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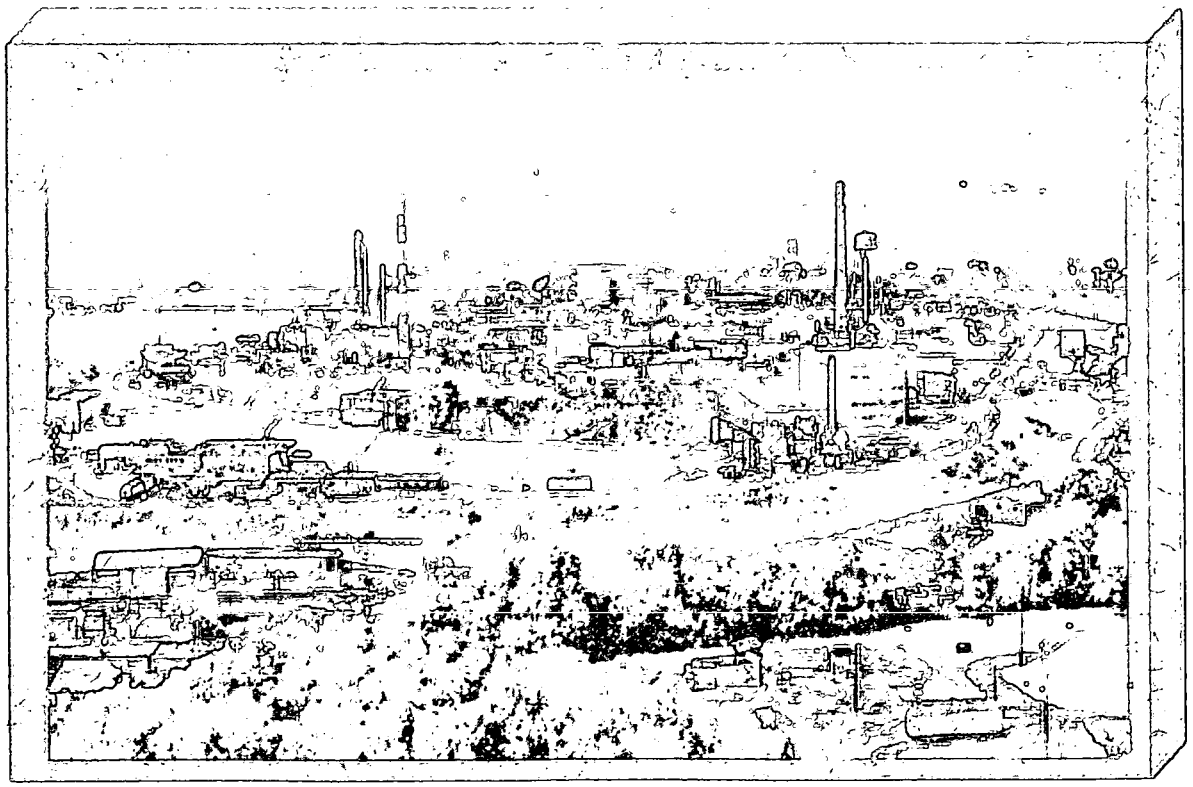
MOUND

Environmental Restoration Program

OhioEPA

MOUND PLANT
Building Data Package
Building 51

Public Review Draft
April 2002



BDP Building 51

REV	DESCRIPTION	DATE
WORKING DRAFT (to DOE)		**April 2002**
DRAFT (to Core Team)	BDPs for construction demolitions undergo simultaneous review by the Core Team and public.	**April 2002**
DRAFT PROPOSED FINAL (incorporates Core Team comments)		**N/A**
PUBLIC REVIEW DRAFT	In Appendix G (Radiological Information), added table summarizing RSDSs, and modified graphics to show locations of elevated radiological readings. On page 4, Table 1 Asbestos, corrected "Building 44" to read "Building 51."	**April 2002**
FINAL		

BUILDING DATA PACKAGE (BDP)

Building 51

(Demolition)

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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1.0 GENERAL OVERVIEW

1.1 Introduction

The purpose of this Building Data Package (BDP) is to prepare for the demolition of Building 51 (Pilot Scale Test Facility/Incinerator Facility) and to identify, if possible, any recognized environmental conditions (defined below) that may affect the subject property and building.

Recognized Environmental Condition: The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a likely release, a past release, or a material threat of a release of any hazardous substances or petroleum into structures, or into the air, ground, groundwater, or surface water near the building.

1.2 Scope

This document has been prepared in accordance with the agreements and requirements as specified in the *Work Plan for Environmental Restoration of the DOE Mound Site, The Mound 2000 Approach*. This document is a BDP for Building 51 located at the Department of Energy (DOE) Mound Plant in Miamisburg, Ohio. The investigation performed to support this BDP models procedures found in *ASTM Standard Practice for Environmental Site Assessments; Phase I Environmental Site Assessment Process* (Designation E 1527-97).

The scope of the investigation included Building 51, the soil beneath, and a 15-foot wide perimeter border around the building. The investigation of Building 51 included the following:

A) A building and perimeter inspection.
B) An examination of historical aerial photographs and maps.
C) A review of federal and state regulatory agency records.
D) Personnel interviews.
E) A review of Mound Plant records for:

   1) History of spills, releases, and chemical inventories
   2) Past sampling data

      - Radiological survey
      - Soil sampling
      - Lead-based paint
      - Asbestos
      - Radon

In addition to the building investigation conducted by BWXT of Ohio, Inc. (BWXTO) personnel, documents were reviewed. Information used to compile BDPs includes the following:

- Characterization of Mound's Hazardous, Radioactive, and Mixed Wastes, August 1990;
- OU-9 Site Scoping Report, Volumes 1-12;
- Mound Facility Physical Characterization, December 1992;
- Active Underground Storage Tank Plan, November 1994;
- OU-9 Hydrological Investigation, Bedrock Report, January 1994;
- OU-9 Hydrological Investigation, Buried Valley Aquifer Report, March 1994;
- Environmental Appraisal Report of the Mound Plant, March 1996;
- Title Search;
- Lease Information;
- EDR Report - Radius Map;
- Building Prints;
- Potential Release Site (PRS) information;
- MD-222153, Mound Site Radionuclides By Location, July 1995 Contaminant Surveys; and
- MLM-3791, Mound Facility Physical Characterization, December 1993.

2.0 BUILDING SPECIFIC OVERVIEW

Building 51 is a 3,541 square-foot, steel frame building with a high bay area and a metal roof and superstructure. The building is cut into the hillside such that the front street access is level with the upper floor of the building, and the lower floor is a basement that walks out to the rear dock. On the rear dock, there is an ash bin that is believed to have previously been connected to the incinerator waste stream. Floor plans are included as Appendix D.

Building 51 is located in the central portion of the Test Fire Valley between the Main Hill and the SM/PP Hill as shown on Figures 1 and 3. The building is serviced with central steam and chilled water. Potable water and sanitary services are provided by the Mound Plant facility. Electric service is 480 volts. The building was constructed in 1970 to provide waste incineration for the Mound Plant. No waste is currently stored in Building 51.

2.1 Current Uses of Building 51

Building 51 is currently inactive, and Safe Shutdown activities are underway. All required equipment has been removed from the building. The remaining equipment will be left in place and demolished/disposed of with the building.

2.2 Past Uses of Building 51

Building 51 housed an incinerator that was designed to burn nearly all of the plant's non-radioactive refuse including some liquids such as paints, oils, and solvents. The operation was plagued with problems and never performed at its designed capacity. The incinerator operated at various loading capacities from 1971 until February 15, 1974, when it was completely shut down *(OU 9 Site Scoping Report: Vol. 7 - Waste Management).* The incinerator was disassembled, and removed from Mound on May 22, 1979. The associated waste oil tank, which stored waste oils and waste solvents slated for incineration, was removed in November of 1990 *(OU 9 Site Scoping Report: Vol. 7 - Waste Management).*

Building 51 was most recently used in support of thermite (energetic material) production and the production of carbon for a lithium battery capacitor research project. All support operations in the facility have ceased and the facility is currently undergoing preparations for demolition.

Even though historical documentation does not indicate that radioactive wastes were ever in the building, the presence of radioactive contamination (see Section 2.4), on the floor and wall below and next to where the incinerator had been located, suggests that radioactive wastes were processed in the building at one time.

2.3 Summary of Environmental Concerns and Findings - Building 51

Table 1: Summary of Environmental Concerns and Findings

Description	Comment	Resolution
Lead-Based Paint	Recent targeted lead-based paint screening indicated that most of the paint coatings did not contain lead. Of the samples containing lead, the highest reading was 0.10 mg/cm^2, which is well below the US Department of Housing and Urban Development (HUD) established level of concern of 1.0 mg/cm^2.	Lead-based paint will not impact the demolition or disposal of the facility. Close worker disturbance of paint coatings (sanding, grinding, scraping, torching) will be avoided during demolition. If close disturbance is necessary, point of contact will be tested for lead and appropriate controls and personal protective equipment (PPE) used for disturbance as required.
Chemicals	All chemicals have been removed from the building.	No further action required.
Fluorescent Lamps and PCBs	Fluorescent lamps were utilized in the building. Ballasts may contain polychlorinated biphenyls (PCBs).	Will be removed prior to demolition.
Air Emissions	Air emission sources in Rooms 106 and 107 of Building 51 are no longer active.	No further action required.

Table 1: Summary of Environmental Concerns and Findings

Description	Comment	Resolution
Asbestos	Asbestos abatement was performed in Building 51.	No further action required.
Drainage Sumps	N/A	N/A
Lead	N/A	N/A
Mercury	N/A	N/A
Radiological	Radiological surveys were performed. Elevated levels of fixed contamination (identified as plutonium-238) were identified on a section of the lower slab and retaining wall, in areas where the incinerator and incinerator ash conveyor were located.	The back section of the building superstructure will be demolished and discarded as low-level waste. The front section of the building will be demolished and debris piles or rolloffs surveyed to determine disposition. The upper slab will be demolished and surveyed on both sides to determine disposition. The lower slab, rear dock, ash bin, and retaining wall will be left in place and included in the PRS 66 Removal Action.
Septic System	N/A	N/A
Waste Water	Handled by Mound wastewater facility.	N/A
Stains & Corrosion/HVAC	Stains were noted on the walls, overhead piping, and floors indicative of previous glycol leaks in the heating and cooling systems.	The leaks were repaired and the heating and cooling systems are drained pending demolition. No further action required.
Storage Tanks	The underground waste oil and solvent storage tank (PRS 37) was removed in 1990.	No further action required.
Solid Waste Disposal	Waste streams have been identified.	Disposal will be at the direction of Waste Management.
Migratory Hazards	Incinerator (PRS 38) and scrubber (PRS 39) associated with Building 51 were removed.	Potentially contaminated soil resulting from emissions (from PRSs 38 and 39) will be addressed as part of the PRS 66 cleanup effort. PRSs 38 and 39 will be closed out separately from the Building 51 demolition.
Radon	N/A	N/A
Energetic Material/HVAC	Thermite (energetic material) manufacturing took place in this building.	The facility underwent cleaning during Safe Shutdown activities and equipment removal. No further action required.

N/A: Not applicable

2.4 Radiological Characterization Summary for Building 51

An assessment of Building 51 was performed to review operational history and radiological survey information. Even though operational history indicates that the building's incinerator was used for non-radiological wastes, the presence of radioactive contamination (see below) on the floor and wall in the area where the incinerator had been located, suggests that radioactive wastes were processed in the building at one time. Building 51 may have also contained a uranium enrichment process, but it is unclear if the enrichment process was ever started.

A previous radiological survey had identified a location on the basement floor with fixed alpha contamination measuring 600 to 700 dpm/100cm^2 (above the release criteria of 100 dpm/100cm^2). The contaminant was determined to be plutonium-238, and the area was remediated and resurveyed. Subsequently, a 100% scan survey was conducted of the basement floor and adjacent walls using a Ludlum model 2350 gas flow proportional counter with data logging capabilities. During the course of the survey, one additional location of contamination was discovered with a maximum reading of 700 dpm/100cm^2 fixed alpha contamination. The contaminated surface was acid-etched and isotopic identification determined the isotope to be predominately plutonium-238.

In accordance with the Multi-Agency Radiological Survey and Site Investigation Manual (MARSSIM), more in-depth surveys were required. During the course of the random sampling in the lower section of the building, two other spots of contamination were discovered: one on the inside of the rear sheet metal wall (~200-300 dpm/100cm^2 fixed alpha), and the other on the west basement wall (4,000 dpm/100cm^2 fixed alpha). Those spots were also acid-etched and identified as plutonium-238. Based on the locations of the contaminated surfaces, the contamination seems to be directly related to the path of the former incinerator conveyor system. The conveyor system transported the incinerator ash from the bottom of the water "catch basin" to the outside to be collected and disposed of. The conveyor then traveled up and over the top of the incinerator, down the west wall of the lower building section and back under the incinerator in a continuous loop.

Because further surveys of the rear lower section of the building are economically impracticable, it was decided (with Core Team concurrence) that the entire rear lower section of the superstructure be disposed of as low-level radiological waste. The contaminated concrete lower slab and west wall will be left in place and disposed of as radiological waste as part of the PRS 66 Removal Action and will not be addressed here.

In accordance with MARSSIM guidance, the review team concluded that the front section and the upper slab of the building were not radiologically contaminated. However, during demolition of the front section of the building and upper slab, in-depth radiological surveys will be performed on rolloffs and debris piles due to the proximity of the material to known contaminated material at the rear of the building.

Tables 2a and 2b summarize the radiological readings in the front and rear sections of the building, respectively. Associated radiological survey documentation for the information summarized in the following tables is contained in Appendix G.

Table 2a: Radiological Summary – Upper Front Section of Building 51

TYPE	RSDS (Radiological Survey Data Sheet)	LOCATION	MAXIMUM SURVEY RESULTS (dpm/100 cm^2)	SURFACE CONTAMINATION GUIDELINES (dpm/100 cm^2) (Note 1)	COMMENTS
Highest Alpha Smearable Activity	02-TF-0453	Horizontal Surfaces & Equipment	5.59	20	
Highest Alpha Fixed Activity	02-TF-0092	Misc.	172	5,000	Note 3
Highest Beta Smearable Activity	02-TF-0453	Horizontal Surfaces & Equipment	10.75	1,000	
Highest Beta Fixed Activity	Note 2	Misc.	< 5,000	5,000	Note 2
Highest Tritium Smearable Activity	02-TF-0453	Horizontal Surfaces & Equipment	22.17	10,000	

Note 1: Guideline values per DOE Order 5400.5, Radiation Protection of the Public and the Environment.
Note 2: All radiological surveys indicated < 5,000 dpm/100cm^2 beta.
Note 3: Polonium-210, a natural decay product of uranium-238, was identified by isotopic analysis. The limit for this isotope is 5,000 dpm/100cm^2 alpha. The next Highest Alpha Fixed Activity was 50 dpm/100cm^2 on RSDS# 02-TF-0453, which is well below the 100 dpm/100cm^2 applicable limit for transuranics.

Table 2b: Radiological Summary – Lower Rear Section of Building 51

TYPE	RSDS (Radiological Survey Data Sheet)	LOCATION	MAXIMUM SURVEY RESULTS (dpm/100 cm^2)	SURFACE CONTAMINATION GUIDELINES (dpm/100 cm^2) (Note 1)	COMMENTS
Highest Alpha Smearable Activity	02-TF-0453	Horizontal Surfaces & Equipment	77.86 Note 3	20	Rear of building east wall above incinerator housing, (former) ash conveyor area
Highest Alpha Fixed Activity	02-TF-0411	Misc.	4,000 Note 3	100	Basement west wall, in incinerator ash conveyor area
Highest Beta Smearable Activity	02-TF-0458	Horizontal Surfaces & Equipment	7.34	1,000	
Highest Beta Fixed Activity	Note 2	Misc.	< 5,000	5,000	Note 2
Highest Tritium Smearable Activity	02-TF-0453	Horizontal Surfaces & Equipment	22.17	10,000	

Note 1: Guideline values per DOE Order 5400.5, Radiation Protection of the Public and the Environment.
Note 2: All radiological surveys indicated < 5,000 dpm/100cm^2 beta.
Note 3: The lower rear portion of the building was determined to be radiologically contaminated as a result of incinerator operations.

3.0 SITE DESCRIPTION

3.1 Site/Vicinity Location and Characteristics

Building 51 is located at the DOE Miamisburg Environmental Management Project (MEMP), formerly known as Mound Plant. Mound Plant is situated in the City of Miamisburg, Miami Township, Montgomery County, State of Ohio as shown in Appendix B.

The Mound Plant at one time was situated on approximately 300 acres of land and contained approximately 130 buildings with a total of approximately 1.4 million square feet of floor space (the number of buildings is constantly diminishing as buildings are decommissioned and either sold or demolished). The original 182-acre site, purchased by the Manhattan Engineer District in 1946, consisted of two hills and an intervening valley that runs approximately east and west. The 124-acre tract acquired in 1981 was an undeveloped mixture of fields and woods that undulates and slopes downward to the west, away from the main site. This area was acquired to serve as a buffer and has been used as a staging area and parking area for contractors working on-site.

To the west lies a railroad line and the north south trending Miami-Erie Canal. The northern boundaries of the site abut the residential area of Miamisburg, Ohio. Mound Road marks the northern half of the eastern perimeter of the facility then veers east, away from the southern half of the eastern boundary. A public golf course (belonging to the City of Miamisburg), the Miamisburg Mound Memorial Park, old agricultural fields, residential lots, and vacant wooded lots border against the facility along Mound Road. Benner Road forms the southern property line of the Mound Plant, with agricultural fields and farms occupying the lands beyond.

3.2 Description of Structures, Roads, Other Improvements in Proximity to Building 51

As shown on Figures 2 and 4, Building 51 is bordered on the north and south by scrub grass, on the west (front) by an asphalt access apron and roll-up doors, and on the east (back) by a dirt/gravel parking lot. In the vicinity of Building 51 are Facility 110 (two above ground fuel storage tanks within a concrete containment structure), a roadway, an access road to a parking lot, and overhead pipes. Building 51 is cut into the hillside such that the front street access is level with the upper floor of the building.

3.3 Current and Past Uses of Buildings in Proximity to Building 51

The closest building to Building 51 is one of three tarp buildings (shown on Figure 4) previously used to support a pilot soil compaction unit and used currently for heavy equipment parking.

4.0 RECORDS REVIEW

4.1 General/Historical CERCLA Information

In compliance with permit requirements under Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), and the Clean Air Act (CAA), Mound Plant has applied for or has received permits for its surface water discharges, air emissions, and hazardous waste program. Mound Plant is currently operating a hazardous waste storage facility under a RCRA Part B permit dated October 18, 1996. Mound Plant also maintains a National Pollutant Discharge Elimination System (NPDES) surface water discharge permit with Facility I.D. number OH 0009857. Operations that produce particulate or vaporous emissions are either permitted or registered with RAPCA and the Ohio Environmental Protection Agency (OEPA). Mound Plant also submits annual Emergency and Hazardous Chemical Inventory forms to the OEPA, pursuant to the Superfund Amendment and Reauthorization Act (SARA), Title III, the Emergency Planning and Community Right-to-Know Act. The 2001 version of this report indicated that no chemicals are stored in Building 51.

The Mound Plant was identified as a contaminated site on the National Priorities List under CERCLA (Superfund) in 1989. The Mound Plant site was originally listed due to volatile organic compound (VOC) contamination in the western end of the lower valley area. The cleanup of the Mound site was originally to be accomplished under the CERCLA mandated procedures for regulating Superfund Sites using the operable unit (OU) system to define and characterize cleanup areas. As the cleanup effort went forward, it became apparent that the Mound site did not fit the profile for a cleanup strategy based on the operable units. The DOE, the United States Environmental Protection Agency (USEPA), and the OEPA designed a new decision making process for the cleanup of the Mound site. The new process is known formally as a "removal site evaluation process" and informally as the "Mound 2000 Process." The Mound 2000 Process system divided the Mound site into geographical parcels containing over 400 PRSs with approximately equal numbers of parcels concerned with potentially contaminated soil and with potential contamination in or associated primarily with building operations. For a more detailed description, refer to the *Work Plan for Environmental Restoration of the DOE Mound Site, the Mound 2000 Approach*.

4.2 Specific Record Sources

4.2.1 Occurrence Reports

- None

4.2.2 Spills and Releases

- None

4.2.3 Associated PRS Overview

As a result of the investigations and documentation accomplished to comply with the CERCLA cleanup process via the Federal Facilities Agreement (FFA)/DOE Environmental Restoration (ER) Program, DOE and BWXTO have tabulated all the PRSs identified under the various regulatory programs in effect at the site. Of these 440 PRSs, seven are at or near Building 51. PRSs in the vicinity of Building 51 are identified in Table 3. Additional information is included in Appendix N.

Table 3: PRSs in Proximity to Building 51

PRS	CERCLA or Bldg. Related	Binning Status	Comments
37	Building	No Further Action (NFA)	Building 51 Waste Oil and Solvent Storage Tank, removed in November of 1990.
38	Building	Unbinned	Building 51 Waste Incinerator, removed on May 22, 1979. Will be included with PRS 66 Removal Action.
39	Building	Unbinned	Building 51 Waste Scrubber, removed on May 22, 1979. Will be included with PRS 66 Removal Action.
40	CERCLA	Removal Action (RA)	PRS 40 located entirely within PRS 66.
66	CERCLA	RA	Building 51 located entirely within PRS 66.
398	CERCLA	Further Assessment (FA)	Soil Contamination. Will be included with PRS 66 Removal Action.
399	CERCLA	FA	Elevated Soil Gas Location. Will be included with PRS 66 Removal Action.

4.2.4 Sampling Data

4.2.4.1 Radiological Surveys

Survey data, summarized in Section 2.4 of this document, indicated no elevated radiological readings in the upper front portion of the building. The lower rear portion of the building, apparently affected by incinerator operations, was determined to be radiologically contaminated. Supporting documentation is contained in Appendix G.

4.2.4.2 *Soil Sampling Data*

Appendix L contains a graphic and table presenting results of all soil sampling data within a 15-foot perimeter of Building 51. Maximum exceedances to screening levels or guideline values (where no screening level exists) are listed in Table 4. All other results are below applicable levels.

Table 4: Maximum Results Exceeding Screening Levels

Analyte	Maximum Result	Background	Comparison
Thorium-232+D (pCi/g)	11.76	1.4	1.47 (screening level)
Beryllium (mg/kg)	0.94	1.3	0.7 (10^{-6} RBGV)
Potassium-40 (pCi/g)	6.53	37	1.42 (10^{-6} RBGV)

Screening level established by the Core Team.

RBGV: most stringent of construction and office worker scenarios per Risk-Based Guideline Values, March 1997, Final

Additional soil sampling required to close out PRSs 38 and 39 will be performed as part of the PRS 66 project and is separate from the Building 51 demolition.

4.2.4.3 *Chemical History*

Building 51 contained an incinerator (since removed) that burned liquids such as paint, solvents, and waste oil. Most recently, Building 51 housed processes that used energetic materials and photographic processing chemicals. The building underwent Safe Shutdown in 1996 at which time these materials were removed from the building. The most recent annual chemical inventory report (March 2002) found no chemicals located in the building.

4.2.4.4 *Lead-based Paint*

A lead-based paint screen was conducted on March 20, 2002 in conjunction with a planned radiological MARSSIMS survey. The results indicated that most of the paint coatings tested did not contain lead. Of the samples containing lead, the highest reading was 0.10 mg/cm^2, which is well below the HUD-established level of concern of 1.0 mg/cm^2. In accordance with the OSHA Construction Standard for Lead, lead-containing paint should not be disturbed by workers in close contact without employing the proper controls and PPE.

4.2.4.5 *Asbestos*

Asbestos abatement was performed in Building 51; no further action is required.

4.2.4.6 *Radon*

The results of a 1989-90 Mound Indoor Radon study indicated an average radon concentration of 0.4 picoCuries/liter (pCi/L) in Building 51 (Appendix H). The USEPA recommended standard for radon is 4.0 pCi/L.

4.3 Review of Building Prints

Building prints were reviewed and floor plans are included in Appendix D.

4.4 Aerial Photographs

Aerial photographs from 1968 (prior to construction), 1973 (following construction), and 1996 (most recent aerial photo) were reviewed and are presented in Appendix E.

4.5 Interviews

Past Building Manager, R. A. Ward, was interviewed via a building manager questionnaire (included in Appendix F). The subsequent Building Manager, Ken Hacker, and the current Building Manager, Gary Weidenbach, were also interviewed regarding past facility operations and current conditions. No significant items in the building were identified based on the questionnaire or interviews.

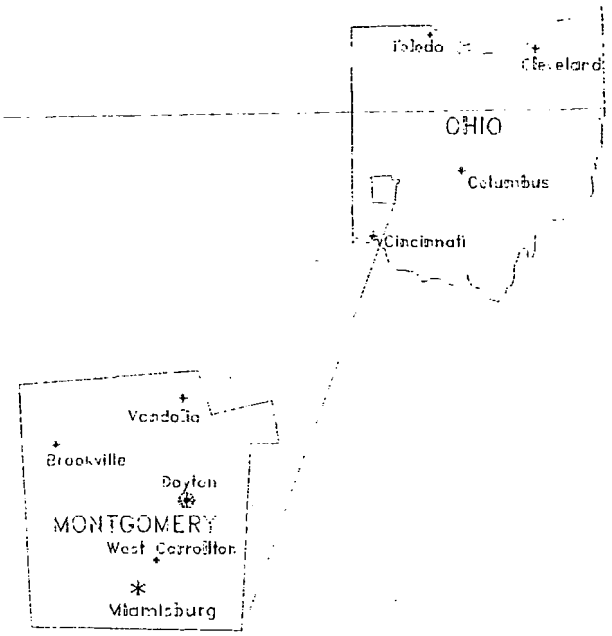
Appendix A

General Listing of Acronyms

ASTM	American Society for Testing and Materials
BDP	Building Data Package
BWXTO	BWXT of Ohio, Inc.
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
cm^2	centimeters squared
CWA	Clean Water Act
DOE	United States Department of Energy
DPM	disintegrations per minute
EPA	United States Environmental Protection Agency
ER	Environmental Restoration (Program)
FFA	Federal Facility Agreement
HAZMAT	hazardous materials
MARSSIM	Multi-Agency Radiological Survey and Site Investigation Manual
MEMP	Miamisburg Environmental Management Project
N/A	not applicable
NPDES	National Pollutant Discharge Elimination System
OEPA	Ohio Environmental Protection Agency
OU	Operable Unit
PCB	polychlorinated biphenyl
pCi/L	picoCuries per liter
PRS	Potential Release Site
RI/FS	Remedial Investigation/Feasibility Study
RAPCA	Regional Air Pollution Control Agency
RCRA	Resource Conservation and Recovery Act
RSDS	Radiological Survey Data Sheet
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

Appendix B

Map of Montgomery County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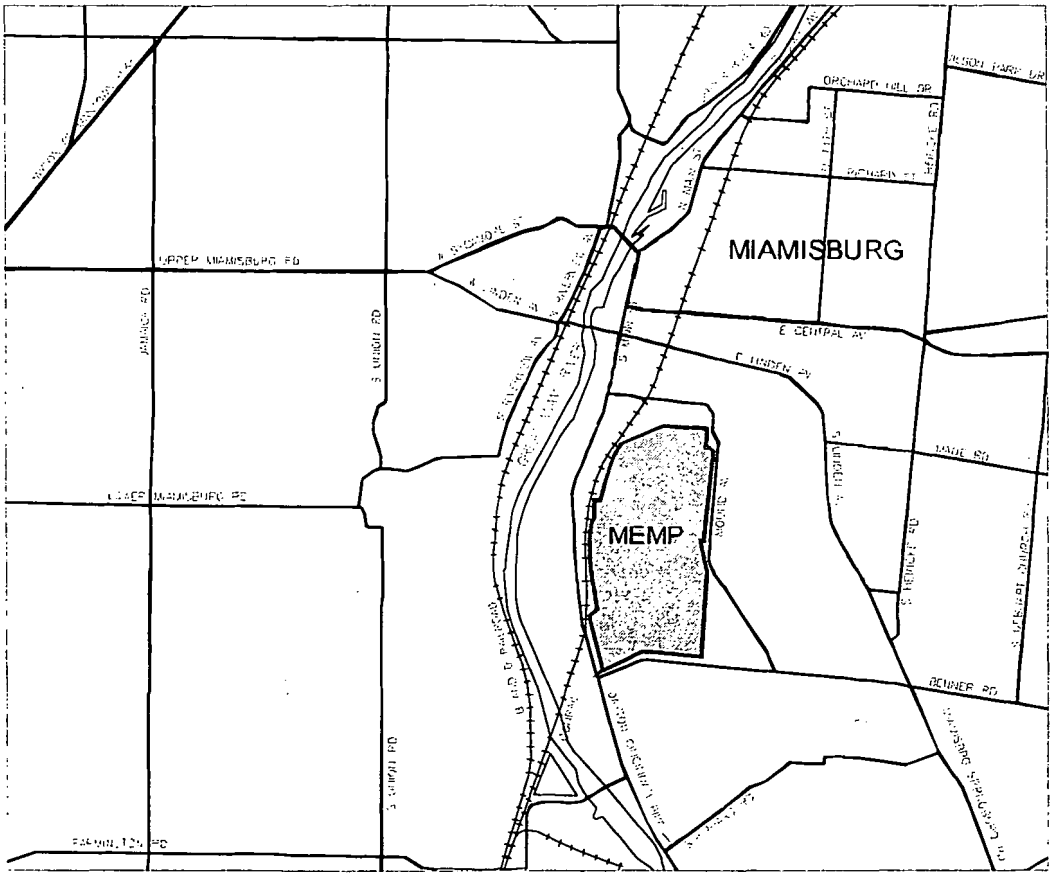
Cleveland
OHIO
Columbus
Cincinnati
Vandalia
Brookville
Dayton
MONTGOMERY
West Carrollton
Miamisburg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MEMP
UPPER MIAMISBURG RD
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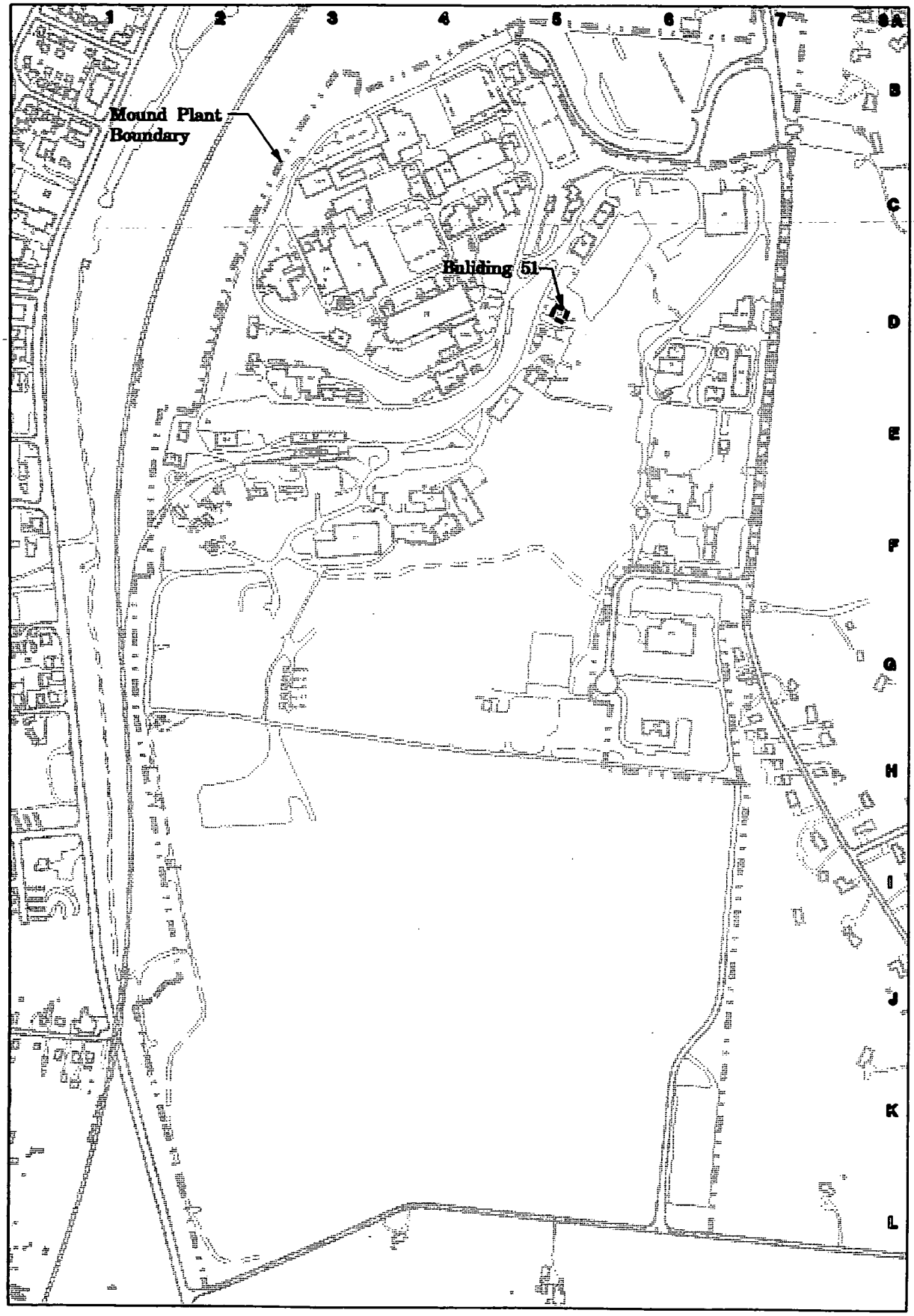
MADE RD
BENNER RD
OPPOSSUM HILL DR

Appendix C

Figures



Legend

- Structures
- Paved roadway
- Unpaved roadway
- Railroad
- Water course
- Fence
- Mound Plant boundary
- Contour line

0 100 200 400 600 800 1000
Scale In Feet

DATE	REVISION	BY
01/28/02	ISSUE FOR GENERAL USE	SSP

MOUND

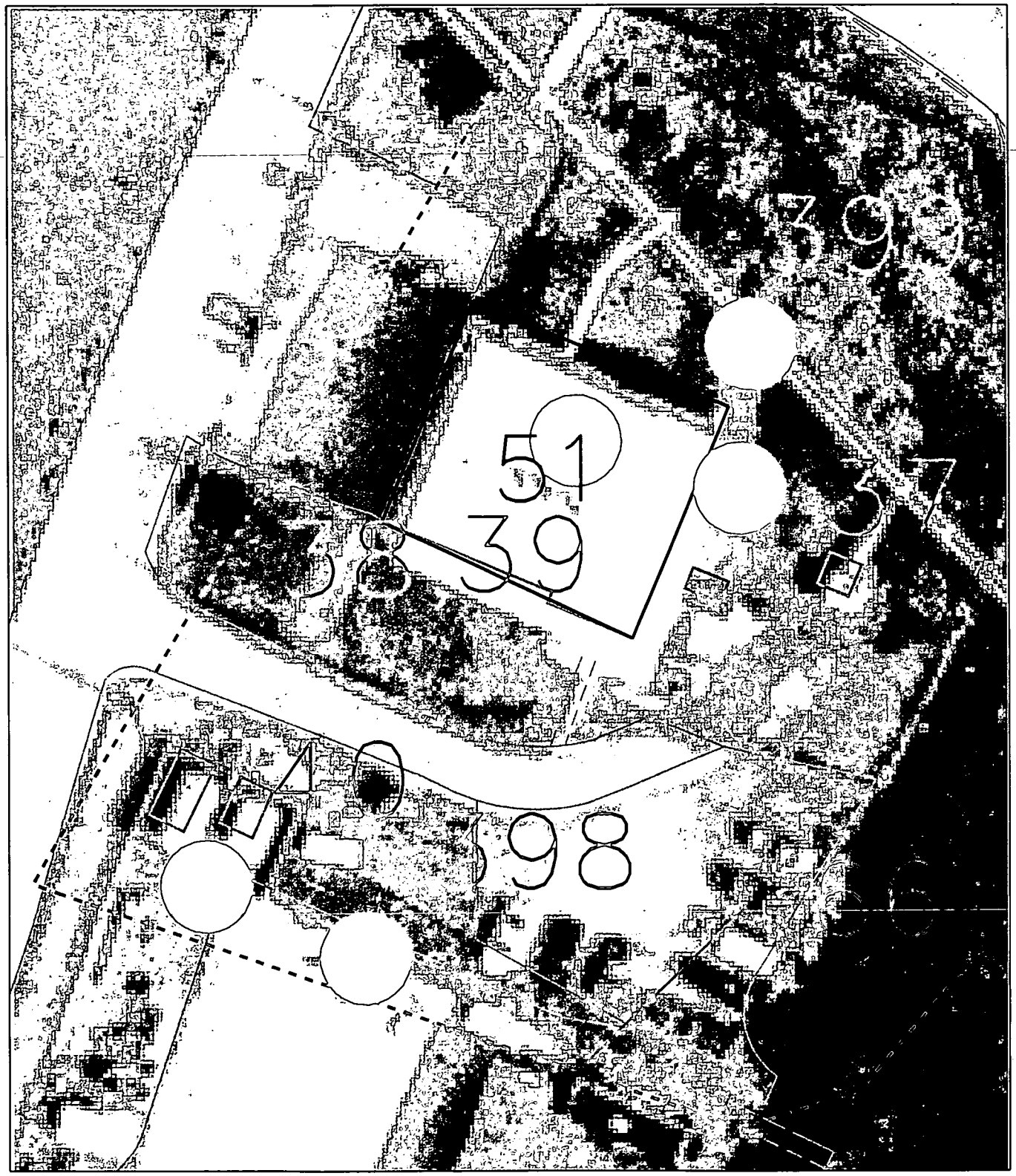
Environmental Restoration Geographic Information System

UNCLASSIFIED

D gen_site_plan.dgn

Figure 1
Location of Building 51

gen_site_plan.dgn



○ PRS Point

⬚ PRS Area

MOUND

Environmental Restoration Geographic Information System

Figure 2
Building 51
and Vicinity

UNCLASSIFIED

vicinity.dgn

REV	DATE	REVISION	BY	CHKR	ENG	UPDC	APVD	
	01/30/02		SSR					

DGN TYPE STE | PROJ ER-GIS | STATUS MD-REL | ORIGIN MSTATION

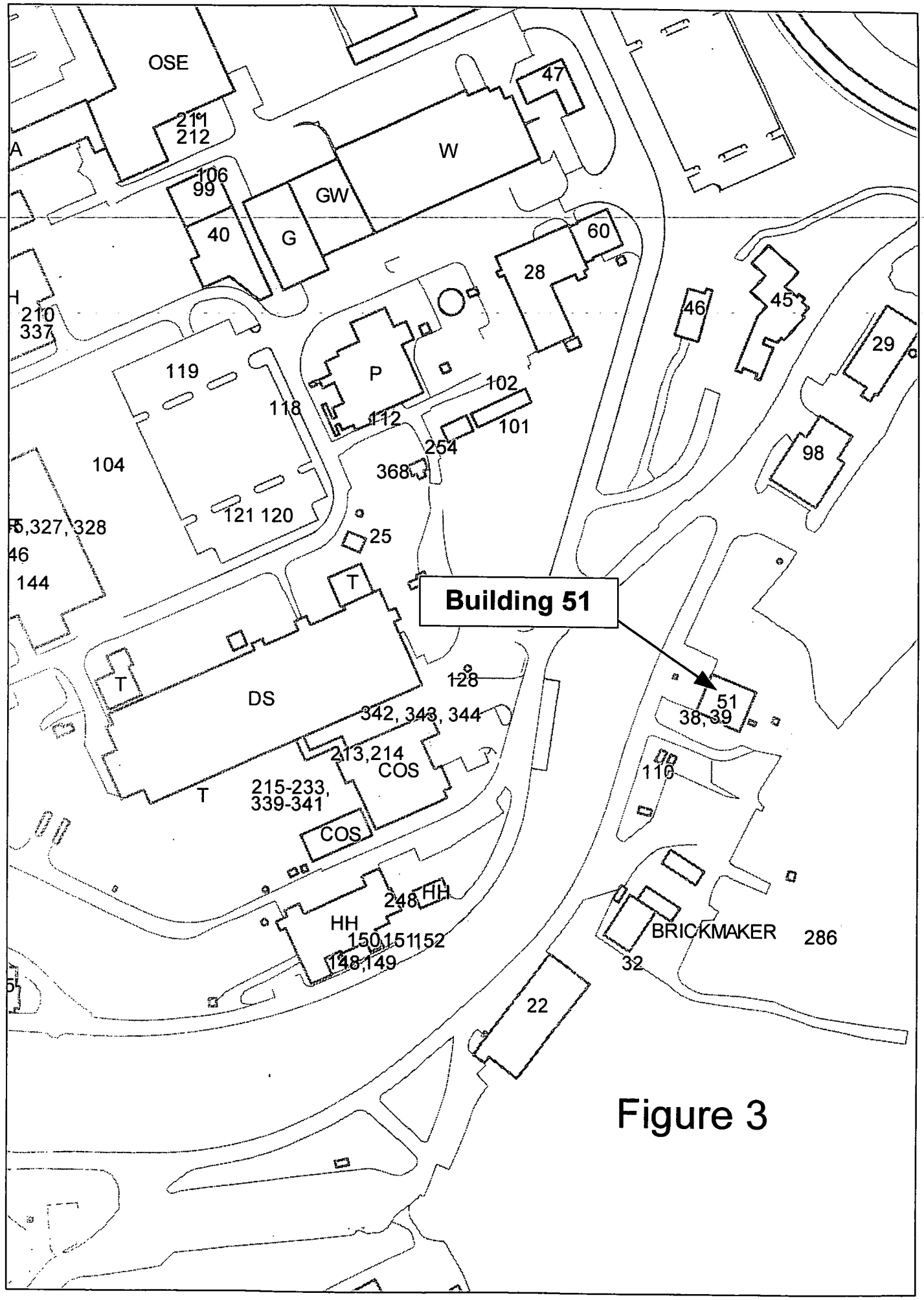

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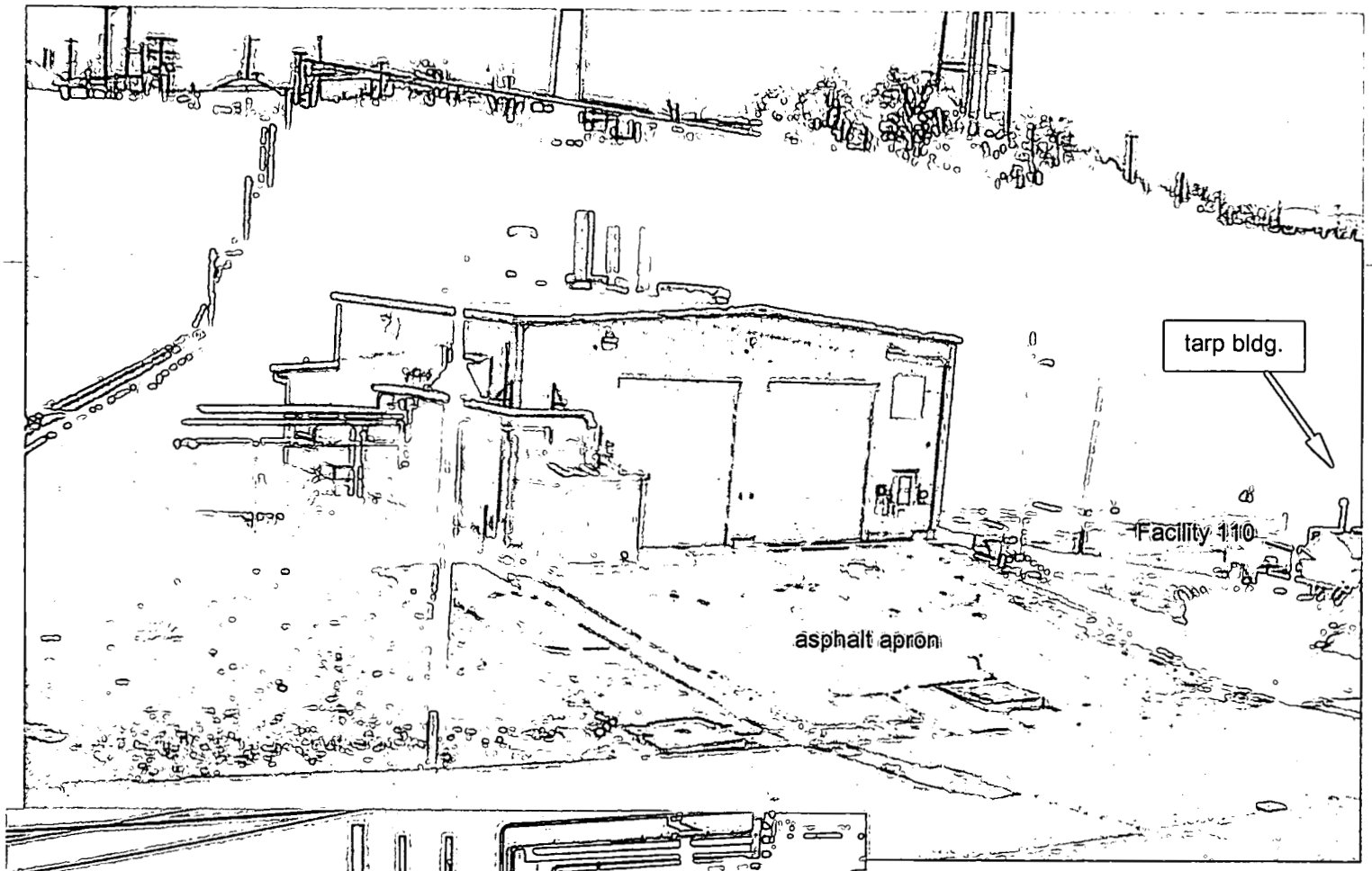
Figure 3



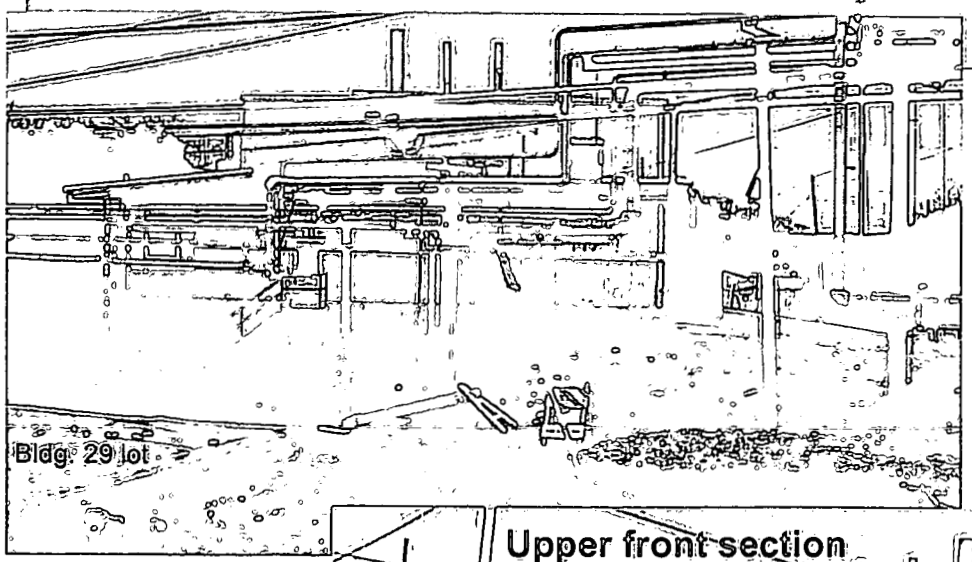
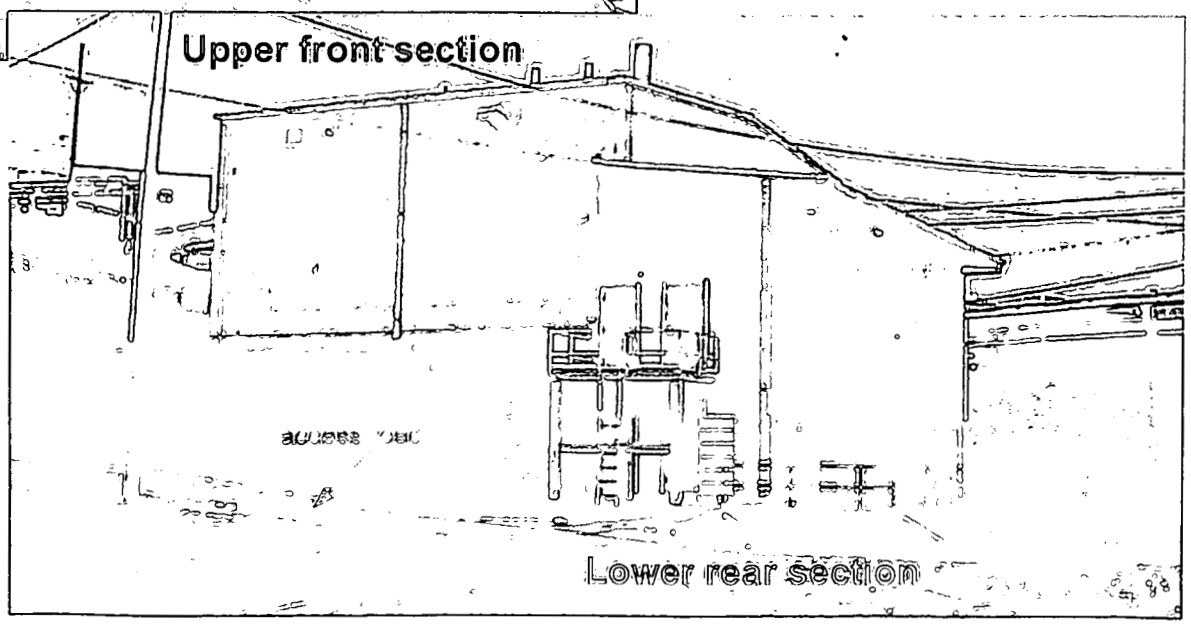


