	1.01	ug/kg	HU
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Aroclor-1254		5	ug/kg	J
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Aroclor-1260	<	8.82	ug/kg	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Radium-226		0.921	pCi/g	
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Arsenic	<	0.838	mg/kg	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Benzo(a)pyrene	<	70.5	ug/kg	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Beryllium		0.311	mg/kg	
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Cesium-137		0.261	pCi/g	
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Dibenzo(a,h)anthracene	<	70.5	ug/kg	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Dieldrin	<	0.705	ug/kg	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Lead		10.5	mg/kg	J
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Technetium-99	<	-0.0235	pCi/g	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Thorium-230		0	pCi/g	U
A2P2-TCA7	A2P2-TCA7^7-MPRS	7/8/2004	3	3.5	Uranium, Total		7.58	mg/kg	
A2P2-TCA8	A2P2-TCA8^11-M	10/19/2004	5	5.5	Arsenic		7.68	mg/kg	
A2P2-TCA8	A2P2-TCA8^13-M	10/19/2004	6	6.5	Arsenic		7.55	mg/kg	
A2P2-TCA8	A2P2-TCA8^1-L	7/26/2004	0	0.5	1,1-Dichloroethene	<	0.857	ug/kg	U
A2P2-TCA8	A2P2-TCA8^1-L	7/26/2004	0	0.5	Bromodichloromethane	<	0.857	ug/kg	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Aroclor-1254		3.3	ug/kg	J

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Aroclor-1260	<	9.09	ug/kg	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Benzo(a)pyrene		30.9	ug/kg	J
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Beryllium		0.262	mg/kg	
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Dibenzo(a,h)anthracene	<	71.9	ug/kg	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Dieldrin	<	0.727	ug/kg	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Lead		8.82	mg/kg	J
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Arsenic		8.99	mg/kg	
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Radium-226		0.932	pCi/g	
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Technetium-99	<	0.131	pCi/g	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Thorium-230	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^1-MPRS	7/26/2004	0	0.5	Uranium, Total		4.91	mg/kg	
A2P2-TCA8	A2P2-TCA8^3-L	7/26/2004	1	1.5	1,1-Dichloroethene	<	1.11	ug/kg	U
A2P2-TCA8	A2P2-TCA8^3-L	7/26/2004	1	1.5	Bromodichloromethane	<	1.11	ug/kg	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Aroclor-1254		6.8	ug/kg	J
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Aroclor-1260	<	9.7	ug/kg	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Benzo(a)pyrene	<	78.2	ug/kg	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Beryllium		0.287	mg/kg	
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Cesium-137		0.0768	pCi/g	
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Dibenzo(a,h)anthracene	<	78.2	ug/kg	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Dieldrin	<	0.776	ug/kg	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Lead		10.8	mg/kg	J
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Arsenic		4.11	mg/kg	J
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Radium-226		1.03	pCi/g	
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Technetium-99	<	0.313	pCi/g	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Thorium-230	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^3-MPRS	7/26/2004	1	1.5	Uranium, Total		9.85	mg/kg	
A2P2-TCA8	A2P2-TCA8^5-L	7/26/2004	2	2.5	1,1-Dichloroethene	<	1.04	ug/kg	U
A2P2-TCA8	A2P2-TCA8^5-L	7/26/2004	2	2.5	Bromodichloromethane	<	1.04	ug/kg	U