Figure 4: Building 51
Recent Exterior Photos

taken 1 February 02



Appendix D

Floor Plans

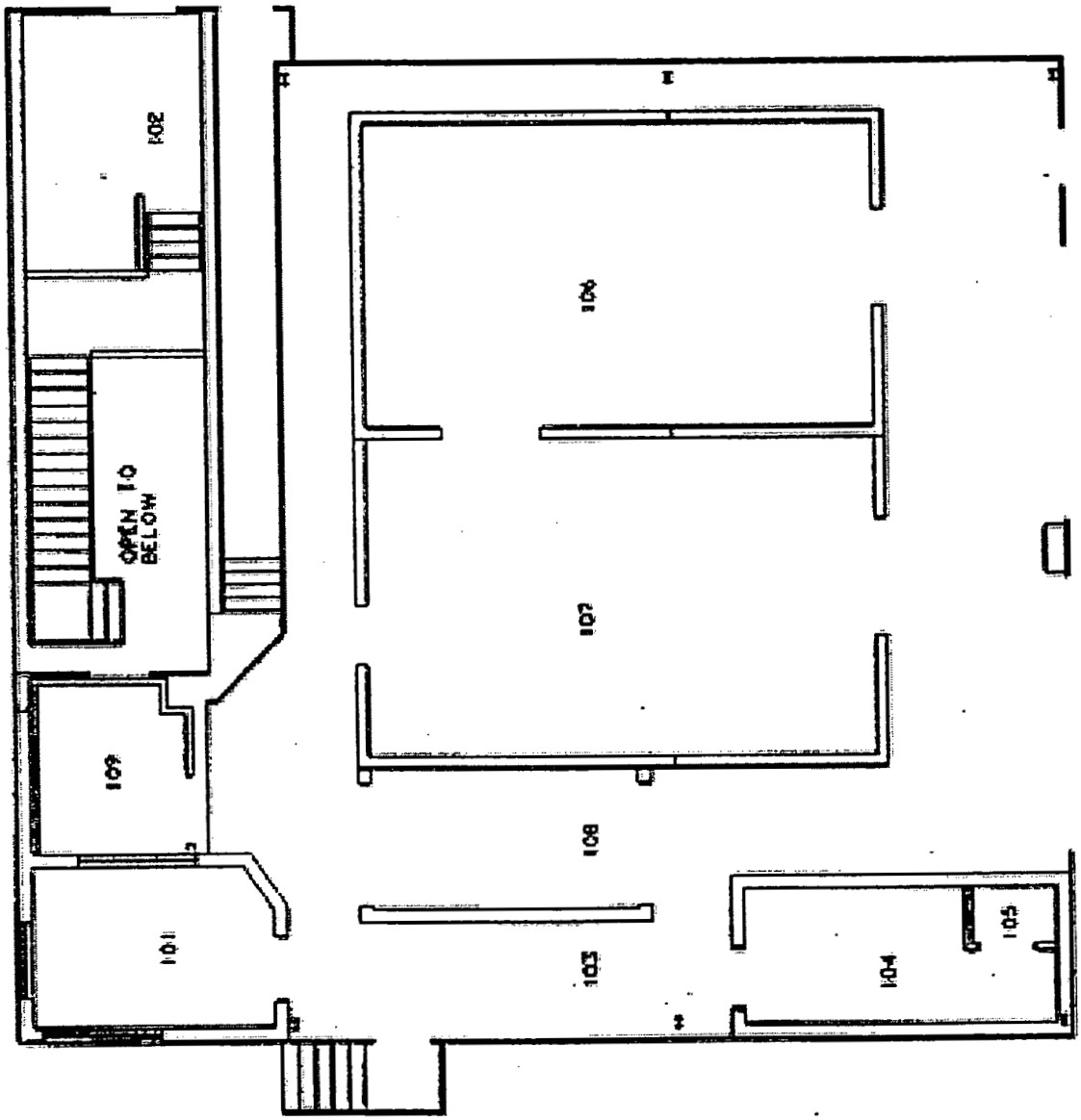
All radiological drawings based on incorrect north arrow. (V140)

BLDG #51
FIRST FLOOR
BLDG CODE:2061

F8C211261
UNCLASSIFIED

15Ap02

North



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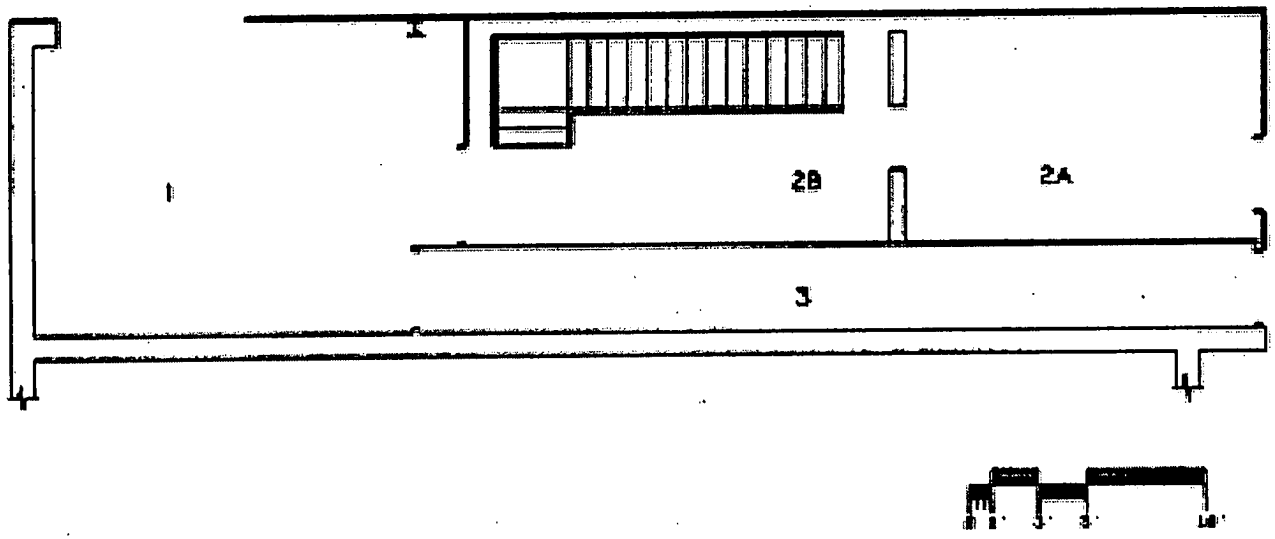
All radiological drawings based on incorrect north arrow. (VKG)



North

BLDG #51
BASEMENT
BLDG CODE:3051

BLDG #51
FLOOR PLAN

UNCLASSIFIED

FBC91124

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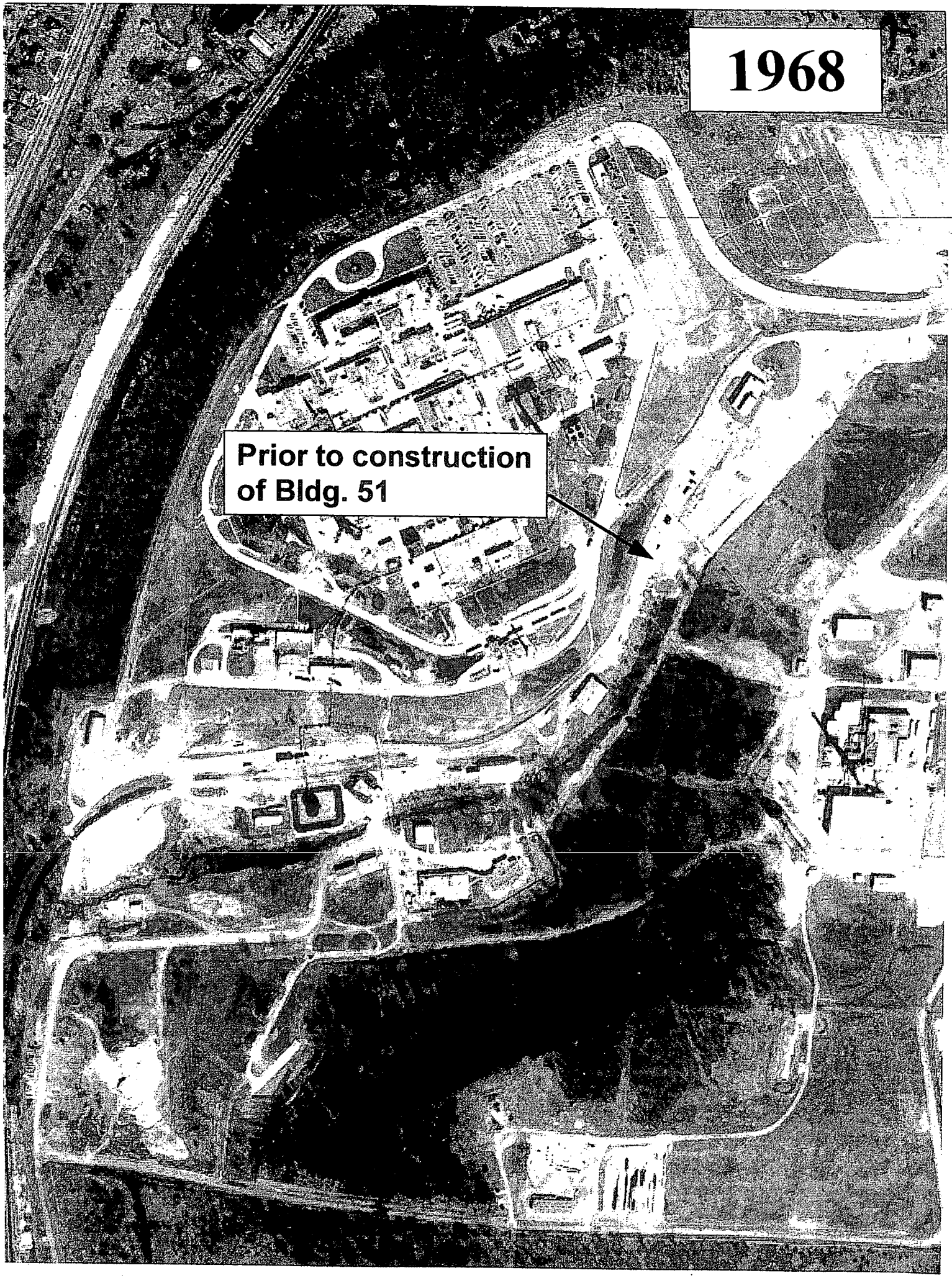
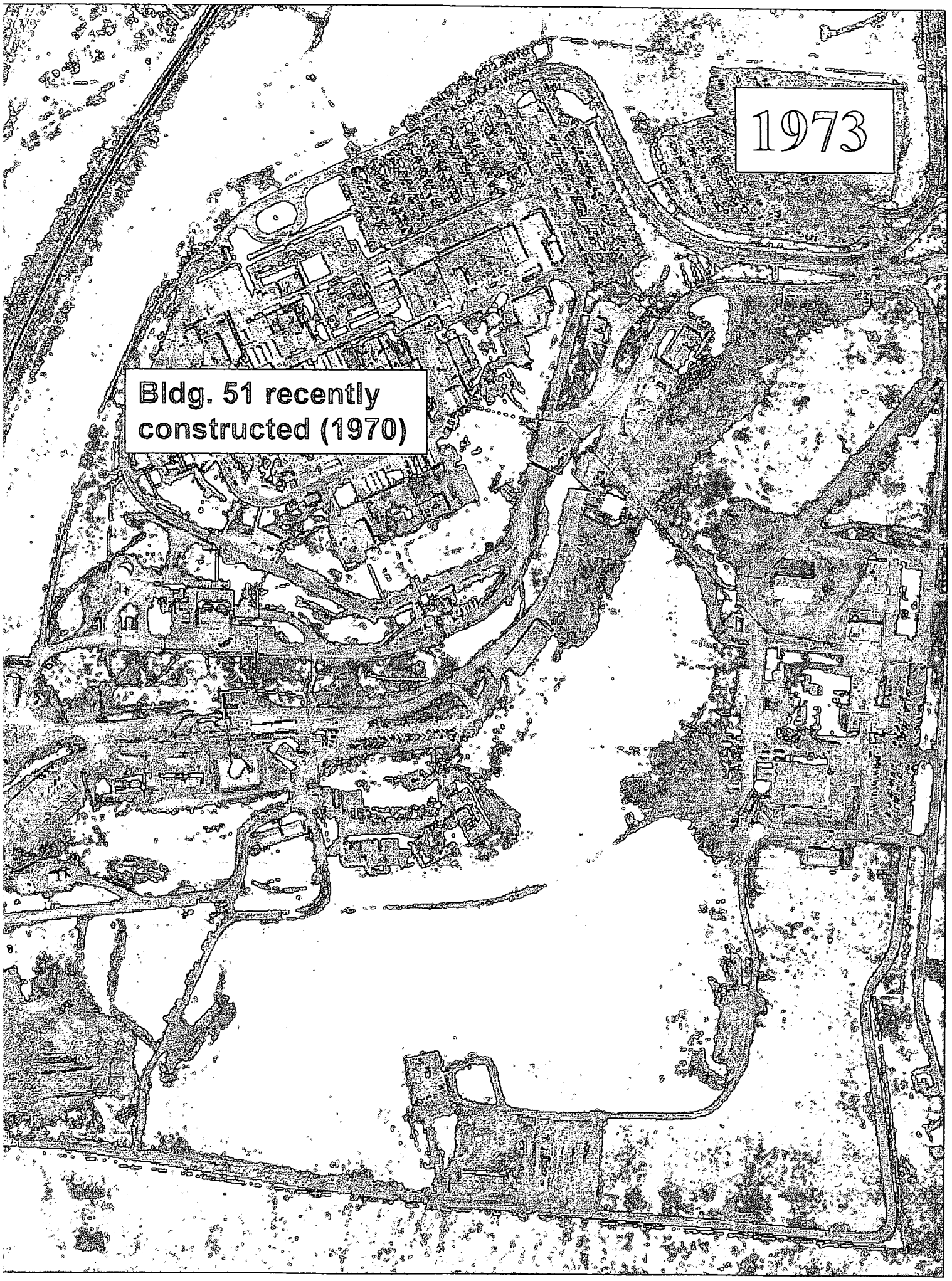
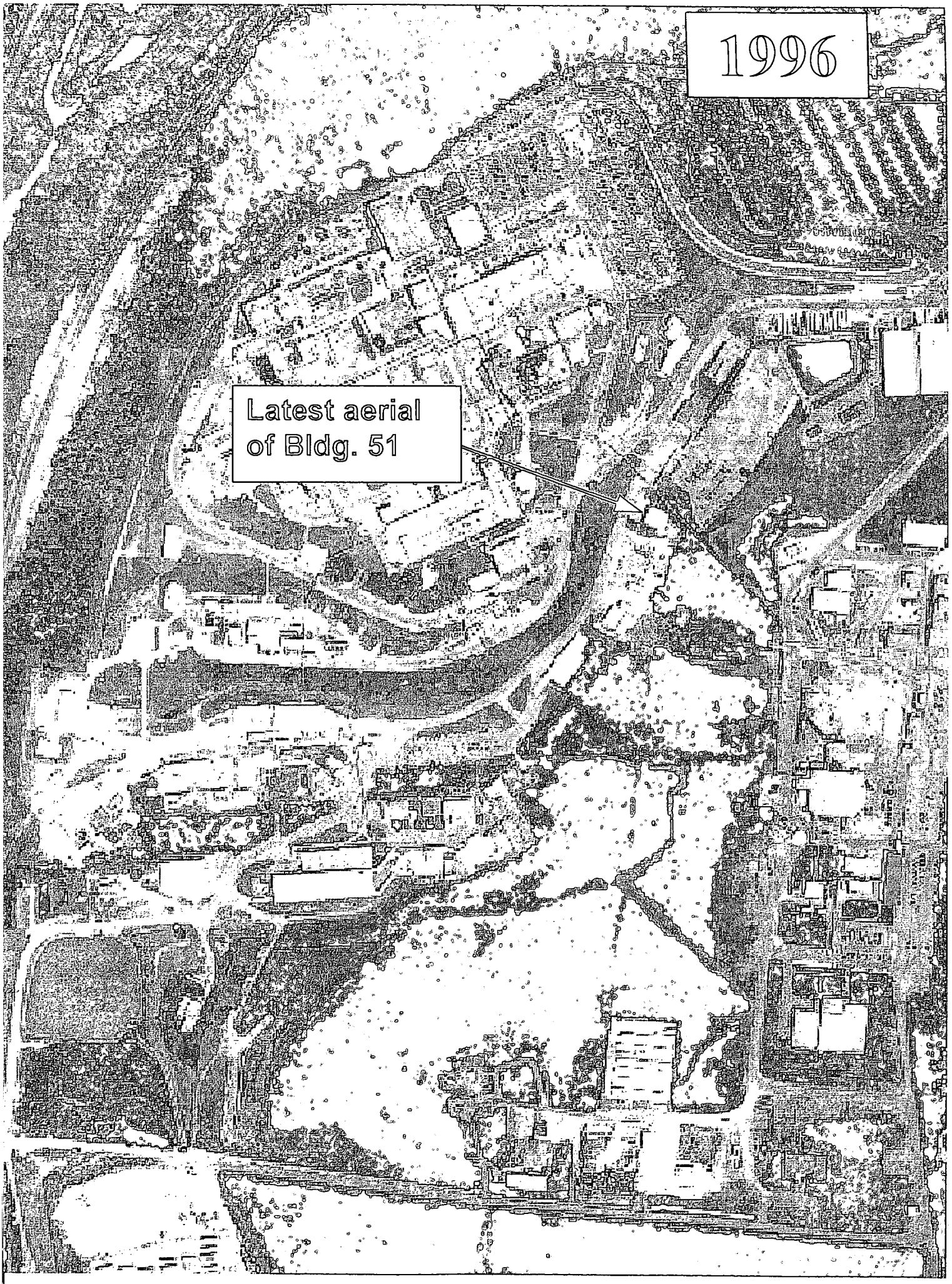
Appendix E

Aerial Photographs


1968
Prior to construction of Bldg. 51


1973
Bldg. 51 recently constructed (1970)


1996
Latest aerial of Bldg. 51

Appendix F

Environmental Appraisal Report of the Mound Plant (excerpt)

ENVIRONMENTAL APPRAISAL CHECKLIST

Building Name 51

Appraisers:

Name	Discipline
MARCIA VANNET	CHEMIST
MARK GILLIAT	ENGINEER
MYRON SMITH	ENGINEER

Building Manager: BOB WARD

Process Manager:

Date: 2/27/96

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ENVIRONMENTAL APPRAISAL CHECKLIST

Table of Contents

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TSCA—PCB	14
Low-level and Transuranic Waste	17
Waste Minimization/Pollution Prevention Activities	22

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Environmental . ..sal Checklist

Building Name: S(Appraisers: TEAM 4 Date: 2/27/96

Clean Water Act (CWA) Screening Checklist

Question	Response	Comments
Does the outside ~~drain spouting~~ of the building discharge directly to a storm sewer/~~sanitary system~~?	Y / N	If the answer to any of these questions is yes, proceed with the following checklist.
Are there sinks, toilets and floor drains in the building?	Y / N	
Are chemicals being used in the building?	Y / N	
Is there a process which discharges to the storm or sanitary system?	Y / N	

CWA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 122 Appendix D Table V	If chemicals are used/stored in the building, are they on the attached list? * Are they properly contained?	Y / N Y / N	
	Is the building in operation? What are the processes and where do they discharge to?	Y / N _____ _____	
	Do the floor drains, sinks & toilets appear to be draining properly?	Y / N	
OAC 3745-33	Do the floor drains and sinks drain to a sanitary or storm sewer?	Sanitary / Storm	
	Is there a sump/pit in the building? If so, what does it contain? How often is it pumped out? Does water collect in sump? Does sump have secondary containment?	Y / N _____ _____ Y / N Y / N	
	Are there any manholes, catch basins, drains, or fill pipes in or around the building? If so, are there any unusual appearances, colors, and/or odors? Describe in comment section. Can chemicals flow into the drain?	Y / N Y / N Y / N	**

* all chemicals removed from building

** concrete basin in back of facility - flyash cleanout from historical

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Clean Air Act (CAA) Screening Checklist

Regulatory Guideline	Question	Response	Comments
	Are there any rooms that have air emissions sources that vent to the outside of the building, e.g., fumehoods, equipment? If so, note the rooms.	Y / N *	
OAC 3745-35	Using the air emissions inventory reference for this building, are there any sources in the building that are not documented?	Y / N	
	Is there evidence of fugitive dust emissions inside or outside of the building	Y / N	

CAA Checklist

Regulatory Guideline	Question	Response	Comments
	Are there existing air permits or applications applicable to the building?	Y / N	*
OAC 3745-31,35	If yes, are the terms and conditions of the permit or the information included on the application (see air emissions database) being followed? Note any differences and update the air emissions database.	Y / N	
OAC 3745-31	Are there any sources that are not included in the air emissions database? If so, note the room, hood number, active or not, POC, and applicable air emission database information on Table B.	Y / N	
OAC 3745-31-03	Are there sources which are lab equipment of lab fumeheads used exclusively for chemical or physical analyses and bench scale lab equipment? These sources do not require a permit. However, the air emissions database should be updated.	Y / N	
	Has there been any release of air contaminants from this building?	Y / N	

* Air emission sources on 95 list but now inactive

Environment Appraisal Checklist

Building Name: 51 Appraisers: Team 4 Date: 2/27/96

CAA Checklist

Comments: Note the number of sources/hoods per room, the number that are active, and the POC on the reference document.

TABLE A									
Process Source	Room Number	Hood Number	In Database	Active	Chemicals Used	Quantity Used	Quantity to Waste Management	Hours/Yr. Operation	Air Emissions
Bd 51 Navigational Depositor	106	51106 0002	Y / N	Y / N					
			Y / N	Y / N					
PaN Process	107	05110 70001	Y / N	Y / N					
			Y / N	Y / N					
			Y / N	Y / N					

Source:_____

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Hazardous Materials (HM) Screening Checklist

Question	Response	Comments
Are any chemicals used or stored in this building, now or in the past?	(Y) N	If the answer is yes, proceed with the following checklist.

*

HM Checklist

Regulatory Guideline	Question	Response	Comments
29 CFR 1910.1200(b,f)	All containers of hazardous chemicals shall be labeled as to the identity of the chemical and the appropriate hazard warnings.	Y / N	
29 CFR 1910.1200(g)	MSDS shall be available to the employees in close proximity to the work area.	Y / N	
29 CFR 1910.22, 1910.106, 1910.176	All places of employment, passageways, storerooms and service areas shall be kept clean and orderly and in a sanitary manner. Aisles shall be unobstructed. Drums and containers are not leaking and are tightly sealed.	Y / N	
29 CFR 1910.106	Storage cabinets for flammable materials are constantly kept closed, are fire resistant and are labeled "FLAMMABLE - Keep Fire Away". Containers inside should be labeled and closed. No spills inside cabinet.	Y / N	
29 CFR 1910.106(d)(7)	Incompatible chemicals are not stored together.	Y / N	
29 CFR 1910.106(d)(4)	Inside Flammable/combustible storage rooms must meet the following: 4 in. raised sill or trench that drains to a safe area, liquid tight wall/floor joints, self-closing doors, gravity or mechanical exhaust providing 6 room changes/hr., exhaust switch located outside room, at least one 3 ft. aisle; no cracks in secondary containment.	Y / N	

* all chemical removed from facility

Building Name: 51 Appraisers: TEAM 4 Date: 2/28/96

HM Checklist

Regulatory Guideline	Question	Response	Comments
29 CFR 1910.106(d)(7)	All flammable/combustible storage locations have at least one 12-B portable fire extinguisher located outside and within 10 ft. of a door opening into any room for storage. No smoking signs are posted.	Y / N	
29 CFR 1910.151	Eyewashes/showers shall be provided within the work area. Ensure unit is operational.	Y / N	
CGA P-1 3.3 & 3.3.10	All gas cylinders (full or empty) shall carry a legible label or marking identifying the contents.	Y / N	
CGA P-1 3.5.3	Full and empty containers should be stored separately with the storage layout planned so that containers comprising of old stock can be removed first with a minimum handling of other containers.	Y / N	
CGA P-1 3.5.8	All compressed gas containers in service or in storage shall be stored standing upright and the container shall be secured.	Y / N	
CGA P-1 4.2.2	Oxygen cylinders shall be separated from flammable gas containers or combustible materials a minimum of 20 ft. or a noncombustible barrier 5 ft. high.	Y / N	
29 CFR 1910.104(2)(10)	Oxygen stored as a liquid shall be on a noncombustible surface. Asphalt is considered combustible. Wood and long dry grass shall be cut back 15 ft. from the container.	Y / N	
29 CFR 1910.104	Bulk oxygen storage shall be permanently placarded "OXYGEN - NO SMOKING - NO OPEN FLAMES".	Y / N	
	Is there a sign posted in each work area regarding emergency egress and emergency response action?	Y / N	
	Is there an emergency response plan available?	Y / N	

BLANK

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

HM Checklist

Regulatory Guideline	Question	Response	Comments
	Is there a process area?	Y / N	
	Does it have proper containment?	Y / N	
	Is there a liquid bulk transfer area?	Y / N	
	Is there proper containment?	Y / N	
*	Is there an above ground storage tank? If so, complete Table B.	Y / N	

*LN_2 tank removed

Above Ground Storage Tanks Inventory

TABLE B—Above Ground Storage Tanks Inventory

Building	Capacity (Gal.)	Contents	Estimated Volume	In Service	Containment	Visual Stains/ Contamination	If Empty, Flushed
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
		BLANK		Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N

Source: _____

Environmental Appraisal Checklist

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Safe Drinking Water Act (SDWA) Screening Checklist

Does this facility have potable water?	Y / N	If yes, conduct the following survey.

SDWA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745 95-02 (A)	Do actual or potential cross-connections exist between potable (light green) and service water (dark green)?	Y / N	
OAC 3745 95-04 (B)(C)	Are backflow prevention devices installed where cross connections (hoses connected to faucets, hot water tank vented directly to a drain) exist?	Y / N	
	Are sources of service water (janitorial and laboratory faucets, or outdoor spigots) posted as non-potable water sources?	Y / N	
	Does the facility contain any water coolers or fountains that are not lead free? Complete Table C.	Y / N	?

TABLE C—Water Fountain Survey

Building	Location	Model #	Comments / Date of Analysis for Lead
51	Corridor 8	Oasis	(No Model # could be seen)

Source: _____

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

RCRA Screening Checklist

Does this facility generate waste or use chemicals? *	Y / N	If yes, conduct the following survey.

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745 52-11	Has any material generated been characterized RCRA hazardous? Was charactarization by analysis or by process knowledge? Are lab results or documentation of process knowledge readily available? Note any uncharacterized material in comment section. Is it waste? If yes, proceed with next section.	Y / N analysis / process Y / N Y / N	
OAC 3745 52-11	Are any of the materials noted RCRA hazardous waste? If no, note and stop here. If yes, note the location of the management unit, and the method of management, and proceed with the appropriate section below.	Y / N	

* There is some waste being generated as part of safe shutdown (see report)

Environmental Appraisal Checklist

Building Name: 51 Appraisers: Team 4 Date: 2/27/96

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
I. HAZARDOUS WASTE STORED IN CONTAINERS			
	Is there an area in the building that could qualify as a Satellite Accumulation Area? Is it treated as such?	Y / N Y / N	
OAC 3475-52-34 (C)	Has any of the RCRA hazardous waste in this building been managed in Satellite Accumulation Areas? If no, proceed to the next section. BLANK If yes, answer the following.	Y / N	
	Are the containers marked with the words hazardous waste, or other words denoting the hazard?	Y / N	
	Are the containers in good condition?	Y / N	
	Are the waste compatible with the containers?	Y / N	
	Are containers managing ignitable hazardous waste stored at least 50 feet from the plant site boundary?	Y / N	
	Are containers kept closed and locked except during filling?	Y / N	
	Are containers moved within 3 days of being filled?	Y / N	

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745-52-11 (A)	If a Satellite accumulation area has been abandoned and/or if waste left in place, and the containers may be subject to the 90-day-storage exclusion. If this exclusion does not apply, go to the next section. If the containers have been in storage under this exclusion, answer the following:	BLANK	
	Are the containers in good condition?	Y / N	
	Are the waste compatible with the containers?	Y / N	
	Are the containers kept closed except during filling?	Y / N	
	Are the containers managed in such a way, that they are not ruptured, or leaks caused?	Y / N	
	Is the area inspected at least once weekly?	Y / N	
	Is the inspection recorded? • Where is the log? Is it properly completed, dated, and signed?	Y / N _____ Y / N	
	Are containers managing ignitable hazardous waste stored at least 50 feet from the facility boundary?	Y / N	
	Are incompatible wastes managed in such a way that they will not react with another incompatible waste?	Y / N	
OAC 3745-52-34(B)	Has any of the waste (except in Building 23, Building 72 and the Burn Area) been managed in excess of 90-days?	Y / N	
	If no go to next section.		
	If yes, note.		
	For Building 23, Building 72 & Burn Area use special checklist.		

Environmental Appraisal Checklist

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
II. HAZARDOUS WASTE STORED IN TANKS			
OAC 3745-52-32 (B)	Has any chemical waste stored in a tank, piece of process equipment or ancillary equipment been in storage in excess of 90-days?	Y / N	
	If the answer was no, then proceed with the following:	Y / N	
	Has the tank or piece of equipment had an integrity assessment?	Y / N	
	Is there a sump?	Y / N	
	Is it dry?	Y / N	
	Does the tank or equipment have secondary containment?	Y / N	
	Does the tank or equipment have leak detection device(s)?	Y / N	
	Has spill control prevention been enacted?	Y / N	
	Has any hazardous waste stored in a tank, piece of process equipment or ancillary equipment been in storage in excess of 90-days?	Y / N	
	If the answer was no, then proceed with the following:		
	Has the tank or piece of equipment had an integrity assessment?	Y / N	
	Does the tank or equipment have secondary containment?	Y / N	
	Does the tank or equipment have leak detection device(s)?	Y / N	
	Has spill control prevention been enacted?	Y / N	
	Is there a closure plan?	Y / N	
	If yes, then note.		
OAC 3745-67	Has any of the waste been managed in a surface impoundment? If yes, then note. Go to the next section.	Y / N	

BLANK

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745-68	Has any of the waste been managed in a Landfill? If yes, then note. Go to the next section.	Y / N	BLANK
OAC 3745-68	Has any of the waste been managed in an Incinerator (other than Burn area units)? If yes, then note. Go to the next section.	Y / N	
OAC 3745-68	Has any of the waste been managed in a Thermal treatment Unit (other than Burn area units)? If yes, then note. Go to the next section	Y / N	
OAC 3745-69	Has any of the waste been managed in a Miscellaneous Treatment Unit (other than Burn area units)? If yes, then not. Go to the next section.	Y / N	
OAC 3745-56	Has any of the waste been managed in a Waste Pile? If yes, then note. Go to the next section.	Y / N	

General Comments:

Environmental Appraisal Checklist

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Asbestos Screening Checklist

Does this facility contain ACBM? *	Y / N	If yes, conduct the following survey.

Suspected (Miller, 1995)

Asbestos Checklist

Note: Routinely, the asbestos standard for ACBM in schools has been applied to facilities for purpose of cleanup. In addition to AEHERA, there are additional standards in the NESHAPS that may be of importance.

Regulatory Guideline	Question	Response	Comments
ADAPTED FROM TSCA ACBM IN SCHOOLS:			
	Has this building been characterized either through process knowledge, by analyses, or by inspection to determine if it contains asbestos? If no for this building or area note this conclusion in the comment section.	Y / N	
	Is there any evidence of friable asbestos?	Y / N	
	Is the asbestos removal properly managed? (See questions listed below)	Y / N	If there is no asbestos removal, do not complete the following section.
NESHAPS FOR ASBESTOS FOR ANY ONGOING ASBESTOS REMOVAL:			
40 CFR 61.156	There are no discharges of visible emissions to the outside air from collection, processing, packaging, transporting, or deposition of ACBM during the removal.	Y / N	
40 CFR 61.152(b) (1)	ACBM is treated with water in accordance with 40 CFR 152(b)?	Y / N	
40 CFR 61.154	Is friable asbestos adequately wetted during stripping? Or, has an adequate ventilation and collection system been installed?	Y / N	
40 CFR 61.152	Is wetting continued until the waste friable asbestos is collected for disposal?	Y / N	

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Toxic Substances and Control Act (TSCA) PCB's Screening Checklist

Does this facility potentially contain any PCB's or PCB contaminated equipment?	Y / N	If yes, are transformers labeled (Blue or Yellow stickers)? If yes, conduct the following survey.

TSCA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 761	Has any waste generated in, or from, this building been characterized either through process knowledge or by analyses to determine if it contains PCB's ? If the answer is no, note . If the answer is yes, proceed with next section.	Y / N BLANK	
	Based on an inspection, are any of the materials or equipment potentially PCB contaminated? If no, note and stop here. If yes, note the location of the management unit, and the method of management, and proceed.	Y / N	
40 CFR 761.65 (c) (5)	Are PCB articles or containers stored in this building checked for leaks at least once every 30 days?	Y / N	
	If yes, are auditable records maintained.	Y / N	
40 CFR.30 (a) (1) (ix)	Are any PCB transformers in use, or stored for possible reuse, that contain PCB's at concentrations of 500 ppm or greater?	Y / N	
	Are they visually inspected quarterly? If yes, are auditable records maintained?	Y / N	

Environmental Appraisal Checklist

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

TSCA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 761.30 (a) 1,viii	Are all combustible materials (i.e., paints, solvents, plastics, paper, sawn wood, etc.) cleared from areas containing PCB transformers to a distance of five meters?	Y / N	BLANK
40 CFR 761.65 (b) (8)	Are all PCB articles and containers labeled with the date they were placed in storage?	Y / N	
	Are labeled PCB articles and containers stored so that the labels can be referenced?	Y / N	
40 CFR 761.65 (a)	Are all PCB's and PCB contaminated items at concentrations above 50 PPM, that are stored for disposal, stored no longer than one year from the date they were placed in storage?	Y / N	
40 CFR 761.62 (b) (1) (i)	Do all PCB storage areas have an adequate roof and walls to prevent rainwater from reaching the stored items?	Y / N	
40 CFR 761.62 (b) (1) (iv)	Are storage are floors curbed and constructed of continuous smooth and impervious materials?	Y / N	
40 CFR 761.62 (b) (1) (i)	Are the curbs at least 6 inches high?	Y / N	
40 CFR 761.62 (b) (1) (iii)	No drains are allowed in storage areas. Are there drains in the storage areas?	Y / N	

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

TSCA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 761.65 (c) (2)	Only non-leaking and undamaged large high voltage PCB's capacitators and PCB-containing electrical equipment are allowed to be stored outside of PCB storage areas, on pallets if stored outside, with containment for 10 percent of the volume of the equipment. Do all PCB's stored in this configuration conform with this requirement?	Y / N BLANK	
40 CFR 761.45 and .65	Are all PCB storage areas marked with a large PCB mark as described in 40 CFR 761.45 (a)?	Y / N	
40 CFR 761.65 (c) (5)	Have all leaking PCB articles and containers been transferred to non-leaking containers?	Y / N	
40 CFR 761.65 (c) (6)	Do all PCB storage containers for the storage of liquid and non-liquid PCB's comply with DOT shipping container specifications?	Y / N	

GENERAL COMMENTS:

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Low-Level Waste and Transuranic Waste Screening Checklist

Does this facility contain radioactive waste ?	Y / N	If yes, conduct the following survey.

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
Low-Level Waste			
DOE Order 5820.2A Chapter III	Can any waste generated in, or from, this building be characterized either through process knowledge or by analyses to determine if it is LLW ? If the answer is no, note. If the answer is yes, proceed with next section.	Y / N	
DOE Order 5820.2A Chapter III.	Are any of the materials noted by inspection LLW? If no, The audit would stop here, because there are no LLW. If yes, note the location of the management unit, and the method of management, and proceed with the section below.	Y / N	
DOE Order 5820.2A Chapter III, 3.a.	Have the storage configurations in use in this area been taken into account for keeping external exposures to the general public below 25 mrem/yr?	Y / N	
	Is the waste stored in a configuration that protects ground-water resources?	Y / N	
DOE Order 5820.2A Chapter III, 3.b.	Has monitoring been conducted in this area in accordance with DOE Order 5820.2A in order to evaluate the area against the performance standard?	Y / N	
	Based on field data, does the monitoring conducted in this area conform to the performance standard?	Y / N	

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
DOE Order 5820.2A Chapter III, 3.d.	Based on field data, is the characterization of the materials in this area sufficient to assure proper segregation to assure proper segregation, treatment, storage, and disposal?	Y / N	
	Based on field data does the characterization as documented at the time of generation of the waste ensure that the actual physical and chemical characteristics, and major radionuclide content of this material are recorded and known at all stages of the waste management process?	Y / N BLANK	
	Do characterization data include the following:		
	Physical and chemical characteristics of the waste?	Y / N	
	Volume of the waste (including solidification and absorbent material)?	Y / N	
	Weight of the waste (including solidification and absorbent material)?	Y / N	
	Major radionuclides and their concentrations?	Y / N	
	Packaging date, package weight, external volume?	Y / N	
	How were the concentration of radionuclides determined? Direct methods?	_____ _____	
	How were the concentrations of radionuclides determined? Indirect methods?	_____ _____	
DOE Order 5820.2A Chapter III, 3.h	Is the storage configuration in long term storage sufficient to meet the performance standard?	Y / N	
	Are records maintained at the facility enabling this waste to be traced from its origin?	Y / N	

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
TRU WASTE			
	Can any waste generated in, or from this building be characterized either through process knowledge or by analyses to determine if it is TRU waste? If no, note and stop. If yes, proceed with the next section.	Y / N BLANK	
	Are any of the materials noted as being TRU waste during an inspection? If no, note and stop. If the answer is yes, note the location of the management unit, and the method of management and proceed with the appropriate section below.	Y / N	
DOE Order 5820.2A, Chapter II, 3.a	Was this material evaluated as soon as possible in the generating process, to determine if it is TRU (>100nCi/g), if it is recoverable, or if it is waste? (Note if the activity level is less than 100nCi/g, the waste is not TRU, and can be managed as LLW.)	Y / N	
	Did the determination of TRU radionuclide concentration include the mass of the container, including shielding? These should be included in calculating the specific activity of the waste.	Y / N	

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
DOE Order 5820.2A, Chapter II, 3.b	Has the TRU waste been assayed or otherwise evaluated to determine its radioactive content prior to storage?	Y / N	BLANK
	Has the TRU waste been characterized or otherwise evaluated to determine if hazardous waste is present?	Y / N	
	Has classified TRU waste been treated to destroy the classified characteristics?	Y / N	
DOE Order 5820.2A, Chapter II 3.d	Has all newly generated TRU waste been packaged in non-combustible packaging that meets DOT requirements?	Y / N	
	Have all Type A TRU waste packages been equipped with a method to prevent pressure buildup?	Y / N	
	Have all TRU packages been marked, labeled and sealed in accordance with 40 CFR 261 Subpart C and 49 CFR 172 Subparts D, E and 49 CFR 173 Subpart I?	Y / N	

Building Name: 51 Appraisers: [illegible] Date: 2/27/96

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
DOE Order 5820.2A, Chapter II 3.e	Has the TRU waste been segregated in manner that will not permit commingling of TRU waste with LLW or high-level waste?	Y / N	BLANK
	Has the TRU waste been protected from unauthorized access?	Y / N	
	Has the TRU waste been monitored periodically to ensure that it is not releasing its radioactive and/or hazardous constituents?	Y / N	
	Has this TRU waste storage area been designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or accidental release of its radioactive and/or hazardous constituents?	Y / N	
	Does the facility have a contingency plan designed to minimize the adverse impacts of fire, explosion, or accidental release of its radioactive and/or hazardous constituents?	Y / N	

GENERAL COMMENTS:

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Waste Minimization/Pollution Prevention Activities Screening Checklist

Does this facility generate waste or use chemicals? *	Y / N	If yes, conduct the following survey.

Waste Minimiaztion/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Based on available information and a walk through, are there any apparent opportunities to curtail the consumption of raw materials (including but not limited to paper, chemicals, electricity, and etc.). If yes, list candidate areas in the comment section.	Y / N	
	Are there solvent wastes?	Y / N	
	Is vehicle maintenance performed?	Y / N	
	Are oils used ?	Y / N	
	Are these corrosive wastes?	Y / N	
	Are there sludges?	Y / N	
	Are there halogenated organic (nonsolvent) wastes?	Y / N	
	Are metals recovered from wastewater?	Y / N	
	Is waste sludge generated?	Y / N	
	Are any waste minimization practices used that reduce the generation of sludge?	Y / N	
	Ion exchange process?	Y / N	
	Lead in gasoline lowered to reduce tank sludge toxicity?	Y / N	
	Storage tank agitators installed?	Y / N	
	Corrosive resistant materials used?	Y / N	
	Prevention of crude oil oxidation ?	Y / N	
	Drying?	Y / N	

 * some waste, ii

Environmental Appraisal Checklist

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
HALOGENATED ORGANIC (NONSOLVENT) WASTES			
	Are halogenated organic wastes used as fuel in cement kilns?	Y / N	
	Are baghouse filters used to collect pesticides and pesticide intermediates?	Y / N	
	Are solid wastes generated from the collection of baghouse dust?	Y / N	
	Wet instead of dry grinding used?	Y / N	
	The output spray dried?	Y / N	
	Has baghouse emptying and recycling of baghouse fines been scheduled?	Y / N	
	Have operations been evaluated to improve procedures such as handling, storage and spill prevention for increased efficiency?	Y / N	
METAL WASTES			
	Are any technologies for the recovering of metals from waste rinsewater used?	Y / N	
	Evaporation of waste rinsewater?	Y / N	
	Reverse osmosis?	Y / N	
	Ion exchange?	Y / N	
	Electrolysis?	Y / N	
	Agglomeration?	Y / N	
CORROSIVE WASTES			
	Are acidic or basic cleaning solutions used as treatment for pH adjustment chemicals?	Y / N	

BLANK

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are ion exchange resins used to remove heavy metals and cyanides from acid and base solutions?	Y / N	
	Is crystallization used to remove corrosives from solution by cooling?	Y / N	
	Is the process of evaporation of liquid wastes by heating used to leave behind a more concentrated solution?	Y / N	
CYANIDE AND REACTIVE WASTES			
	Has non-cyanide or low concentration of cyanide process replaced zinc cyanide bath ?	Y / N	
	Are any of these processes used to recycle cyanide wastes?	Y / N	
	Refrigeration/crystallization?	Y / N	
	Evaporation?	Y / N	
	Ion exchange?	Y / N	
	Membrane separation which includes reverse osmosis or electrodialysis?	Y / N	
VEHICLE MAINTENANCE			
	How are auto parts cleaned?	Y / N	
	Solvent sink?	Y / N	
	Solvent dunk bucket?	Y / N	
	Solvent dip tank?	Y / N	
	Are parts cleaning solvents used for anything else besides cleaning parts?	Y / N	
	Are spills reduced by locating sinks or dunk buckets near auto service bays?	Y / N	

BLANK

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are cleaned parts drained on the sink to minimize solvent spills?	Y / N	
	Are drip tanks used to capture losses?	Y / N	
	Is a solvent sink used for mineral solvents rather than a dunk bucket or dip tank?	Y / N	
	Does a waste hauler collect solvent waste for recycling or treatment?	Y / N	
OILS			
	What kind of oils are used?		
	Hydraulic oil?	Y / N	
	Transformer oil?	Y / N	
	Metal working fluids?	Y / N	
	Spent lubricating oils?	Y / N	
	Can the process be modified or changed to use water-based fluids?	Y / N	
	Are these good housekeeping and operation practices used to minimize oil waste production?		
	Use oils not contaminated with other liquids?	Y / N	
	Oil spills prevented?	Y / N	
	Drip pans installed?	Y / N	
	Oil soaked rags laundered?	Y / N	
	Rags and absorbants used to their limit?	Y / N	

BLANK

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Environmental Appraisal Checklist

Building Name: Appraisers: Date:

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are these treatment techniques used to promote separation of oil/water wastes?		
	Reclaiming process to remove water and solvents by heat?	Y / N	
	Gravity setting?	Y / N	
	Screening?	Y / N	
	Centrifugation?	Y / N	
	Filtration?	Y / N	
SOLVENT WASTES			
	Has there been an attempt to reduce volume or toxicity by:		
	Eliminating solvents?	Y / N	
	Reducing the use of solvents?	Y / N	
	Reducing the loss of solvents?	Y / N	
	Increasing recyclability?	Y / N	
	Are solvents segregated?	Y / N	
	Are waste solvents free from water and garbage?	Y / N	
	Are recycled solvent containers labeled as such?	Y / N	
	Are containers kept closed?	Y / N	
	Free and sheltered from the elements?	Y / N	
	Are solvent tanks kept as free from contaminations as possible so that the waste can be recycled?	Y / N	
	Is a method used to minimize the use of new materials such as a countercurrent process?	Y / N	

BLANK

Environmental Appraisal Checklist

Building Name: 51 Appraisers: TEAM 4 Date: 2/27/96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	If there is a recycling program, what technique is used?	Y / N	BLANK
	Distillation?	Y / N	
	Solids removal?	Y / N	
	Dispersion breaking?	Y / N	
	Dissolved and emulsified organics recovery?	Y / N	
	Are any of these housekeeping procedures used to minimize the production of solvent wastes?		
	Separators cleaned and checked?	Y / N	
	Parts not allowed to enter the degreaser while wet?	Y / N	
	Sludge from the bottom of the tank not allowed to accumulate?	Y / N	
	Lids kept on tanks?	Y / N	
	Freeboard space on tanks increased?	Y / N	
	Are better operating practices used to reduce waste?	Y / N	
	How long is solvent waste stored and where?	_____ _____	

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: 3821 Date: 12-07-95
Alternate: K. KOEHLER Phone: 48816

1. What are the access requirements (training, clearance, etc.)?

NONE

2. What protective equipment is required to enter the building?

NONE

3. Are there any restricted areas? Yes (No)
Where are they?

4. Provide a physical description of the building.

This building consists of one story with a high bay area and basement. The steel frame building with metal roof was built in ~~1972~~ 1970 and contains 3,541 ft². HVAC systems are central steam and chilled water. The building is contaminated with energetic materials but is not contaminated with radiological materials or asbestos contained in the thermal insulation system.

Source: Mound Facility Physical Characterization, 12-1-93

5. Provide a drawing of the building.

Attached

6. What is the current building use?

Building ~~currently supports~~ supported the production of thermites and the production of carbon for a lithium battery capacitor research project funded by Sandia and private industry.
Building now in safe shutdown program

Source: Mound Buildings, 5-9-95

7. What is the history of building use other than that described in #6?

WASTE INCINERATOR

Source: Mound Buildings, 5-9-95

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

8. What are ongoing operations or processes? What are the raw materials and waste streams from each process? Who is the best contact for each process?

Process(es) Housed: Thermite development, low-density foam production

How Wastes Are Generated:

In one section of this building, thermites are pressed, machined, and sometimes deposited in a thin film using a plasma spray facility. The only wastes generated in these operations are small amounts of thermite. They are packaged and transported to the onsite burn facility for destruction.

In the remainder of the building, low-density foams are being produced. In this operation no hazardous wastes are generated. Some non-hazardous wastes generated include: salt brine, 0.4 normal nitric acid neutralized with sodium hydroxide, and small amounts of alcohol from squeeze bottles. All of the materials are flushed down the drain. Acetone is sometimes used on paper or cloth for cleaning. It evaporates. Gaseous phenolic compounds generated when phenolic resins are heated in ovens are released through hoods.

* OLD PROCESSES & WASTES — BUILDING NOW IN SAFE SHUTDOWN PROGRAM

Contact:
Phone #:

Source: Characterization of Mound's Hazardous, Radioactive, and Mixed Waste, (8-15-90).

Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

9. In the last six months, have any modifications been made to the building or to processes in the building? Yes No

10. Does the building have air emission sources? Yes

Process Source	Room Number	Hood Number	Active	Chemicals Used	Quantity Used	Quantity to Waste Management	Lbs./Yr. Operation	Air Emissions
BD 51 Maurial Depositor	106	51106 0002	Y	particulates	.001		.936	
PaN Process BD 51	107	05110 70001	Y	polyacryionitrile	.0056		2.8	
			Y / N					
			Y / N					
			Y / N					

Source: Mound Air Emissions Database 11/30/95

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

11. Describe air pollution control equipment used to reduce emissions for each source.

Process Source	Emissions	Control Equipment	Functioning
Pan Process		inpingement scrubber	Y / N
Material Disposition		inpingement scrubber	Y / N

Source: Air Permits 2/4/95

12. For existing permits are emissions monitored? At what frequency? Where are the records maintained?

Process Source	Permit	Log	Permit Conditions & Frequency of Monitoring
Pan Process *	P024/06-26-42	Y / N	Not exceed 0.000045 lbs TFY hydrogen cyanide; 0.00_____ 0.037 TFY _____ PAN not exceed 8 lb. week; weekly records must be maintained. Shall install, operate, and maintain equipment to continuously monitor HCN concentrations in the exhaust stack of source; outlet HCN not exceed 10 ppm; shall maintain records of monitor recalibratic: and weekly inspections to ensur proper functioning. Shall determine scrubber _____ prior to and at the end of initial source operations; NaOH scrubber solution pH shall not be less than 11. Shall notify RAPCA ___ HCN exceeds 10 ppm, immediately and steps taken to reduce outlet concentration.
Material Disposition	557091196P020	Y / N	Particulate matter (metals) less than 0.19-Py; water cascade in good condition and sludge level less than or equal to 2 inches.

Source: Air Permits 2/4/95

13. Does the building have domestic water service? Yes No
Is there bottled water? Yes No

14. Does the building discharge to the storm sewer? Yes No
Where?

15. Does the building discharge to the sanitary sewer? Yes No
Where?

16. Has an asbestos survey been conducted? Yes
What are the results? Assumed

Source: Technical Manual MD-10391, Issue 3 Asbestos Program Manual 9/6/95

* OLD PROCESSES - BUILDING NOW IN SAFE SHUTDOWN

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

17. Does the building contain transformers or capacitors? NO

Source: PCB ANNUAL DOCUMENT LOG

18. Has the building been identified as containing PCBs? NO

Source: PCB ANNUAL DOCUMENT LOG

19. What chemicals are used or stored inside or outside of the building? Include compressed gasses not in large tanks.

Chemical Name	State	Amount (MAX)
NONE		

Source: Chemical Inventory 1994

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

20. Has there been a reported spill, leak, or other release of any chemical? Yes No
What, how much, and what clean-up measures were followed?

Chemical	Amount	Clean-up Measures
*		

Source: _____

21. Where do waste chemicals go?

N/A

22. What janitorial supplies are stored inside or outside of the building?

N/A

23. Where do excess janitorial supplies go?

N/A

Source: _____

24. Are pesticides or herbicides stored or used in or around the building? Yes (No)

Chemical	Amount	Chemical	Amount

Source: _____

* see report

Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

25. Does the building contain active or inactive above ground storage tanks? Yes No
For each tank, list the content, quantity, last inspection, registration number.

Registration Number	Content	Quantity	Last Inspection Date	Preventive Maintenance Performed	Inside Or Outside
	~~Nitrogen~~	~~500 gal~~		~~Y/N~~	
				Y/N	

TAKEN OUT OF SERVICE

Source: Emergency and Hazardous Chemical Inventory Form - Chemical Storage Tanks on EGG Mound Site Owned and Maintained by Outside Contractors 8/8/94

26. Is there a sump or pit or underground tank in or around the building?
Yes No Unknown
Is it double-walled? What does it contain? How many days per year is it filled?
Is there an emergency overflow tank? Have there been previous overflows?

Double-Walled	Contents	Days/Year in Use	Overflow Tank	Previous Overflow
Y / N			Y / N	Y / N

Source: _____

27. Does the building generate, store, or dispose of hazardous waste? Yes No

Materials	Amount

Source: Characterization of Mounds Hazardous, Radioactive, and Mixed Wastes 08/15/90

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

28. Does the building have abandoned process equipment such as tanks, piping, containers, etc.? Yes No

29. Is waste material stored in or around the building for more than 90 days?
Yes No

30. Has the building been identified as a 90-day waste accumulation area?
Yes No

31. Has any area in the building been identified as a satellite accumulation area?
Yes No

32. Is mixed waste generated, stored, or disposed of from the building? Yes No
Where are logs found?

Process	Waste	Stored	Disposed	Logs
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N

Source: _____

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Building Manager's Questionnaire

Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

33. Is TRU radioactive waste generated, stored, or disposed of from the building?
Yes No
Where are logs found?

Process	Waste	Stored	Disposed	Logs
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N

Source: _____

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Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

34. Is low-level radioactive waste generated, stored, or disposed of from the building? Yes No
Where are logs found?

Process	Waste	Stored	Disposed	Logs
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N

Source: _____

35. Identify all administrative orders, temporary or permanent injunctions, civil administrative penalties, or criminal activities issued against the building.

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Building Name: 51 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

36. Is there a waste minimization program in the building? Yes No
Discuss your ideas about how to minimize waste.

37. Has a pollution prevention program been developed for the building? Yes No

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9.73 BUILDING 51

9.73.1 Scope of Building 51 Report

In late 1995 and the early months of 1996, EG&G MAT performed a review of environmental conditions at the Mound Plant. The purpose was to develop a performance baseline, and to identify areas for improvement on a building and a sitewide basis. EG&G MAT did not perform a "due diligence" or Phase I Environmental Site Assessment as specified by ASTM 1527 or ASTM 1528. The scope of the appraisal effort and a discussion of the appraisal methodology are detailed in Sections 2.0 and 5.0, found in Volume 1 of this report.

The appraisal team performed a walk-through of Building 51 on the morning of February 22, 1996. The Environmental Appraisal Checklist (EAC) was used to record findings. The EAC is found in Attachment 1 (Section 9.73.6.1). The appraisers were not accompanied by the building manager. The team revisited the building, accompanied by the building manager, on the afternoon of March 18, 1996. Other information was supplied by the building manager and recorded on the Building Manager's Questionnaire (BMQ), included as Attachment 2 (Section 9.73.6.2).

9.73.2 Description of Building 51

Building 51 is a 3,541-square-foot, one-story steel frame building with a high bay area and a metal roof. Its location is shown in Attachment 3 (Section 9.73.6.3). The facility is located in the central portion of the valley between the main plant hill and the SM/PP Hill. The building is serviced with central steam and chilled water. Electric service is 480V.

The building was constructed in 1970 with the purpose of providing waste incineration for the Mound Plant. The plant was designed to burn nearly all of the plant's non-radioactive solid wastes and some liquids including paints, oils and solvents. The plant was plagued with problems and never performed at its designed capacity. The incinerator operated at various loading capacities from 1971 until February 15, 1974, when it was completely shut down, (*RI/FS, OU 9, Site Scoping Report: Vol. 7 - Waste Management*). The incinerator was disassembled, and removed from Mound on May 22, 1979. The associated waste oil tank which stored waste oils and waste solvents prior to incineration was removed in November of 1990, (*RI/FS, OU 9, Site Scoping Report: Vol. 7 - Waste Management*).

Building 51 was most recently used in support of thermite production and the production of carbon for a lithium battery capacitor research project. Thermite is an energetic material. All support operations in the facility have been ceased and the facility is currently undergoing Safe Shutdown.

9.73.3 Summary of Findings

As noted, the facility is currently in the process of being shut down with all support operations suspended. Support equipment was found to be in various stages of disassembly on the day of the visit, and upon revisit it was obvious that the Safe Shutdown process was proceeding as additional disassembly and removal of equipment had occurred. There were several issues of environmental concern noted during the facility walk-through.

9.73.4 Observations

9.73.4.1 Air Emissions

The facility has two air emission sources (both fumehoods in Rooms 106 and 107) that are listed in the 1995 Mound Air Emissions Database. The processes which generated air emissions are no longer active in Building 51. No other air emissions sources were noted during the facility walk-through. There was no evidence of fugitive dust. A review of air handling systems for thermite contamination was not conducted.

9.73.4.2 Wastewater Emissions

The Mound Facility has three wastewater collection systems: a sanitary wastewater system; a storm water system; and a radioactively contaminated process wastewater system. Sanitary wastewater is treated at an onsite tertiary treatment plant and subsequently discharged by hard pipe to the Great Miami River. Storm water and any non-process wastewater, single pass cooling water, and softener backwash may be discharged directly to the Great Miami River, via the Miami-Erie Canal, or may be diverted to a 3.1-million-gallon holding pond for settling prior to discharge. Radioactively contaminated wastewater is treated in Building WD by physical-chemical treatment. If appropriate, wastewater may be discharged by hard pipe to the Great Miami River. If concentrations of radioactive contaminants cannot be reduced to acceptable levels, wastewater is solidified and shipped to the Nevada Test Site or Envirocare for disposal. All outfalls are permitted under an active NPDES permit. Routine monitoring activities are in place. Based on NPDES monitoring report data reviewed, it appears that the facility is in compliance with qualitative and quantitative conditions of the permit.

9.73.4.2.1 Sanitary Wastewater

The facility is serviced by a sanitary drain line as shown in the diagram of undergound utility lines presented in Attachment 5 (Section 9.73.6.5). Additionally, there were several floor drains located in corridors and rooms of the facility. One floor drain in the northeast corner of Corridor 108 showed evidence of liquid entering the drain (sorbent dams surrounding the drain). The building manager indicated that there had been a glycol leak and that it had been repaired. A request was generated to have the sorbent dams removed by Waste Management. Additionally, it was noticed that a leak of some unknown fluid from an overhead line, the source of which could not be confirmed, had occurred in Corridor 8. There was evidence of staining on the overhead pipes, mounted air conditioner, and floor below the leak. It was not determined if action was taken to preclude fluids from leaking utility systems to enter surface water collection systems.

9.73.4.2.2 Storm Wastewater

The facility is serviced by a storm sewer according to information shown on drawings presented in Attachment 5 (Section 9.73.6.5). Confirmation of drainage of stormwater into the stormwater system was not within the scope of the project and was therefore not verified with dye or smoke tests. Inspection showed no signs of odors, colored discharges, or scarring which would indicate any hazardous materials entered the storm water system.

9.73.4.2.3 Chemicals

With the exception of hand soap, chemicals have been removed from the facility under the Safe Shutdown Program. It should be noted that utility systems within the building do contain glycol. As discussed above, there was evidence of a previous leak.

9.73.4.3 Potable and Service Water

Potable water and service water are supplied to the building. Backflow prevention devices are installed at all visible points of potential cross connection. The fountains which supply drinking water have not been tested for lead. According to Environmental Protection Agency protocol, annual sampling criteria do not require testing of each fountain.

9.73.4.4 Chemical Storage and Hazardous Materials

A review of the procedures and requirements contained in MD-10431, *Safe Shutdown Standards Operating Procedures*, and the Safe Shutdown process manager's records indicate that once Phase II Activities (i.e., commencement of Safe Shutdown) begin, all chemicals within the building are inventoried (chemicals contained in idle equipment are handled separately). Chemicals which can be reused, either at Mound or transferred to the City of Miamisburg—subject to age and condition—are identified and processed separately.

Subsequently, all the remaining chemicals are placed in containers, characterized, and transferred to Waste Management for disposition. A copy of the inventory, chemical profile of each container, and Waste Management's acceptance becomes a permanent part of the Mound Safe Shutdown Plan for the specific building. As chemicals are transferred to Waste Management, a central chemical database in the program manager's office is updated monthly to reflect the disposition. All activities are conducted in accordance with MD-70523, 40 CFR 265, and OAC 3745.52. As hazardous waste generators, all Safe Shutdown process managers have received training in accordance with 40 CFR 265.16.

All chemicals associated with DOE support work have been removed from the facility. The facility was used to support various thermite (energetic material) production activities. There may be thermite contamination within the rooms and equipment utilized in support of thermite production.

The underground waste oil storage tank was removed in 1990, (*RI/FS, OU 9, Site Scoping Report: Vol. 7 - Waste Management*). On the south side of the building there is a concrete basin extending out and slightly above the dock area. Discussions with the building manager indicate that this basin was used as a flyash cleanout for the incinerator. Engineering drawings of Building 51 were reviewed, but the basin was not located on any of the drawings. The contents of the basin are unknown to the building manager and there is no record of inspection.

Research activities using radioactive materials has not occurred in the building, however, there has been research and production activities using energetic materials (*Mound Facility Physical Characterization, 12-1-93*)

9.73.4.5 Solid, Hazardous and Radioactive Wastes

Idle equipment which may contain hydraulic oil, pump oil, etc. is present in Rooms 106 and 107.

The facility is assumed to contain asbestos (MD-10391, *Asbestos Program Manual, 9-14-95*). No evidence of friable asbestos was noted during the walk-through.

There are no polychlorinated biphenyl (PCB) containing devices in or around the facility, (1995 PCB Annual Document Log).

9.73.4.6 Waste Minimization and Pollution Prevention

At Mound there is an active program to minimize waste streams in accordance with state and federal requirements and Executive Order 12856. As part of the Safe Shutdown process, equipment and supplies were evaluated for reuse. They were handled in several ways: reused at Mound; sent to other DOE facilities; claimed by the City of Miamisburg; sold at auction; sold to recycle; or disposed of.

9.73.5 Findings and Recommendations

Photographs were taken to document the environmental appraisal. They are included as Attachment 6 (Section 9.73.6.6). The environmental appraisal of Building 51 indicates that the following action items, in order of priority order, should be planned and scheduled for accomplishment thus assuring that best management and operating practices are in place.

51-1 Investigate the potential for thermite contamination in the building and in the air handling systems.

51-2 The nature of the overhead leak which caused the staining of overhead lines, the mounted air conditioner, and the floor should be investigated to determine if the floor drain system has been contaminated. If hazardous material is present appropriate action should be taken. Additionally, determine if the leaking condition has been corrected, and correct as necessary to avoid potential leaks to wastewater collection systems.

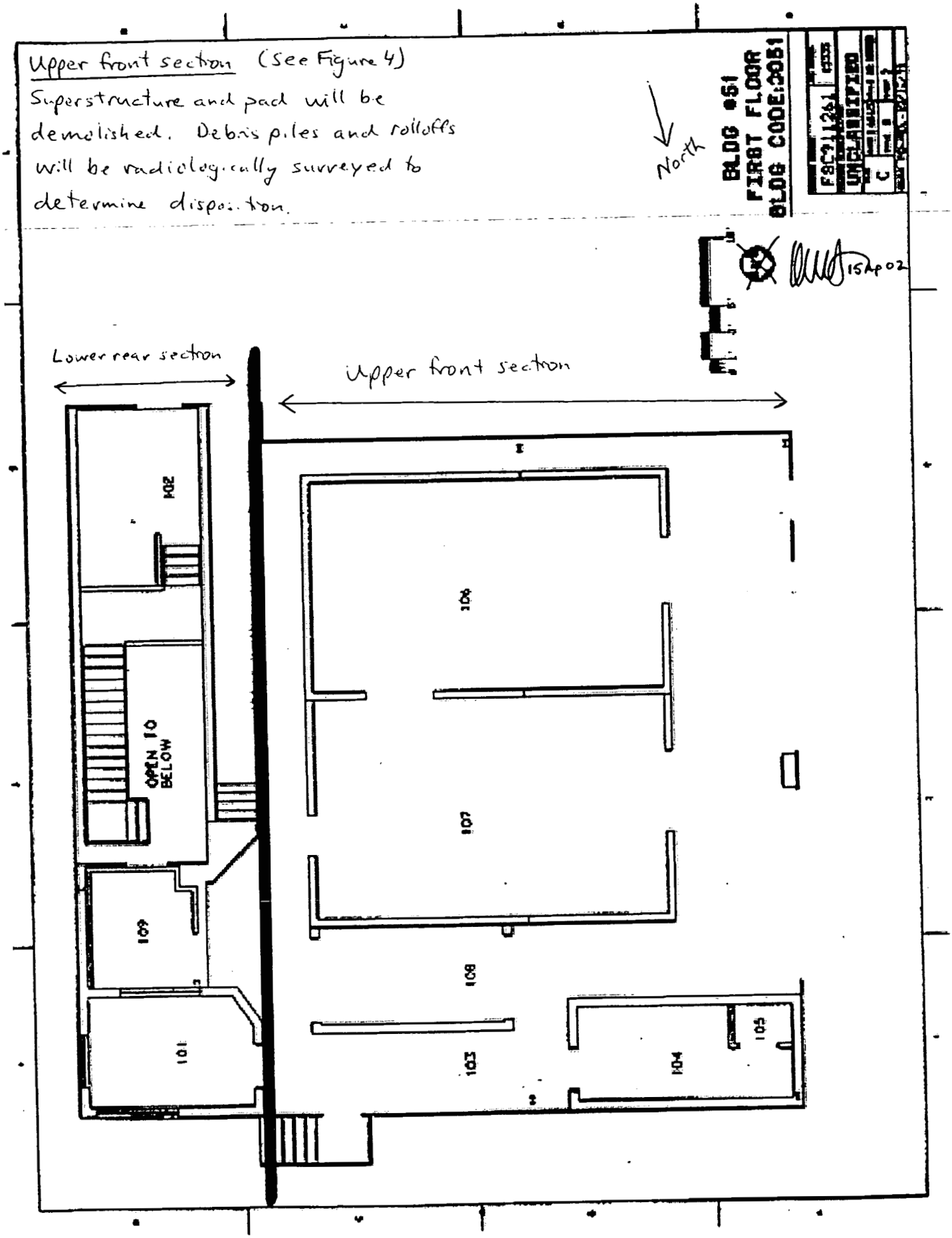
51-3 The concrete basin located on the south side of the facility and associated with the dock should be investigated as to the nature of the basin and determine if any hazardous constituents have accumulated inside it.

51-4 Air emission sources in Room 106 and Room 107 of Building 51 are no longer active. An air permit has been issued or an application is on file for this source with RAPCA. RAPCA should be notified of this change in status.

Appendix G

Radiological Information

Upper front section (See Figure 4)
Superstructure and pad will be demolished. Debris piles and rolloffs will be radiologically surveyed to determine disposition.



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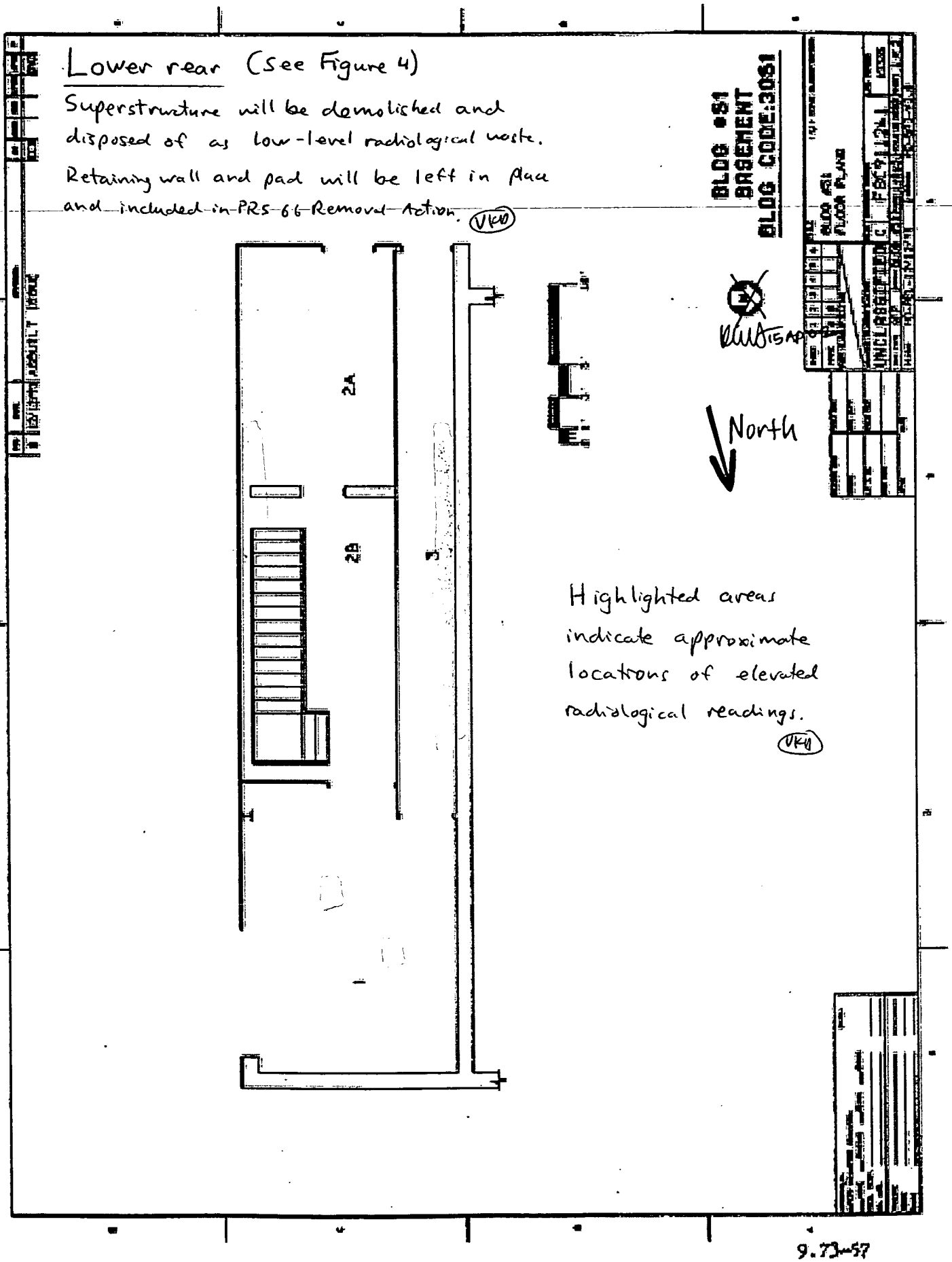
All radiological drawings based on incorrect north arrow.

Lower rear (See Figure 4)

Superstructure will be demolished and disposed of as low-level radiological waste.

Retaining wall and pad will be left in place and included in PRS 66 Removal Action. VKH



9.73-57

All radiological drawings based on incorrect north arrow. VKH

Building 51 – RSDS Results and Debris Disposition*

Note 1 - The upper front section (superstructure and pad) will be demolished and all rolloffs and debris piles will be radiologically surveyed to determine debris disposition.

Note 2 - The superstructure of the lower rear section will be demolished and disposed of as low-level radiological waste.

Note 3 - The pad, foundation, and basement retaining (west) wall of the lower rear section will be left in place and included as part of the PRS 66 Removal Action.

**All material not meeting applicable surface release criteria will be disposed of as radiologically-contaminated waste.*

RSDS #	Building Section	Sample Location	All Samples Meet Surface Release Criteria	Disposition
01-OSA-081	Lower rear	Top of incinerator housing	Yes	Note 2
01-OSA-080	Lower rear and Upper front	Upper front section floor; top surface of grating above lower rear section	Yes	Notes 1 and 2
02-TF-0073	Lower rear	Basement retaining wall (west)	No	Note 3
02-TF-0092	Upper front	Room 104	Yes	Note 1
02-TF-0150	Lower rear	Floor of lower rear section	No	Note 3
02-TF-0153	Lower rear	Floor of lower rear section	Yes	Note 3
02-TF-0157	Lower rear	Basement retaining wall (west)	No	Note 3
02-TF-0159	Lower rear	Basement retaining wall (west)	No	Note 3
02-TF-0183	Lower rear	Floor in Room 1, top of incinerator housing, ducts	Yes	Note 2
02-TF-0211	Lower rear	Basement retaining wall (west)	No	Note 3
02-TF-0301	Lower rear	Isostatic press, Room 2A	Yes	Note 2
02-TF-0411	Lower rear	Room 3, post	No	Note 2
02-TF-0453	Lower rear and Upper front	Various (selected by random number generator)	No	Notes 1, 2, and 3
02-TF-0454	Lower rear and Upper front	Various (selected by field judgment)	Yes	Notes 1, 2, and 3
02-TF-0458	Lower rear and Upper front	Various (selected by field judgment)	Yes	Notes 1, 2, and 3
02-TF-0524	Lower rear	Isostatic press, Room 2A	Yes	Note 2
02-TF-0534	Lower rear	Crawlspace east wall	No	Notes 2 and 3
02-TF-0526	Lower rear	Crawlspace east wall	No	Notes 2 and 3

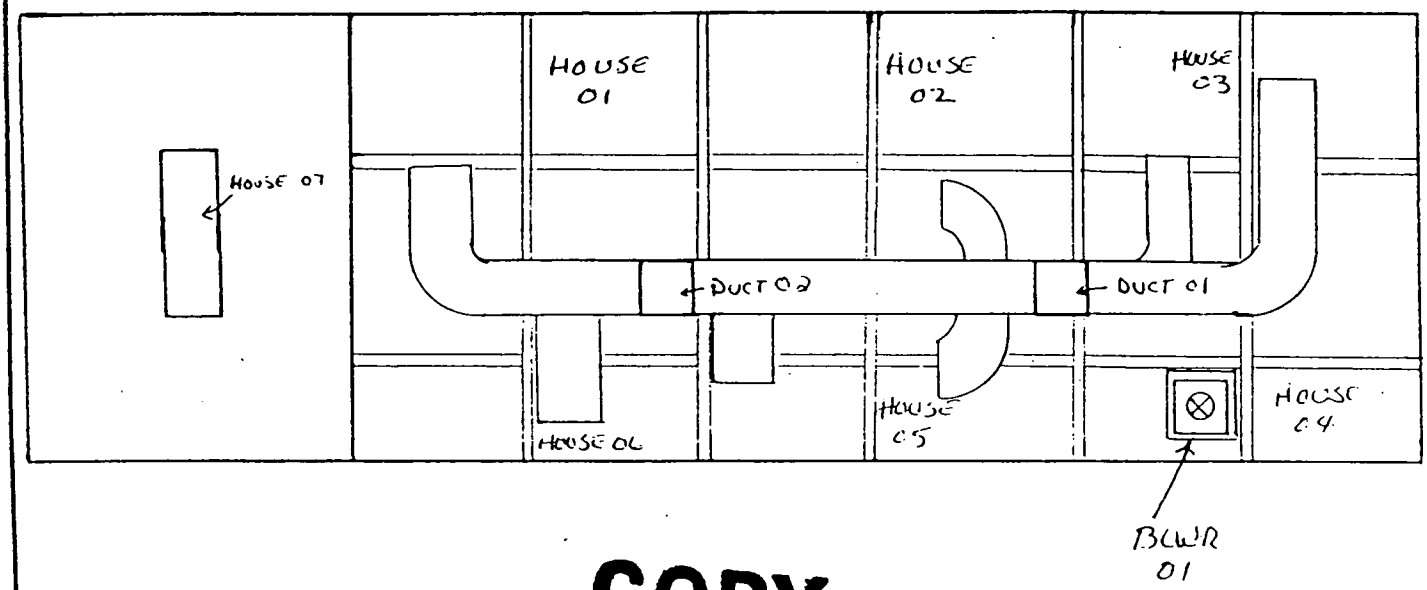
RADIOLOGICAL SURVEY DATA SHEET

1 of 8

LOCATION: (BLDG./AREA/ROOM) 51 MEZZANINE	SURVEY NO. 01-OSA-081
PURPOSE: SCOPING SURVEY	RWP NO. N/A
	DATE: 12-5-01
	TIME: 1630

MAP/DRAWING

TOP OF INCINERATOR HOUSING



COPY

*LARGE AREA WIPES TAKEN ON HORIZONAL SURFACES
RESULTS:
<100 dpm/100cm² α
<5K dpm/100cm² β-

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
LUDLOM 2350	5673/5143	8-21-02
ELECTRA	5603/5604	1-31-02
	N/A	

[redacted]

HP #	Date:
6178	12-18-01
HP #	Date:
0	
HP #	Date:
7707	01/09/02

ML-9620 (2-98)

200 U

Survey No. 01-OSA-081

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-5	SEE ATTACHED			LANDING PAGE 3
			N/A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
			N/A	

COPY

COMMENTS: N/A

NOTES:

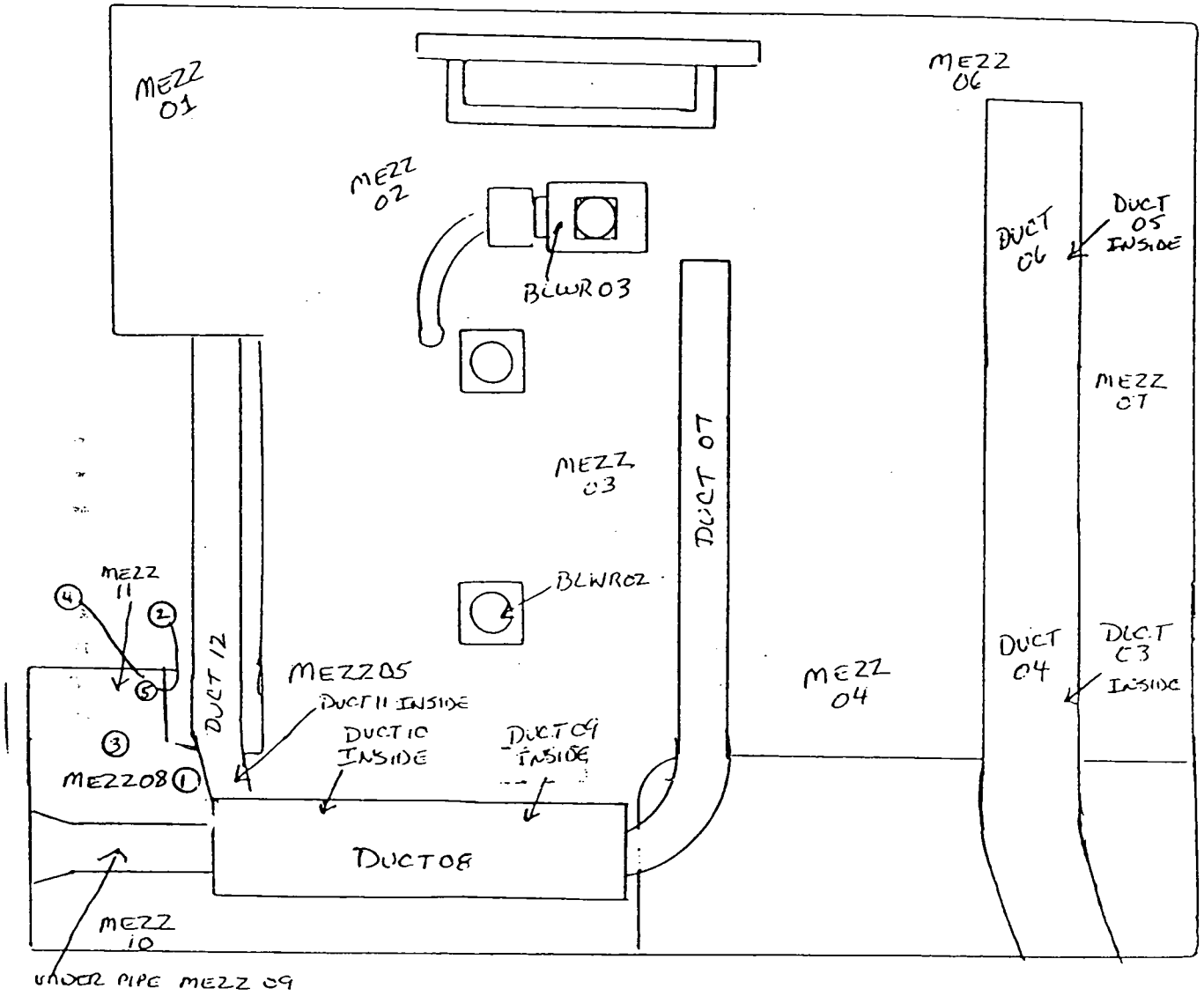
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 MEZZANINE	SURVEY NO. 01-OSA-081
PURPOSE: SCOPING SURVEY	RWP NO. N/A
	DATE: 12-5-01
	TIME: 1630

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact

△# = mrem/hr neutron

[#] = air sample number

(#) = swipe number

(#/α) = α/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date

N A

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name)		
Counted by: (Signature)	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

N A

ML-9620 (2-98)

Survey No. 01-OSA-081

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

N/A

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

BLDG 51 M-2350 SURVEY

RSDS# 01-05A-081 RCT: D9A RCT: _____

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm	Surface Eff:	0.5	
43-37 BKG:		EFF:		PROBE AREA:		cm	Surface Eff:		

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5673	7707	5143	2	0	12/5/01	8:19	27	300	31
SRCCHECK	5673	7707	5143	2	1	12/5/01	8:23	2207	60	12636
SRCCHECK	5673	7707	5143	2	2	12/5/01	8:25	2312	60	13237
SRCCHECK	5673	7707	5143	2	3	12/5/01	8:26	2239	60	12819
SRCCHECK	5673	7707	5143	2	4	12/5/01	8:28	2234	60	12790
HOUSE01	5673	7707	5143	2	5	12/5/01	10:40	6	90	23
HOUSE02	5673	7707	5143	2	6	12/5/01	10:42	15	90	57
HOUSE03	5673	7707	5143	2	7	12/5/01	10:44	8	90	31
HOUSE04	5673	7707	5143	2	8	12/5/01	10:46	9	90	34
BLWR01	5673	7707	5143	2	9	12/5/01	10:48	9	90	34
DUCT01	5673	7707	5143	2	10	12/5/01	10:50	8	90	31
HOUSE05	5673	7707	5143	2	11	12/5/01	10:53	12	90	46
DUCT02	5673	7707	5143	2	12	12/5/01	10:55	6	90	23
HOUSE06	5673	7707	5143	2	13	12/5/01	10:57	8	90	31
HOUSE07	5673	7707	5143	2	14	12/5/01	11:02	11	90	42
MEZZ01	5673	7707	5143	2	15	12/5/01	15:03	15	90	57
MEZZ02	5673	7707	5143	2	16	12/5/01	15:06	13	90	50
MEZZ03	5673	7707	5143	2	17	12/5/01	15:09	13	90	50
MEZZ04	5673	7707	5143	2	18	12/5/01	15:12	10	90	38
MEZZ05	5673	7707	5143	2	19	12/5/01	15:14	10	90	38
MEZZ06	5673	7707	5143	2	20	12/5/01	15:18	10	90	38
MEZZ07	5673	7707	5143	2	21	12/5/01	15:21	11	90	42
DUCT03	5673	7707	5143	2	22	12/5/01	15:23	6	90	23
DUCT04	5673	7707	5143	2	23	12/5/01	15:25	9	90	34
DUCT05	5673	7707	5143	2	24	12/5/01	15:28	9	90	34
DUCT06	5673	7707	5143	2	25	12/5/01	15:30	8	90	31
DUCT07	5673	7707	5143	2	26	12/5/01	15:36	9	90	34
DUCT08	5673	7707	5143	2	27	12/5/01	15:39	4	90	15
DUCT09	5673	7707	5143	2	28	12/5/01	15:42	12	90	46
DUCT10	5673	7707	5143	2	29	12/5/01	15:45	8	90	31
DUCT11	5673	7707	5143	2	30	12/5/01	15:51	6	90	23
DUCT12	5673	7707	5143	2	31	12/5/01	15:53	9	90	34
MEZZ08	5673	7707	5143	2	32	12/5/01	15:55	22	90	84
MEZZ09	5673	7707	5143	2	33	12/5/01	16:03	17	90	65

BLDG 51 M-2350 SURVEY

RSDS# 01-05A-081 RCT: 29H RCT: _____

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
MEZZ10	5673	7707	5143	2	34	12/5/01	16:06	18	90	69
MEZZ11	5673	7707	5143	2	35	12/5/01	16:09	45	90	172
BLWR02	5673	7707	5143	2	36	12/5/01	16:13	9	90	34
BLWR03	5673	7707	5143	2	37	12/5/01	16:16	8	90	31
106D01	5673	7707	5143	2	38	12/5/01	16:24	17	90	65
106D02	5673	7707	5143	2	39	12/5/01	16:26	14	90	53
BLD51BKG	5673	7707	5143	2	40	12/5/01	16:32	31	300	35

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR023
Batch Ended: 12/17/01 15:14

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: 01-OSA-081 HARVEY (5) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	1	3.75	3.06		0.00	2.09	
A2	2	1.69	2.27		3.64	2.74	
A3	3	0.00	2.06		0.95	2.25	
A4	4	3.44	2.84		5.68	3.67	
B1	5	0.00	2.04		0.35	1.68	

DJH DJH Albert Rebsor

Time: 2.00
Data Mode: DPM Nuclide: SMGL2 Quench Set: SM_GLASS
Background Subtract: 1st Vial

	LL	UL	LCR	2SI	BKG
Region A:	0.5 -	18.6	0	0.0	7.60
Region B:	2.0 -	18.6	0	0.0	7.23
Region C:	40.0 -	2000	0	0.0	5.60

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
HARVEY 01-OSA-081 (J1-J5) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\prot1.dat
Count Data Filename: c:\data\SDATA7.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.60	3	B	652.48		0.00	5.60
0	2.00	656.50	0		491.22	1456.53	119.12	0.90
1	2.00	0.00	0		398.82	0.00	0.00	1.90
2	2.00	0.00	0		363.14	0.00	0.00	1.40
3	2.00	0.00	0		388.13	0.00	0.00	0.00
4	2.00	0.00	0		380.92	0.00	0.00	2.40
5	2.00	0.00	50		333.64	0.00	0.00	0.90

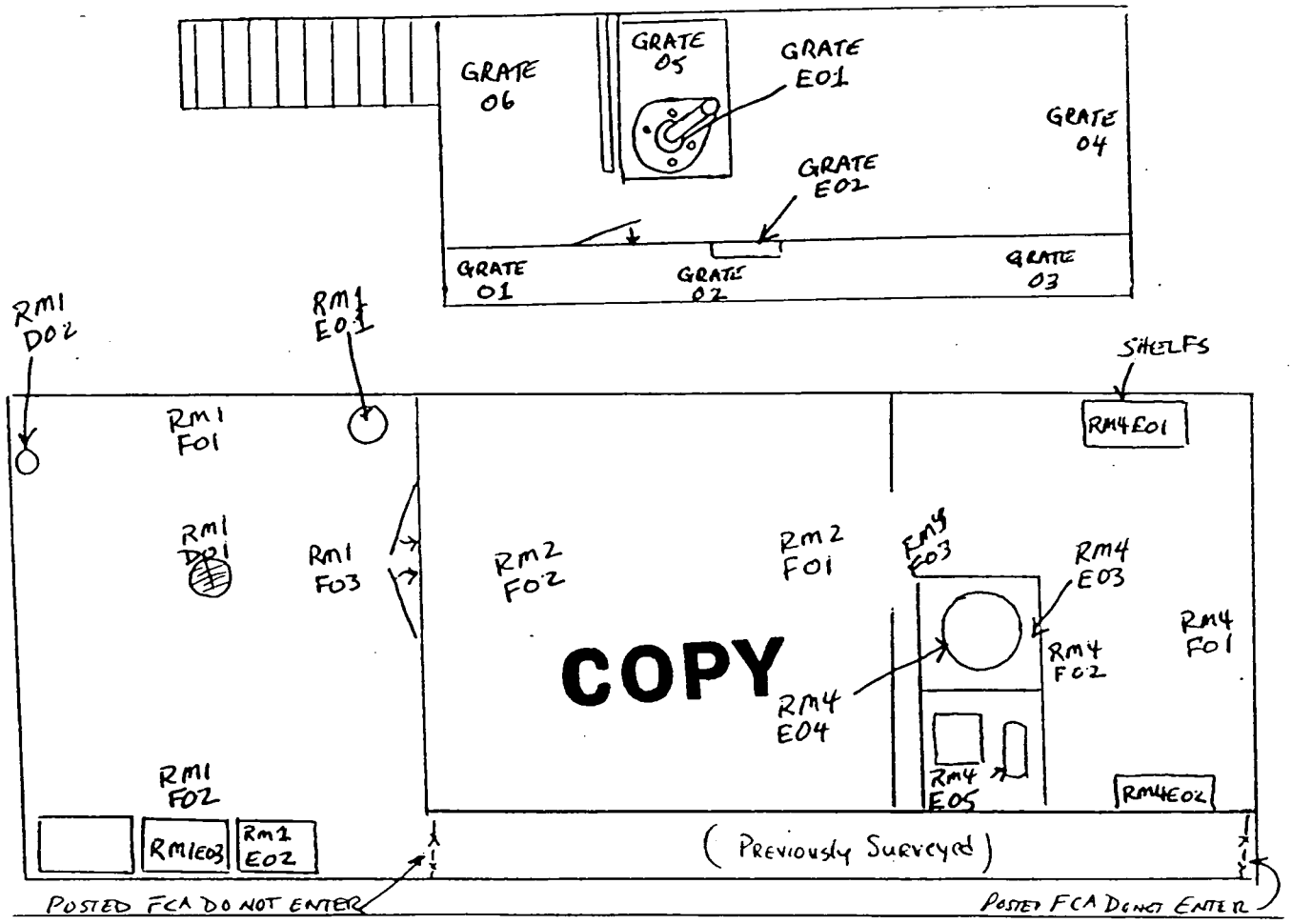
DJH Albert Nilson

8 of 8

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BUILDING 51 MAIN FLOOR	SURVEY NO. 01-OSA-080
PURPOSE: SCOPING SURVEY	RWP NO. N/A
	DATE: 12-3-01
	TIME: 1530

MAP/DRAWING



*NOTE: LARGE AREA WIPES TAKEN THROUGHOUT BUILDING RESULTS. <100dpm/100cm² α <5Kdpm/100cm² β⁻

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
α/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
LUDLUM 2350	5671/5675/5748	9-21-02
ELECTRA	5603/5604	1-31-02
	N/A	

[redacted]

HP #	Date:
6178	12-17-01
HP #	Date:
HP #	Date:
7707	12-17-01

ML-9620 (2-98)

Survey No. 01-OSA-080

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

N A

Y900

COMMENTS:

NOTES:

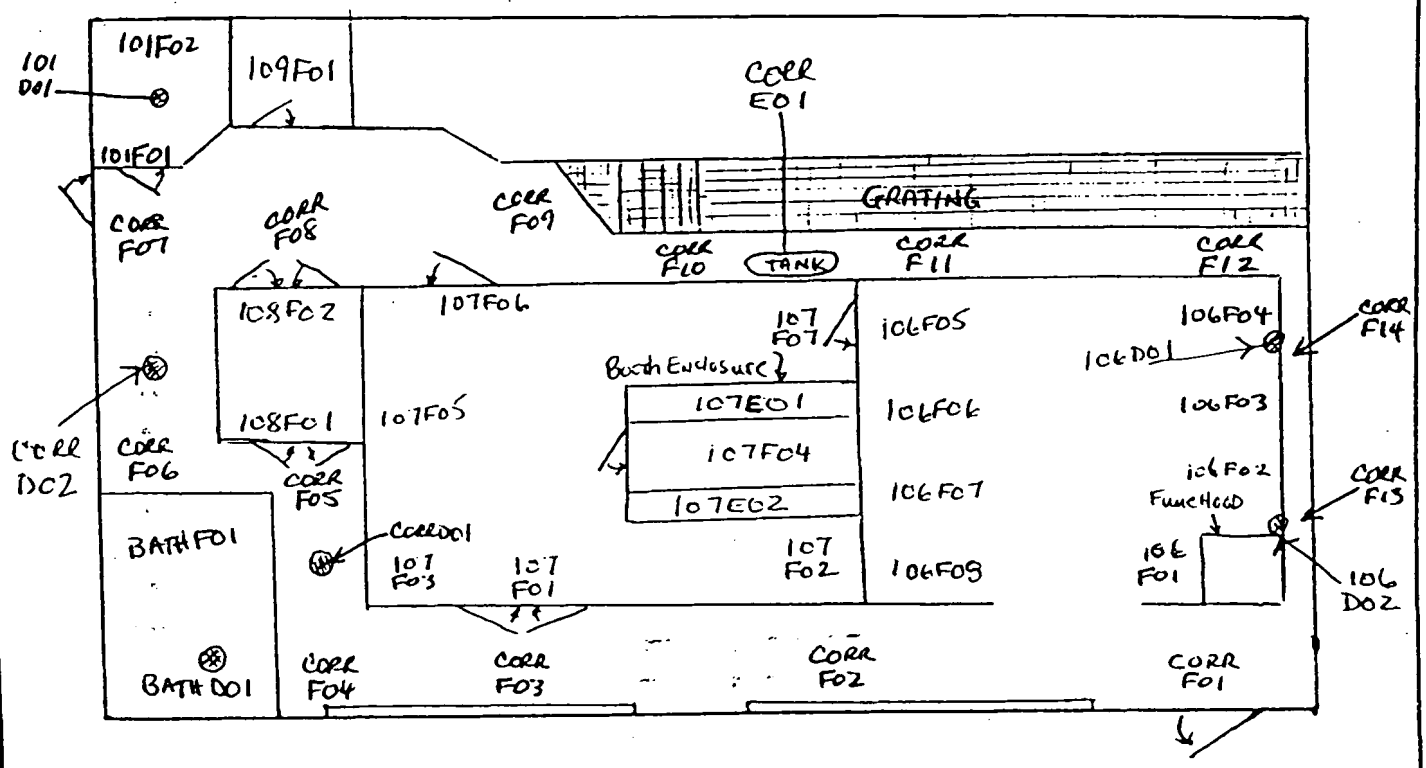
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GRATING LEVEL & LOWER LEVEL	SURVEY NO. 01-OSA-080
PURPOSE: SCOPING SURVEY	RWP NO. N/A
	DATE: 12-3-01
	TIME: 1530

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact

△# = mrem/hr neutron

[#] = air sample number

(#) = swipe number

(#/α) α/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
SEE PAGE 1		
	N/A	

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name)		
Counted by: (Signature) A	HP #	Date:
Counted by: (Print Name) N		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

ML-9620 (2-98)

Survey No. 01-OSA-080

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				[redacted]
Sample #	β/γ	Alpha	Tritium	Comments