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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Aroclor-1254	<	9.97	ug/kg	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Aroclor-1260	<	9.97	ug/kg	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Benzo(a)pyrene	<	79.4	ug/kg	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Beryllium		0.51	mg/kg	
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Dibenzo(a,h)anthracene	<	79.4	ug/kg	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Dieldrin	<	0.797	ug/kg	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Lead		15.3	mg/kg	J
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Arsenic		13.9	mg/kg	
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Radium-226		1.57	pCi/g	
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Technetium-99	<	0.546	pCi/g	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Thorium-230	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^5-MPRS	7/26/2004	2	2.5	Uranium, Total		4.3	mg/kg	
A2P2-TCA8	A2P2-TCA8^7-L	7/26/2004	3	3.5	1,1-Dichloroethene	<	1.03	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-L	7/26/2004	3	3.5	Bromodichloromethane	<	1.03	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Aroclor-1254	<	10	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Aroclor-1260	<	10	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Benzo(a)pyrene	<	79.6	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Beryllium		1.18	mg/kg	
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Cesium-137	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Dibenzo(a,h)anthracene	<	79.6	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Dieldrin	<	0.8	ug/kg	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Lead		16.2	mg/kg	J
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Arsenic		16.7	mg/kg	
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Radium-226		1.61	pCi/g	
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Technetium-99	<	0.258	pCi/g	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Thorium-230	<	0	pCi/g	U
A2P2-TCA8	A2P2-TCA8^7-MPRS	7/26/2004	3	3.5	Uranium, Total		4.82	mg/kg	
A2P2-TCA8	A2P2-TCA8^9-M	10/19/2004	4	4.5	Arsenic		8.49	mg/kg	

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APPENDIX B
PREDESIGN CHARACTERIZATION DATA FOR THE TRAILER COMPLEX AND AQUIFER PROJECT LAYDOWN AREAS

Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA8S	A2P2-TCA8S^10-R	12/8/2004	4.5	5	Radium-226		1.64	pCi/g	
A2P2-TCA8S	A2P2-TCA8S^1-MR	10/19/2004	0	0.5	Arsenic		5.37	mg/kg	
A2P2-TCA8S	A2P2-TCA8S^1-MR	10/19/2004	0	0.5	Radium-226		1.33	pCi/g	
A2P2-TCA8S	A2P2-TCA8S^7-MR	10/19/2004	3	3.5	Arsenic		14.4	mg/kg	
A2P2-TCA8S	A2P2-TCA8S^7-MR	10/19/2004	3	3.5	Radium-226		1.89	pCi/g	
A2P2-TCA8S	A2P2-TCA8S^8-R	12/8/2004	3.5	4	Radium-226		1.72	pCi/g	
A2P2-TCA8S2	A2P2-TCA8S2^1-R	12/8/2004	0	0.5	Radium-226		1.07	pCi/g	
A2P2-TCA8S2	A2P2-TCA8S2^7-R	12/8/2004	3	3.5	Radium-226		1.57	pCi/g	
A2P2-TCA8W	A2P2-TCA8W^1-MR	10/19/2004	0	0.5	Arsenic		6.38	mg/kg	
A2P2-TCA8W	A2P2-TCA8W^1-MR	10/19/2004	0	0.5	Radium-226		1.45	pCi/g	
A2P2-TCA8W	A2P2-TCA8W^7-MR	10/19/2004	3	3.5	Arsenic		10.9	mg/kg	
A2P2-TCA8W	A2P2-TCA8W^7-MR	10/19/2004	3	3.5	Radium-226		1.5	pCi/g	
A2P2-TCA9	A2P2-TCA9^1-L	7/8/2004	0	0.5	1,1-Dichloroethene	<	1.16	ug/kg	U
A2P2-TCA9	A2P2-TCA9^1-L	7/8/2004	0	0.5	Bromodichloromethane	<	1.16	ug/kg	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Aroclor-1254		21.2	ug/kg	
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Aroclor-1260	<	9.18	ug/kg	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Benzo(a)pyrene	<	73.3	ug/kg	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Beryllium		0.379	mg/kg	
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Cesium-137		0.149	pCi/g	
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Dibenzo(a,h)anthracene	<	73.3	ug/kg	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Dieldrin	<	0.735	ug/kg	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Lead		10.2	mg/kg	J
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Radium-226		0.99	pCi/g	
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Arsenic	<	0.979	mg/kg	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Technetium-99	<	0.113	pCi/g	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Thorium-230		0	pCi/g	U
A2P2-TCA9	A2P2-TCA9^1-MPRS	7/8/2004	0	0.5	Uranium, Total		6.83	mg/kg	
A2P2-TCA9	A2P2-TCA9^3-L	7/8/2004	1	1.5	1,1-Dichloroethene	<	1.06	ug/kg	U
A2P2-TCA9	A2P2-TCA9^3-L	7/8/2004	1	1.5	Bromodichloromethane	<	1.06	ug/kg	U