Removable Contamination				
Swipes (dpm/100cm²)				[redacted]
Sample #	β/γ	Alpha	Tritium	Comments

N A

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

BLDG 51 M-2350 SURVEY

RSDS# 01-054-080 RCT: 2914 RCT: _____

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm	Surface Eff:	0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:	0.5	

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671	6178	5675	4	0	12/3/01	8:37	40	300	15
SRCCHECK	5671	6178	5675	4	1	12/3/01	8:39	2246	60	4203
SRCCHECK	5671	6178	5675	4	2	12/3/01	8:42	2309	60	4321
SRCCHECK	5671	6178	5675	4	3	12/3/01	8:44	2198	60	4113
SRCCHECK	5671	6178	5675	4	4	12/3/01	8:46	2150	60	4024
SRCCHECK	5671	6178	5675	4	5	12/3/01	8:47	2030	60	3799
SRCCHECK	5671	6178	5675	4	6	12/3/01	8:49	2113	60	3954
SRCBKG	5671	6178	5148	3	7	12/3/01	8:55	14	300	16
SRCCHECK	5671	6178	5148	3	8	12/3/01	8:58	2120	60	12138
SRCCHECK	5671	6178	5148	3	9	12/3/01	8:59	2106	60	12057
SRCCHECK	5671	6178	5148	3	10	12/3/01	9:01	1969	60	11273
SRCCHECK	5671	6178	5148	3	11	12/3/01	9:02	2072	60	11863
101-D01	5671	6178	5675	4	46	12/3/01	14:07	1	19	6
101-F01	5671	6178	5675	4	45	12/3/01	14:02	3	19	18
106-E01	5671	6178	5148	3	50	12/3/01	14:21	0	64	0
106-F01	5671	6178	5675	4	12	12/3/01	11:18	3	19	18
106-F02	5671	6178	5675	4	13	12/3/01	11:19	5	19	30
106-F03	5671	6178	5675	4	14	12/3/01	11:20	1	19	6
106-F04	5671	6178	5675	4	15	12/3/01	11:21	4	19	24
106-F05	5671	6178	5675	4	16	12/3/01	11:22	4	19	24
106-F06	5671	6178	5675	4	17	12/3/01	11:22	3	19	18
106-F07	5671	6178	5675	4	18	12/3/01	11:23	3	19	18
106-F08	5671	6178	5675	4	19	12/3/01	11:24	0	19	0
107-E01	5671	6178	5148	3	54	12/3/01	14:35	5	64	27
107-E02	5671	6178	5148	3	55	12/3/01	14:37	1	64	5
107-F01	5671	6178	5675	4	36	12/3/01	13:52	2	19	12
107-F02	5671	6178	5675	4	37	12/3/01	13:53	1	19	6
107-F03	5671	6178	5675	4	38	12/3/01	13:54	1	19	6
107-F04	5671	6178	5675	4	39	12/3/01	13:55	5	19	30
107-F05	5671	6178	5675	4	40	12/3/01	13:56	3	19	18
107-F06	5671	6178	5675	4	41	12/3/01	13:57	0	19	0
107-F07	5671	6178	5675	4	42	12/3/01	13:58	2	19	12
108-F01	5671	6178	5675	4	43	12/3/01	13:59	2	19	12
108-F02	5671	6178	5675	4	44	12/3/01	14:01	0	19	0

RSDS# 01-OSA-080 RCT: 2998 RCT: _____

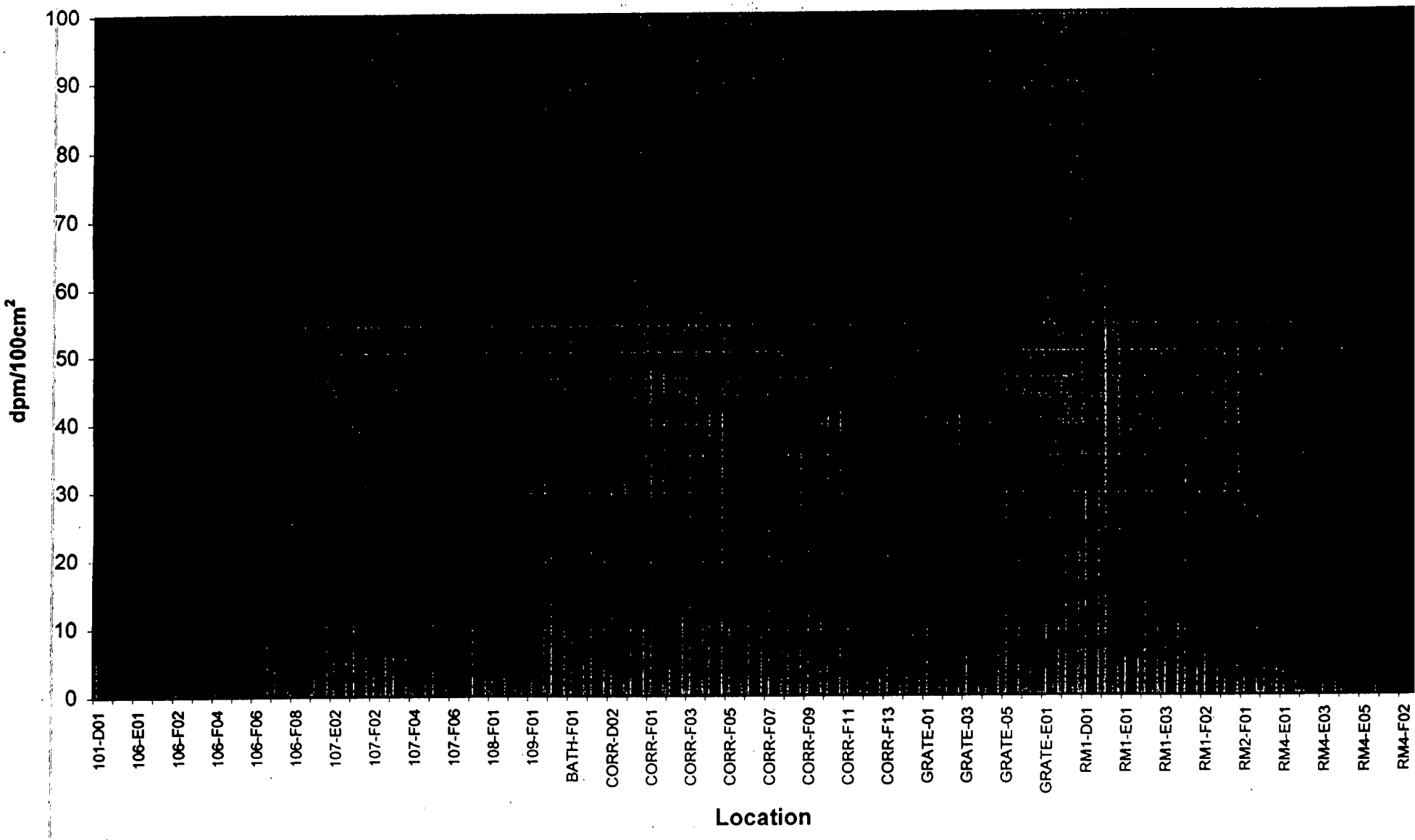
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
109-F01	5671	6178	5675	4	47	12/3/01	14:08	6	19	35
BATH-D01	5671	6178	5675	4	49	12/3/01	14:17	4	19	24
BATH-F01	5671	6178	5675	4	48	12/3/01	14:14	3	19	18
CORR-D01	5671	6178	5675	4	24	12/3/01	11:31	4	19	24
CORR-D02	5671	6178	5675	4	27	12/3/01	11:34	6	19	35
CORR-E01	5671	6178	5148	3	56	12/3/01	14:40	2	64	11
CORR-F01	5671	6178	5675	4	20	12/3/01	11:27	8	19	47
CORR-F02	5671	6178	5675	4	21	12/3/01	11:28	2	19	12
CORR-F03	5671	6178	5675	4	22	12/3/01	11:30	6	19	35
CORR-F04	5671	6178	5675	4	23	12/3/01	11:30	7	19	41
CORR-F05	5671	6178	5675	4	25	12/3/01	11:32	2	19	12
CORR-F06	5671	6178	5675	4	26	12/3/01	11:33	3	19	18
CORR-F07	5671	6178	5675	4	28	12/3/01	11:35	5	19	30
CORR-F08	5671	6178	5675	4	29	12/3/01	11:36	6	19	35
CORR-F09	5671	6178	5675	4	30	12/3/01	11:37	4	19	24
CORR-F10	5671	6178	5675	4	31	12/3/01	11:38	7	19	41
CORR-F11	5671	6178	5148	3	32	12/3/01	11:44	3	64	16
CORR-F12	5671	6178	5148	3	33	12/3/01	11:46	2	64	11
CORR-F13	5671	6178	5148	3	34	12/3/01	11:49	4	64	21
CORR-F14	5671	6178	5148	3	35	12/3/01	11:51	1	64	5
GRATE-01	5671	6178	5675	4	57	12/3/01	14:44	2	19	12
GRATE-02	5671	6178	5675	4	58	12/3/01	14:45	7	19	41
GRATE-03	5671	6178	5675	4	59	12/3/01	14:46	1	19	6
GRATE-04	5671	6178	5675	4	60	12/3/01	14:51	4	19	24
GRATE-05	5671	6178	5675	4	61	12/3/01	14:52	5	19	30
GRATE-06	5671	6178	5675	4	62	12/3/01	14:59	0	19	0
GRATE-E01	5671	6178	5148	3	63	12/3/01	15:02	2	64	11
GRATE-E02	5671	6178	5148	3	64	12/3/01	15:06	4	64	21
RM1-D01	5671	6178	5675	4	77	12/3/01	15:29	5	19	30
RM1-D02	5671	6178	5148	3	82	12/3/01	15:37	10	64	54
RM1-E01	5671	6178	5148	3	79	12/3/01	15:33	1	64	5
RM1-E02	5671	6178	5148	3	80	12/3/01	15:35	3	64	16
RM1-E03	5671	6178	5148	3	81	12/3/01	15:36	2	64	11
RM1-F01	5671	6178	5675	4	75	12/3/01	15:27	6	19	35
RM1-F02	5671	6178	5675	4	76	12/3/01	15:29	1	19	6
RM1-F03	5671	6178	5675	4	78	12/3/01	15:30	9	19	53
RM2-F01	5671	6178	5675	4	73	12/3/01	15:23	5	19	30
RM2-F02	5671	6178	5675	4	74	12/3/01	15:24	1	19	6
RM4-E01	5671	6178	5148	3	65	12/3/01	15:10	2	64	11

BLDG 51 M-2350 SURVEY

RSDS# 01-05A-050 RCT: 2974 RCT: _____

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
RM4-E02	5671	6178	5148	3	66	12/3/01	15:12	0	64	0
RM4-E03	5671	6178	5148	3	67	12/3/01	15:13	5	64	27
RM4-E04	5671	6178	5148	3	68	12/3/01	15:15	0	64	0
RM4-E05	5671	6178	5148	3	69	12/3/01	15:17	1	64	5
RM4-F01	5671	6178	5675	4	70	12/3/01	15:20	4	19	24
RM4-F02	5671	6178	5675	4	71	12/3/01	15:20	0	19	0
RM4-F03	5671	6178	5675	4	72	12/3/01	15:22	6	19	35

Building 51 M2350 Survey



RSDS#: 01-0SA-080

RCT: DJA

CONTAMINATION PROBE INTEGRATED COUNT MDA

<SELECT> Probe Type		181	Model 43-20 cm2	Active Probe Area
<ENTER> Isotopic Efficiency Listed on Probe *	EI	[illegible]	c/d	Instrument Efficiency (c/d-on Probe)
<SELECT> Contamination Type (Alpha Or Beta)	Es		0.5	Surface Efficiency (1 for beta/0.5 for alpha)
	E	0.0965		Total Efficiency (CALCULATED =EI * Es)
<ENTER> Background Count Rate *	Rb	[illegible]	CPM	Background Count Rate
<ENTER> Background Count Time (minutes)	Tb	5	min.	

Enter the above information in the 'gray areas'. Then adjust sample intergrated count time to obtain desired MDA.

Sample Integrated Count Time (sec.)		64	sec.
Sample Count Time (minutes) (Tsb)		1.07	min.
*	MDA	50	dpm/100 cm2

Minimum Activity Detected Per Probe Area (dpm/Probe)

90

Performed by: [redacted]

HP#: 7707

Date: 12-3-01

* MDA Equation Source: NUREG 1507, Eq. 3-11 (Strom & Stansbury 1992), where K = E*A/100

01-OSA-080

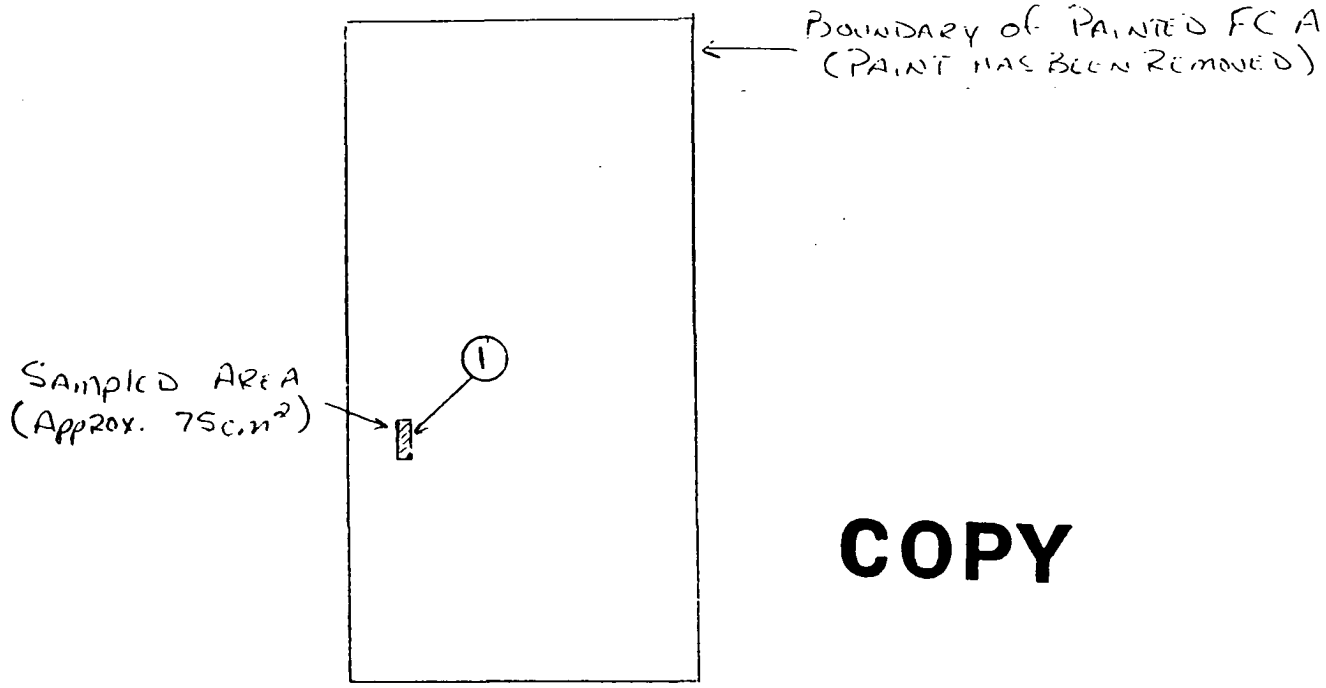
DJH

19 gross counts = 100 dpm/100cm2

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 FCA	SURVEY NO. 02-TF-0073
PURPOSE: ACID ETCH FOR ISOTOPIC IDENTIFICATION	RWP NO. N/A
	DATE: 1-9-02
	TIME: 0900

MAP/DRAWING



COPY

DIRECT MEASUREMENTS AFTER ETCHING INDICATED:

$\alpha < 100 dpm/100cm^2$ $\beta^- 25000 dpm/100cm^2$

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5603/5604	1-31-02
SAC-4	5247/5114	10-19-02

[redacted]

HP # 61916	Date: 1-14-02
[redacted]	
HP #	Date:
ATTACHED	
HP # 7707	Date: 01/16/02
[redacted]	

ML-9620 (2-98)

Survey No. 00-TF-0073

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<5k	<20	N/A	SAMPLED AREA
	1K MDA 1-14-02			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS: N/A

N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
01-09-02	Leach	Hopkins	1
PROJECT/FUNCTION:	PRIMARY CONTACT/PHONE NO		MAIL STOP:
	Mike Rubadue 5558		
CHARGE NUMBER:	DATE(S) COLLECTED	RSDS# (if applicable):	ATTACHMENTS (list):
J01128			

ANALYSES REQUESTED (check):

- ☐ ^3H
- ☐ Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release_____ Approved_____
- ☐ Gross Alpha
- ☐ Air Filter – Isotopic Analysis
- ☒ Characterization per MD-80036, Operation #10015
- ☐ Isotopic Analysis: Pu____ U_____ Th____ Am____ Other_____
- ☐ Other_____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
02000422	Bldg. 51	Basement	

COMMENTS:

ANALYZED BY:	DATE:
Farwell C. Hopkins	01-14-02

MEL-5222 (1-01)

Laboratory ID#: 0200422
Project/function: Bldg 51
Submitted: 1/9/02
Submitted by: L.C. Hopkins
Point of Contact: Mike Rubadue
RSDS#: N/A
Date: 1/14/02

0200422

Isotope	Sample Location	dpm/sample	Uncertainty +/-	LDL (dpm/sample)
Pu-238	Bldg 51 Basement	351.73	74.99	16.70
Pu-239/240	Bldg 51 Basement	<LDL		16.70
Th-232	Bldg 51 Basement	<LDL		16.70
Th-230	Bldg 51 Basement	<LDL		16.70
Th-227	Bldg 51 Basement	<LDL		16.70
U-238	Bldg 51 Basement	<LDL		16.70
U-235	Bldg 51 Basement	<LDL		16.70
U-233/234	Bldg 51 Basement	<LDL		26.60

Analyzed in accordance with Operation 10015.

[redacted]

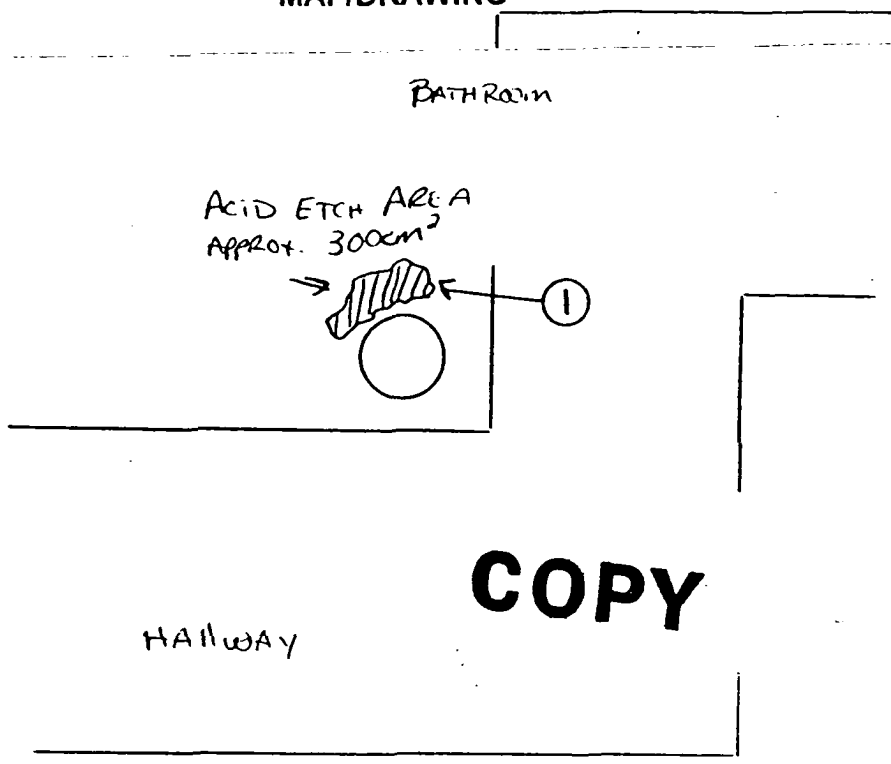
1585 1-14-02
HP # Date

6195 1/14/02
HP # Date

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51	SURVEY NO. 02-TF-0092
PURPOSE: ACID ETCH AREA NORTHWEST MEZZANINE POST JOB SURVEY	RWP NO. N/A
	DATE: 1-16-02
	TIME: 1500

MAP/DRAWING



COPY

DIRECT MEASUREMENTS TAKE ON ETCHED PORTION AND SURROUNDING AREA: $\alpha < 100 dpm/100cm^2$.

$\beta^- < 5000 dpm/100cm^2$

(INITIAL MEASUREMENTS: $\alpha \rightarrow 130 \frac{dpm}{100cm^2}$)

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5603/5604	1-31-02
SAC-4	5247/5114	10-19-02

[redacted]

HP #	Date:
6196	1-22-02
[redacted]	
HP #	Date:
ATTACHED	
HP # 7707	Date: 01/22/02
[redacted]	

ML-9620 (2-98)

Survey No. 02-TF-0092

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<1K	<20	N/A	ETCHED AREA

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COPY

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
1-15-02	Leach	HOP	1
PROJECT/FUNCTION:	PRIMARY CONTACT/PHONE NO.:		MAIL STOP:
	MIKE Rubadue 5558		
CHARGE NUMBER:	DATE(S) COLLECTED	RSDS# (if applicable):	ATTACHMENTS (list):
M00404	1-15-02		

ANALYSES REQUESTED (check):

- ☐ ^3H
- ☐ Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release_____ Approved_____
- ☐ Gross Alpha
- ☐ Air Filter – Isotopic Analysis
- ☒ Characterization per MD-80036, Operation #10015
- ☐ Isotopic Analysis: Pu____ U____ Th____ Am____ Other____
- ☐ Other _____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
0200542	Bldg. 51	1	

COMMENTS:

L. C. Hopkins 01-17-02

ANALYZED BY: DATE:

ML-5222 (1-01)

Laboratory ID#: 0200542
Project/function: Bldg 51
Submitted: 1/15/2002
Submitted by: Mike Rubadue
Point of Contact: Mike Rubadue
RSDS#: N/A
Date: 1/17/2002

0200542

Isotope	Sample Location	dpm/sample	Uncertainty +/-	LDL (dpm/sample)
Pu-238	Bldg 51 #1	0.63	0.10	0.08
Pu-239/240	Bldg 51 #1	<LDL		0.08
Po-210	Bldg 51 #1	42.72	4.61	0.95
Th-232	Bldg 51 #1	0.48	0.07	0.08
Th-230	Bldg 51 #1	1.77	0.18	0.09
Th-228	Bldg 51 #1	0.88	0.11	0.08
Th-227	Bldg 51 #1	0.12	0.03	0.02

Analyzed in accordance with Operation 10015.

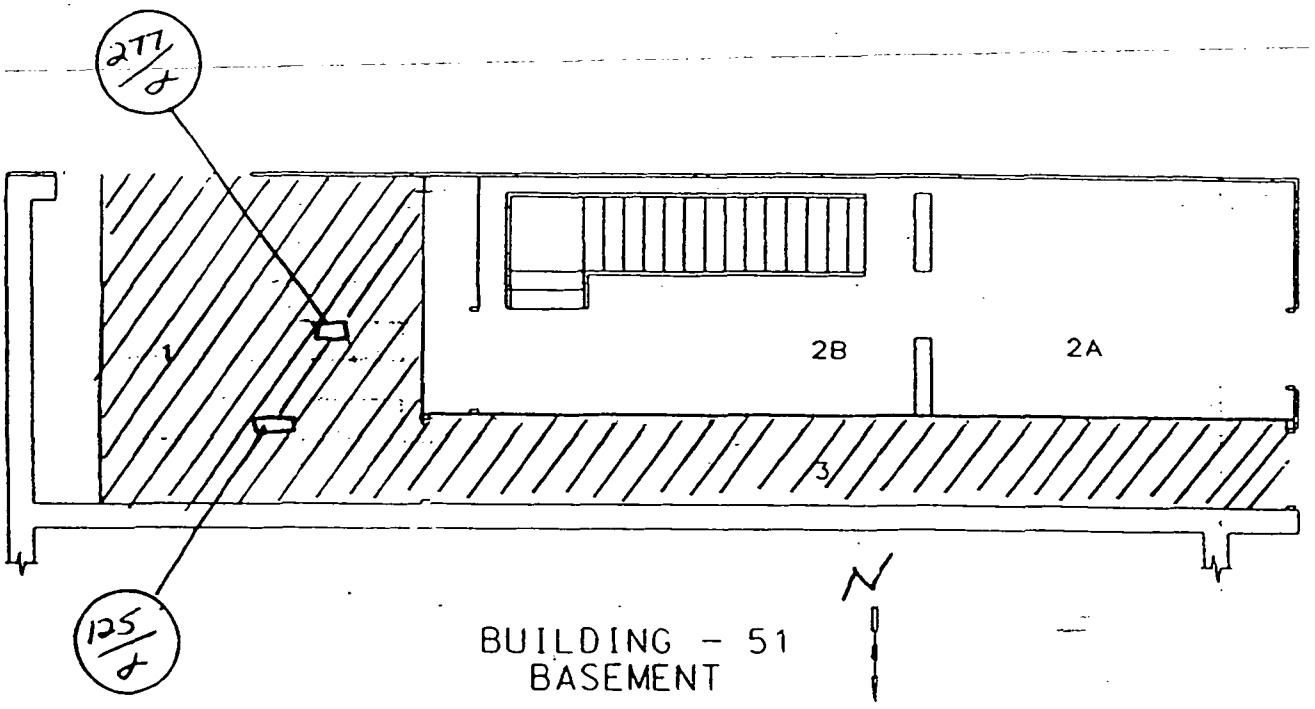
[redacted]

1585 — HP # — 1-17-02 — Date

6195 — HP # — 1/17/02 — Date

LOCATION: (BLDG./AREA/ROOM) 51-BASEMENT	SURVEY NO. 02-TF-0150
PURPOSE: CHARACTERIZATION	RWP NO. N/A
	DATE: 1-23-02
	TIME: 1715

MAP/DRAWING



ALL SHADED AREAS SURVEYED WITH RESULTS OF <100dpm/100cm² α direct. EXCEPT WHERE NOTED REFERENCE SURVEY PLAN BLDG 51

COPY

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5671/5675	9-21-02
	N/A	

[redacted]

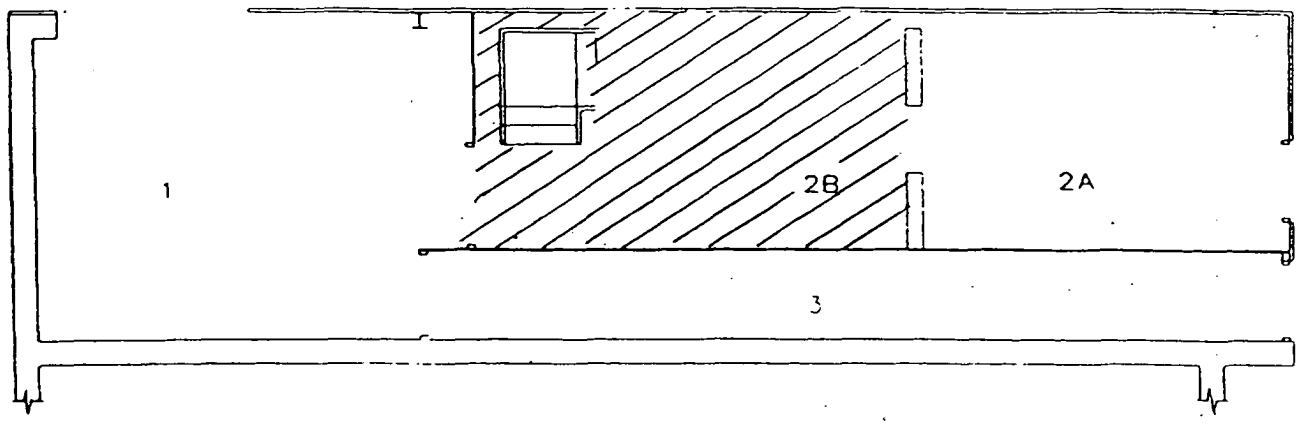
	HP # 6178	Date: 1-31-02
	HP #	Date:
Counted by: (Print Name) N/A		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51-BASEMENT-RM2	SURVEY NO. 02-TF-0153
PURPOSE: CHARTACTERIZATION	RWP NO. N/A
	DATE: 1-24-02
	TIME: 1620

MAP/DRAWING



BUILDING - 51
BASEMENT

SHADED AREA SURVEYED WITH RESULTS OF < 100dpm/100cm² α DIRECT.

REFERENCE SURVEY PLAN BLDG 51

COPY

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) = α/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5671/5675	9-21-02
	N/A	

[redacted]

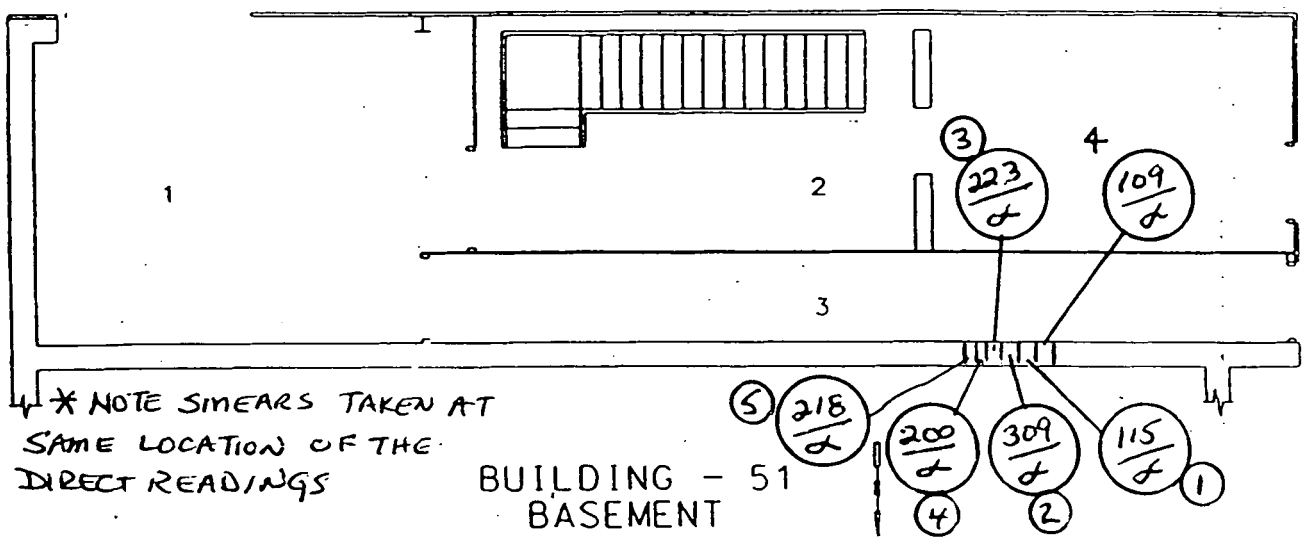
HP # 6178	Date: 1-31-02
[redacted]	
HP #	Date:
HP # 7707	Date: 02/13/02
[redacted]	

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) 51-BASEMENT	SURVEY NO. 02-TF-0157
PURPOSE: CHARTACTERIZATION	RWP NO. N/A
	DATE: 1-28-02
	TIME: 1600

MAP/DRAWING



* NOTE SMEARS TAKEN AT SAME LOCATION OF THE DIRECT READINGS

BUILDING - 51 BASEMENT

ALL WALLS IN ROOMS 3 AN 4 WERE SURVEYED FROM FLOOR TO 6 INCHES UP. WITH RESULTS OF <100dpm /100cm² α DIRECT, EXCEPT AS NOTED REFERENCE SURVEY PLAN BLDG 51.

COPY

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5671/5675/5148	9-21-02

[redacted]

HP # 6178	Date: 2-14-02
HP #	Date:
HP # 7707	Date: 02/18/02

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-5	SEE	ATTACHED		WALL
			N/A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

Y900

COMMENTS: N/A

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of resul are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR010
Batch Ended: 1/30/02 9:06

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE 02-TF-0157 (5) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
C1	1	0.00	2.28		4.44	5.10	
C2	2	1.81	2.12		0.00	2.26	
C3	3	0.00	2.00		1.19	2.72	
C4	4	1.66	1.94		1.25	2.32	
D1	5	0.00	2.20		0.00	1.51	

Brenda Strong 1-30-02

3 of 6

Protocol# 5 - Smears.lsa User: 5737

RUBADUE SUR #02-TF-0157 (L1-L5)/BKS

T-413

Cycle 1 Results

S#	Count Time	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	A:2S%	MESSAGES
-1	10.00	6	5	4	0	663.98	0	26.2	B
0	2.00	1111	1006	0	0	587.72	2013	4.3	
1	2.00	0	0	1	0	589.53	0	0.0	
2	2.00	20	18	0	0	544.78	38	36.6	
3	2.00	0	0	0	0	506.30	0	0.0	
4	2.00	0	0	3	0	554.87	0	0.0	
5	2.00	3	3	1	0	574.61	5	169.9	

DPH

4 of 6

Olenda Strong 1-30-02

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
2-11-02	Leach	Hop John	2
PROJECT/FUNCTION:	PRIMARY CONTACT/PHONE NO.:		MAIL STOP:
	M. Rubadue 5558		

CHARGE NUMBER:	DATE(S) COLLECTED:	RSDS# (if applicable):	ATTACHMENTS (list):
M00407	2-11-02	02-TF-0157	

ANALYSES REQUESTED (check):

- ☐ ^3H
- ☐ Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release _____ Approved _____
- ☐ Gross Alpha
- ☐ Air Filter – Isotopic Analysis
- ☒ Characterization per MD-80036, Operation #10015
- ☐ Isotopic Analysis: Pu____ U____ Th____ Am____ Other____
- ☐ Other _____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
0201626	Bldg. 51 inside	1	
0201628	" " outside	2	

COMMENTS:

5 of 6
02-TF-0157

ANALYZED BY:	DATE:
L. C. Hopkins	2-14-02

ML-5222 (1-01)

Laboratory ID#: 0201626 & 0201628
Project/function: BD 51
Submitted: Feb 11, 2002
Submitted by: M. Rubadue
Point of Contact: M. Rubadue x5558
RSDS#: N/A

Lab ID 0201626
Sample Location BD 51 Inside

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238	314.785	37.748	0.288
Pu-239/240	1.065	0.360	0.288
Th-232	0.943	0.333	0.283
Th-230	4.084	0.810	0.283
Th-227	<LDL	<LDL	0.283
Th-228	1.210	0.391	0.540
U-238	1.527	0.229	0.069
U-235	0.127	0.058	0.069
U-233/234	2.801	0.344	0.182

Lab ID 0201628
Sample Location BD 51 Outside

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238	372.295	62.926	1.415
Pu-239/240	0.740	0.445	0.668
Th-232	0.772	0.317	0.509
Th-230	1.369	0.428	0.309
Th-227	<LDL	<LDL	0.591
Th-228	0.798	0.317	0.310
U-238	0.647	0.150	0.083
U-235	0.401	0.116	0.083
U-233/234	4.164	0.491	0.277

[redacted]

1585 2-14-02
HP # Date

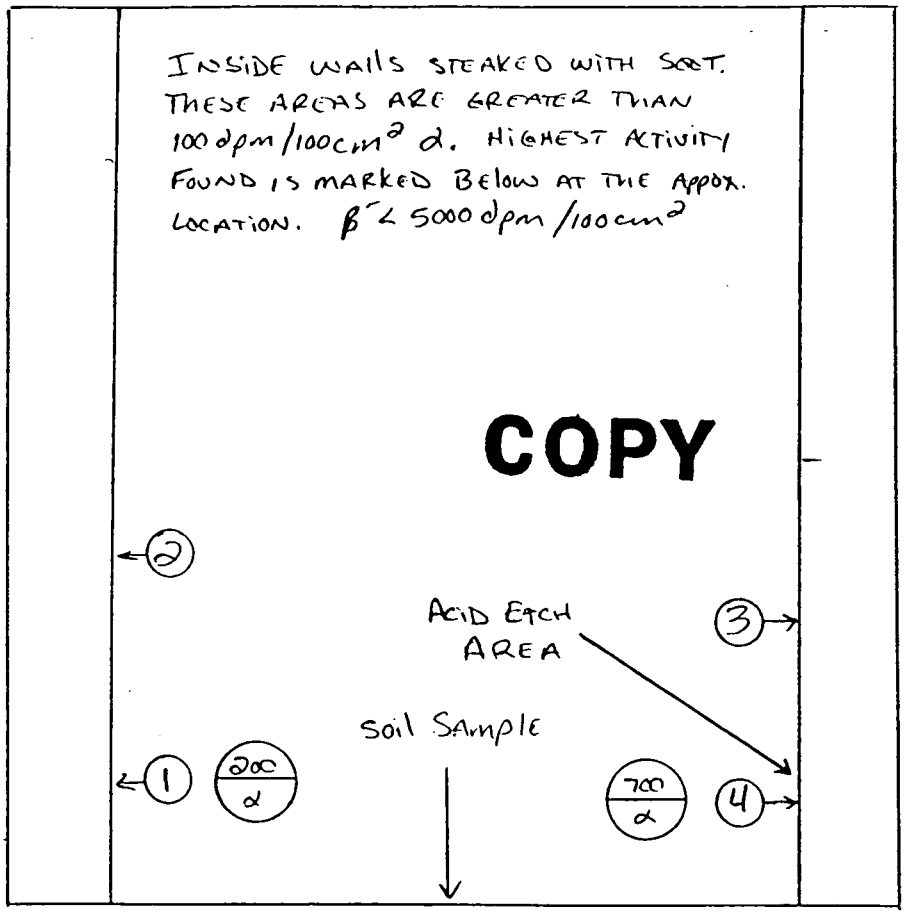
DH

6195 2-14-02
HP # Date

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 CONVEYOR	SURVEY NO. 02-TF-0159
PURPOSE: INVESTIGATIVE SURVEY AND SOIL SAMPLE	RWP NO. N/A
	DATE: 1-30-02
	TIME: 1600

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
= air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5267/5440	1-15-03

[redacted]

HP #	Date:
6196	2-19-02
[redacted]	
HP #	Date:
ATTACHED	
HP #	Date:
7707	02/20/02
[redacted]	

ML-9620 (2-98)

Survey No. 02-TF-0159

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	ATTACHED		EAST SIDE
2	↓	↓	↓	↓
3	↓	↓	↓	WEST SIDE
4	SEE	ATTACHED		↓
				2-19-08

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS: SMEARS FIELD SCREENED 21000 dpm/100cm²

N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR011
Batch Ended: 1/30/02 9:06

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE 02-TF-0159 (4) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
B1	1	36.07	8.69		0.00	1.68	
B2	2	13.93	5.45		1.35	2.43	
B3	3	2.87	2.70		0.69	2.05	
B4	4	20.17	6.25		0.00	1.59	

MOR

MOR

Brenda Strong 1-30-02

PAGE 3 OF 1

Protocol# 6 - Smears.lsa User: 5737

RUBADUE SUR #02-TF-0159 (M2-M3)/BKS

T-413

Cycle 1 Results

S#	Count Time	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	A:2S%	MESSAGES
-1	10.00	8	7	5	0	660.99	0	22.3	B
0	2.00	1223	1109	1	0	558.40	2267	4.1	
Missing vial 3.									
2	2.00	0	0	7	0	356.68	0	0.0	
3	2.00	0	0	4	0	445.86	0	0.0	

4 Sample pulled for RCT. BKS 1-30-02

Brenda Bruing 1-30-02

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML12731
File ID: F0000422.s0
Priority: Yes

Description\Location
Bldg. #51 Conveyor

Collector: 6178
Date Received: 1/30/02
Date Collected: 1/29/02

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60		0.01	0.01	45,000
Cs-137		0.04	0.01	45,000
Pb-210		2.17	0.23	45,000
Ra-226		0.64	0.26	800
Ac-227 (D)	*	0	0.1	40
Th-230	*	0.37	2.14	800
Th-232 (D)		0.17	0.02	130
Pu-238		9.42	7.25	500
Am-241		0.03	0.02	500

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ_{DOT} 0.01 nCi/g $\Sigma_{Respirator}$ 0.03

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ_{DOT} 2nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is Assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation

Instrument type: High Purity Germanium

Comments:

Date: 2/12/02 Counted By: 6152 Analyzed By: 5801 Initials [redacted]

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
2-11-02	Leach	Hop John	2
PROJECT/FUNCTION:	PRIMARY CONTACT/PHONE NO.:		MAIL STOP:
	M. Rubadue 5558		
CHARGE NUMBER:	DATE(S) COLLECTED:	RSDS# (if applicable):	ATTACHMENTS (list):
M00407	2-11-02		

ANALYSES REQUESTED (check):

- ☐ ^3H
- ☐ Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release_____ Approved_____
- ☐ Gross Alpha
- ☐ Air Filter – Isotopic Analysis
- ☒ Characterization per MD-80036, Operation #10015
- ☐ Isotopic Analysis: Pu____ U_____ Th____ Am____ Other_____
- ☐ Other _____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
0201626	Bldg. 51 inside	1	
0201628	" " outside	2	

COMMENTS:

ANALYZED BY:	DATE:
L. C. Hopkins	2-14-02

ML-5222 (1-01)

Laboratory ID#: 0201626 & 0201628
Project/function: BD 51
Submitted: Feb 11, 2002
Submitted by: M. Rubadue
Point of Contact: M. Rubadue x5558
RSDS#: N/A

Lab ID 0201626
Sample Location BD 51 Inside

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238	314.785	37.748	0.288
Pu-239/240	1.065	0.360	0.288
Th-232	0.943	0.333	0.283
Th-230	4.084	0.810	0.283
Th-227	<LDL	<LDL	0.283
Th-228	1.210	0.391	0.540
U-238	1.527	0.229	0.069
U-235	0.127	0.058	0.069
U-233/234	2.801	0.344	0.182

Lab ID 0201628
Sample Location BD 51 Outside

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238	372.295	62.926	1.415
Pu-239/240	0.740	0.445	0.668
Th-232	0.772	0.317	0.509
Th-230	1.369	0.428	0.309
Th-227	<LDL	<LDL	0.591
Th-228	0.798	0.317	0.310
U-238	0.647	0.150	0.083
U-235	0.401	0.116	0.083
U-233/234	4.164	0.491	0.277

ACID ETCH OF CONVEYOR

[redacted]

1585 2-14-02
HP # Date

6195 2-14-02
HP # Date

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
2-12-02	SMEAR	MICHAEL J RUBADUE	2
PROJECT/FUNCTION:	**PRIMARY CONTACT/PHONE NO.:**		**MAIL STOP:**
TFV/SMPP	MIKE RUBADUE 3104		OSW-4
CHARGE NUMBER:	**DATE(S) COLLECTED:**	**RSDS# (if applicable):**	**ATTACHMENTS (list):**
500489	1-30-02	02-TF-0159	GROSS α β RESULTS

ANALYSES REQUESTED (check):

- ☐ ^3H
- ☐ Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release_____ Approved_____
- ☐ Gross Alpha
- ☐ Air Filter – Isotopic Analysis
- ☒ Characterization per MD-80036, Operation #10015
- ☐ Isotopic Analysis: Pu____ U____ Th____ Am____ Other____
- ☐ Other _____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
02010066	S1 CONVEYOR	1	
02010067	S1 CONVEYOR	4	

COMMENTS:

ANALYZED BY:	DATE:
L. C. Hopkins	2-13-02

ML-5222 (1-01)

Laboratory ID#: 0201666-0201667
Project/function: TFV/SMPP
Submitted: Feb 12, 2002
Submitted by: M. Rubadue
Point of Contact: M. Rubadue x3104
RSDS#: 02-TF-0159

Lab ID 0201666
Sample Location 51 Conveyor #1

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238	38.38	5.24	0.52
Pu-239/240	<LDL	<LDL	0.33
Am-241	0.84	0.44	0.57
Th-232	<LDL	<LDL	0.33
Th-230	1.09	0.39	0.33
Th-227	<LDL	<LDL	0.33
U-238	<LDL	<LDL	0.60
U-235	<LDL	<LDL	0.33
U-233/234	1.81	0.52	0.33

Lab ID 0201667
Sample Location 51 Conveyor #4

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238	9.13	1.48	0.30
Pu-239/240	<LDL	<LDL	0.30
Am-241	<LDL	<LDL	0.98
Th-232	<LDL	<LDL	0.30
Th-230	<LDL	<LDL	0.30
Th-227	<LDL	<LDL	0.47
U-238	<LDL	<LDL	0.30
U-235	<LDL	<LDL	0.30
U-233/234	0.33	0.19	0.30

[redacted]

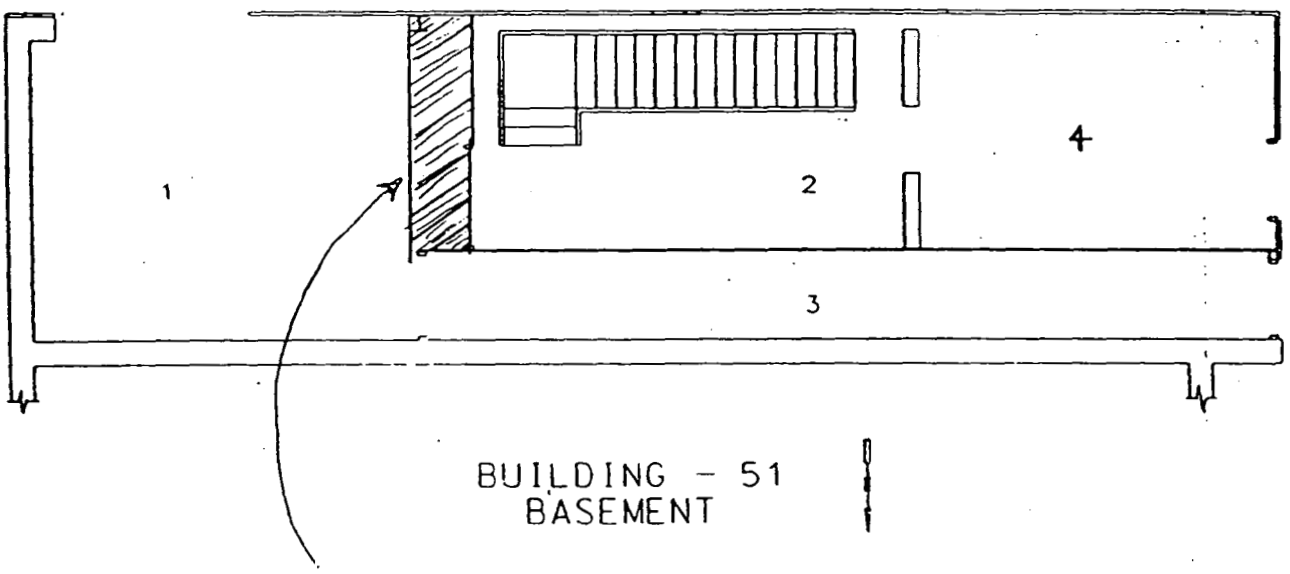
1585 2-19-02
HP # Date

5768 2/19/02
HP # Date

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 - BASEMENT	SURVEY NO. 02-TF-0183
PURPOSE: CHARTACTERIZATION	RWP NO. N/A
	DATE: 1-31-02
	TIME: 1500

MAP/DRAWING



SHADED AREA SURVEYED WITH RESULTS OF <100 dpm/100cm² α DIRECT.

REFERENCE SURVEY PLAN BLDG 51

COPY

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) = α/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5671/5148	9-21-02
	N/A	

[redacted]

HP # 6278	Date: 2-13-02
[redacted]	
HP #	Date:
HP # 7707	Date: 02/13/02

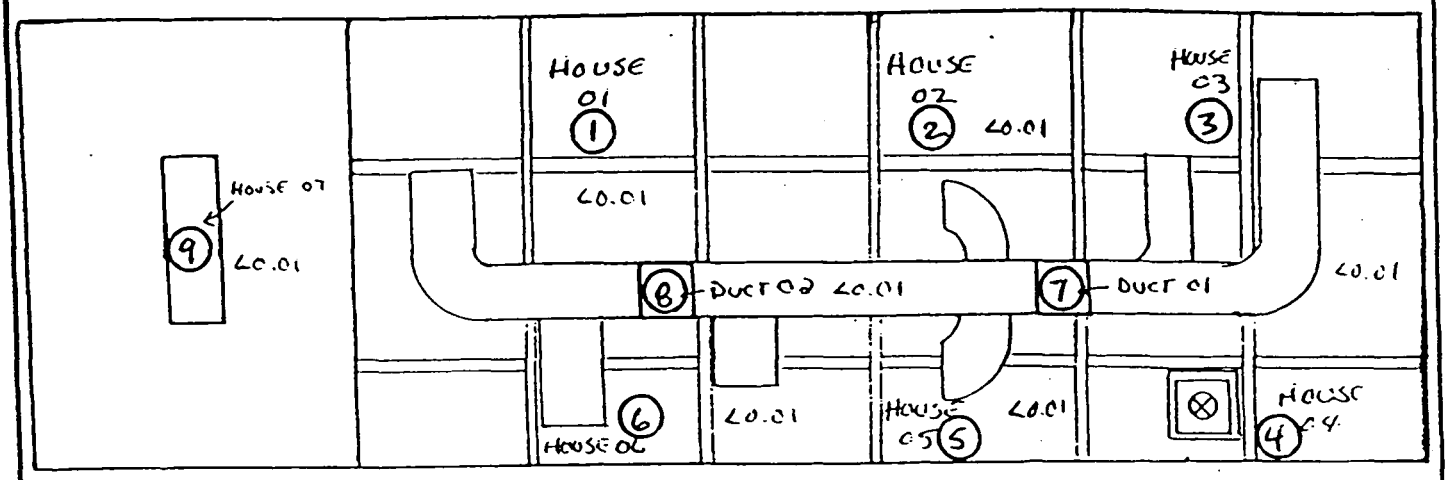
ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51	SURVEY NO. 02-TF-0210
PURPOSE: SMEAR AND DOSE RATES	RWP NO. N/A
	DATE: 2-18-2002
	TIME: 1600

MAP/DRAWING

TOP OF INCINERATOR HOUSING



COPY

γ BACKGROUND APPROX 5μRem

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date	HP #	Date:
ELECTRA	5439/5298	12-10-02	10194	2-20-02
BICRON	3930	8-6-02		
	N/A		HED	
			7707	02/26/02

[redacted]

ML-9620 (2-98)

Survey No. 02-TF-0210

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-9	SEE	ATTACHED		SEE MAP PAGE 1
		N	A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N	A	

COMMENTS: N/A

NOTES:

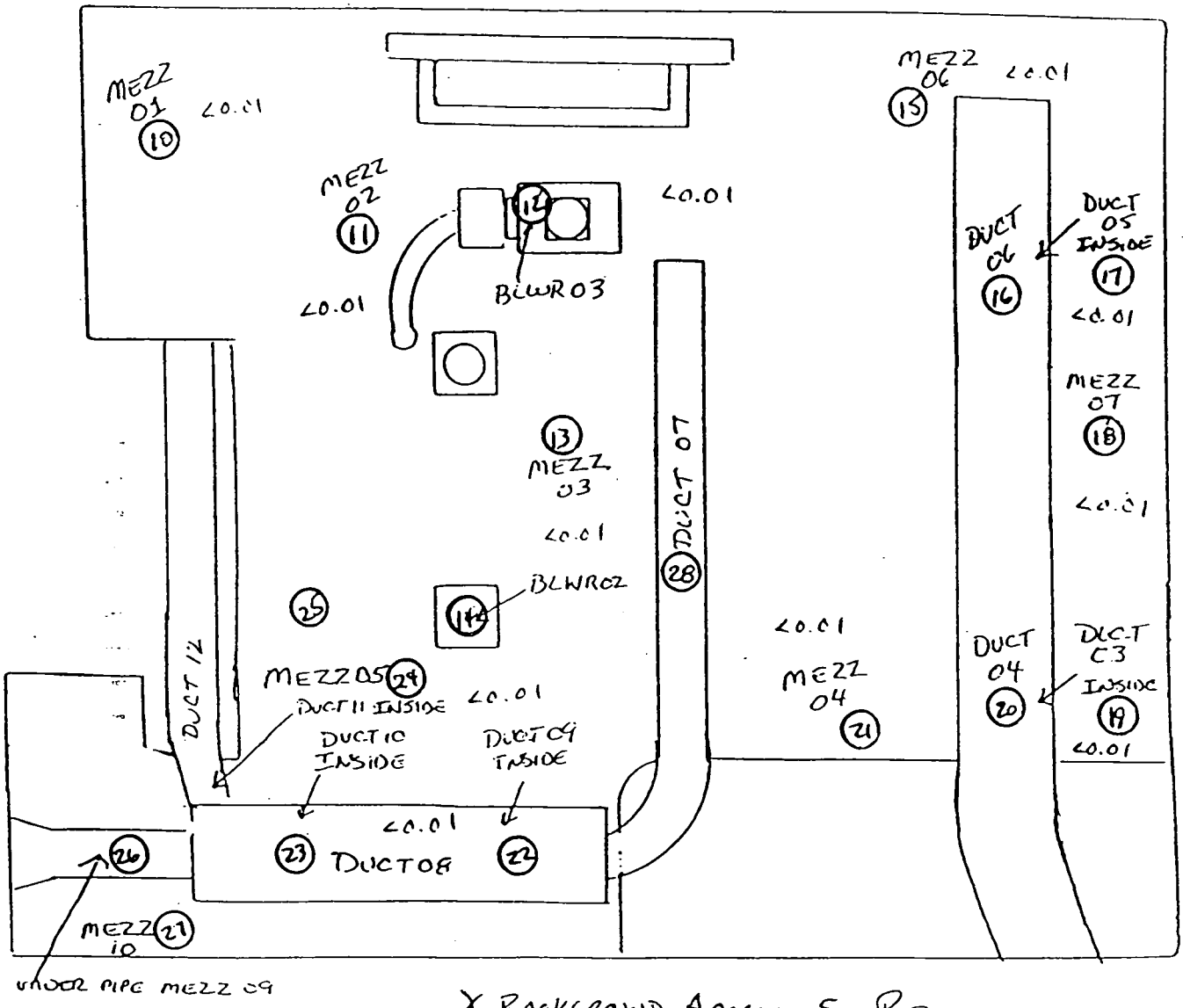
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51	SURVEY NO. 02-TF-0210
PURPOSE: SMEAR AND DOSE RATES	RWP NO. N/A
	DATE: 2-18-2002
	TIME: 1600

MAP/DRAWING



γ BACKGROUND APPROX. 5 μRem

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date

SEE PAGE 1

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name)		
Counted by: (Signature)	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

SEE PAGE 1

ML-9620 (2-98)

Survey No. 02-TF-0210

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
10-28	SEE	ATTACHED		MAP PAGE 3
		N	A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N	A	

COMMENTS: N/A

NOTES:

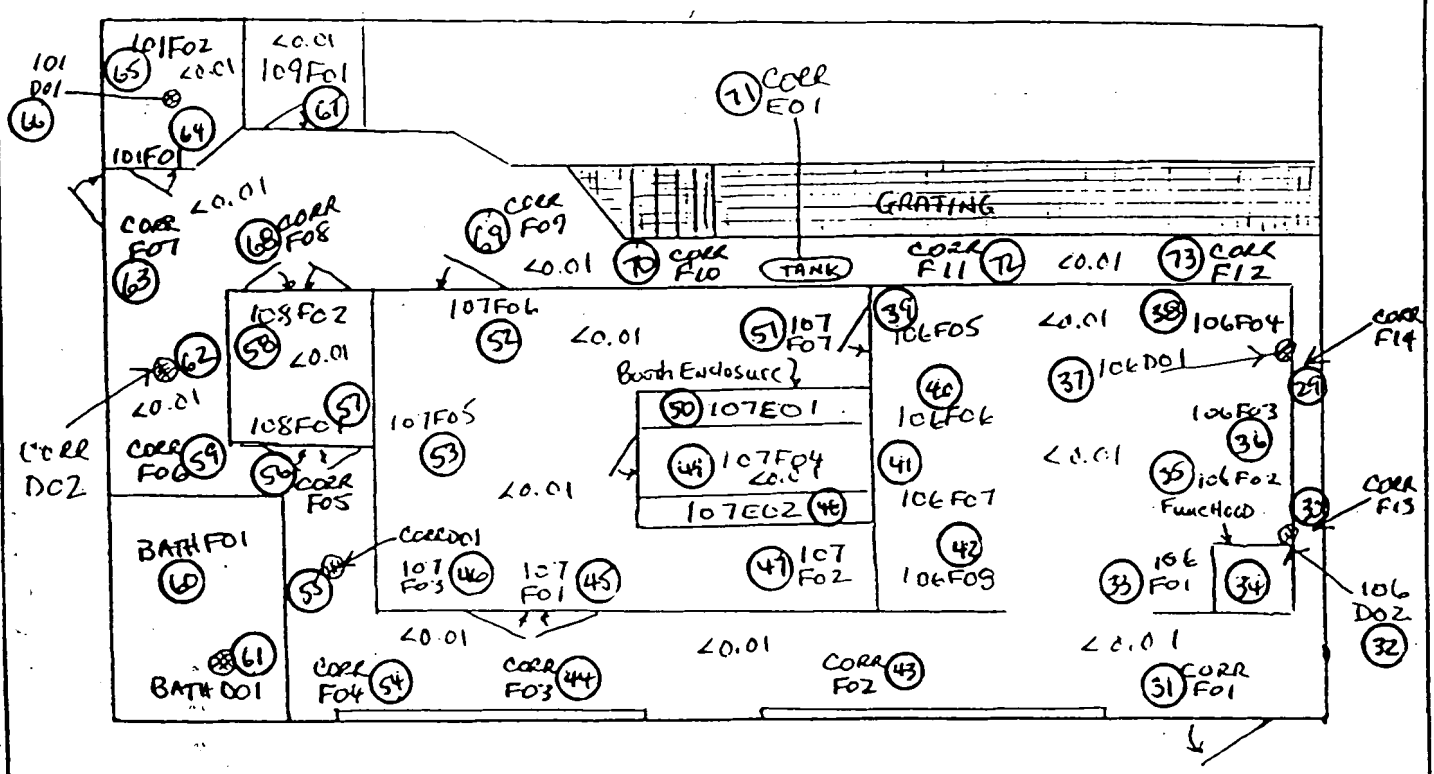
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 57	SURVEY NO. 02-TF-0210
PURPOSE: SMEAR AND DOSE RATES	RWP NO. N/A
	DATE: 2-18-2002
	TIME: 1600

MAP/DRAWING



γ BACKGROUND APPROX 5 mR/hr

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
	SEE PAGE 1	

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name) SEE PAGE 1		
Counted by: (Signature)	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

ML-9620 (2-98)

Survey No. 02-TF-0210

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
29-73	SEE	ATTACHED		MAP PAGES
		N	A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N	A	

COMMENTS: N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of result are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

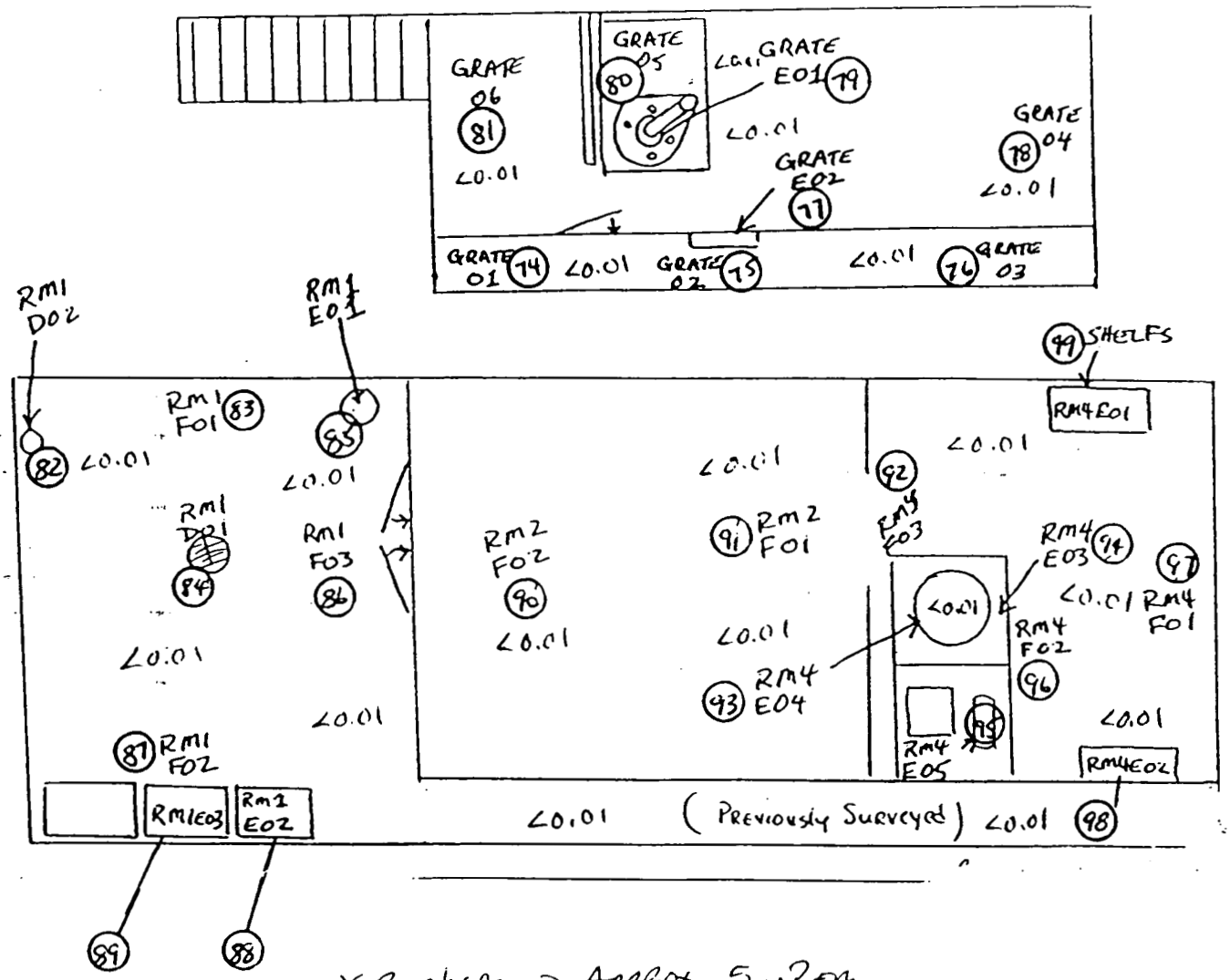
ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

7 of 13

LOCATION: (BLDG./AREA/ROOM) 51	SURVEY NO. 02-TF-0210
PURPOSE: SMEAR AND DOSE RATES	RWP NO. N/A
	DATE: 2-18-2002
	TIME: 1600

MAP/DRAWING



LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) = or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
	SEE PAGE 1	

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name)		
Counted by: (Signature)	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

SEE PAGE 1

ML-9620 (2-98)

Survey No. 02-TF-0210

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
74-99	SEE	ATTACHED		MAP PAGE 7
			N/A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

COMMENTS: N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR001
Batch Ended: 2/19/02 8:02

Crosstalk correction performed

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE SUR #02-TF-0210 (99)/BKS

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	1	1.62	2.20		0.00	2.09	
A2	2	1.69	2.26		2.31	2.39	
A3	3	0.00	2.04		0.00	1.41	
A4	4	0.00	2.00		0.00	2.01	
B1	5	1.85	2.05		1.40	2.06	
B2	6	0.00	2.09		1.48	2.10	
B3	7	0.98	1.90		0.00	1.19	
B4	8	0.00	1.88		0.00	1.12	
C1	9	0.00	2.24		0.00	4.12	
C2	10	0.00	2.12		0.00	1.77	
C3	11	0.00	1.99		0.00	2.41	
C4	12	0.00	1.94		1.37	2.32	
D1	13	0.00	2.20		0.00	1.51	
D2	14	0.00	2.17		1.05	1.97	
D3	15	1.05	2.07		1.43	2.34	
A1	16	0.00	2.19		0.00	1.63	
A2	17	1.69	2.25		0.98	1.99	
A3	18	0.00	2.04		0.00	1.41	
A4	19	0.00	1.99		0.00	1.57	
B1	20	0.00	2.04		0.35	1.68	
B2	21	0.00	2.07		0.27	1.72	
B3	22	0.00	1.91		0.00	1.68	
B4	23	0.00	1.90		1.90	1.94	
C1	24	0.00	2.23		0.00	3.89	
C2	25	0.00	2.15		2.28	3.60	
C3	26	0.00	1.98		0.00	1.60	
C4	27	0.00	1.94		1.37	2.32	
D1	28	0.00	2.20		0.00	1.51	
D2	29	0.00	2.15		0.00	1.42	
D3	30	0.00	2.06		0.27	1.94	
A1	31	0.00	2.20		0.00	2.09	
A2	32	0.00	2.24		0.00	1.49	

DJH ~~Page 1 of 2~~ DJH

9 of 13

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR001
Batch Ended: 2/19/02 8:02

Crosstalk correction performed

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE SUR #02-TF-0210 (99)/BKS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A3	33	1.58	2.05		0.00	1.88	
A4	34	0.00	2.04		3.44	3.21	
B1	35	0.00	2.03		0.00	1.19	
B2	36	0.00	2.06		0.00	1.22	
B3	37	0.00	1.94		2.17	2.37	
B4	38	0.00	1.90		1.90	1.94	
C1	39	0.00	2.25		0.00	4.33	
C2	40	0.00	2.13		0.00	2.66	
C3	41	0.00	1.98		0.00	1.60	
C4	42	0.00	1.93		0.00	1.43	
D1	43	2.01	2.21		0.95	2.02	
D2	44	0.00	2.15		0.00	1.42	
D3	45	0.00	2.06		0.00	1.44	
A1	46	0.00	2.20		0.00	2.09	
A2	47	0.00	2.24		0.00	1.49	
A3	48	0.00	2.05		0.00	1.88	
A4	49	1.49	2.01		0.00	2.37	
B1	50	0.00	2.03		0.00	1.19	
B2	51	0.00	2.06		0.00	1.22	
B3	52	0.00	1.90		0.00	1.19	
B4	53	0.00	1.88		0.00	1.12	
C1	54	0.00	2.24		0.00	4.12	
C2	55	0.00	2.14		0.00	3.00	
C3	56	1.53	1.98		0.00	1.60	
C4	57	0.00	1.94		0.08	1.93	
D1	58	0.00	2.23		2.48	2.43	
D2	59	0.00	2.17		1.05	1.97	
D3	60	0.00	2.06		0.27	1.94	
A1	61	0.00	2.19		0.00	1.63	
A2	62	0.00	2.21		0.00	1.49	
A3	63	0.00	2.06		0.95	2.25	
A4	64	0.00	2.03		2.19	2.96	
B1	65	0.00	2.06		2.73	2.38	
B2	66	1.72	2.09		1.29	2.10	

DJH ~~Page 2 of 3~~ DJH

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR001
Batch Ended: 2/19/02 8:02

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE SUR #02-TF-0210 (99)/BKS

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
B3	67	0.00	1.96		4.54	2.91	
B4	68	1.52	1.90		1.76	1.94	
C1	69	0.00	2.26		1.76	4.73	
C2	70	0.00	2.14		0.00	3.00	
C3	71	0.00	1.99		0.00	2.04	
C4	72	0.00	1.94		1.37	2.32	
D1	73	0.00	2.20		0.00	1.51	
D2	74	0.00	2.17		1.05	1.97	
D3	75	0.00	2.08		2.86	2.67	
A1	76	0.00	2.19		0.00	1.63	
A2	77	0.00	2.24		0.00	1.49	
A3	78	1.58	2.04		0.00	1.41	
A4	79	0.00	2.01		0.00	2.37	
B1	80	0.00	2.03		0.00	1.19	
B2	81	0.00	2.15		5.12	2.98	
B3	82	0.98	1.94		2.02	2.37	
B4	83	0.00	1.88		0.00	1.12	
C1	84	1.72	2.21		0.00	3.12	
C2	85	1.84	2.12		0.00	1.77	
C3	86	0.00	1.99		0.00	2.04	
C4	87	3.56	2.71		0.00	1.93	
D1	88	0.00	2.21		1.13	2.02	
D2	89	0.00	2.17		1.05	1.97	
D3	90	0.00	2.06		0.00	1.44	
A1	91	0.00	2.21		0.00	2.47	
A2	92	0.00	2.24		0.00	1.49	
A3	93	0.00	2.06		0.95	2.25	
A4	94	0.00	2.02		0.94	2.68	
B1	95	0.00	2.03		0.00	1.19	
B2	96	0.00	2.09		1.48	2.10	
B3	97	0.98	1.94		2.02	2.37	
B4	98	1.51	1.91		2.89	2.25	
C1	99	0.00	2.29		7.13	5.44	

Carol Y. Robinson

Protocol #: 1 Name:Pw-H3 #401387 19-Feb-2002 09:16
Region A: LL-UL= 0.5-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL=40.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 2.00 QIP = tSIE/AEC ES Terminator = Count
RUBADUE 02-TF-0210 (1-99) CYR
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
-1	10.00	8.56	8.45	5.10	B	5	667.		21.62
0	2.00	830.42	792.48	0.00	L	1	539.	1690.60	4.99
1	2.00	0.00	0.00	0.90	L	0	591.	0.00	0.00
2	2.00	0.00	0.00	1.40		8	530.	0.00	0.00
3	2.00	0.00	0.00	0.00		0	510.	0.00	0.00
4	2.00	0.00	0.00	0.90		14	474.	0.00	0.00
5	2.00	0.00	0.00	0.40		0	553.	0.00	0.00
6	2.00	0.00	0.00	0.00		13	535.	0.00	0.00
7	2.00	0.00	0.00	1.40		12	490.	0.00	0.00
8	2.00	0.00	0.00	0.00		0	536.	0.00	0.00
9	2.00	0.00	0.00	0.40		14	508.	0.00	0.00
10	2.00	0.00	0.00	0.90		0	435.	0.00	0.00
11	2.00	0.00	0.00	1.90		0	510.	0.00	0.00
12	2.00	0.00	0.00	0.90		0	489.	0.00	0.00
13	2.00	0.00	0.00	1.40		0	536.	0.00	0.00
14	2.00	0.00	0.00	0.00		15	557.	0.00	0.00
15	2.00	0.00	0.00	0.00		0	491.	0.00	0.00
16	2.00	0.00	0.00	0.00		10	526.	0.00	0.00
17	2.00	0.00	0.00	0.00		0	571.	0.00	0.00
18	2.00	0.00	0.00	0.00		0	531.	0.00	0.00
19	2.00	0.00	0.00	0.00		0	618.	0.00	0.00
20	2.00	0.00	0.00	1.90		0	463.	0.00	0.00
21	2.00	0.00	0.00	0.00		0	467.	0.00	0.00
22	2.00	0.00	0.00	0.00		0	586.	0.00	0.00
23	2.00	0.00	0.00	1.90		0	472.	0.00	0.00
24	2.00	0.00	0.00	0.00		0	526.	0.00	0.00
25	2.00	0.00	0.00	0.00		0	471.	0.00	0.00
26	2.00	0.00	0.00	0.00		0	472.	0.00	0.00
27	2.00	0.00	0.00	0.00		0	455.	0.00	0.00
28	2.00	0.00	0.00	0.00		0	479.	0.00	0.00
29	2.00	0.00	0.00	0.40		0	438.	0.00	0.00
30	2.00	0.00	0.00	0.00		0	509.	0.00	0.00
31	2.00	0.00	0.00	0.00		0	560.	0.00	0.00
32	2.00	0.00	0.00	0.40		16	361.	0.00	0.00
33	2.00	0.00	0.00	0.00		27	480.	0.00	0.00
34	2.00	0.00	0.00	0.00		0	578.	0.00	0.00
35	2.00	0.00	0.00	0.00		0	526.	0.00	0.00
36	2.00	0.00	0.00	3.90		0	515.	0.00	0.00
37	2.00	0.00	0.00	0.40		0	469.	0.00	0.00
38	2.00	0.00	0.00	0.00		0	450.	0.00	0.00
39	2.00	0.00	0.00	5.40		0	465.	0.00	0.00
40	2.00	0.00	0.00	0.90		0	549.	0.00	0.00
41	2.00	0.00	0.00	1.90		16	404.	0.00	0.00
42	2.00	0.00	0.00	0.40		9	488.	0.00	0.00
43	2.00	0.00	0.00	0.00		0	559.	0.00	0.00

NJA

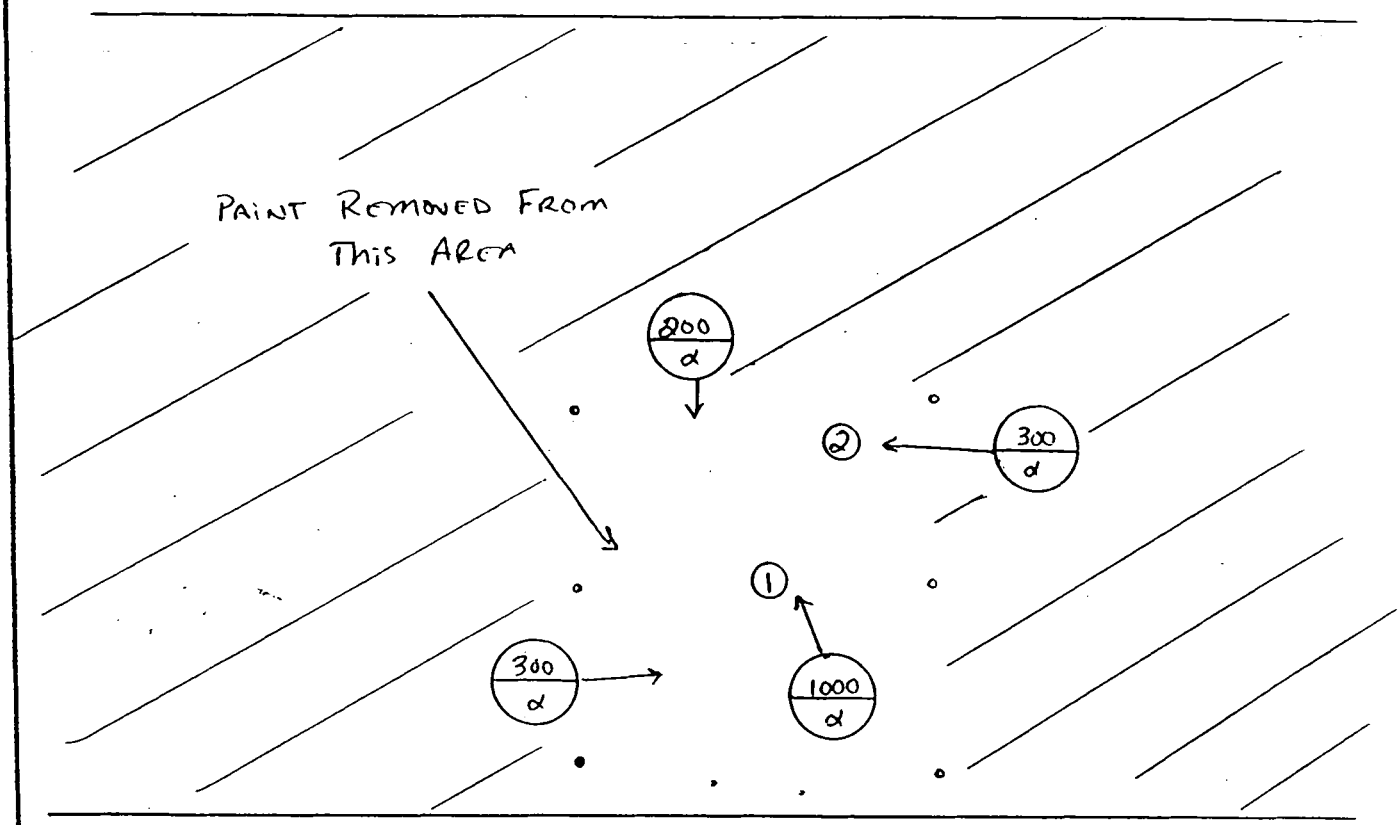
SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
44	2.00	0.00	0.00	0.00		6	581.	0.00	0.00
45	2.00	0.00	0.00	0.00		23	531.	0.00	0.00
46	2.00	0.00	0.00	1.40		0	556.	0.00	0.00
47	2.00	0.00	0.00	0.00		0	534.	0.00	0.00
48	2.00	0.00	0.00	0.00		11	529.	0.00	0.00
49	2.00	0.00	0.00	0.00		0	372.	0.00	0.00
50	2.00	0.00	0.00	1.40		0	395.	0.00	0.00
51	2.00	0.00	0.00	0.40		12	566.	0.00	0.00
52	2.00	0.00	0.00	0.00		0	504.	0.00	0.00
53	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
54	2.00	0.00	0.00	0.00		0	488.	0.00	0.00
55	2.00	0.00	0.00	0.00		0	512.	0.00	0.00
56	2.00	0.00	0.00	0.00		12	522.	0.00	0.00
57	2.00	0.00	0.00	0.00		0	513.	0.00	0.00
58	2.00	0.00	0.00	0.00		0	478.	0.00	0.00
59	2.00	0.00	0.00	0.00		0	574.	0.00	0.00
60	2.00	0.00	0.00	0.00		0	528.	0.00	0.00
61	2.00	0.00	0.00	2.92		0	526.	0.00	0.00
62	2.00	0.00	0.00	0.00		0	436.	0.00	0.00
63	2.00	0.00	0.00	0.40		0	565.	0.00	0.00
64	2.00	0.00	0.00	0.90		0	543.	0.00	0.00
65	2.00	0.00	0.00	0.00		0	488.	0.00	0.00
66	2.00	0.00	0.00	1.40		0	469.	0.00	0.00
67	2.00	0.00	0.00	0.00		0	485.	0.00	0.00
68	2.00	0.00	0.00	0.00		0	491.	0.00	0.00
69	2.00	0.00	0.00	0.56		0	510.	0.00	0.00
70	2.00	0.00	0.00	0.00		0	516.	0.00	0.00
71	2.00	0.00	0.00	0.90		18	493.	0.00	0.00
72	2.00	0.00	0.00	0.00		0	454.	0.00	0.00
73	2.00	0.00	0.00	0.00		12	474.	0.00	0.00
74	2.00	0.00	0.00	0.00		0	478.	0.00	0.00
75	2.00	0.00	0.00	0.00		0	490.	0.00	0.00
76	2.00	0.00	0.00	0.00		0	470.	0.00	0.00
77	2.00	0.00	0.00	1.40		0	533.	0.00	0.00
78	2.00	0.00	0.00	0.90		0	539.	0.00	0.00
79	2.00	0.00	0.00	0.00		47	563.	0.00	0.00
80	2.00	0.00	0.00	0.00		37	467.	0.00	0.00
81	2.00	0.00	0.00	0.00		0	617.	0.00	0.00
82	2.00	0.00	0.00	0.00		0	182.	0.00	0.00
83	2.00	0.00	0.00	0.40		27	547.	0.00	0.00
84	2.00	0.00	0.00	1.90		27	470.	0.00	0.00
85	2.00	0.00	0.00	2.40		0	531.	0.00	0.00
86	2.00	0.00	0.00	0.00		0	565.	0.00	0.00
87	2.00	0.00	0.00	0.00		0	549.	0.00	0.00
88	2.00	0.00	0.00	0.00		14	399.	0.00	0.00
89	2.00	0.00	0.00	0.00		0	479.	0.00	0.00
90	2.00	0.00	0.00	2.40		0	526.	0.00	0.00
91	2.00	0.00	0.00	0.00		0	579.	0.00	0.00
92	2.00	0.00	0.00	0.00		0	524.	0.00	0.00
93	2.00	0.00	0.00	0.90		0	340.	0.00	0.00
94	2.00	0.00	0.00	0.00		0	454.	0.00	0.00
95	2.00	0.00	0.00	0.00		0	374.	0.00	0.00
96	2.00	0.00	0.00	0.00		0	547.	0.00	0.00
97	2.00	0.00	0.00	1.40		27	591.	0.00	0.00
98	2.00	0.00	0.00	0.40		0	528.	0.00	0.00
99	2.00	0.00	0.00	0.00		0	466.	0.00	0.00

Carol Y. Robinson #413
DJH

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) BID 51 Rm 3	SURVEY NO. 02-TF-0211
PURPOSE: INVESTIGATIVE SURVEY AFTER PAINT REMOVAL	RWP NO. 1100
	DATE: 2-19-02
	TIME: 1400

MAP/DRAWING



NORTH WALL

COPY

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	52607	1-15-03

[redacted]

HP#	Date:
6196	2-20-02
[redacted]	
HP#	Date:
ATTACHED	
HP#	Date:
7707	02/20/02

ML-9620 (2-98)

Survey No. 02-TF-0211

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE			WALL
2		ATTACHED		WALL

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS: SMEARS FIELD SCREENED <1000 dpm/100cm2
N/A

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR018
Batch Ended: 2/19/02 15:46

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE SUR #02-TF-0211 (2)/BKS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.21		0.83	2.80	
A2	2	0.00	2.24		0.00	1.49	

MA MA

Carol G. Robinson

19 Feb 2002 16:03 ALPHA/BETA - 1.09 Page #1
Protocol #: 7 PW H3 403728 User : 568

Time: 2.00
Data Mode: DPM Nuclide: SMGL2 Quench Set: SM_GLASS
Background Subtract: 1st Vial

	LL	UL	LCR	2SI	BKG
Region A:	0.5 -	18.6	0	0.0	7.83
Region B:	2.0 -	18.6	0	0.0	7.27
Region C:	40.0 -	2000	0	0.0	5.00

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
RUBADUE 02-TF-0211 (Z1-Z2) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\prot1.dat
Count Data Filename: c:\data\SDATA7.DAT
Spectrum Data Drive & Path: c:\data

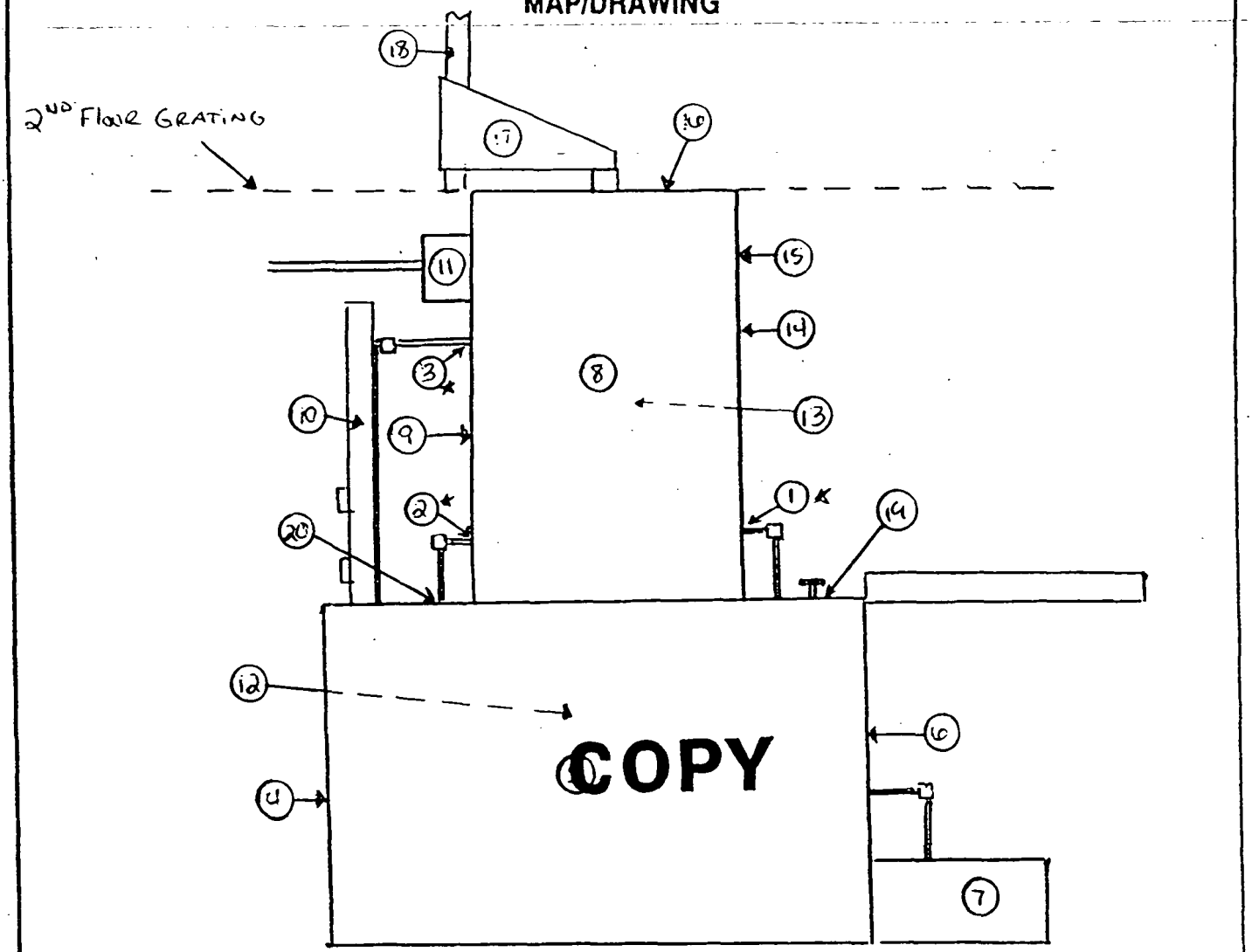
S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.83	4	B	679.21		0.00	5.00
0	2.00	918.52	0		559.37	1912.01	145.61	1.50
1	2.00	0.00	0		636.20	0.00	0.00	1.00
2	2.00	0.00	17		664.45	0.00	0.00	0.00

mak mak
Carol J. Robinson
#413

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51	SURVEY NO. 02-TF-0301
PURPOSE: ISOSTATIC PRESS	RWP NO. N/A
	DATE: 2-22-02
	TIME: 1500

MAP/DRAWING



DIRECT MEASUREMENTS TAKEN ON ALL ACCESSIBLE LOCATIONS: α < 100 dpm/100cm² β < 5000 dpm/100cm²

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

*: COTTEN SWABS

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	52607/5440	1-15-03

[redacted]

HP#	Date:
10196	2-28-02
[redacted]	
HP#	Date:
ATTACHED	
HP#	Date:
7707	03/04/02

ML-9620 (2-98)

Survey No.
02-TF-0301

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-20	SEE	ATTACHED		SEE MAP

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS: SMEARS FIELD SCREENED <1000 dpm/100cm²

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR014
Batch Ended: 2/25/02 10:54

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE 02-TF-0301 (20) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A2	4	0.00	2.24		0.00	1.49	
A3	5	0.00	2.04		0.00	1.41	
A4	6	0.00	2.00		0.00	2.01	
B1	7	0.00	2.03		0.00	1.19	
B2	8	0.00	2.06		0.00	1.22	
B3	9	0.00	1.92		0.99	2.05	
B4	10	1.52	1.88		0.00	1.12	
C1	11	0.00	2.19		0.00	2.47	
C2	12	0.00	2.14		0.00	3.00	
C3	13	0.00	1.99		0.00	2.41	
C4	14	0.00	1.95		2.65	2.65	
D1	15	0.00	2.20		0.00	1.51	
D2	16	0.00	2.15		0.00	1.42	
D3	17	0.00	2.06		0.27	1.94	
A1	18	1.62	2.21		0.70	2.80	
A2	19	0.00	2.24		0.00	1.49	
A3	20	0.00	2.06		0.95	2.25	
A1	1-3 Q-TIPS	1.63	2.19		0.00	1.63	

MGR MGR

Carol Ann Robinson

Time: 2.00
Data Mode: DPM Nuclide: SM6L2 Quench Set: SM_GLASS
Background Subtract: 1st Vial

	LL	UL	LCR	2SI	BKG
Region A:	0.5	18.6	0	0.0	6.31
Region B:	2.0	18.6	0	0.0	5.89
Region C:	40.0	2000	0	0.0	5.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
RUBADUE SUR 802-TF-0301 (T1-T20)/BKS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\prot1.dat
Count Data Filename: c:\data\SDATA6.DAT
Spectrum Data Drive & Path: c:\data

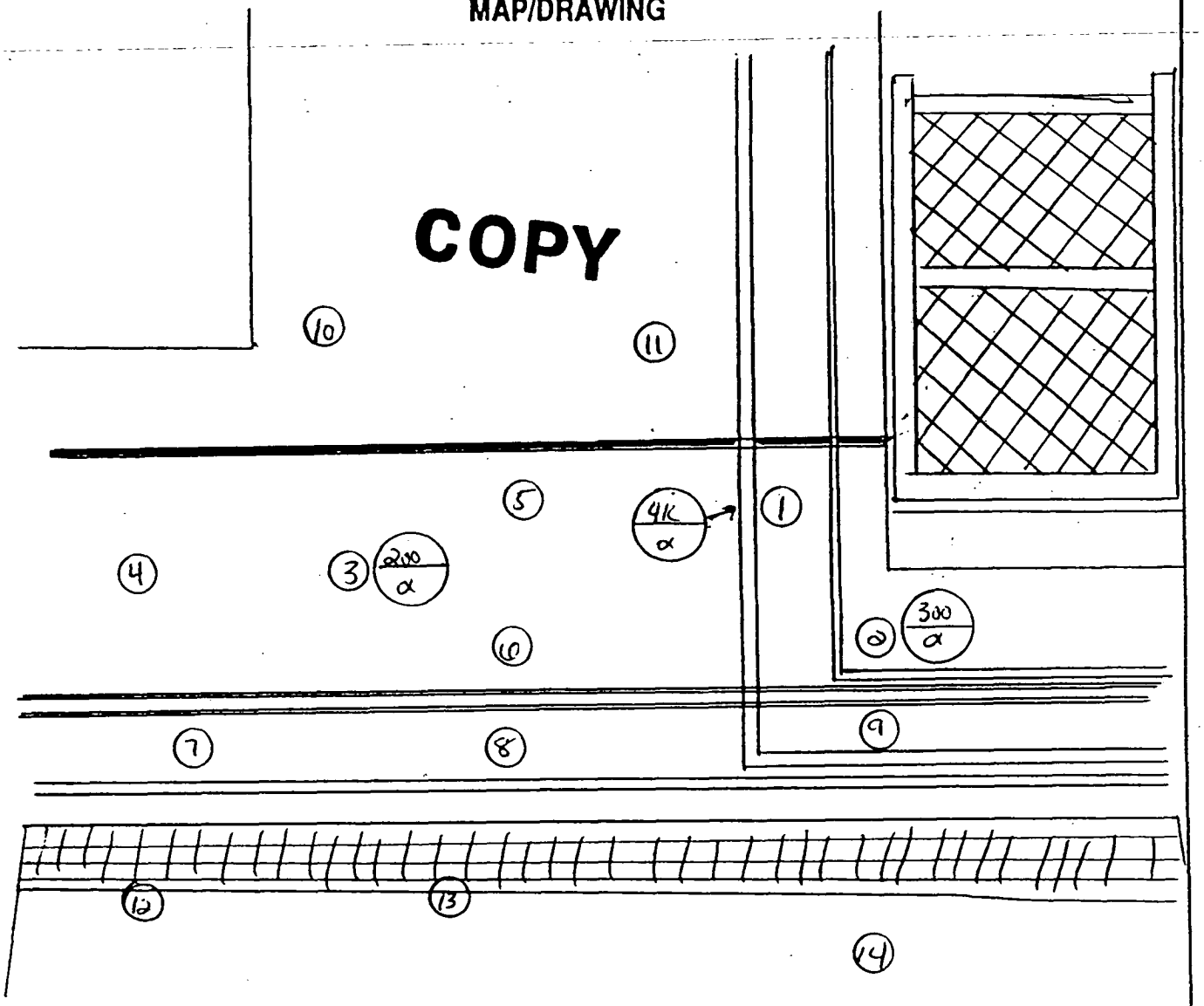
S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	6.31	2	B	672.04		0.00	5.50
0	2.00	609.79	1		492.86	1350.02	112.66	3.00
1	2.00	7.19	0		645.85	13.92	10.55	0.00
2	2.00	0.00	0		623.93	0.00	0.00	0.00
3	2.00	2.19	0		616.49	4.34	8.77	1.50
4	2.00	0.69	0		485.76	1.53	9.08	1.00
5	2.00	0.19	0		501.62	0.41	8.63	1.50
6	2.00	0.00	0		455.40	0.00	0.00	0.00
7	2.00	0.00	0		444.66	0.00	0.00	0.00
8	2.00	0.00	0		336.67	0.00	0.00	0.00
9	2.00	0.00	0		411.16	0.00	0.00	0.00
10	2.00	2.69	0		446.23	6.33	10.68	1.00
11	2.00	0.00	0		366.90	0.00	0.00	1.96
12	2.00	0.00	0		476.23	0.00	0.00	0.00
13	2.00	0.00	0		494.52	0.00	0.00	0.50
14	2.00	0.00	0		435.43	0.00	0.00	0.00
15	2.00	0.00	0		263.57	0.00	0.00	0.00
16	2.00	0.00	0		473.29	0.00	0.00	0.00
17	2.00	0.00	0		459.15	0.00	0.00	0.00
18	2.00	0.00	0		390.38	0.00	0.00	0.00
19	2.00	0.00	0		383.69	0.00	0.00	0.00
20	2.00	0.00	0		466.72	0.00	0.00	0.00

MJR Carol G. Robinson
#413

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 Room 3	SURVEY NO. 02-TF-0411
PURPOSE: Down Post CA	RWP NO. N/A
	DATE: 3-6-02
	TIME: 1400

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5267	1-15-03
SAC-4	5247/5114	10-19-02

[redacted]

HP#	Date:
U196	4-2-02
[redacted]	
HP#	Date:
U196	3-6-02
[redacted]	
HP#	Date:
7707	04-03-02
[redacted]	

ML-9620 (2-98)

Survey No. 02-TF-0411

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<1000	<20	N/A	WALL
2	<1000	<20		
3	<1000	<20		
4	<1000	<20		
5	<1000	<20		
6	<1000	<20		
7	<1000	<20		
8	<1000	<20		
9	<1000	<20		
10	<1000	<20		
11	<1000	<20		WALL
12	<1000	<20		GRATING
13	<1000	<20		
14	<1000	<20		GRATING

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COPY

COMMENTS: N/A

N/A

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If needed, mark N/A.