APPENDIX B
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Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Aroclor-1254	<	8.88	ug/kg	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Aroclor-1260	<	8.88	ug/kg	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Benzo(a)pyrene	<	71.1	ug/kg	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Beryllium		0.38	mg/kg	
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Cesium-137		0.0799	pCi/g	
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Dibenzo(a,h)anthracene	<	71.1	ug/kg	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Dieldrin	<	0.71	ug/kg	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Lead		8.83	mg/kg	J
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Arsenic	<	2.03	mg/kg	J
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Radium-226		0.879	pCi/g	
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Technetium-99	<	0.12	pCi/g	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Thorium-230		0	pCi/g	U
A2P2-TCA9	A2P2-TCA9^3-MPRS	7/8/2004	1	1.5	Uranium, Total	<	0	mg/kg	U
A2P2-TCA9	A2P2-TCA9^5-L	7/8/2004	2	2.5	1,1-Dichloroethene	<	1.08	ug/kg	HU
A2P2-TCA9	A2P2-TCA9^5-L	7/8/2004	2	2.5	Bromodichloromethane	<	1.08	ug/kg	HU
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Aroclor-1254		17.7	ug/kg	
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Aroclor-1260	<	9	ug/kg	U
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Benzo(a)pyrene	<	71.8	ug/kg	U
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Beryllium		0.364	mg/kg	
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Cesium-137		0.212	pCi/g	
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Dibenzo(a,h)anthracene	<	71.8	ug/kg	U
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Dieldrin	<	0.72	ug/kg	U
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Lead		13	mg/kg	J
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Arsenic	<	1.7	mg/kg	J
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Radium-226		1.08	pCi/g	
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Technetium-99	<	0.12	pCi/g	U
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Thorium-230		0	pCi/g	U
A2P2-TCA9	A2P2-TCA9^5-MPRS	7/8/2004	2	2.5	Uranium, Total		5.64	mg/kg	
A2P2-TCA9	A2P2-TCA9^7-L	7/8/2004	3	3.5	1,1-Dichloroethene	<	1.11	ug/kg	HU

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APPENDIX B
PREDESIGN CHARACTERIZATION DATA FOR THE TRAILER COMPLEX AND AQUIFER PROJECT LAYDOWN AREAS

Boring	Sample ID	Sample Date	Sample Depth (feet)		Parameter	Result		Units	Qualifier
			Top	Bottom					
A2P2-TCA9	A2P2-TCA9^7-L	7/8/2004	3	3.5	Bromodichloromethane	<	1.11	ug/kg	HU
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Aroclor-1254	<	8.97	ug/kg	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Aroclor-1260	<	8.97	ug/kg	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Benzo(a)pyrene	<	71.8	ug/kg	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Beryllium		0.371	mg/kg	
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Cesium-137		0.11	pCi/g	
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Dibenzo(a,h)anthracene	<	71.8	ug/kg	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Dieldrin	<	0.718	ug/kg	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Lead		10.5	mg/kg	J
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Arsenic	<	1.62	mg/kg	J
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Radium-226		0.996	pCi/g	
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Technetium-99	<	0.194	pCi/g	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Thorium-230		0	pCi/g	U
A2P2-TCA9	A2P2-TCA9^7-MPRS	7/8/2004	3	3.5	Uranium, Total		7.84	mg/kg	