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 SURVEY UNIT 3	SURVEY NO. 02-TF-0453
PURPOSE: MARSSIM SURVEY	RWP NO. N/A
	DATE: 3-14-02
	TIME: 1830

MAP/DRAWING

DIRECT MEASUREMENTS AND SMEARS TAKEN IN THE [illegible] OF EACH GRID

GRIDS SELECTED USING "MIRCOSOFT EXCEL" RANDOM NUMBER GENERATOR

COPY

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
(#) = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5673/5143	8-21-02

[redacted]

HP#	Date:
0196	4-2-02
[redacted]	
HP#	Date:
ATTACHED	
HP#	Date:
7707	4-5-02
[redacted]	

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				GRID
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED			761
2				414
3				728
4				1091
5				675
6				488
7				525
8				621
9				605
10				598
11				220
12				903
13				844
14				474
15				112
16				130
17				118
18				98
19	SEE ATTACHED			562

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 (4-98)

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-TF-0453 RCT: MJR RCT: DGH

43-20 BKG:	0	EFF:	0.166	PROBE AREA:	181	cm	Surface Eff:		1	Sheet metal SURFACES
~~43-37 BKG:~~	~~0~~	~~EFF:~~	~~0.183~~	~~PROBE AREA:~~	~~584~~	~~cm~~	~~Surface Eff:~~		~~0.5~~	MJR 4-10-02 NOT USED
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5673	6196	5143	2		3/14/02	14:40	31	300	21
SRCCHECK	5673	6196	5143	2		3/14/02	15:13	2464	60	8201
SRCCHECK	5673	6196	5143	2		3/14/02	15:14	2202	60	7328
SRCCHECK	5673	6196	5143	2		3/14/02	15:16	2266	60	7542
SRCCHECK	5673	6196	5143	2		3/14/02	15:17	2434	60	8101
BLD51 761	5673	6196	5143	2	1	3/14/02	17:16	6	60	20
BLD51 414	5673	6196	5143	2	2	3/14/02	17:17	15	60	50
BLD51 728	5673	6196	5143	2	3	3/14/02	17:21	6	60	20
BLD51 691	5673	6196	5143	2	4	3/14/02	17:24	3	60	10
BLD51 675	5673	6196	5143	2	5	3/14/02	17:26	6	60	20
BLD51 488	5673	6196	5143	2	6	3/14/02	17:29	9	60	30
BLD51 528	5673	6196	5143	2	7	3/14/02	17:32	9	60	30
BLD51 621	5673	6196	5143	2	8	3/14/02	17:35	4	60	13
BLD51 605	5673	6196	5143	2	9	3/14/02	17:36	7	60	23
BLD51 598	5673	6196	5143	2	10	3/14/02	17:42	8	60	27
BLD51 220	5673	6196	5143	2	11	3/14/02	17:44	9	60	30
BLD51 903	5673	6196	5143	2	12	3/14/02	17:51	4	60	13
BLD51 844	5673	6196	5143	2	13	3/14/02	17:56	4	60	13
BLD51 474	5673	6196	5143	2	14	3/14/02	17:58	2	60	7
BLD51 112	5673	6196	5143	2	15	3/14/02	18:00	4	60	13
BLD51 136	5673	6196	5143	2	16	3/14/02	18:10	3	60	10
BLD51 118	5673	6196	5143	2	17	3/14/02	18:12	1	60	3
BLD51 198	5673	6196	5143	2	18	3/14/02	18:14	0	60	0
BLD51 562	5673	6196	5143	2	19	3/14/02	18:16	7	60	23

Alpha/Beta Analysis

Batch ID: 02-TF-0453 HARVEY(19) BSB

Batch File: Smear Unit 1 - 200203180911
Group: B
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 3/18/2002
Count Time (min): 1.5
Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	37	1.62	4.03	0.51	3.40
2	29	1.62	4.03	0.51	3.40
3	60	1.62	4.03	0.51	3.40
4	18	3.60	5.66	3.91	5.21
5	14	3.61	5.66	2.77	4.68
6	93	5.59	6.91	0.49	3.41
7	100	0.00	0.66	1.65	4.09
8	5	0.00	0.67	10.75	7.63
9	150	1.62	4.03	2.78	4.68
10	72	1.62	4.03	2.78	4.68
11	4	0.00	0.66	1.65	4.09
12	89	0.00	0.66	0.51	3.40
13	110	3.61	5.66	0.50	3.40
14	4	1.62	4.03	3.92	5.21
15	99	0.00	0.66	1.65	4.09
16	127	0.00	0.66	2.79	4.68
17	85	1.62	4.03	1.64	4.09
18	79	0.00	0.66	0.00	2.53
19	31	1.62	4.03	0.00	2.53

MPa MPa

ntLab Results - 02-TF-04.pdf

18-Mar-2002 11:42 ALPHA/BETA - 1.09 Page #1
Protocol #: 2 PW H3 #403727 User : 5268

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2SX	BKG
Region A:	0.5 -	18.6	0	0.0	6.77
Region B:	2.0 -	18.6	0	0.0	6.69
Region C:	40.0 -	2000	0	0.0	11.92

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0453 HARVEY(19) 888
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT2.DAT
Count Data Filename: C:\DATA\SDATA2.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.77	6.69	11.92	556.21	8	B		0.00
0	2.00	396.11	384.70	1.36	509.38	1		823.83	24.67
1	2.00	4.47	4.55	0.00	652.54	0		8.24	9.30
2	2.00	0.73	0.19	0.00	512.83	0		1.51	8.76
3	2.00	0.00	0.00	0.00	535.97	0		0.00	0.00
4	2.00	2.73	2.81	0.00	637.83	0		5.10	8.73
5	2.00	10.80	10.06	0.00	523.64	0		22.17	12.76
6	2.00	2.58	2.49	0.00	540.30	0		5.22	9.49
7	2.00	2.94	2.52	0.00	585.51	0		5.73	9.20
8	2.00	2.23	1.86	4.58	572.81	0		4.39	9.00
9	2.00	0.00	0.00	0.00	581.77	0		0.00	0.00
10	2.00	0.00	0.00	0.00	550.80	0		0.00	0.00
11	2.00	0.00	0.00	0.00	560.97	0		0.00	0.00
12	2.00	0.84	0.57	0.00	641.77	6		1.56	7.91
13	2.00	3.46	3.12	0.00	681.85	0		6.25	8.73
14	2.00	0.00	0.00	1.58	526.87	0		0.00	0.00
15	2.00	0.00	0.00	0.00	575.58	0		0.00	0.00
16	2.00	1.03	1.10	0.00	408.45	0		2.16	8.06
17	2.00	0.00	0.00	0.58	492.26	0		0.00	0.00
18	2.00	0.00	0.00	3.08	464.14	0		0.00	0.00
19	2.00	0.73	0.12	0.00	549.21	0		1.46	8.49

SYSTEM NORMALIZED

C14 IPA DATA PROCESSED - 18-Mar-2002 12:51
C14 Eff (0-156 keV) = 96.33 %
H3 IPA DATA PROCESSED - 18-Mar-2002 12:53
H3 Eff (0-18.6 keV) = 62.32 %

North

Building 51 Upper FLOOR

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
3	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
4	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
5	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
6	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
7	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
8	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
9	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144
10	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
11	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176
12	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
13	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208

- DIRECT MEASUREMENT LOCATION

Facing North

Building 51 Upper NORTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
2	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
3	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256
4	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272
5	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288
6	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304
7	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320
8																
9																
10																
11																
12																
13																

- DIRECT MEASUREMENT LOCATION

7622

Facing South

Building 51 Upper SOUTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	321	322	323	324	325	326	327	328	329	330						
2	331	332	333	334	335	336	337	338	339	340						
3	341	342	343	344	345	346	347	348	349	350						
4	351	352	353	354	355	356	357	358	359	360						
5	361	362	363	364	365	366	367	368	369	370						
6	371	372	373	374	375	376	377	378	379	380						
7	381	382	383	384	385	386	387	388	389	390						
8																
9																
10																
11																
12																
13																

22 9.8

← North

Building 51 Upper EAST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	391	392	393	394	395	396	397	398	399	400	401	402	403			
2	404	405	406	407	408	409	410	411	412	413	414	415	416			
3	417	418	419	420	421	422	423	424	425	426	427	428	429			
4	430	431	432	433	434	435	436	437	438	439	440	441	442			
5	443	444	445	446	447	448	449	450	451	452	453	454	455			
6	456	457	458	459	460	461	462	463	464	465	466	467	468			
7	469	470	471	472	473	474	475	476	477	478	479	480	481			
8																
9																
10																
11																
12																
13																

- DIRECT MEASUREMENT LOCATION

North

Building 51 Upper WEST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	482	483	484	485	486	487	488	489	490	491	492	493	494			
2	495	496	497	498	499	500	501	502	503	504	505	506	507			
3	508	509	510	511	512	513	514	515	516	517	518	519	520			
4	521	522	523	524	525	526	527	528	529	530	531	532	533			
5	534	535	536	537	538	539	540	541	542	543	544	545	546			
6	547	548	549	550	551	552	553	554	555	556	557	558	559			
7	560	561	562	563	564	565	566	567	568	569	570	571	572			
8																
9																
10																
11																
12																
13																

- DIRCET MEASUREMENT LOCATION

North

Building 51 Upper CEILING/ROOF

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588
2	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604
3	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620
4	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636
5	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652
6	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668
7	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684
8	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700
9	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716
10	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732
11	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748
12	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764
13	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780

→ DIRECT MEASUREMENT LOCATION

North

Building 51-101 FLOOR

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	781	782	783													
2	784	785	786													
3	787	788	789													
4	790	791	792													
5	793	794	795													
6																
7																
8																
9																
10																
11																
12																
13																

12 of 22

Facing North

Building 51-101 NORTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	796	797	798													
2	799	800	801													
3	802	803	804													
4	805	806	807													
5	808	809	810													
6																
7																
8																
9																
10																
11																
12																
13																

Facing South

Building 51-101 SOUTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	811	812	813													
2	814	815	816													
3	817	818	819													
4	820	821	822													
5																
6																
7																
8																
9																
10																
11																
12																
13																

← North

Building 51-101 EAST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	823	824	825	826	827											
2	828	829	830	831	832											
3	833	834	835	836	837											
4	838	839	840	841	842											
5																
6																
7																
8																
9																
10																
11																
12																
13																

North →

Building 51-101 WEST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	843	844	845	846	847											
2	848	849	850	851	852											
3	853	854	855	856	857											
4	858	859	860	861	862											
5																
6																
7																
8																
9																
10																
11																
12																
13																

▨ - DIRECT MEASUREMENT LOCATION

16 of 22

North

Building 51-109 FLOOR Map

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	878	879	880													
2	881	882	883													
3	884	885	886													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

1722

Facing North

Building 51-109 NORTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	887	888	889													
2	890	891	892													
3	893	894	895													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

Facing South

Building 51-109 SOUTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	896	897	898													
2	899	900	901													
3	902	903	904													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

– DIRECT MEASUREMENT LOCATION

← North

Building 51-109 EAST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	905	906	907													
2	908	909	910													
3	911	912	913													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

20 of 22

North →

Building 51-109 WEST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	914	915	916													
2	917	918	919													
3	920	921	922													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

North

Building 51-109 CEILING Map

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	923	924	925													
2	926	927	928													
3	929	930	931													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) S1 Survey Unit 1 & 2	SURVEY NO. 02-TF-0454
PURPOSE: MARSSIM Survey	RWP NO. N/A
	DATE: 3-16-02
	TIME: 1330

MAP/DRAWING

DESCRIPTION:	PAGE
SMEAR LOCATIONS	1
SMEAR RESULTS	7-10
DIRECT MEASUREMENT LOCATIONS (MAPS)	5, 6
DIRECT MEASUREMENTS	3, 4

COPY

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm^2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5073/5143	8-21-02

Compl	[redacted]	HP# 0196	Date: 4-2-02
Compl	[redacted]		
Counte	[redacted]	HP#	Date:
Counte	[redacted]	ATTACHED	
Review	[redacted]	HP# 7707	Date: 04-10-02
Review	[redacted]		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	ATTACHED		SU1 J11
2				J7
3				J3
4				J16
5				F30
6				F5
7				F18
8				F9
9				F26
10				F1
11				F22
12				F13
13				A3
14				A12
15				A7
16				A16
17				A20
18				N1
19				N5
20				SU1 N9
21				SU2 R6
22				N5
23				R10
24				R3
25				C6
26				G8
27				C10
28				G12
29				C14
30				G15
31				J17
32				J14
33				J10
34				N12
35	SEE	ATTACHED		SU2 N16

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	SEE	ATTACHED		SU2 J6

COMMENTS: SMEAR FIELD SCREENED <1000 dpm /100cm²

N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 (4-98)

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-TF-0454 RCT: DJA RCT: MJR

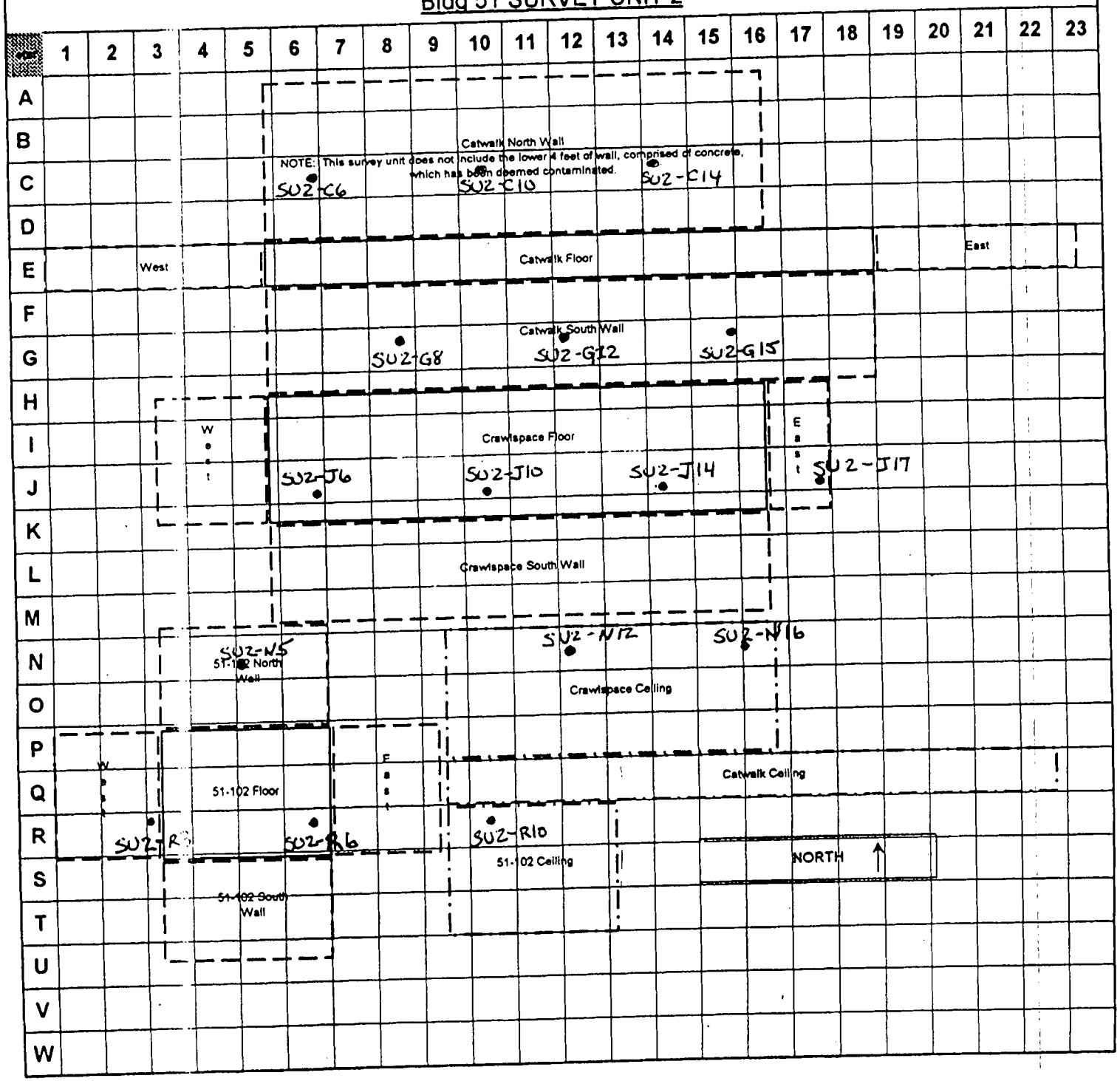
43-20 BKG:	0	EFF:	0.166	PROBE AREA:	181	cm	Surface Eff:		1	Sheet metal surfaces
~~43-37 BKG:~~	~~0~~	~~EFF:~~	~~0.183~~	~~PROBE AREA:~~	~~364~~	~~cm~~	~~Surface Eff:~~		~~0.5~~	~~DJA 4-10-02~~ Not used
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5673	6196	5143	2		3/16/02	8:19	32	300	21
SRCCHECK	5673	6196	5143	2		3/16/02	8:22	2211	60	7359
SRCCHECK	5673	6196	5143	2		3/16/02	8:25	2354	60	7835
SRCCHECK	5673	6196	5143	2		3/16/02	8:26	2237	60	7445
SRCCHECK	5673	6196	5143	2		3/16/02	8:28	2140	60	7122
51SU1 J 11	5673	6196	5143	2	1	3/16/02	11:53	3	60	10
51SU1 J 7	5673	6196	5143	2	2	3/16/02	11:54	8	60	27
51SU1 J 3	5673	6196	5143	2	3	3/16/02	11:55	4	60	13
51SU1 J 16	5673	6196	5143	2	4	3/16/02	11:57	2	60	7
51SU1 F 30	5673	6196	5143	2	5	3/16/02	11:59	2	60	7
51SU1 F 5	5673	6196	5143	2	6	3/16/02	12:01	10	60	33
51SU1 F 18	5673	6196	5143	2	7	3/16/02	12:03	4	60	13
51SU1 F 9	5673	6196	5143	2	8	3/16/02	12:04	7	60	23
51SU1 F 26	5673	6196	5143	2	9	3/16/02	12:06	4	60	13
51SU1 F 1	5673	6196	5143	2	10	3/16/02	12:07	7	60	23
51SU1 F 22	5673	6196	5143	2	11	3/16/02	12:09	4	60	13
51SU1 F 13	5673	6196	5143	2	12	3/16/02	12:10	4	60	13
51SU1 A 3	5673	6196	5143	2	13	3/16/02	12:12	8	60	27
51SU1 A 12	5673	6196	5143	2	14	3/16/02	12:14	6	60	20
51SU1 A 7	5673	6196	5143	2	15	3/16/02	12:16	5	60	17
51SU1 A 16	5673	6196	5143	2	16	3/16/02	12:17	4	60	13
51SU1 A 20	5673	6196	5143	2	17	3/16/02	12:19	4	60	13
51SU1 N 1	5673	6196	5143	2	18	3/16/02	12:21	2	60	7
51SU1 N 5	5673	6196	5143	2	19	3/16/02	12:23	4	60	13
51SU1 N 9	5673	6196	5143	2	20	3/16/02	12:25	7	60	23
51SU2 R 6	5673	6196	5143	2	21	3/16/02	12:41	1	60	3
51SU2 N 5	5673	6196	5143	2	22	3/16/02	12:43	2	60	7
51SU2 R 10	5673	6196	5143	2	23	3/16/02	12:45	6	60	20
51SU2 R 3	5673	6196	5143	2	24	3/16/02	12:46	3	60	10
51SU2 C 6	5673	6196	5143	2	25	3/16/02	12:48	7	60	23
51SU2 G 8	5673	6196	5143	2	26	3/16/02	12:50	1	60	3
51SU2 C 10	5673	6196	5143	2	27	3/16/02	12:52	1	60	3
51SU2 G 12	5673	6196	5143	2	28	3/16/02	12:54	3	60	10
51SU2 C 14	5673	6196	5143	2	29	3/16/02	12:55	1	60	3
51SU2 G 15	5673	6196	5143	2	30	3/16/02	12:57	5	60	17
51SU2 J 17	5673	6196	5143	2	31	3/16/02	12:59	3	60	10
51SU2 J 14	5673	6196	5143	2	32	3/16/02	13:01	5	60	17

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-TF-0454 RCT: DJH RCT: MJK

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
51SU2 J 10	5673	6196	5143	2	33	3/16/02	13:03	4	60	13
51SU2 N 12	5673	6196	5143	2	34	3/16/02	13:04	2	60	7
51SU2 N 16	5673	6196	5143	2	35	3/16/02	13:06	5	60	17
51SU2 J 6	5673	6196	5143	2	36	3/16/02	13:08	5	60	17

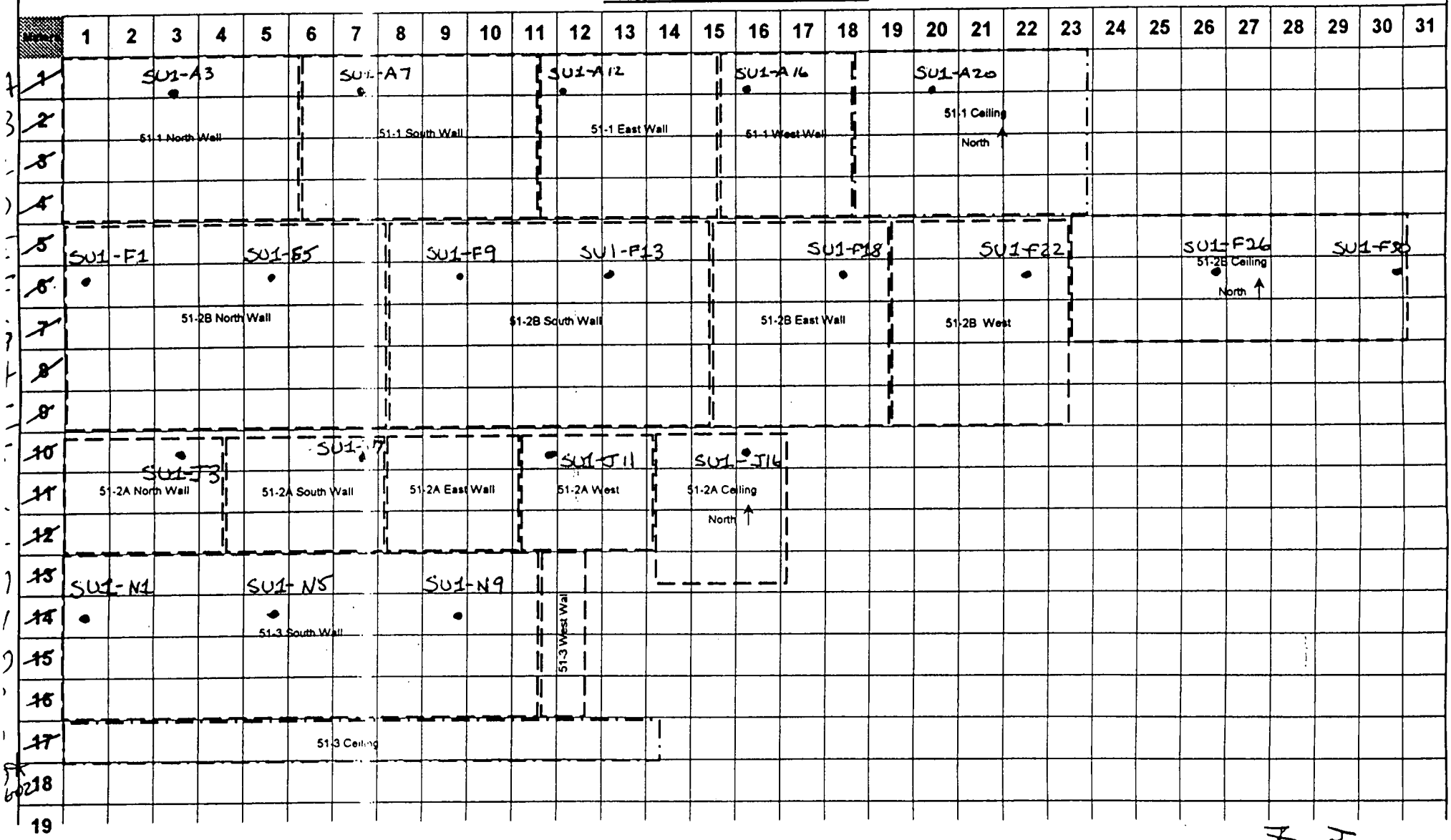
Bldg 51 SURVEY UNIT 2



Page 5 of 10

02-FF-0454 Page

Bldg 51 - SURVEY UNIT 1



Page 6 of

2-14-0454

Alpha/Beta Analysis

Batch ID: 02-TF-0454 HARVEY(36) BSB

Batch File: Smear Unit 3 - 200203180825
Group: D
Device: Unit 3
Geometry: Swipe/Smear
Serial Number: 59123

Acquisition Date: 3/18/2002
Count Time (min): 1.5
Recalibration Date: 5/24/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	24	0.00	0.90	0.00	4.85
2	17	0.00	0.90	0.00	4.10
3	5	0.00	0.90	0.00	4.85
4	33	0.00	0.90	0.00	4.85
5	100	0.00	0.90	0.00	4.85
6	111	0.00	0.90	0.79	5.50
7	95	0.00	0.90	0.79	5.50
8	89	0.00	0.90	0.00	4.85
9	9	1.19	3.89	0.00	3.18
10	62	0.00	0.90	0.00	4.85
11	143	0.00	0.90	0.00	4.10
12	83	1.19	3.89	0.00	4.85
13	93	0.00	0.90	0.00	4.85
14	21	1.19	3.89	0.00	3.18
15	8	3.08	5.43	0.00	4.10
16	39	0.00	0.90	0.00	4.85
17	14	4.98	6.63	0.00	4.86
18	58	1.19	3.89	0.00	4.85
19	83	0.00	0.90	0.79	5.50
20	114	1.19	3.89	0.78	5.50
		MDC		MDC	

B Smith Brown

02-TF-0454 HARVEY(36) BSB

019

ntLab Results - 02-TF-04.pdf

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
21	148	0.00	0.90	0.79	5.50
22	68	0.00	0.90	0.00	3.18
23	128	0.00	0.90	0.00	4.10
24	56	0.00	0.90	0.00	3.18
25	131	0.00	0.90	3.38	6.60
26	108	0.00	0.90	0.79	5.50
27	146	0.00	0.90	0.79	5.50
28	89	3.08	5.43	2.06	6.08
29	133	0.00	0.90	0.00	4.10
30	5	0.00	0.90	0.00	4.85
31	8	1.19	3.89	0.00	4.85
32	124	0.00	0.90	0.00	4.10
33	26	1.19	3.89	0.78	5.50
34	55	0.00	0.90	0.00	4.85
35	133	4.98	6.63	2.05	6.08
36	139	1.19	3.89	0.78	5.50

MR MR

18 Mar 2002 09:38 ALPHA/BETA - 1.09 Page #1
Protocol #: 1 PW H3 #403727 User : 5288

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL - UL	LCR	2SZ	BKG
Region A:	0.5 - 18.6	0	0.0	10.60
Region B:	2.0 - 18.6	0	0.0	10.09
Region C:	40.0 - 2000	0	0.0	10.94

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0454 HARVEY(36) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA1.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	10.60	10.09	10.94	606.46	5	B		0.00
0	2.00	753.03	732.07	0.06	535.71	0		1531.50	137.58
1	2.00	0.00	0.00	2.06	575.54	0		0.00	0.00
2	2.00	0.49	0.25	1.56	584.36	0		0.95	10.04
3	2.00	0.00	0.00	2.56	541.58	0		0.00	0.00
4	2.00	0.00	0.00	0.00	620.11	0		0.00	0.00
5	2.00	0.63	0.26	1.56	651.68	0		1.16	9.36
6	2.00	0.00	0.00	2.06	637.09	0		0.00	0.00
7	2.00	0.00	0.00	0.00	631.99	0		0.00	0.00
8	2.00	0.00	0.00	5.06	653.35	0		0.00	0.00
9	2.00	0.00	0.00	0.00	641.79	0		0.00	0.00
10	2.00	0.00	0.00	4.06	582.64	0		0.00	0.00
11	2.00	0.00	0.00	0.00	576.55	0		0.00	0.00
12	2.00	0.31	0.37	7.06	582.68	0		0.61	9.91
13	2.00	0.00	0.00	3.56	627.45	0		0.00	0.00
14	2.00	0.00	0.00	0.00	581.86	0		0.00	0.00
15	2.00	0.00	0.00	2.87	619.33	0		0.00	0.00
16	2.00	0.00	0.00	0.00	613.39	0		0.00	0.00
17	2.00	0.00	0.00	5.56	620.52	0		0.00	0.00
18	2.00	0.00	0.00	0.00	546.75	0		0.00	0.00
19	2.00	0.00	0.00	1.06	604.46	0		0.00	0.00
20	2.00	1.46	1.17	0.00	585.05	0		2.73	10.38
21	2.00	0.00	0.00	0.56	541.89	0		0.00	0.00
22	2.00	0.00	0.00	3.06	599.46	0		0.00	0.00
23	2.00	0.00	0.00	0.00	549.09	0		0.00	0.00
24	2.00	0.00	0.00	0.00	540.08	0		0.00	0.00
25	2.00	0.00	0.00	0.00	533.51	0		0.00	0.00
26	2.00	0.00	0.00	0.00	570.42	0		0.00	0.00
27	2.00	0.00	0.00	0.00	652.32	0		0.00	0.00
28	2.00	0.00	0.00	0.00	443.94	0		0.00	0.00
29	2.00	0.00	0.00	0.00	542.17	0		0.00	0.00
30	2.00	0.00	0.00	0.00	663.66	0		0.00	0.00
31	2.00	0.00	0.00	0.00	562.39	0		0.00	0.00
32	2.00	0.00	0.00	0.00	546.81	0		0.00	0.00
33	2.00	0.00	0.00	0.00	435.75	0		0.00	0.00
34	2.00	0.00	0.00	0.00	483.57	0		0.00	0.00
35	2.00	0.00	0.00	0.00	515.51	0		0.00	0.00

MR

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.00	573.15	0		0.00	0.00

MGR

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 51 BUILDING	SURVEY NO 02-TF-0458
PURPOSE: MARSSIM JUDGEMENTALS	RWP NO. N/A
	DATE: 3-19-2002
	TIME 1600

MAP / DRAWING

JUDGEMENTAL SURVEY THOUGHOUT 51 BUILDING
COVERING SURVEY UNITS 1,2 AND 3

RESULTS OF LUDLUM 2350 ON PAGES 3

SMEARS REULTS ON PAGES 4 AND 5

MAPS WITH LOCTIONS OF LUDLUM 2350 AND SMEARS ON PAGES 6 THRU 24

COPY

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
K = factor of 1000
— · — · — = radiological boundary
△# = mrem/hr neutron
(#) = swipe number
[#] = air sample number
(#/α) or /β = direct contamination
[redacted]

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date	[redacted]	
			HP#6178	Date:4-8-2002
			[redacted]	
2350	5673/5143	8-21-2002	HP# N/A	Date: N/A
	N/A		HP# 7707	Date: 04-10-02

RADIOLOGICAL SURVEY DATA SHEET

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See	Attach	ed Print	SU3J-558
2				SU3J-463
3				SU3J-467
4				SU3J-384
5				SU3J-387
6				SU3J-548
7				SU2J-F13
8				SU2J-F17
9				SU1J-L1
10				SU1J-L3
11				SU1J-H1
12				SU1J-I3
13				SU1J-I4
14				SU1J-B7
15				SU1J-B10
16				SU1J-P3
17				SU1J-P6
18				SU3J-921
19				SU3J-912
20	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A
24	N/A	N/A	N/A	N/A
25	N/A	N/A	N/A	N/A
26	N/A	N/A	N/A	N/A
27	N/A	N/A	N/A	N/A
28	N/A	N/A	N/A	N/A
29	N/A	N/A	N/A	N/A
30	N/A	N/A	N/A	N/A

Removable Contamination				
Swipes (dpm/100cm²)				N/A
Sample #	β/γ	Alpha	Tritium	Comments
31	N/A	N/A	N/A	N/A
32	N/A	N/A	N/A	N/A
33	N/A	N/A	N/A	N/A
34	N/A	N/A	N/A	N/A
35	N/A	N/A	N/A	N/A
36	N/A	N/A	N/A	N/A
37	N/A	N/A	N/A	N/A
38	N/A	N/A	N/A	N/A
39	N/A	N/A	N/A	N/A
40	N/A	N/A	N/A	N/A
41	N/A	N/A	N/A	N/A
42	N/A	N/A	N/A	N/A
43	N/A	N/A	N/A	N/A
44	N/A	N/A	N/A	N/A
45	N/A	N/A	N/A	N/A
46	N/A	N/A	N/A	N/A
47	N/A	N/A	N/A	N/A
48	N/A	N/A	N/A	N/A
49	N/A	N/A	N/A	N/A
50	N/A	N/A	N/A	N/A
51	N/A	N/A	N/A	N/A
52	N/A	N/A	N/A	N/A
53	N/A	N/A	N/A	N/A
54	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A
56	N/A	N/A	N/A	N/A
57	N/A	N/A	N/A	N/A
58	N/A	N/A	N/A	N/A
59	N/A	N/A	N/A	N/A
60	N/A	N/A	N/A	N/A

COMMENTS: None

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If needed, mark N/A.

ML-9620A (4-96) Computer Generated

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-TF-0458 RCT: [illegible] RCT:

43-20 BKG:	0	EFF:	0.166	PROBE AREA:	181	cm	Surface Eff:		1	SHEETMETAL SUFACES
~~43-37 BKG:~~	~~0~~	~~EFF:~~	~~0.183~~	~~PROBE AREA:~~	~~584~~	~~cm~~	~~Surface Eff:~~		~~0.5~~	NOT USED [illegible] 4-10-02
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRC BKG	5673	6178	5143	2		3/19/02	9:23	22	300	15
SRCCHECK	5673	6178	5143	2		3/19/02	9:52	2405	60	8004
SRCCHECK	5673	6178	5143	2		3/19/02	9:53	2235	60	7439
SRCCHECK	5673	6178	5143	2		3/19/02	9:55	2006	60	6676
SRCCHECK	5673	6178	5143	2		3/19/02	9:56	2221	60	7392
SU3J 558	5673	6178	5143	2	1	3/19/02	14:00	13	115	23
SU3J 463	5673	6178	5143	2	2	3/19/02	14:03	22	115	38
SU3J 467	5673	6178	5143	2	3	3/19/02	14:06	8	115	14
SU3J 384	5673	6178	5143	2	4	3/19/02	14:09	10	115	17
SU3J 387	5673	6178	5143	2	5	3/19/02	14:12	9	115	16
SU3J 548	5673	6178	5143	2	6	3/19/02	14:14	15	115	26
SU2J F13	5673	6178	5143	2	7	3/19/02	14:24	5	115	9
SU2J F17	5673	6178	5143	2	8	3/19/02	14:26	8	115	14
SU1J L1	5673	6178	5143	2	9	3/19/02	14:30	13	115	23
SU1J L3	5673	6178	5143	2	10	3/19/02	14:33	6	115	10
SU1J H1	5673	6178	5143	2	11	3/19/02	14:35	7	115	12
SU1J I3	5673	6178	5143	2	12	3/19/02	14:38	9	115	16
SU1J I4	5673	6178	5143	2	13	3/19/02	14:45	11	115	19
SU1J B7	5673	6178	5143	2	14	3/19/02	14:47	10	115	17
SU1J B10	5673	6178	5143	2	15	3/19/02	14:50	13	115	23
SU1J P3	5673	6178	5143	2	16	3/19/02	15:45	5	115	9
SU1J P6	5673	6178	5143	2	17	3/19/02	15:48	4	115	7
SU3J 921	5673	6178	5143	2	18	3/19/02	15:57	10	115	17
SU3J 912	5673	6178	5143	2	19	3/19/02	16:00	11	115	19

Alpha/Beta Analysis

Batch ID: 02-TF-0458 HARVEY(19) BSB

Batch File: Smear Unit 1 - 00203200936
Group: A
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 3/20/2002
Count Time (min): 1.5
Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	55	0.00	0.66	2.79	4.68
2	48	3.61	5.66	1.64	4.09
3	8	1.62	4.03	1.64	4.09
4	41	3.61	5.66	2.77	4.68
5	54	3.61	5.66	0.50	3.40
6	94	1.62	4.03	0.51	3.40
7	29	5.59	6.91	6.18	6.12
8	36	7.58	7.98	5.04	5.69
9	11	0.00	0.66	7.34	6.53
10	24	1.62	4.03	0.00	2.53
11	18	0.00	0.66	0.51	3.40
12	18	0.00	0.66	0.51	3.40
13	134	0.00	0.66	0.00	2.53
14	42	3.61	5.66	0.50	3.40
15	17	0.00	0.66	3.93	5.21
16	89	3.61	5.66	2.77	4.68
17	100	7.58	7.98	1.62	4.10
18	12	0.00	0.66	5.06	5.68
19	127	3.60	5.66	5.05	5.68

29 A 29 B

YB Smith-Brown

4-26-24

20 Mar 2002 10:06 ALPHA/BETA - 1.08 Page #1
Protocol #: 3 Pw H3 405828 User : 5268

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	ERG
Region A:	0.5 -	18.6	0	0.0	8.55
Region B:	2.0 -	18.6	0	0.0	7.98
Region C:	40.2 -	2000	0	0.0	12.40

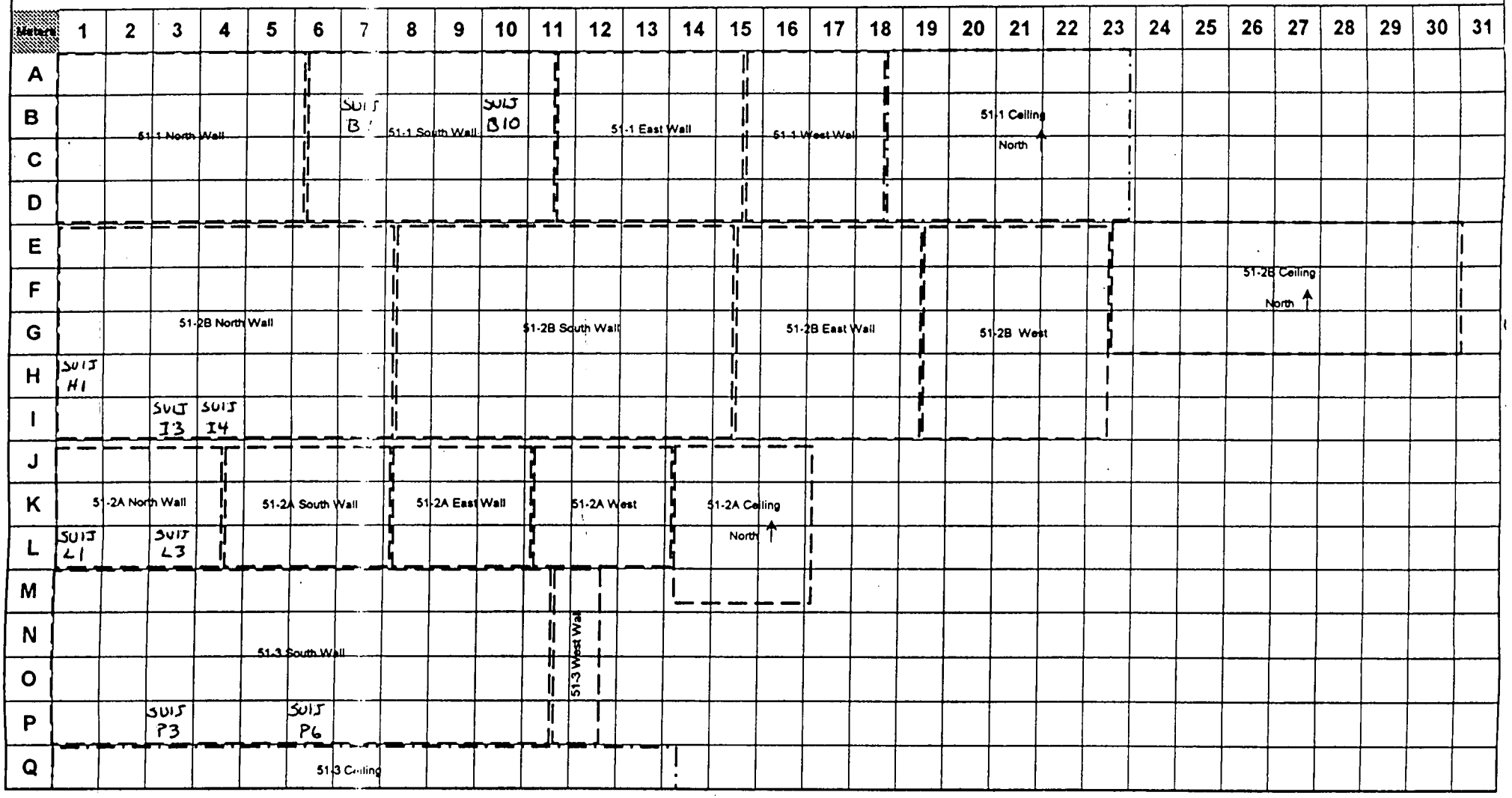
Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0458 HARVEY(19) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	8.55	7.98	0	B	526.70		0.00	12.40
0	2.00	885.91	833.83	0		520.61	1862.77	167.23	2.60
1	2.00	8.64	8.52	0		500.64	18.50	13.24	7.60
2	2.00	5.45	4.79	0		576.12	10.90	11.24	13.60
3	2.00	1.95	2.52	0		403.71	4.77	12.07	4.60
4	2.00	0.00	0.00	0		448.61	0.00	0.00	3.60
5	2.00	0.00	0.00	0		458.06	0.00	0.00	0.00
6	2.00	0.00	0.00	0		552.15	0.00	0.00	0.00
7	2.00	5.95	5.60	0		565.79	12.01	11.53	0.00
8	2.00	0.00	0.00	0		449.97	0.00	0.00	0.00
9	2.00	3.95	3.85	0		543.35	8.14	11.00	0.00
10	2.00	0.00	0.00	0		544.01	0.00	0.00	1.60
11	2.00	2.45	2.53	0		444.69	5.65	11.63	0.00
12	2.00	0.00	0.00	0		573.07	0.00	0.00	4.10
13	2.00	0.00	0.00	0		539.55	0.00	0.00	1.10
14	2.00	0.00	0.00	0		343.27	0.00	0.00	0.60
15	2.00	0.00	0.00	0		481.94	0.00	0.00	0.00
16	2.00	0.45	0.88	0		523.96	0.95	9.70	0.00
17	2.00	0.00	0.52	0		473.45	0.00	0.00	5.10
18	2.00	5.32	5.23	0		477.30	11.75	12.35	1.60
19	2.00	0.00	0.00	0		515.09	0.00	0.00	0.00

DJH

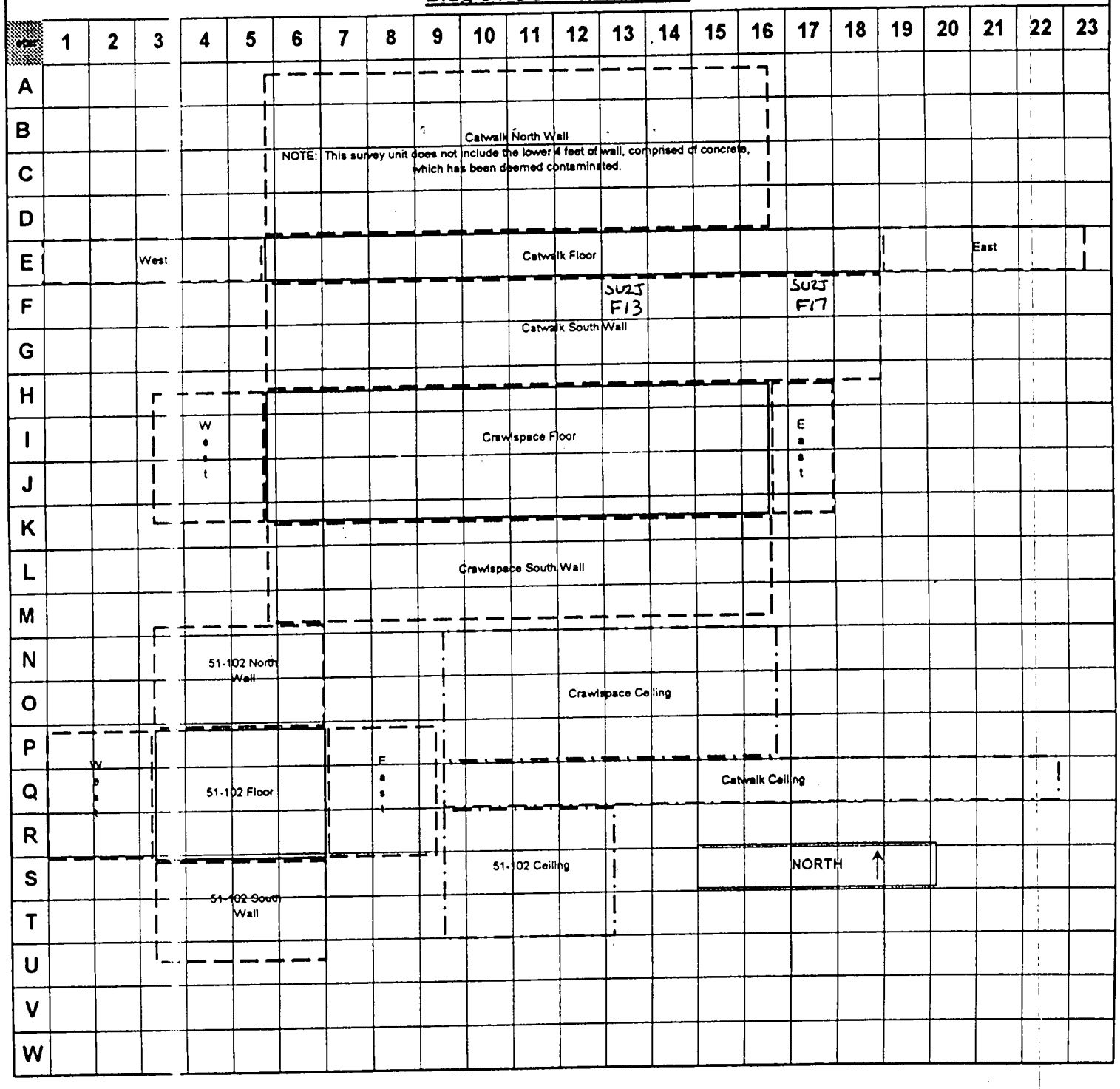
P Smith-Brown

Bldg 51 - SURVEY UNIT 1



68 24

Bldg 51 SURVEY UNIT 2



RGA 8540-FL-20

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North

Building 51 Upper FLOOR

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
3	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
4	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
5	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
6	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
7	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
8	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
9	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144
10	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
11	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176
12	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
13	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208

#6V

02-TF-0458

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Facing North

Building 51 Upper NORTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
2	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
3	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256
4	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272
5	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288
6	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304
7	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320
8																
9																
10																
11																
12																
13																

AGR

02-TE-0458

Facing South

Building 51 Upper SOUTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	321	322	323	324	325	326	327	328	329	330						
2	331	332	333	334	335	336	337	338	339	340						
3	341	342	343	344	345	346	347	348	349	350						
4	351	352	353	354	355	356	357	358	359	360						
5	361	362	363	364	365	366	367	368	369	370						
6	371	372	373	374	375	376	377	378	379	380						
7	381	382	383	SU3J 384 384	385	386	SU3J 387 387	388	389	390						
8																
9																
10																
11																
12																
13																

ACA

02-TE-0458

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← North

Building 51 Upper EAST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	391	392	393	394	395	396	397	398	399	400	401	402	403			
2	404	405	406	407	408	409	410	411	412	413	414	415	416			
3	417	418	419	420	421	422	423	424	425	426	427	428	429			
4	430	431	432	433	434	435	436	437	438	439	440	441	442			
5	443	444	445	446	447	448	449	450	451	452	453	454	455			
6	456	457	458	459	460	461	462	SU3J 463 463	464	465	466	SU3J 467 467	468			
7	469	470	471	472	473	474	475	476	477	478	479	480	481			
8																
9																
10																
11																
12																
13																

HGR

02-TF-0458

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North

Building 51 Upper WEST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	482	483	484	485	486	487	488	489	490	491	492	493	494			
2	495	496	497	498	499	500	501	502	503	504	505	506	507			
3	508	509	510	511	512	513	514	515	516	517	518	519	520			
4	521	522	523	524	525	526	527	528	529	530	531	532	533			
5	534	535	536	537	538	539	540	541	542	543	544	545	546			
6	547	SU3J 548 548	549	550	551	552	553	554	555	556	557	SU3J 558 558	559			
7	560	561	562	563	564	565	566	567	568	569	570	571	572			
8																
9																
10																
11																
12																
13																

MSR

8540-TL-20

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North

Building 51 Upper CEILING/ROOF

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588
2	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604
3	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620
4	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636
5	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652
6	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668
7	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684
8	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700
9	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716
10	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732
11	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748
12	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764
13	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780

Building 51-101 FLOOR

North

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	781	782	783													
2	784	785	786													
3	787	788	789													
4	790	791	792													
5	793	794	795													
6																
7																
8																
9																
10																
11																
12																
13																

Page

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Facing North

Building 51-101 NORTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	796	797	798													
2	799	800	801													
3	802	803	804													
4	805	806	807													
5	808	809	810													
6																
7																
8																
9																
10																
11																
12																
13																

02-TF-0458

15629

Facing South

Building 51-101 SOUTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	811	812	813													
2	814	815	816													
3	817	818	819													
4	820	821	822													
5																
6																
7																
8																
9																
10																
11																
12																
13																

ASP

02-TF-0458

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← North

Building 51-101 EAST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	823	824	825	826	827											
2	828	829	830	831	832											
3	833	834	835	836	837											
4	838	839	840	841	842											
5																
6																
7																
8																
9																
10																
11																
12																
13																

ASY

02-HF-0458

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North →

Building 51-101 WEST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	843	844	845	846	847											
2	848	849	850	851	852											
3	853	854	855	856	857											
4	858	859	860	861	862											
5																
6																
7																
8																
9																
10																
11																
12																
13																

B7A

02-TF-0458

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North

Building 51-109 FLOOR Map

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	878	879	880													
2	881	882	883													
3	884	885	886													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

02-TF-0458

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Facing North

Building 51-109 NORTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	887	888	889													
2	890	891	892													
3	893	894	895													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

2-4

02-TF-0458

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Facing South

Building 51-109 SOUTH WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	896	897	898													
2	899	900	901													
3	902	903	904													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

02-TF-0458

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Building 51-109 EAST WALL

← North

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	905	906	907													
2	908	909	910													
3	911	912	913													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

02-HF-0458

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North →

Building 51-109 WEST WALL

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	914	915	916													
2	917	918	919													
3	920	S&3J 921 421	922													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

HSA

02-TF-0458

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Building 51-109 CEILING Map

North

Meters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	923	924	925													
2	926	927	928													
3	929	930	931													
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																

ADA

02-TF-0458

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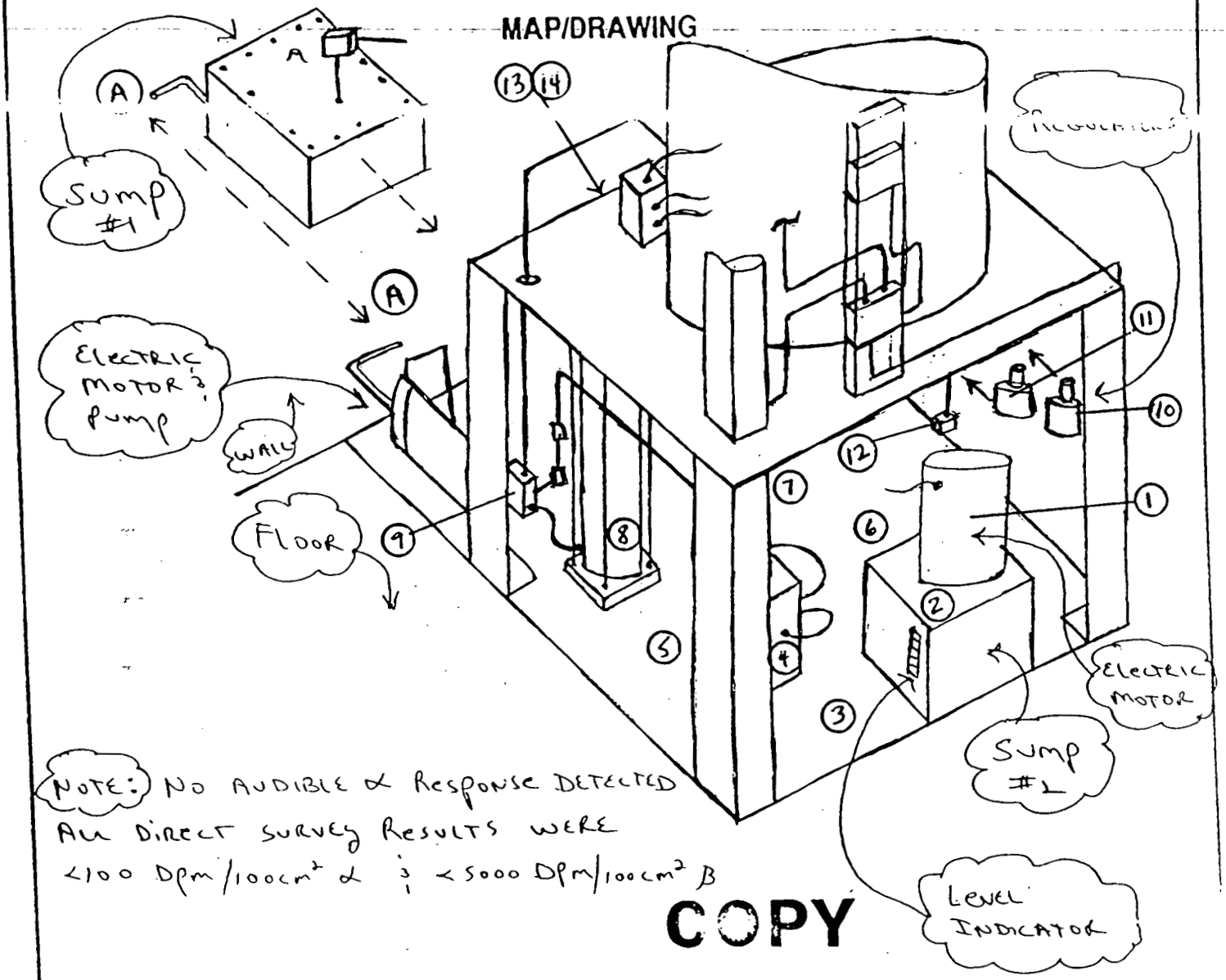
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BUILDING 51 Room 2A	SURVEY NO. 02-TF-0524
PURPOSE: ISOSTATIC PRESS	RWP NO. N/A
	DATE: 3/26/02
	TIME: 0930

MAP/DRAWING



NOTE: NO AUDIBLE α RESPONSE DETECTED
ALL DIRECT SURVEY RESULTS WERE
<100 Dpm/100cm² α & <5000 Dpm/100cm² β

COPY

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date	HPs	Date:
ELECTRA	5603/5604	2-6-03	6178 8420	3-26-02
			HPs	Date:
	N/A		LEO	
			HPs 7707	Date: 03/28/02

[redacted]

ML-0620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #.	β/γ	Alpha	Tritium	Comments
1	SEE			MOTOR
2		ATTACHED		SUMP CASE#2
3				FLOOR
4				ELE. BOX
5-7				FLOOR
8				BASE PILAR
9				FITTINGS
10-11				FITTINGS
12				FITTINGS
13-14	✓	✓	✓	FITTINGS UNDERPLATE
		N	A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N	A	

COMMENTS: N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of resu are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 (4-98)

Alpha/Beta Analysis

Batch ID: 02-TF-0524 HARVEY(14) BSB

Batch File: Smear Unit 1 - 200203261045
Group: 1
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 3/26/2002
Count Time (min): 1.5
Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	34	0.00	0.66	1.65	4.09
2	56	0.00	0.66	1.65	4.09
3	1	0.00	0.66	0.00	2.53
4	140	5.59	6.91	3.90	5.21
5	142	0.00	0.66	1.65	4.09
6	11	1.62	4.03	0.00	2.53
7	133	0.00	0.66	1.65	4.09
8	55	0.00	0.66	3.93	5.21
9	33	1.62	4.03	2.78	4.68
10	108	0.00	0.66	2.79	4.68
11	24	0.00	0.66	5.06	5.68
12	11	1.62	4.03	5.06	5.68
13	48	0.00	0.66	1.65	4.09
14	8	0.00	0.66	1.65	4.09
		29A		29A	

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~~3 of 4~~
1 of

CountLab Results - 02-TF-05.pdf

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	8.34
Region B:	2.0 -	18.6	0	0.0	8.06
Region C:	40.0 -	2000.	0	0.0	11.10

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0524 HARVEY(14) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	8.34	8.06	0	B	529.75		0.00	11.10
0	2.00	904.74	852.23	0		519.42	1904.48	170.46	0.00
1	2.00	0.00	0.00	0		583.80	0.00	0.00	1.90
2	2.00	0.00	0.00	0		543.18	0.00	0.00	0.00
3	2.00	0.00	0.00	0		445.04	0.00	0.00	0.00
4	2.00	0.00	0.16	0		473.36	0.00	0.00	0.00
5	2.00	0.16	0.09	0		641.40	0.31	8.53	0.00
6	2.00	0.00	0.00	0		415.83	0.00	0.00	0.90
7	2.00	0.00	0.00	0		477.65	0.00	0.00	0.00
8	2.00	0.00	0.00	0		400.05	0.00	0.00	0.00
9	2.00	0.00	0.00	0		521.76	0.00	0.00	1.24
10	2.00	0.00	0.00	0		535.03	0.00	0.00	0.00
11	2.00	0.00	0.00	0		561.01	0.00	0.00	0.00
12	2.00	0.00	0.00	0		410.53	0.00	0.00	0.00
13	2.00	0.00	0.00	0		448.80	0.00	0.00	0.00
14	2.00	0.00	0.00	0		563.59	0.00	0.00	0.00

DJH
B Smith Brown

~~4 of 4~~
4 of 5
9 4/4/02

RSDI # 02-TF-0524
4/4/02

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
3/28/02	oil	STEVE WILLIAMS	1
PROJECT/FUNCTION:	**PRIMARY CONTACT/PHONE NO.:**		**MAIL STOP:**
SMPP/TFV	STEVE WILLIAMS 4324		
CHARGE NUMBER:	**DATE(S) COLLECTED:**	**RSDS# (if applicable):**	**ATTACHMENTS (list):**
J00489	3/27/02	02-TF-0524	

ANALYSES REQUESTED (check).

- [x] ^3H
- [ ] Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release_____ Approved_____
- [x] Gross Alpha
- [ ] Air Filter – Isotopic Analysis
- [ ] Characterization per MD-80036, Operation #10015
- [ ] Isotopic Analysis: Pu____ U____ Th____ Am____ Other____
- [ ] Other _____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
0203358	51 ISO PRESS	1	< 0.0088 nCi/mL ^3H
	Sump #2		
			< 1.93 dpm/mL α

COMMENTS:

ANALYZED BY:	DATE:
Bradley D Jones	4/1/02

ML-5222 (1-0)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) 51 SURVEY UNIT'S 1&2	SURVEY NO 02-TF-0534
PURPOSE: 25% SCAN SURVEY OF CLASS 2 AREAS	RWP NO. N/A
	DATE: 3-20-02 TO 3-26-02
	TIME: 1330

MAP / DRAWING

INTEGRATED COUNTS PERFORMED WHERE AUDIBLE RESPONSE DETECTED.

THESE AREAS MARKED ON MAPS. (SEE ATTACHED)

ALL OTHER DIREST SURVEY RESULTS <100dpm/100cm2 ALPHA

AT LOCATION SU2 L 15 475dpm/100cm2 DIRECT 17.83dpm/100cm2 REMOVABLE

SMEAR SENT FOR ISOTOPIC RESULTS ATTACHED

COPY

LEGEND:

= mrem/hr (γ) whole body

#E = mrem/hr (β+η+γ) extremity on contact

K = factor of 1000

— · — · - = radiological boundary

△# = mrem/hr neutron

(#) = swipe number

[#] = air sample number

(#/α) or /β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2350	5673/5143	8-21-2002
2350	5671/5148	9-21-2002
	N/A	
	N/A	

[redacted]

HP# 6178 6196 Date: 4-1-2002

[redacted]

HP# NA Date: NA

HP# 7707 Date: 04-01-02

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-TF-0534 RCT: 2974 RCT: MSK

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671	6178	5148	3		3/20/02	9:31	4	300	5
SRCCHECK	5671	6178	5148	3		3/20/02	9:37	2051	60	11742
SRCCHECK	5671	6178	5148	3		3/20/02	9:38	2112	60	12092
SRCCHECK	5671	6178	5148	3		3/20/02	9:39	1878	60	10752
SRCCHECK	5671	6178	5148	3		3/20/02	9:41	1868	60	10695
SU1 A1	5671	6178	5148	3	1	3/20/02	10:42	5	60	29
SU1 A5	5671	6178	5148	3	2	3/20/02	10:48	3	60	17
SU1 B4	5671	6178	5148	3	3	3/20/02	10:52	0	60	0
SU1 C3	5671	6178	5148	3	4	3/20/02	10:55	6	60	34
SU1 C3	5671	6178	5148	3	5	3/20/02	10:58	2	60	11
SU1 B2	5671	6178	5148	3	6	3/20/02	11:00	1	60	6
SU1 B2	5671	6178	5148	3	7	3/20/02	11:02	4	60	23
SU1 A10	5671	6178	5148	3	8	3/20/02	13:35	2	60	11
SU1 C6	5671	6178	5148	3	9	3/20/02	13:49	4	60	23
SU1 C14	5671	6178	5148	3	10	3/20/02	14:13	3	60	17

51-BLDG MARSSIM M-2350 SURVEY

RSDS#02-TF-0534 RCT: DGH RCT: MOR

43-20 BKG:	0	EFF:	0.166	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5673	6196	5143	2		3/20/02	9:03	17	300	23
SRCCHECK	5673	6196	5143	2		3/20/02	9:06	2243	60	14930
SRCCHECK	5673	6196	5143	2		3/20/02	9:09	2280	60	15177
SRCCHECK	5673	6196	5143	2		3/20/02	9:11	2013	60	13399
SRCCHECK	5673	6196	5143	2		3/20/02	9:13	2072	60	13792
SU2 O4	5673	6196	5143	2	1	3/20/02	11:58	4	95	17
SU2 O4	5673	6196	5143	2	2	3/20/02	12:04	16	95	67
SU2 O5	5673	6196	5143	2	3	3/20/02	12:12	4	95	17
SU2 Q2	5673	6196	5143	2	4	3/20/02	15:23	12	95	50
SU2 T4	5673	6196	5143	2	5	3/20/02	15:41	9	95	38

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-TF-0534 RCT: DJH RCT: MCR

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671	6178	5148	3		3/21/02	5:45	5	300	6
SRCCHECK	5671	6178	5148	3		3/21/02	5:56	1963	60	11239
SRCCHECK	5671	6178	5148	3		3/21/02	5:58	2066	60	11828
SRCCHECK	5671	6178	5148	3		3/21/02	5:59	1855	60	10620
SRCCHECK	5671	6178	5148	3		3/21/02	6:01	1878	60	10752
51SU1 C21	5671	6178	5148	3	1	3/21/02	9:51	4	60	23
51SU1 D20	5671	6178	5148	3	2	3/21/02	9:56	0	60	0

51-BLDG MARSSIM M-2350 SURVEY

RSDS# 02-F-0534 RCT: DJA RCT: MOL

43-20 BKG:	0	EFF:	0.166	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5673	6196	5143	2		3/21/02	7:52	21	300	28
SRCCHECK	5673	6196	5143	2		3/21/02	9:15	2303	60	15330
SRCCHECK	5673	6196	5143	2		3/21/02	9:18	2269	60	15104
SRCCHECK	5673	6196	5143	2		3/21/02	9:19	2006	60	13353
SRCCHECK	5673	6196	5143	2		3/21/02	9:21	2183	60	14531
SU2 T4	5673	6196	5143	2	1	3/21/02	10:52	10	110	36
SU2 S6	5673	6196	5143	2	2	3/21/02	11:01	10	110	36
SU2 R8	5673	6196	5143	2	3	3/21/02	11:08	12	110	44
SU2 T12	5673	6196	5143	2	4	3/21/02	11:14	11	110	40
SU2 P8	5673	6196	5143	2	5	3/21/02	11:20	11	110	40
SU2 Q5	5673	6196	5143	2	6	3/21/02	11:27	5	110	18
SU2 S10	5673	6196	5143	2	7	3/21/02	15:29	4	110	15

51-BLDG MARSSIM M-2350 SURVEY

RSDS#02-TF-0534 RCT: 29 H RCT: mh

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671	6178	5148	3		3/22/02	6:43	1	300	1
SRCCHECK	5671	6178	5148	3		3/22/02	6:54	1906	60	10912
SRCCHECK	5671	6178	5148	3		3/22/02	6:56	1938	60	11096
SRCCHECK	5671	6178	5148	3		3/22/02	6:57	1969	60	11273
SRCCHECK	5671	6178	5148	3		3/22/02	6:58	1876	60	10741
51SU1 G4	5671	6178	5148	3	1	3/22/02	8:55	0	60	0
51SU1 H3	5671	6178	5148	3	2	3/22/02	9:02	2	60	11
51SU1 I1	5671	6178	5148	3	3	3/22/02	9:06	2	60	11
51SU1 I5	5671	6178	5148	3	4	3/22/02	9:11	2	60	11
51SU1 I5	5671	6178	5148	3	5	3/22/02	9:13	2	60	11
SRCCHECK	5671	6178	5148	3		3/22/02	9:16	1963	60	11239
SRCCHECK	5671	6178	5148	3		3/22/02	9:17	2059	60	11788
SRCCHECK	5671	6178	5148	3		3/22/02	9:18	1822	60	10431
SRCCHECK	5671	6178	5148	3		3/22/02	9:20	1848	60	10580
51SU1 I23	5671	6178	5148	3	6	3/22/02	12:59	0	60	0
51SU1 F21	5671	6178	5148	3	7	3/22/02	13:04	5	60	29
51SU1 F15	5671	6178	5148	3	8	3/22/02	13:15	2	60	11
51SU1 G18	5671	6178	5148	3	9	3/22/02	13:22	1	60	6
51SU1 G18	5671	6178	5148	3	10	3/22/02	13:26	2	60	11
51SU1 K6	5671	6178	5148	3	11	3/22/02	14:36	1	60	6

51-BLDG MARSSIM M-2350 SURVEY

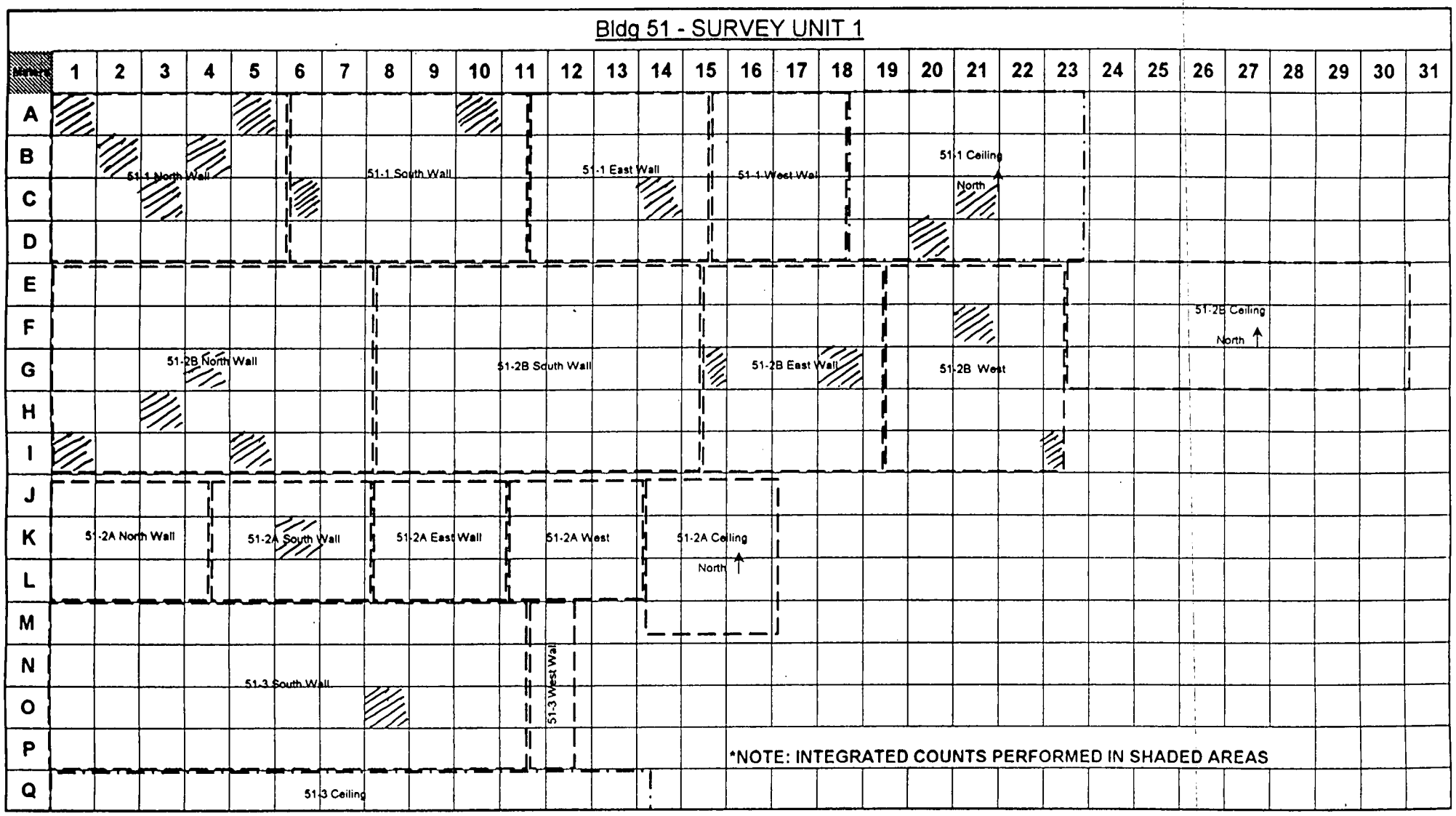
RSDS#02-TF-0534 RCT: 29H RCT: mon

43-20 BKG:	0	EFF:	0.166	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5673	6196	5143	2		3/22/02	7:01	28	300	37
SRCCHECK	5673	6196	5143	2		3/22/02	7:06	2244	60	14937
SRCCHECK	5673	6196	5143	2		3/22/02	7:08	2245	60	14944
SRCCHECK	5673	6196	5143	2		3/22/02	7:09	2273	60	15130
SRCCHECK	5673	6196	5143	2		3/22/02	7:11	2158	60	14365
51SU2 L6	5673	6196	5143	2	1	3/22/02	8:56	8	135	24
51SU2 L7	5673	6196	5143	2	2	3/22/02	9:01	11	135	33
51SU2 L10	5673	6196	5143	2	3	3/22/02	9:11	10	135	30
51SU2 M11	5673	6196	5143	2	4	3/22/02	9:17	9	135	27
SRCCHECK	5673	6196	5143	2		3/22/02	9:22	1737	60	11562
SRCCHECK	5673	6196	5143	2		3/22/02	9:24	1828	60	12168
SRCCHECK	5673	6196	5143	2		3/22/02	9:26	1987	60	13226
SRCCHECK	5673	6196	5143	2		3/22/02	9:28	2023	60	13466
51SU2 H11	5673	6196	5143	2	5	3/22/02	9:59	7	135	21
51SU2 F11	5673	6196	5143	2	6	3/22/02	10:03	11	135	33
51SU2 G14	5673	6196	5143	2	7	3/22/02	10:17	10	135	30
51SU2 H16	5673	6196	5143	2	8	3/22/02	13:00	18	135	53
51SU2 F16	5673	6196	5143	2	9	3/22/02	13:05	13	135	38
51SU2 E20	5673	6196	5143	2	10	3/22/02	13:23	18	135	53
51SU2 E4	5673	6196	5143	2	11	3/22/02	13:32	8	135	24
51SU2 B12	5673	6196	5143	2	12	3/22/02	14:41	17	135	50

51-BLDG MARSSIM M-2350 SURVEY

RSDS#02-TF-0534 RCT: 29H RCT: [illegible]

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm	Surface Eff:		0.5	
43-37 BKG:	0	EFF:	0.183	PROBE AREA:	584	cm	Surface Eff:		0.5	
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671	6178	5148	3		3/25/02	7:30	1	300	1
SRCCHECK	5671	6178	5148	3		3/25/02	7:40	2042	60	11691
SRCCHECK	5671	6178	5148	3		3/25/02	7:47	2151	60	12315
SRCCHECK	5671	6178	5148	3		3/25/02	7:48	1961	60	11227
SRCCHECK	5671	6178	5148	3		3/25/02	7:54	1942	60	11118
51SU1 O8	5671	6178	5148	3	1	3/25/02	12:55	0	60	0
SRCBKG	5671	6178	5148	3		3/26/02	6:18	10	300	11
SRCCHECK	5671	6178	5148	3		3/26/02	6:29	2072	60	11863
SRCCHECK	5671	6178	5148	3		3/26/02	6:31	1899	60	10872
SRCCHECK	5671	6178	5148	3		3/26/02	6:33	1876	60	10741
SRCCHECK	5671	6178	5148	3		3/26/02	6:34	1926	60	11027
51SU2 L15	5671	6178	5148	3	2	3/26/02	13:05	83	60	475



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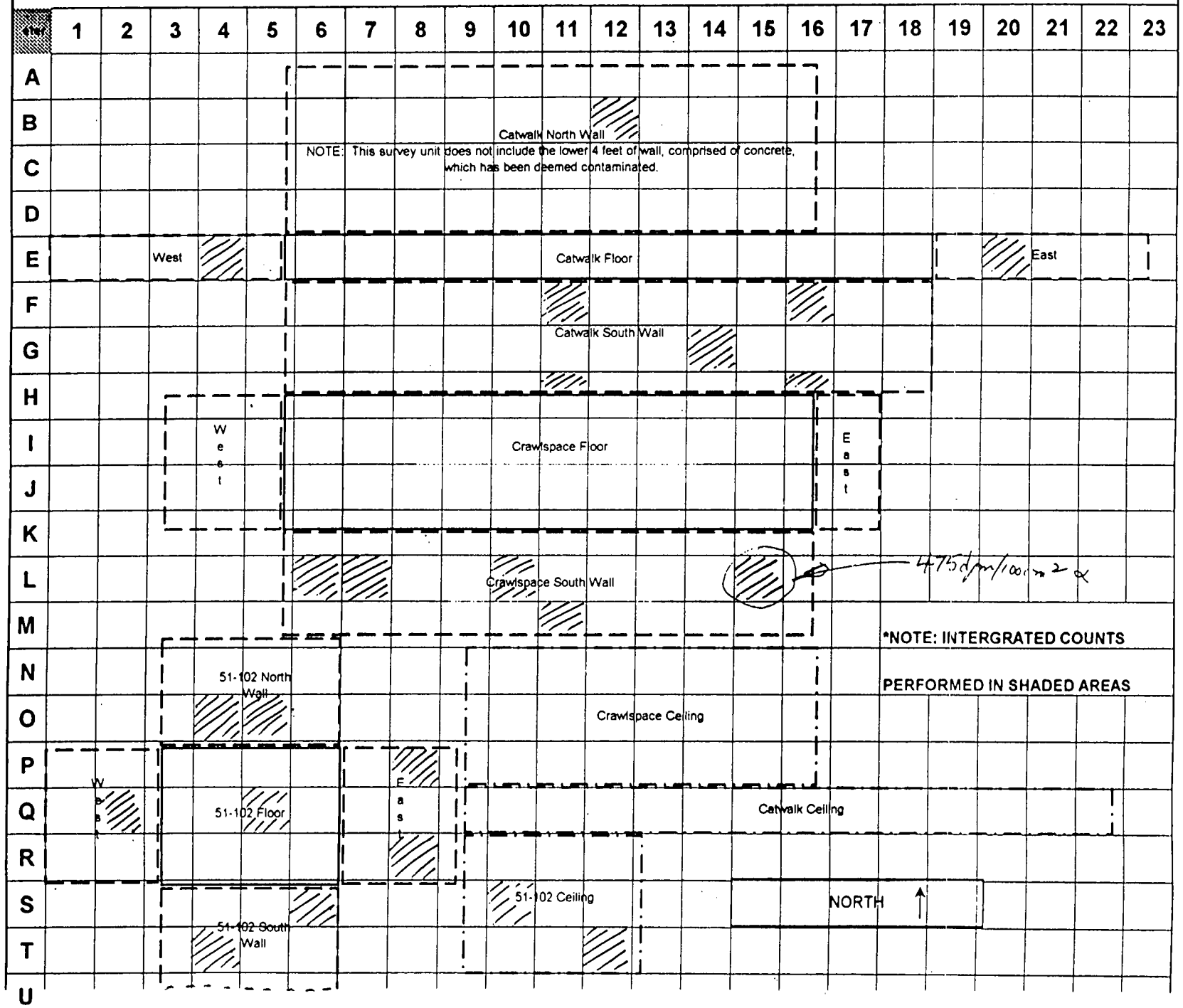
Bldg 51 SURVEY UNIT 2



02-TF-0534
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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR021
Batch Ended: 3/26/02 14:08
Cal. Due Date: 4/25/03
Serial Number: 26966-3
0534 DJH 4-1-02
Batch ID: 02-TF-~~0526~~ HARVEY(1) BSB

Detector ID	Sample ID
D2	1

Alpha Activity		
DPM	σ	flags
17.83	6.12	

DJH

Beta Activity		
DPM	σ	flags
0.00	1.24	

DJH 4/1/02

Laboratory ID#: 0203206
Project/function: SMPP/TFV
Submitted: Mar 26, 2002
Submitted by: D. Harvey
Point of Contact: D. Harvey x3163
RSDS#: 02-TF-~~0526~~ 0534
Date: Mar 28, 2002 DJH 4-1-02

Lab ID	0203206
Sample Location	51 / Crawspace #1

Isotope	dpm/smear	Uncertainty +/-	LDL
Pu-238/Am-241 SJH 3/28/02	21.58	3.47	0.43
Pu-239/240	<LDL	<LDL	0.69
Th-232	<LDL	<LDL	0.43
Th-230	0.80	0.37	0.43
Th-227	<LDL	<LDL	0.69
U-238	<LDL	<LDL	0.43
U-235	<LDL	<LDL	0.43
U-233/234	<LDL	<LDL	0.43

[redacted]

1585 — HP #
3-28-02 — Date

5768 — HP #
~~3/28/02~~ — Date DJH

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG. / ROOM / AREA) Building 51	SURVEY NO. 02-TF-0526
PURPOSE: CONFIRMATION SURVEY OF L15 IN SURVEY UNIT 2	RWP NO. N/A
	DATE: 04/1/02
	TIME: 1300

MAP / DRAWING

THIS IS A CONFIRMATION SURVEY OF L15 IN BUILDING 51

AREA IS COVERED.
POSTED CONTROLLED AREA, CONTAMINATION AREA AND DO NOT ENTER

MAP IS ON PAGE 3

RESULTS ON PAGE 4

COPY

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
K = factor of 1000
— · — · — = radiological boundary
△# = mrem/hr neutron
□# = air sample number
(#) = swipe number
(#/α) or /β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date			
NE Electra	5603/5604	02/06/03	HP# 6178	Date: 04/10/02	
			HP#	Date:	
	N/A		HP# 7707	Date: 4-10-02	

[redacted]

Survey No. 02-TF-0526

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	PAGE	4	L15
			N/A	
		N/A		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

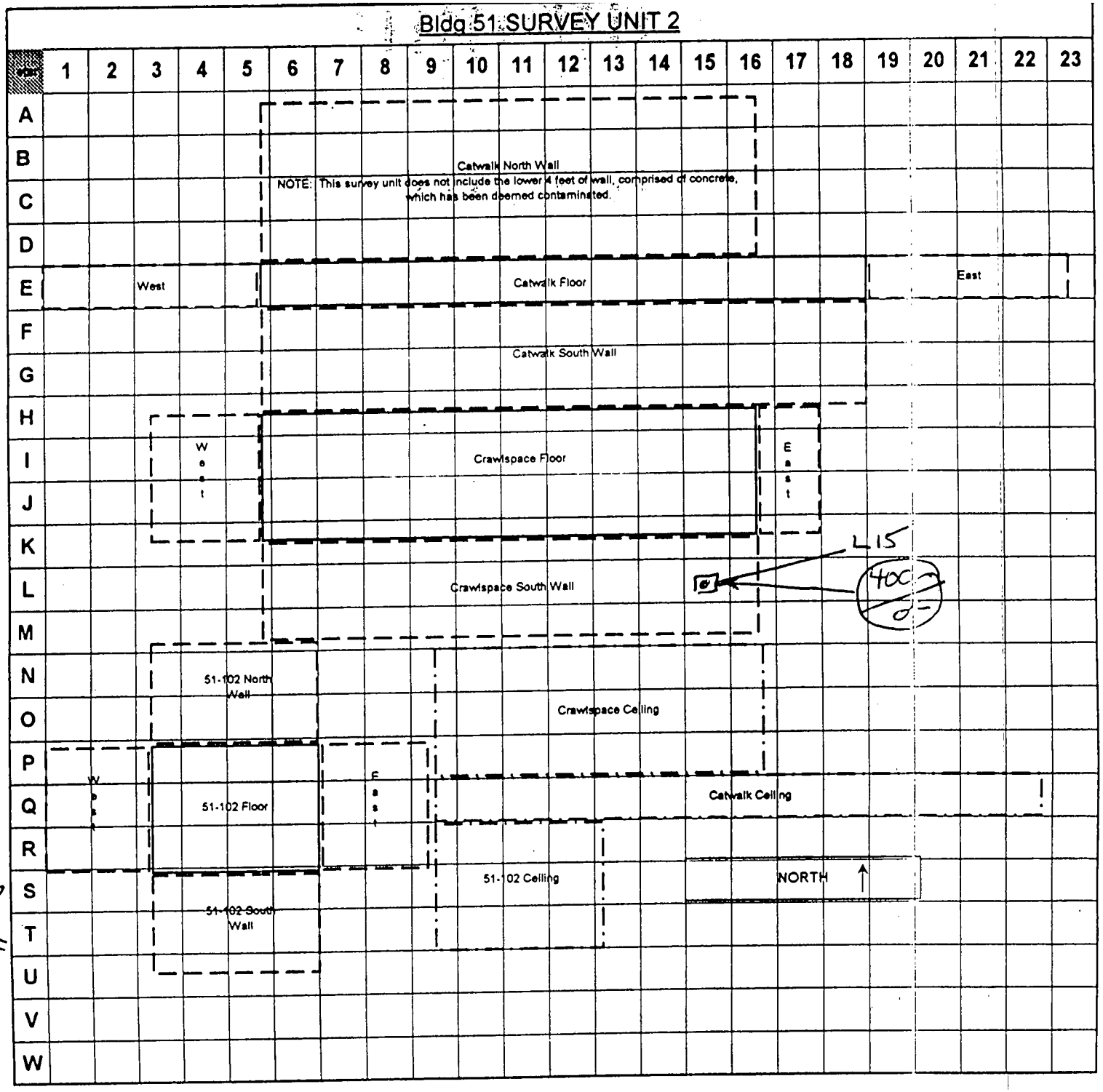
COMMENTS: N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of resul are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

Bldg 51 SURVEY UNIT 2



02-TF-0526

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR009
Batch Ended: 4/1/02 14:10

Crosstalk correction performed

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0526 (1) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D1	1	77.86	13.09		0.00	2.43	

Sig H Sig H Carol Ly Robinson

Appendix H

Radon Information

UNC Geotech

UNC Geotech
2597 B 3/4 Road
P.O. Box 14000
Grand Junction, Colorado 81502-5504
303/242-8621

April 12, 1990

Dennis Murphy
EG&G Mound Applied Technonogies
P.O. Box [illegible]
Mound Road
Miamisburg, OH 45343-3000

File

Dear Mr. Murphy:

I have enclosed the results ~~of the radon~~ measurements made at your site as part of the DOE Indoor Radon Study. A copy of these results can be provided in electronic ~~format if desired~~. The results will be forwarded to the study sponsor, the DOE Office of Projects and Facilities Management, by the end of April.

Please contact me at FTS 326-6293 or commercial (303) 248-6293 if you have any questions.

Sincerely yours,

Mark D. Pearson

Mark D. Pearson
Project Manager
UNC Geotech

cc: DOE Points of Contact

			[illegible]	[illegible]	[illegible]	[illegible]	12/14/89	2/16/90	MET - OLD THORIUM STORAGE
21		ABOVE AIR SAMPLERS	116.7		1668548		12/14/89	2/16/90	MET - OLD THORIUM STORAGE
	SM	19 MID EAST WALL	4.8		1661547		12/12/89	2/19/90	HISTORY OF ELEVATED READINGS
46		114 B CLOSET ON SPRINKLER PIPE	3.2		1671282		12/12/89	2/19/90	
19		ROOM 1	2.6		1678051		12/13/89	2/19/90	
	OLD SO BLDG	BASEMENT RIGHT CABINET	2.4		1661515		12/14/89	2/19/90	
55		1 BELOW THERMOSTAT ON E WALL	2.1		1661515		12/18/89	2/19/90	
57		ROOM 1	1.9		1661545		12/12/89	2/19/90	
87		143	1.5		1661543		12/12/89	2/19/90	
818	FIRE STATION	ROOM 802 EQUIPMENT ROOM WITH SUMP	1.4		1654458		12/12/89	2/19/90	
24		ROOM 1 PLANT NORTH WALL	1.3		1672687		12/12/89	2/19/90	
	PAINT SHOP	PS 4	1.2		1661518		12/12/89	2/16/90	
30		ROOM 3 EAST	1.1		1671262		12/12/89	2/16/90	
100		103 MIDDLE OF NORTH WALL	1.0		1678066		12/12/89	2/19/90	
37		6 NORTH WALL	1.0		1678046		12/12/89	2/19/90	
34		34-A-WEST WALL	.9	.6	1672062	1672042	12/12/89	2/19/90	MET
102		123	.9		1661577		12/14/89	2/19/90	
61		RM 221 MIDDLE OF NORTH WALL	.8		1661565		12/13/89	2/19/90	
67		101 N	.9		1678021		12/12/89	2/19/90	
G-13	LOG	G-514 WEST WALL	.8		1661544		12/12/89	2/16/90	
	T	CORRIDOR 28	.9		1678039		1/15/90	2/19/90	
	T	153	.8		1678067		1/15/90	2/19/90	
	T	70	.9		1678077		[illegible]	[illegible]	
		[illegible]	[illegible]		[illegible]		1/12/90	2/19/90	
105	PARTS WAREHOUSE BUILDING	STAIRWELL NEXT TO ROOM 127	.8		1661564		12/12/89	2/19/90	
25	ARAC	3 ON BOOK CASE MIDDLE	.8		1671314		12/16/89	2/19/90	
60		1 ON DOOR TO ROOM 3	.8		1678049		12/12/89	2/19/90	
	A	153C CENTER CUBICLE WEST WALL	.8		1672056		12/14/89	2/16/90	
	C BUILDING OLD CAFETERIA	NORTHEAST SECTION INTERNAL WALL RM2	.8		1672052		12/12/89	2/16/90	
	R BUILDING	68 NORTH WALL	.8		1678068		12/12/89	2/16/90	
	SM	8 WEST WALL AT OLD RECOVERY	.6		1672057		12/11/89	2/16/90	
	WO BLDG	WO 8	.8		1678045		12/18/89	2/16/90	
87		124	.8		1678032		12/12/89	2/19/90	
40		ROOM 116 ON NORHT WALL RIGHT OF CEN	.7	.6	1661524	1661535	12/12/89	2/19/90	
89		101 NEAR BACK CORNER BY ROOF DRAIN	.7	.5	1666783	1668522	12/15/89	2/19/90	
22		RM 1 EAST CORRIDOR ON STORAGE RACK	.7		1678070		12/13/89	2/19/90	
56	FIRE PUMP HOUSE	ROOM 1 THERE IS ONLY 1 ROOM	.7		1678066		12/12/89	2/19/90	
	E ANNEX	E 225 EAST WALL	.7		1661552		12/18/89	2/16/90	
	POWER HOUSE PH-1	REPAIR SHOP NORTH EAST CORNER	.7		1678040		12/12/89	2/19/90	
	W BLDG	W-135	.7		1661553		12/12/89	2/16/90	
26		ROOM 84 SOUTH WEST WALL	.6	.8	1672048	1667159	12/13/89	2/16/90	
69		RM 7 ON NORTH WALL	.6	.4	1672044	1672077	12/12/89	2/19/90	
26		ROOM 84 SOUTH WEST WALL	.6		1671278		12/13/89	2/16/90	
35		RM 7	.6		1654459		12/14/89	2/19/90	
38	PP BLDG	PP CORR 136	.6		1678016		12/14/89	2/19/90	
72		ON OVERHEAD DOOR BEAM	.6		1672069		1/03/90	2/19/90	
93		HALLWAY 107 (MIDWAY)	.6		1661628		12/13/89	2/20/90	
98	FIRE STATION	ROOM 114 DORM	.6		1661507		12/12/89	2/19/90	
	COS	RM STAIRWELL AT BASEMENT LEVEL	.6		1672086		12/14/89	2/19/90	
	OSM	120 C	.6		1661573		12/12/89	2/16/90	
	SM	150 WEST END GAS BOX	.6		1678043		12/11/89	2/16/90	
	A	34 EAST WALL	.5	.7	1672075	1672051	12/14/89	2/16/90	
43		102 MIDDLE OF EAST WALL	.5	.5	1658110	1666019	12/12/89	2/16/90	

	R BUILDING	143 NEXT TO NORTH WALL	.5	.5 1666533	1666816	12/13/89	2/16/90
101		ROOM 5 ON SOUTH WEST WALL IN OFFSET	.6	1671288		12/12/89	2/19/90
	"B" 175	175 WEST WALL	.5	1678048		12/12/89	2/16/90
.6		ELECTRICAL PANEL RM IN ELECTRONICS	.5	1678062		12/12/89	2/19/90
40		104	.6	1654480		12/13/89	2/16/90
43		1 EAST WALL OVER WATER DISPENSER	.5	1678076		12/12/89	2/20/90
44		ON BULLETTIN BOARD	.5	1678047		12/12/89	2/16/90
47		102 MIDDLE OF EAST WALL	.5	1678058		12/12/89	2/16/90
50		CELL 113	.5	1681582		12/13/89	2/19/90
79		CENTRAL HALLWAY WEST OF DOOR TO RM7	.5	1681605		12/18/89	2/16/90
89		101 NEAR BACK CORNER BY ROOF DRAIN	.5	1678079		12/15/89	2/19/90
91		1ST FLOOR	.5	1661525		12/15/89	2/16/90
91		2ND FLOOR OUTSIDE RM215	.5	1681593		12/15/89	2/16/90
92		HALLWAY RIGHT OFF ROOM 8	.5	1661509		12/12/89	2/19/90
94		BAY 2 NORTH WALL	.5	1654477		12/12/89	2/19/90
	A	215 WEST WALL	.5	1661572		12/14/89	2/16/90
	A	1040 WEST WALL	.5	1681580		12/14/89	2/16/90
	COS	110 N WALL NEAR PUNCH PRESS	.5	1654456		12/12/89	2/19/90
	COS	316 WALL CABINET TO RIGHT OF SINK	.5	1681590		12/12/89	2/19/90
	E BUILDING	150 WEST WALL	.5	1678033		12/14/89	2/16/90
	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
	E ANNEX	E 212 NORTH WALL	.5	1681567		12/16/89	2/16/90
	GH BUILDING	ROOM 2	.6	1678065		12/12/89	2/16/90
	GP 81	1A MIDDLE OF WEST WALL	.6	1678054		12/12/89	2/19/90
	H BLDG	ROOM 127	.5	1681571		12/12/89	2/16/90
	HH	HH-0	.5	1671268		12/18/89	2/19/90
	I BUILDING	BASEMENT LEFT CRAWL SPACE DOOR	.5	1671260		12/12/89	2/19/90
	K BUILDING	K 108	.5	1678056		12/15/89	2/19/90
	OSE	CORRIDOR 437	.5	1661536		12/15/89	2/16/90
	OSE	CORRIDOR 301 ACROSS FROM WATER FOUN	.5	1672004		12/15/89	2/16/90
	OSW	4HT FLOOR	.5	1678028		12/12/89	2/16/90
	OSE	CORR 212 SOUTH WALL NEAR 218 DOOR	.5	1678036		12/15/89	2/16/90
	OSW	319	.5	1678069		12/13/89	2/16/90
	OSW	2ND FLOOR	.5	1681611		12/12/89	2/16/90
	POWER HOUSE PH-1	STATIONARY BOARD CORNER	.5	1678073		12/12/89	2/19/90
	R BUILDING	145 WEST WALL ABOVE BALANCE	.5	1654538		12/14/89	2/16/90
	SW/R TRITIUM COMPLEX	128 OVER LARGE METAL FLOOR DISC	.5	1678019		12/12/89	2/16/90
	W BLDG	W135 WEST CENTRAL WALL	.5	1671293		12/12/89	2/16/90
	WO BLDG	WOA 110	.5	1671301		12/18/89	2/16/90
	"B" 124	EAST WALL	.5	1667189		12/12/89	2/16/90
	OSE	113 BULLETIN BOARD OPPOSITE ELEVATO	.5	1678027		12/15/89	2/16/90
TF-2		114 EAST WALL CENTER OF ROOM	.4	1678064		12/12/89	2/19/90
	HH	HH-24	.4	1667187		12/14/89	2/19/90
	OS BUILDING	CORRIDOR 7 NEXT TO ROOM 216	.4	1661614		12/13/89	2/19/90
	GP 81	1A MIDDLE OF WEST WALL	.4	.6 1672135	1661542	12/12/89	2/19/90
105	PARTS MACHINING BUILDING	136 QC OFFICE	.4	1678017		12/12/89	2/19/90
27		CELL 8 - WALL	.4	1681583		12/12/89	2/19/90
28	CERAMIC PRODUCTION	101	.4	1672061		12/12/89	2/19/90
29		HALLWAY	.4	1672105		12/14/89	2/19/90
	TEST FIRE BUILDING 3	3-315	.4	1672036		12/12/89	2/19/90
36	PP BLDG	PP CORR 16/BAY 2 WALL	.4	1681570		12/14/89	2/19/90
39		BREAK RM	.4	1678050		12/14/89	2/19/90
42		101 B EAST WALL	.4	1678031		12/13/89	2/19/90

Area	Bldg	Bldg Description	Room	Radon pCi/l	Radon pCi/l	Monid	Dupid	Install Date	Retrieve Date	Comments
	45		WORK STATION AREA	.4		1681560		12/14/89	2/18/90	
	46		01 EAST HALL	.4		1672070		12/12/89	2/18/90	
	49		HALL OUTSIDE RM 125	.4		1670020		12/14/89	2/18/90	
	51		107 TOP OF FUME HOOD	.4		1681575		12/12/89	2/18/90	
	63		ROOM 134	.4		1672059		12/12/89	2/20/90	
	63W		RM 4	.4		1670070		12/14/89	2/18/90	
	65		ROOM 10 CONFERANCE ROOM	.4		1671284		12/14/89	2/18/90	
	66		OFFICE AREA	.4		1681554		12/12/89	2/18/90	
	68		EAST HALL CENTER BEAM	.4		1681555		12/14/89	2/18/90	
	69		RM 16A	.4		1681576		12/12/89	2/18/90	
	70		170 MEETING ROOM CENTER HALL	.4		1670041		12/12/89	2/18/90	
	80		ROOM 116	.4		1671205		12/12/89	2/18/90	
	95	SR/PP	95- BLD-ROOM41	.4		1661531		12/12/89	2/20/90	
		BS BUILDING	CORRIDOR 2 - 6 FT. ABOVE FLOOR	.4		1670071		12/12/89	2/18/90	
		I	I HALLWAY	.4		1667184		12/12/89	2/18/90	
		M BUILDING	M 21 WEST HALL	.4		1670057		12/15/89	2/20/90	
		POWER HOUSE PH-1	OFFICE SUPERVISOR	.4		1670036		12/12/89	2/18/90	
		R BUILDING	12 SOUTH HALL	.4		1681566		12/12/89	2/18/90	
	34		BURN ROOM			1654481		12/12/89		BURNT (NOT AVAILABLE)

Appendix I

Asbestos Information

Asbestos has been removed. No further action is required.

Appendix J

Lead Information

MOUND

INTEROFFICE CORRESPONDENCE

Date: March 26, 2002

From: Christopher Ahlquist
SMPP/TFV Project Team
Health & Safety

To: Lee Koehmstedt
SMPP/TFV Project Team
Project Engineering

Re: Building 51 – Lead Paint Screen

In response to your request, a screen for lead-based paint was conducted on March 20, 2002 within selected areas of Mound Building 51, currently scheduled for demolition. The screen was targeted toward determining the approximate lead content of paint coatings, which were marked as a part of the MARSSIMS radiological sampling survey. Approximate lead concentrations were determined in the field using a Niton Model XL-309 XRF lead detector which yields results expressed as milligrams of lead per square centimeter (mg/cm^2) of surface sampled. The US Department of Housing and Urban Development (HUD) and the Ohio Department of Health (ODH) have established a level of concern for lead in paint of 1.0 mg/cm^2 for private and public housing as well as daycare facilities. This level of lead in paint is generally accepted as representing the "standard of care" for determining lead-based paint hazards, with respect to paint coatings, during risk assessment investigations. The US Occupational Safety and Health Administration (OSHA) has established through its Lead Standard for the Construction Industry that any material containing a detectable amount of lead is subject to the Standard.