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APPENDIX C

PREDESIGN SCANNING DATA FOR THE TCA/AQL

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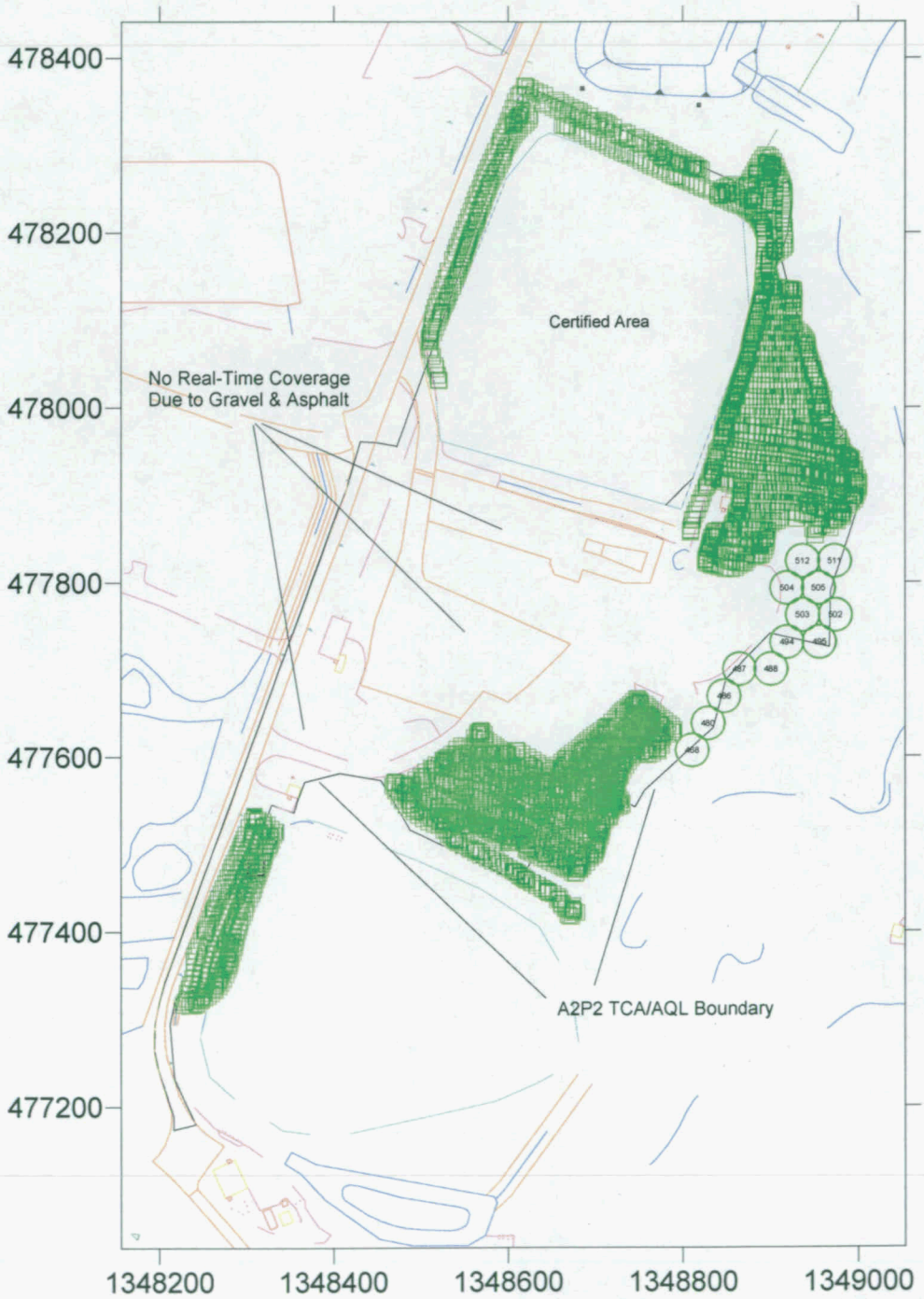
Figure C-1

Area 2/Phase 2, Subarea 3, TCA/AQL Area Surface Scan

Moisture Corrected Total Uranium
Field of View to Scale
NaI Batch #: RSS1-1456; RSS3-590, 616 HPGe Det. #: 31265, 40743
Measurement Dates: 10-02-2003 thru 12-01-2004

N



HPGe @ 100 cm Total U (ppm)
0 to 246
246 to 400
400 to 9999

NaI Total U (ppm)
-193 to 246
246 to 875
875 to 9999

RTIMP DWG Title: A2P2_SA3_TCA_TU.srf
Project Name: Gen Char for Site Soil Remediation
Project #: 20300-PSP-0011
Verified By: M. Frank
Date Verified: 05-18-2005
Support Data: A2P2_SA3_TCA_SF_TU.xls
A2P2_SA3_TCA_SF_HPGe_100cm.xls