Lead Survey

None of the thirty-seven (37) readings collected from the targeted paint coatings were found to contain lead above the HUD/ODH level. These interior readings were found to contain lead in concentrations ranging from 0.00 mg/cm^2 to 0.10 mg/cm^2 (with a range of precision between +/- 0.00 mg/cm^2 and 0.33 mg/cm^2).

Thirteen (13) of the readings collected from the targeted paint coatings were found to contain lead within the analyzing instrument's limit of detection.

Summary and Conclusion

Based on the coatings sampled, the data suggests that the paint on the corrugated metal walls, the paint on some structural metal beams, the gray paint present and the yellow paint present in the building are the targeted coatings which contain some minor amount of lead. Considering the low levels of lead detected (<0.10 mg/cm^2) and previous air sampling conducted during the procedures utilized on a MARSSIMS survey, the OSHA permissible exposure limit would not be expected to be met or exceeded with these paint coatings. It is recommended that workers who will be performing those aspects of the Building 51 MARSSIMS survey which involve disturbing paint coatings have Lead Awareness Training, wear gloves while performing the work, and wash hands and face following the work. Personal air sampling should be accomplished for these workers so as to establish a current exposure assessment.

P.O. Box 3000 Miamisburg, Ohio 45343-3000 (513) 865-4020

The lead paint screen accomplished during the course of this survey was not a complete or formal lead-based paint inspection or risk assessment. Only those specific paint coatings referenced on the Niton lead reading log were actually screened.

Enclosed with this summary report is a copy of the readout generated by the Niton XRF for the lead readings accomplished.

Please call with any questions or concerns.

Respectfully,

Christopher Ahlquist
Industrial Hygienist

Serial #XL309-U1059NR1794 Site: Mound Building 51 Date: 3/20/2002

No	XLNo	Site	Insp	Flr	Side	Room	Strc	Sub	Feat	Cnd	Clr	Note	Ssec	Date/Time	Cycle	DI	Res	Pbl ± Prec	Pbk ± Prec	Pbc ± Prec
1	1	51	CAA			Shutter Cal 1							42.8	3/20/2002 10:41:49	1 of 1	0.0	...	NA	NA	NA
2	2	51	CAA			Calibration							30.4	3/20/2002 10:46:57	1 of 1	1.0	POS	1.14 ± 0.10	0.31 ± 0.51	1.14 ± 0.10
3	3	51	CAA			Calibration							42.7	3/20/2002 10:48:16	1 of 1	2.5	POS	1.58 ± 0.18	0.56 ± 0.44	1.58 ± 0.18
4	4	51	CAA			Shutter Cal 1							42.9	3/20/2002 14:07:39	1 of 1	0.0	...	NA	NA	NA
5	5	51	CAA	Basement		3	Wall	Metal			Creme	SU1J-N1	36.6	3/20/2002 14:09:12	1 of 1	1.0	NEG	0.00 ± 0.00	-0.04 ± 0.54	0.00 ± 0.00
6	6	51	CAA	Basement		3	Wall	Metal			Creme	SU1J-P3	39.3	3/20/2002 14:12:01	1 of 1	1.0	NEG	0.00 ± 0.00	-0.72 ± 0.51	0.00 ± 0.00
7	7	51	CAA	Basement		1	Wall beam	Metal			Creme	SU1J-B10	46.8	3/20/2002 14:15:13	1 of 1	1.5	NEG	0.07 ± 0.03	-0.63 ± 0.47	0.07 ± 0.03
8	8	51	CAA	Basement		1	Wall beam	Metal			Creme	SU1J-B10	23.8	3/20/2002 14:17:15	1 of 1	1.7	NEG	0.07 ± 0.05	-0.32 ± 0.67	0.07 ± 0.05
9	9	51	CAA	Basement		2B	Wall	Metal			Creme	SU1J-I4	23.2	3/20/2002 14:19:20	1 of 1	1.0	NEG	0.00 ± 0.00	-0.38 ± 0.67	0.00 ± 0.00
10	10	51	CAA	Basement		2B	Floor	Concrete			Creme	SU1J-I3	26.3	3/20/2002 14:21:11	1 of 1	1.0	NEG	0.00 ± 0.00	0.03 ± 0.64	0.00 ± 0.00
11	11	51	CAA	Basement		2B	Beam	Metal			Creme	SU1J-H1	73.2	3/20/2002 14:23:01	1 of 1	1.0	NEG	0.00 ± 0.02	-0.83 ± 0.37	0.00 ± 0.02
12	12	51	CAA	Basement		2B	Wall	Drywall			Creme	SU1J-F9	21.7	3/20/2002 14:26:43	1 of 1	1.0	NEG	0.00 ± 0.00	-0.15 ± 0.50	0.00 ± 0.00
13	13	51	CAA	Basement		2B	Wall	Metal			Creme	SU1J-F18	21.9	3/20/2002 14:28:18	1 of 1	1.0	NEG	0.00 ± 0.00	-1.10 ± 0.70	0.00 ± 0.00
14	14	51	CAA	Basement		2B	Wall	Metal			Creme	SU1J-F1	31.0	3/20/2002 14:33:10	1 of 1	1.0	NEG	0.00 ± 0.00	-0.93 ± 0.55	0.00 ± 0.00
15	15	51	CAA	Basement		2A	Wall	Metal			Creme	SU1J-L3	91.9	3/20/2002 14:34:48	1 of 1	1.5	NEG	0.00 ± 0.00	-0.57 ± 0.32	0.00 ± 0.00
16	16	51	CAA	Basement		2A	Wall	Metal			Creme	SU1J-J3	21.8	3/20/2002 14:39:21	1 of 1	1.0	NEG	0.00 ± 0.00	-1.33 ± 0.72	0.00 ± 0.00
17	17	51	CAA	Basement		2A	Wall	Metal			Creme	SU1J-L1	24.2	3/20/2002 14:40:29	1 of 1	1.1	NEG	0.00 ± 0.00	-0.44 ± 0.66	0.00 ± 0.00
18	18	51	CAA	Basement		2A	Unknown	Unknown			Unknown	Unknown	21.0	3/20/2002 14:41:34	1 of 1	1.0	NEG	0.00 ± 0.00	-0.09 ± 0.71	0.00 ± 0.00
19	19	51	CAA	Basement		2A	Corrugated wall	Metal			Creme	SU1J-J11	63.1	3/20/2002 14:42:43	1 of 1	10.0	NEG	0.06 ± 0.19	-0.61 ± 0.29	0.06 ± 0.19
20	20	51	CAA	Basement		2A	Corrugated wall	Metal			Creme	SU1J-J11	45.5	3/20/2002 14:45:20	1 of 1	10.0	NEG	0.06 ± 0.22	-0.30 ± 0.34	0.06 ± 0.22
21	21	51	CAA	Basement		2A	Wall	Drywall			Creme	SU1J-J7	33.4	3/20/2002 14:49:43	1 of 1	1.0	NEG	0.00 ± 0.00	-0.11 ± 0.44	0.00 ± 0.00
22	22	51	CAA	1st		102	Wall	Drywall			Creme	SU1-F13	84.1	3/20/2002 14:52:18	1 of 1	1.0	NEG	0.00 ± 0.01	0.01 ± 0.25	0.00 ± 0.01
23	23	51	CAA	1st		102	Ceiling	Metal			Creme	SU1-F26	21.7	3/20/2002 14:56:01	1 of 1	1.6	NEG	0.00 ± 0.01	-0.74 ± 0.72	0.00 ± 0.01
24	24	51	CAA	1st		102	Wall	Drywall			Creme	SU1-F22	30.8	3/20/2002 14:57:29	1 of 1	1.0	NEG	0.00 ± 0.00	-0.11 ± 0.41	0.00 ± 0.00
25	25	51	CAA	1st		102	Wall	Metal			Creme	SU1-N5	40.9	3/20/2002 15:00:48	1 of 1	1.0	NEG	0.00 ± 0.02	-0.41 ± 0.48	0.00 ± 0.02
26	26	51	CAA	1st		102	Ceiling	Metal			Creme	SU1-R10	21.8	3/20/2002 15:03:57	1 of 1	1.0	NEG	0.00 ± 0.00	-0.47 ± 0.68	0.00 ± 0.00
27	27	51	CAA	1st		102	Corrugated wall	Metal			Creme	SU1-R3	51.1	3/20/2002 15:05:19	1 of 1	10.0	NEG	0.08 ± 0.33	-0.45 ± 0.32	0.08 ± 0.33
28	28	51	CAA	1st			Wall	Metal			Creme	SU1-F17	21.5	3/20/2002 15:09:24	1 of 1	1.1	NEG	0.00 ± 0.00	-0.82 ± 0.70	0.00 ± 0.00
29	29	51	CAA	1st			Beam	Metal			Grey	SU1-C6	40.3	3/20/2002 15:10:30	1 of 1	3.5	NEG	0.10 ± 0.15	-0.69 ± 0.37	0.10 ± 0.15
30	30	51	CAA	1st			Wall	Metal			Grey	SU1-C10	37.2	3/20/2002 15:15:06	1 of 1	2.5	NEG	0.05 ± 0.12	-0.08 ± 0.37	0.05 ± 0.12
31	31	51	CAA	1st			Wall	Metal			Creme	SU1-F13	45.8	3/20/2002 15:17:22	1 of 1	1.0	NEG	0.00 ± 0.00	-0.86 ± 0.47	0.00 ± 0.00
32	32	51	CAA	1st			Wall	Metal			Creme	SU1-G12	46.5	3/20/2002 15:20:35	1 of 1	1.0	NEG	0.00 ± 0.00	-0.74 ± 0.45	0.00 ± 0.00
33	33	51	CAA	1st			Wall	Metal			Grey	SU1-C14	28.3	3/20/2002 15:22:34	1 of 1	2.6	NEG	0.05 ± 0.19	-0.24 ± 0.42	0.05 ± 0.19
34	34	51	CAA	1st			Wall	Drywall			Creme	SU1-G8	35.3	3/20/2002 15:27:29	1 of 1	1.0	NEG	0.00 ± 0.03	-0.05 ± 0.38	0.00 ± 0.03
35	35	51	CAA	1st		109	Wall	Drywall			Creme	SU3J-921	26.1	3/20/2002 15:29:06	1 of 1	1.0	NEG	0.00 ± 0.00	-0.28 ± 0.45	0.00 ± 0.00
36	36	51	CAA	1st		109	Wall	Drywall			Creme	SU3J-903	23.8	3/20/2002 15:30:08	1 of 1	1.0	NEG	0.00 ± 0.00	-0.52 ± 0.49	0.00 ± 0.00
37	37	51	CAA	1st		109	Wall	Metal			Creme	SU3J-912	42.0	3/20/2002 15:31:09	1 of 1	1.0	NEG	0.02 ± 0.01	-0.52 ± 0.49	0.02 ± 0.01
38	38	51	CAA	1st			Wall	Metal			Grey	SU3J-548	50.5	3/20/2002 15:40:27	1 of 1	1.0	NEG	0.02 ± 0.01	-0.69 ± 0.41	0.02 ± 0.01
39	39	51	CAA	1st		101	Wall	Concrete	Block		Yellow	SU3J-844	51.8	3/20/2002 15:42:52	1 of 1	6.6	NEG	0.02 ± 0.05	0.04 ± 0.39	0.02 ± 0.05
40	40	51	CAA	1st			Wall	Metal			Grey	SU3J-467	35.0	3/20/2002 15:45:03	1 of 1	1.0	NEG	0.03 ± 0.02	-0.52 ± 0.52	0.03 ± 0.02
41	41	51	CAA	1st		Near front door	Wall	Metal			Grey	SU3J-558	32.5	3/20/2002 15:49:24	1 of 1	1.3	NEG	0.03 ± 0.02	-0.86 ± 0.51	0.03 ± 0.02

Appendix K

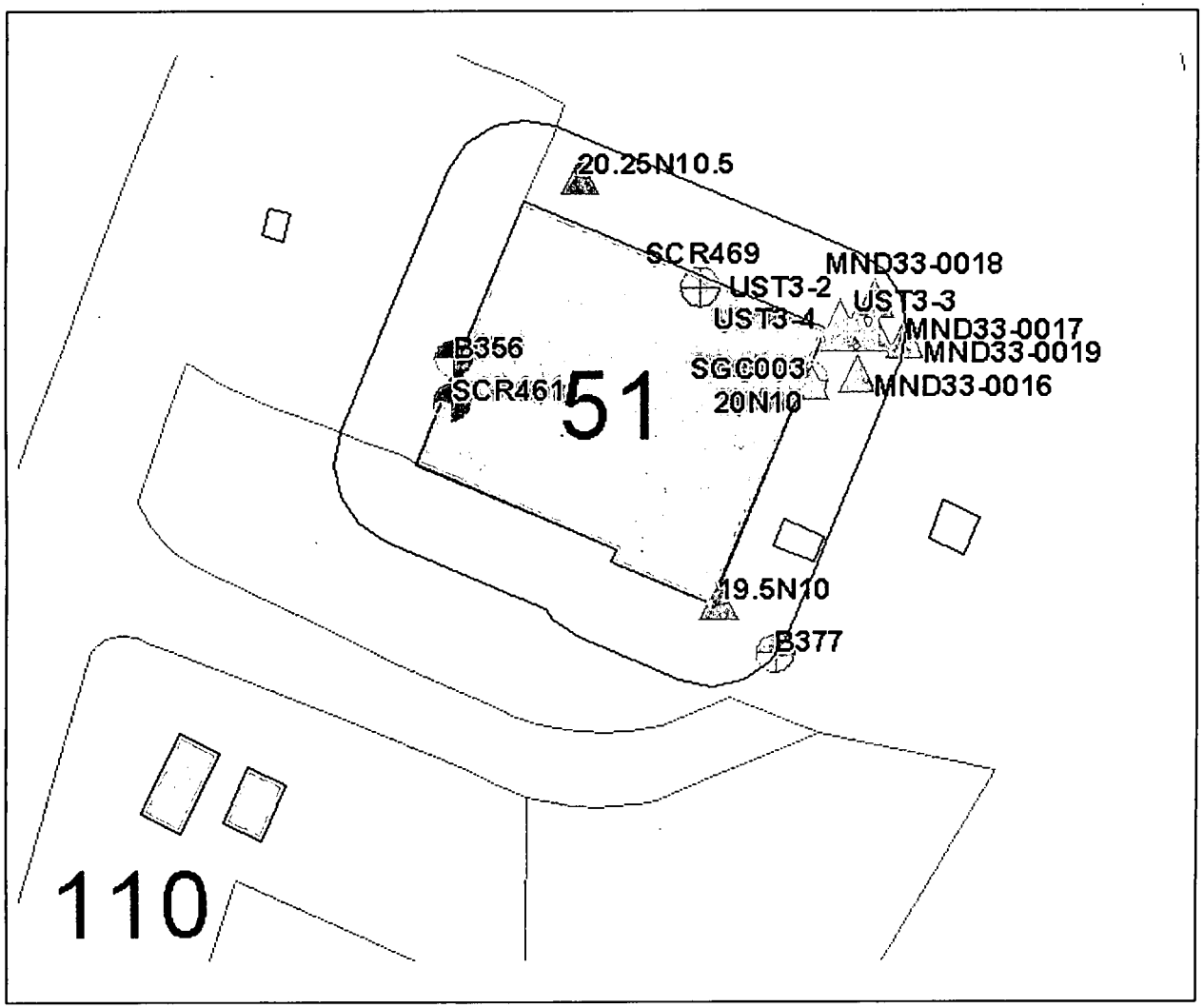
Chemical Information

All chemicals have been removed from the building.

Appendix L

Soil Sampling, Vicinity

Bldg. 51 Sample Locations within 15 feet



Sample Detect
Sample Detect Outline
Sample Nondetect Outline
Building Label
Text Bldg ID
Building Outline
Building Outline
Building
Color Fill
Roads
Paved Drives/Parking
Unpaved Drives/Parking

N
W E
S

25 0 25 50 75 100 Feet

03/19/02

Building 51 Detects

Location_nam	Sample_id	Collection	Value_name	Measured_val	Value_	Detection	Chem_	Start	End_	La	D	Project	Medi	Comments
MND33-0017	0017-0001	19910828	2-Butanone	70.0000	UG/KG	10.0000	ORVO	1.0	2.0			MND33	Soil	
MND33-0018	0018-0001	19910828	2-Butanone	59.0000	UG/KG	10.0000	ORVO	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	2-Butanone	53.0000	UG/KG	10.0000	ORVO	0.0	1.0			MND33	Soil	
MND33-0019	0019-1001	19910828	2-Butanone	31.0000	UG/KG	10.0000	ORVO	1.0	2.0			MND33	Soil	
MND33-0016	0016-0001	19910828	2-Butanone	18.0000	UG/KG	10.0000	ORVO	1.0	2.0			MND33	Soil	
SGC003	NAC003	19960213	Acenaphthene	63.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Acenaphthene	47.0000	UG/KG	330.0000	ORSV	1.0	2.0	J	J	MND33	Soil	
MND33-0018	0018-0001	19910828	Acetone	250.0000	UG/KG	10.0000	ORVO	1.0	2.0	B		MND33	Soil	
MND33-0017	0017-0001	19910828	Acetone	240.0000	UG/KG	10.0000	ORVO	1.0	2.0	B		MND33	Soil	
MND33-0019	0019-0001	19910828	Acetone	200.0000	UG/KG	10.0000	ORVO	0.0	1.0	B		MND33	Soil	
SGC003	NAC003	19960213	Acetone	23.0000	UG/KG		ORVO	0.0	2.0	B		SGCSP	Soil	
B356	020103	19991201	Actinium-227	1.2330	PCI/G	0.5063	RAD	15.0	20.0			PRS 66	Soil	
B356	020104	19991201	Actinium-227	0.9035	PCI/G	0.6061	RAD	20.0	25.0			PRS 66	Soil	
MND33-0018	0018-0001	19910828	Aluminum	22200.0000	MG/KG	0.0600	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0017	0017-0001	19910828	Aluminum	19900.0000	MG/KG	0.0600	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-0001	19910828	Aluminum	19300.0000	MG/KG	0.0600	INORG	0.0	1.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-1001	19910828	Aluminum	18800.0000	MG/KG	0.0600	INORG	1.0	2.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Aluminum	18100.0000	MG/KG	0.0600	INORG	1.0	2.0			MND33	Soil	
SGC003	NAC003	19960213	Aluminum	1910.0000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
SGC003	NAC003	19960213	Anthracene	66.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Arsenic	13.2000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0018	0018-0001	19910828	Arsenic	11.3000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0016	0016-0001	19910828	Arsenic	10.5000	MG/KG	0.0020	INORG	1.0	2.0		J	MND33	Soil	2-Exceeds background value.
MND33-0019	0019-1001	19910828	Arsenic	7.9700	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	Arsenic	7.5300	MG/KG	0.0020	INORG	0.0	1.0			MND33	Soil	
UST3-4	58507	19901204	Arsenic	5.8000	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Arsenic	2.9000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
UST3-3	58506	19901204	Arsenic	2.4000	MG/KG		INORG					USTBM	Soil	
UST3-2	58505	19901204	Arsenic	2.3000	MG/KG		INORG					USTBM	Soil	
MND33-0018	0018-0001	19910828	Barium	89.5000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-1001	19910828	Barium	86.0000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	Barium	82.2000	MG/KG	0.0020	INORG	0.0	1.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Barium	72.2000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0017	0017-0001	19910828	Barium	70.8000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
UST3-4	58507	19901204	Barium	38.0000	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Barium	23.7000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
UST3-2	58505	19901204	Barium	16.0000	MG/KG		INORG					USTBM	Soil	
UST3-3	58506	19901204	Barium	8.5000	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Benzo(a)anthracene	180.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
SGC003	NAC003	19960213	Benzo(a)pyrene	180.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
SGC003	NAC003	19960213	Benzo(b)fluoranthene	180.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
SGC003	NAC003	19960213	Benzo(g,h,i)perylene	110.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
SGC003	NAC003	19960213	Benzo(k)fluoranthene	160.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Beryllium	0.9400	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0019	0019-1001	19910828	Beryllium	0.9200	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0016	0016-0001	19910828	Beryllium	0.9000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0018	0018-0001	19910828	Beryllium	0.9000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0019	0019-0001	19910828	Beryllium	0.8700	MG/KG	0.0020	INORG	0.0	1.0			MND33	Soil	1-Exceeds soil 10-6 GV.

Location_nam	Sample_id	Collection	Value_name	Measured_val	Value_	Detection	Chem_	Start	End_	La	D	Project	Medi	Comments
SGC003	NAC003	19960213	Beryllium	0.1200	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
SGC003	NAC003	19960213	Bis(2-ethylhexyl)phthalat	63.0000	UG/KG		ORSV	0.0	2.0	JB		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Butyl Benzyl Phthalate	48.0000	UG/KG	330.0000	ORSV	1.0	2.0	J	J	MND33	Soil	
UST3-2	58505	19901204	Cadmium	0.6100	MG/KG		INORG					USTBM	Soil	
UST3-3	58506	19901204	Cadmium	0.4400	MG/KG		INORG					USTBM	Soil	
UST3-4	58507	19901204	Cadmium	0.4100	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Cadmium	0.1900	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
SGC003	NAC003	19960213	Calcium	95500.0000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
MND33-0019	0019-1001	19910828	Calcium	56300.0000	MG/KG	0.0200	INORG	1.0	2.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Calcium	53700.0000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
MND33-0019	0019-0001	19910828	Calcium	26200.0000	MG/KG	0.0200	INORG	0.0	1.0		J	MND33	Soil	
MND33-0017	0017-0001	19910828	Calcium	15300.0000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
MND33-0018	0018-0001	19910828	Calcium	11300.0000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
SGC003	NAC003	19960213	Carbazole	62.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Carbon Disulfide	4.0000	UG/KG	5.0000	ORVO	1.0	2.0	J	J	MND33	Soil	
B356	020103	19991201	Cesium-137	0.2144	PCI/G	0.1115	RAD	15.0	20.0			PRS 66	Soil	
B356	020104	19991201	Cesium-137	0.1422	PCI/G	0.0789	RAD	20.0	25.0			PRS 66	Soil	
B377	020109	19991201	Cesium-137	0.0453	PCI/G	0.0429	RAD	5.0	10.0			PRS 66	Soil	
B377	020110	19991201	Cesium-137	0.0452	PCI/G	0.0331	RAD	10.0	15.0			PRS 66	Soil	
UST3-2	58505	19901204	Chloroform	21.0000	UG/KG		ORVOA					USTBM	Soil	
UST3-3	58506	19901204	Chloroform	21.0000	UG/KG		ORVOA					USTBM	Soil	
MND33-0018	0018-0001	19910828	Chromium	23.7000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0017	0017-0001	19910828	Chromium	21.8000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-1001	19910828	Chromium	20.4000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
UST3-4	58507	19901204	Chromium	20.0000	MG/KG		INORG					USTBM	Soil	
MND33-0019	0019-0001	19910828	Chromium	19.9000	MG/KG	0.0100	INORG	0.0	1.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Chromium	18.5000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	
UST3-2	58505	19901204	Chromium	4.8000	MG/KG		INORG					USTBM	Soil	
UST3-3	58506	19901204	Chromium	3.8000	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Chromium	3.8000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
SGC003	NAC003	19960213	Chrysene	220.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0018	0018-0001	19910828	Cobalt	13.4000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	Cobalt	12.8000	MG/KG	0.0100	INORG	0.0	1.0			MND33	Soil	
MND33-0017	0017-0001	19910828	Cobalt	12.8000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-1001	19910828	Cobalt	11.2000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Cobalt	10.6000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	
SGC003	NAC003	19960213	Cobalt	2.3000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
MND33-0019	0019-1001	19910828	Copper	38.2000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	2-Exceeds background value.
MND33-0019	0019-0001	19910828	Copper	28.0000	MG/KG	0.0100	INORG	0.0	1.0		J	MND33	Soil	2-Exceeds background value.
MND33-0017	0017-0001	19910828	Copper	26.0000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
MND33-0016	0016-0001	19910828	Copper	20.4000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
MND33-0018	0018-0001	19910828	Copper	20.2000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
SGC003	NAC003	19960213	Copper	9.9000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
MND33-0016	0016-0001	19910828	Delta-BHC	14.0000	UG/KG	7.7000	ORPPB	1.0	2.0		J	MND33	Soil	
SGC003	NAC003	19960213	Dibenz(a,h)anthracene	40.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
SGC003	NAC003	19960213	Dibenzofuran	23.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
SGC003	NAC003	19960213	Dichloromethane (Methy	13.0000	UG/KG		ORVO	0.0	2.0	B		SGCSP	Soil	
SGC003	NAC003	19960213	Fluoranthene	480.0000	UG/KG		ORSV	0.0	2.0			SGCSP	Soil	
MND33-0017	0017-0001	19910828	Fluoranthene	160.0000	UG/KG	330.0000	ORSV	1.0	2.0	J	J	MND33	Soil	
SGC003	NAC003	19960213	Fluorene	42.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	

Location_nam	Sample_id	Collection	Value_name	Measured_val	Value_	Detection	Chem_	Start	End_	La	D	Project	Medi	Comments
SGC003	NAC003	19960213	Indeno(1,2,3-cd)pyrene	120.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Iron	34100.0000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
MND33-0018	0018-0001	19910828	Iron	33200.0000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
MND33-0019	0019-0001	19910828	Iron	30000.0000	MG/KG	0.0100	INORG	0.0	1.0		J	MND33	Soil	
MND33-0019	0019-1001	19910828	Iron	26500.0000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
MND33-0016	0016-0001	19910828	Iron	25100.0000	MG/KG	0.0100	INORG	1.0	2.0		J	MND33	Soil	
UST3-4	58507	19901204	Iron	21000.0000	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Iron	5680.0000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
UST3-2	58505	19901204	Iron	5000.0000	MG/KG		INORG					USTBM	Soil	
UST3-3	58506	19901204	Iron	4800.0000	MG/KG		INORG					USTBM	Soil	
MND33-0016	0016-0001	19910828	Lead	23.9000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-1001	19910828	Lead	21.9000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0018	0018-0001	19910828	Lead	20.3000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0017	0017-0001	19910828	Lead	20.2000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	Lead	19.6000	MG/KG	0.0020	INORG	0.0	1.0			MND33	Soil	
SGC003	NAC003	19960213	Lead	11.2000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
UST3-4	58507	19901204	Lead	6.4000	MG/KG		INORG					USTBM	Soil	
UST3-2	58505	19901204	Lead	6.1000	MG/KG		INORG					USTBM	Soil	
UST3-3	58506	19901204	Lead	2.3000	MG/KG		INORG					USTBM	Soil	
B377	020108	19991201	Lead-210	0.8573	PCI/G	0.7110	RAD	0.0	5.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
SGC003	NAC003	19960213	Lithium	6.2000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
SGC003	NAC003	19960213	Magnesium	27900.0000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
MND33-0019	0019-1001	19910828	Magnesium	18000.0000	MG/KG	0.0500	INORG	1.0	2.0		J	MND33	Soil	
MND33-0016	0016-0001	19910828	Magnesium	16000.0000	MG/KG	0.0500	INORG	1.0	2.0		J	MND33	Soil	
MND33-0019	0019-0001	19910828	Magnesium	8940.0000	MG/KG	0.0500	INORG	0.0	1.0		J	MND33	Soil	
MND33-0017	0017-0001	19910828	Magnesium	8600.0000	MG/KG	0.0500	INORG	1.0	2.0		J	MND33	Soil	
MND33-0018	0018-0001	19910828	Magnesium	5560.0000	MG/KG	0.0500	INORG	1.0	2.0		J	MND33	Soil	
MND33-0018	0018-0001	19910828	Manganese	1030.0000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	Manganese	867.0000	MG/KG	0.0020	INORG	0.0	1.0			MND33	Soil	
MND33-0017	0017-0001	19910828	Manganese	681.0000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Manganese	519.0000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-1001	19910828	Manganese	482.0000	MG/KG	0.0020	INORG	1.0	2.0			MND33	Soil	
UST3-4	58507	19901204	Manganese	470.0000	MG/KG		INORG					USTBM	Soil	
SGC003	NAC003	19960213	Manganese	270.0000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
UST3-3	58506	19901204	Manganese	120.0000	MG/KG		INORG					USTBM	Soil	
UST3-2	58505	19901204	Manganese	100.0000	MG/KG		INORG					USTBM	Soil	
MND33-0019	0019-1001	19910828	Mercury	0.3800	MG/KG	0.0600	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-0001	19910828	Mercury	0.2800	MG/KG	0.0600	INORG	0.0	1.0			MND33	Soil	2-Exceeds background value.
UST3-2	58505	19901204	Mercury	0.1700	MG/KG		INORG					USTBM	Soil	2-Exceeds background value.
SGC003	NAC003	19960213	Mercury	0.1300	MG/KG		INORG	0.0	2.0			SGCSP	Soil	2-Exceeds background value.
UST3-3	58506	19901204	Mercury	0.0600	MG/KG		INORG					USTBM	Soil	2-Exceeds background value.
UST3-4	58507	19901204	Mercury	0.0300	MG/KG		INORG					USTBM	Soil	2-Exceeds background value.
SGC003	NAC003	19960213	Molybdenum	0.7700	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
SGC003	NAC003	19960213	Naphthalene	24.0000	UG/KG		ORSV	0.0	2.0	J		SGCSP	Soil	
MND33-0017	0017-0001	19910828	Nickel	28.2000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
MND33-0019	0019-1001	19910828	Nickel	23.0000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
MND33-0016	0016-0001	19910828	Nickel	22.1000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
MND33-0018	0018-0001	19910828	Nickel	22.0000	MG/KG	0.0200	INORG	1.0	2.0		J	MND33	Soil	
MND33-0019	0019-0001	19910828	Nickel	20.3000	MG/KG	0.0200	INORG	0.0	1.0		J	MND33	Soil	
SGC003	NAC003	19960213	Nickel	6.4000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	

Location_nam	Sample_id	Collection	Value_name	Measured_val	Value_	Detection	Chem_	Start	End_	La	D	Project	Medi	Comments
SGC003	NAC003	19960213	Nitrate/Nitrite	1.2000	MG/KG	0.2300	ANION	0.0	2.0			SGCSP	Soil	
SGC003	NAC003	19960213	Percent Solids	88.5000	%	0.1000	GENER	0.0	2.0			SGCSP	Soil	
UST3-3	58506	19901204	pH	8.8000	STD UNIT		GENERA					USTBM	Soil	
UST3-2	58505	19901204	pH	8.7000	STD UNIT		GENERA					USTBM	Soil	
UST3-4	58507	19901204	pH	7.7000	STD UNIT		GENERA					USTBM	Soil	
SGC003	NAC003	19960213	Phenanthrene	380.0000	UG/KG		ORSV	0.0	2.0			SGCSP	Soil	
SCR461	88042252	19880422	Plutonium-238	27.0000	PCI/G		RAD	5.0	5.0			SCRDA	Soil	1-Exceeds soil 10-6 GV. 2-Exceeds background value.
SGC003	NAC003	19960213	Plutonium-238	0.8330	PCI/G	0.0025	RAD	0.0	2.0			SGCSP	Soil	2-Exceeds background value.
SGC003	NAC003	19960213	Plutonium-239/240	0.0252	PCI/G	0.0025	RAD	0.0	2.0			SGCSP	Soil	
UST3-2	58505	19901204	Polychlorinated Biphenyl	0.1200	MG/KG		ORPPB					USTBM	Soil	
MND33-0019	0019-1001	19910828	Potassium	4660.0000	MG/KG	0.1000	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0018	0018-0001	19910828	Potassium	4640.0000	MG/KG	0.1000	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0017	0017-0001	19910828	Potassium	4260.0000	MG/KG	0.1000	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0016	0016-0001	19910828	Potassium	4210.0000	MG/KG	0.1000	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-0001	19910828	Potassium	4080.0000	MG/KG	0.1000	INORG	0.0	1.0			MND33	Soil	2-Exceeds background value.
SGC003	NAC003	19960213	Potassium	346.0000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
SGC003	NAC003	19960213	Potassium-40	6.5300	PCI/G	0.0000	RAD	0.0	2.0			SGCSP	Soil	1-Exceeds soil 10-6 GV.
SGC003	NAC003	19960213	Pyrene	440.0000	UG/KG		ORSV	0.0	2.0			SGCSP	Soil	
MND33-0017	0017-0001	19910828	Pyrene	86.0000	UG/KG	330.0000	ORSV	1.0	2.0	J	J	MND33	Soil	
MND33-0019	0019-1001	19910828	Pyrene	44.0000	UG/KG	330.0000	ORSV	1.0	2.0	J	J	MND33	Soil	
B356	020107	19991201	Radium-226	1.9700	PCI/G	0.9240	RAD	35.0	40.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020103	19991201	Radium-226	1.8960	PCI/G	1.7620	RAD	15.0	20.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B377	020110	19991201	Radium-226	1.6760	PCI/G	0.5875	RAD	10.0	15.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020105	19991201	Radium-226	1.4200	PCI/G	0.9834	RAD	25.0	30.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020101	19991201	Radium-226	1.4000	PCI/G	0.6208	RAD	5.0	10.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B377	020111	19991201	Radium-226	1.3040	PCI/G	0.7565	RAD	15.0	20.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020106	19991201	Radium-226	1.2760	PCI/G	0.9291	RAD	30.0	35.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B377	020108	19991201	Radium-226	1.2460	PCI/G	0.8887	RAD	0.0	5.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B377	020109	19991201	Radium-226	1.2170	PCI/G	1.0140	RAD	5.0	10.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020100	19991201	Radium-226	0.8646	PCI/G	0.5113	RAD	0.0	5.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
SGC003	NAC003	19960213	Radium-226	0.5080	PCI/G	0.3890	RAD	0.0	2.0			SGCSP	Soil	1-Exceeds soil 10-6 GV.
MND33-0017	0017-0001	19910828	Selenium	1.9000	MG/KG	0.0020	INORG	1.0	2.0		J	MND33	Soil	2-Exceeds background value.
MND33-0016	0016-0001	19910828	Selenium	1.7000	MG/KG	0.0020	INORG	1.0	2.0		J	MND33	Soil	2-Exceeds background value.
MND33-0019	0019-1001	19910828	Selenium	1.7000	MG/KG	0.0020	INORG	1.0	2.0		J	MND33	Soil	2-Exceeds background value.
MND33-0018	0018-0001	19910828	Selenium	1.6000	MG/KG	0.0020	INORG	1.0	2.0		J	MND33	Soil	2-Exceeds background value.
MND33-0019	0019-0001	19910828	Selenium	1.4000	MG/KG	0.0020	INORG	0.0	1.0		J	MND33	Soil	2-Exceeds background value.
UST3-3	58506	19901204	Selenium	0.4000	MG/KG		INORG					USTBM	Soil	2-Exceeds background value.
SGC003	NAC003	19960213	Silver	0.2400	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
MND33-0016	0016-0001	19910828	Sodium	310.0000	MG/KG	0.0200	INORG	1.0	2.0	B		MND33	Soil	2-Exceeds background value.
MND33-0019	0019-1001	19910828	Sodium	261.0000	MG/KG	0.1000	INORG	1.0	2.0	B		MND33	Soil	2-Exceeds background value.
MND33-0018	0018-0001	19910828	Sodium	237.0000	MG/KG	0.1000	INORG	1.0	2.0	B		MND33	Soil	
MND33-0019	0019-0001	19910828	Sodium	232.0000	MG/KG	0.1000	INORG	0.0	1.0	B		MND33	Soil	
MND33-0017	0017-0001	19910828	Sodium	161.0000	MG/KG	0.1000	INORG	1.0	2.0	B		MND33	Soil	
SGC003	NAC003	19960213	Sodium	150.0000	MG/KG		INORG	0.0	2.0	B		SGCSP	Soil	
UST3-3	58506	19901204	Sodium	140.0000	MG/KG		INORG					USTBM	Soil	
UST3-2	58505	19901204	Sodium	95.0000	MG/KG		INORG					USTBM	Soil	
MND33-0017	0017-0001	19910828	Thallium	0.4200	MG/KG	0.0020	INORG	1.0	2.0	B		MND33	Soil	
MND33-0019	0019-1001	19910828	Thallium	0.2700	MG/KG	0.0020	INORG	1.0	2.0	B		MND33	Soil	
MND33-0016	0016-0001	19910828	Thallium	0.2600	MG/KG	0.0020	INORG	1.0	2.0	B		MND33	Soil	
MND33-0018	0018-0001	19910828	Thallium	0.2400	MG/KG	0.0020	INORG	1.0	2.0	B		MND33	Soil	

Location_nam	Sample_id	Collection	Value_name	Measured_val	Value_	Detection	Chem_	Start	End_	La	D	Project	Medi	Comments
MND33-0019	0019-0001	19910828	Thallium	0.2100	MG/KG	0.0020	INORG	0.0	1.0	B		MND33	Soil	
SGC003	NAC003	19960213	Thorium-228	0.3700	PCI/G	0.0298	RAD	0.0	2.0			SGCSP	Soil	1-Exceeds soil 10-6 GV.
SGC003	NAC003	19960213	Thorium-230	0.6210	PCI/G	0.0195	RAD	0.0	2.0			SGCSP	Soil	1-Exceeds soil 10-6 GV.
B356	020103	19991201	Thorium-232	11.7600	PCI/G	0.2977	RAD	15.0	20.0			PRS 66	Soil	1-Exceeds soil 10-6 GV. 2-Exceeds bckgnd value. 3-Exceeds screening level.
B356	020104	19991201	Thorium-232	7.8260	PCI/G	0.2039	RAD	20.0	25.0			PRS 66	Soil	1-Exceeds soil 10-6 GV. 2-Exceeds bckgnd value. 3-Exceeds screening level.
B356	020105	19991201	Thorium-232	2.8370	PCI/G	0.2275	RAD	25.0	30.0			PRS 66	Soil	1-Exceeds soil 10-6 GV. 2-Exceeds bckgnd value. 3-Exceeds screening level.
SCR461	88042252	19880422	Thorium-232	2.0000	PCI/G		RAD	5.0	5.0			SCRDA	Soil	1-Exceeds soil 10-6 GV. 2-Exceeds bckgnd value. 3-Exceeds screening level.
B377	020111	19991201	Thorium-232	0.7870	PCI/G	0.2243	RAD	15.0	20.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020106	19991201	Thorium-232	0.6537	PCI/G	0.1674	RAD	30.0	35.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020107	19991201	Thorium-232	0.5846	PCI/G	0.2184	RAD	35.0	40.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020102	19991201	Thorium-232	0.5732	PCI/G	0.1668	RAD	10.0	15.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B377	020110	19991201	Thorium-232	0.5636	PCI/G	0.1473	RAD	10.0	15.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B377	020109	19991201	Thorium-232	0.4055	PCI/G	0.1700	RAD	5.0	10.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
SGC003	NAC003	19960213	Thorium-232	0.3150	PCI/G	0.0195	RAD	0.0	2.0			SGCSP	Soil	1-Exceeds soil 10-6 GV.
B377	020108	19991201	Thorium-232	0.2693	PCI/G	0.1840	RAD	0.0	5.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020101	19991201	Thorium-232	0.1430	PCI/G	0.1361	RAD	5.0	10.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
B356	020100	19991201	Thorium-232	0.1409	PCI/G	0.1071	RAD	0.0	5.0			PRS 66	Soil	1-Exceeds soil 10-6 GV.
SGC003	NAC003	19960213	Toluene	1.0000	UG/KG		ORVO	0.0	2.0	J		SGCSP	Soil	
20N10	20N10	19940912	Total Aromatic Hydrocar	354934.0000	IC		GENER	0.0	1.5			2680	Soil	
20.25N10.5	20.25N10.	19940927	Total Aromatic Hydrocar	48524.0000	IC		GENER	0.0	1.5			2680	Soil	
19.5N10	19.5N10	19940927	Total Aromatic Hydrocar	36255.0000	IC		GENER	0.0	1.5			2680	Soil	
20N10	20N10	19940912	Total C5 TO C11 Petrol	646966.0000	IC		GENER	0.0	1.5			2680	Soil	
20.25N10.5	20.25N10.	19940927	Total C5 TO C11 Petrol	79645.0000	IC		GENER	0.0	1.5			2680	Soil	
19.5N10	19.5N10	19940927	Total C5 TO C11 Petrol	65413.0000	IC		GENER	0.0	1.5			2680	Soil	
UST3-3	58506	19901204	Total C5 TO C11 Petrol	560.0000	MG/KG		GENERA					USTBM	Soil	
UST3-2	58505	19901204	Total C5 TO C11 Petrol	75.0000	MG/KG		GENERA					USTBM	Soil	
UST3-4	58507	19901204	Total C5 TO C11 Petrol	35.0000	MG/KG		GENERA					USTBM	Soil	
20N10	20N10	19940912	Total Halogenated Hydr	453690.0000	IC		GENER	0.0	1.5			2680	Soil	
20.25N10.5	20.25N10.	19940927	Total Halogenated Hydr	27164.0000	IC		GENER	0.0	1.5			2680	Soil	
19.5N10	19.5N10	19940927	Total Halogenated Hydr	14484.0000	IC		GENER	0.0	1.5			2680	Soil	
20N10	20N10	19940912	Total Semivolatile Hydro	689.0000	IC		GENER	0.0	1.5			2680	Soil	
UST3-3	58506	19901204	Trichloroethene	210.0000	UG/KG		ORVOA					USTBM	Soil	
UST3-2	58505	19901204	Trichloroethene	53.0000	UG/KG		ORVOA					USTBM	Soil	
SGC003	NAC003	19960213	Uranium-234	0.4190	PCI/G	0.0291	RAD	0.0	2.0			SGCSP	Soil	
SGC003	NAC003	19960213	Uranium-235	0.0400	PCI/G	0.0267	RAD	0.0	2.0			SGCSP	Soil	
SGC003	NAC003	19960213	Uranium-238	0.5120	PCI/G	0.0312	RAD	0.0	2.0			SGCSP	Soil	
MND33-0018	0018-0001	19910828	Vanadium	38.3000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0017	0017-0001	19910828	Vanadium	33.4000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0016	0016-0001	19910828	Vanadium	28.5000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-0001	19910828	Vanadium	27.9000	MG/KG	0.0100	INORG	0.0	1.0			MND33	Soil	2-Exceeds background value.
MND33-0019	0019-1001	19910828	Vanadium	27.2000	MG/KG	0.0100	INORG	1.0	2.0			MND33	Soil	2-Exceeds background value.
SGC003	NAC003	19960213	Vanadium	4.7000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	
MND33-0019	0019-1001	19910828	Zinc	112.0000	MG/KG	0.0050	INORG	1.0	2.0			MND33	Soil	
MND33-0019	0019-0001	19910828	Zinc	94.1000	MG/KG	0.0050	INORG	0.0	1.0			MND33	Soil	
MND33-0017	0017-0001	19910828	Zinc	91.4000	MG/KG	0.0050	INORG	1.0	2.0			MND33	Soil	
MND33-0016	0016-0001	19910828	Zinc	74.2000	MG/KG	0.0050	INORG	1.0	2.0			MND33	Soil	
MND33-0018	0018-0001	19910828	Zinc	73.8000	MG/KG	0.0050	INORG	1.0	2.0			MND33	Soil	
SGC003	NAC003	19960213	Zinc	72.4000	MG/KG		INORG	0.0	2.0			SGCSP	Soil	

Building 51 Non-Detects

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
UST3-2	58505	19901204	1,1,1-Trichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,1,1-Trichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,1,1-Trichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,1,1-Trichloroethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,1,1-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,1,1-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,1,1-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,1,1-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,1,1-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,1,2,2-Tetrachloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,1,2,2-Tetrachloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,1,2,2-Tetrachloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,1,2,2-Tetrachloroethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,1,2,2-Tetrachloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,1,2,2-Tetrachloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,1,2,2-Tetrachloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,1,2,2-Tetrachloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,1,2,2-Tetrachloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,1,2-Trichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,1,2-Trichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,1,2-Trichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,1,2-Trichloroethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,1,2-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,1,2-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,1,2-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,1,2-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,1,2-Trichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,1-Dichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,1-Dichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,1-Dichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,1-Dichloroethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,1-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,1-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,1-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,1-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
SGC003	NAC003	19960213	1,1-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,1-Dichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,1-Dichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,1-Dichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,1-Dichloroethene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,1-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,1-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,1-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,1-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,1-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,2,3-Trichloropropane	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,2,3-Trichloropropane	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,2,3-Trichloropropane	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,2,4-Trichlorobenzene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	1,2,4-Trichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	1,2,4-Trichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	1,2,4-Trichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	1,2,4-Trichlorobenzene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	1,2,4-Trichlorobenzene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	1,2-Dichlorobenzene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	1,2-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	1,2-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	1,2-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	1,2-Dichlorobenzene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	1,2-Dichlorobenzene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,2-Dichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,2-Dichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,2-Dichloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,2-Dichloroethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,2-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,2-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,2-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,2-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,2-Dichloroethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	1,2-Dichloroethene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,2-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,2-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-1001	19910828	1,2-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,2-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,2-Dichloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,2-Dichloropropane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,2-Dichloropropane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,2-Dichloropropane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,2-Dichloropropane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,2-Dichloropropane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,2-Dichloropropane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,2-Dichloropropane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,2-Dichloropropane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,2-Dichloropropane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,2-trans-Dichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,2-trans-Dichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,2-trans-Dichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
SGC003	NAC003	19960213	1,3,5-Trinitrobenzene	241.0000	UG/KG	241.0000	OREX	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,3-cis-Dichloropropene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,3-cis-Dichloropropene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,3-cis-Dichloropropene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,3-cis-Dichloropropene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,3-cis-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	1,3-cis-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,3-cis-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,3-cis-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,3-cis-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	1,3-Dichlorobenzene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	1,3-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	1,3-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	1,3-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	1,3-Dichlorobenzene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	1,3-Dichlorobenzene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	1,3-Dinitrobenzene	239.0000	UG/KG	239.0000	OREX	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	1,3-trans-Dichloropropene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	1,3-trans-Dichloropropene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	1,3-trans-Dichloropropene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	1,3-trans-Dichloropropene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	1,3-trans-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0018	0018-0001	19910828	1,3-trans-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	1,3-trans-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	1,3-trans-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	1,3-trans-Dichloropropene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	1,4-Dichlorobenzene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	1,4-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	1,4-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	1,4-Dichlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	1,4-Dichlorobenzene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	1,4-Dichlorobenzene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,2'-oxybis(1-chloropropane)	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2,2'-oxybis(1-chloropropane)	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2,2'-oxybis(1-chloropropane)	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2,2'-oxybis(1-chloropropane)	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2,2'-oxybis(1-chloropropane)	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2,2'-oxybis(1-chloropropane)	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,4,5-Trichlorophenol	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2,4,5-Trichlorophenol	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2,4,5-Trichlorophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2,4,5-Trichlorophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2,4,5-Trichlorophenol	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2,4,5-Trichlorophenol	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,4,6-Trichlorophenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2,4,6-Trichlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2,4,6-Trichlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2,4,6-Trichlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2,4,6-Trichlorophenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2,4,6-Trichlorophenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	2,4,6-Trinitrotoluene	241.0000	UG/KG	241.0000	OREX	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,4-Dichlorophenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2,4-Dichlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2,4-Dichlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2,4-Dichlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2,4-Dichlorophenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2,4-Dichlorophenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,4-Dimethylphenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2,4-Dimethylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0018	0018-0001	19910828	2,4-Dimethylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2,4-Dimethylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2,4-Dimethylphenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2,4-Dimethylphenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,4-Dinitrophenol	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2,4-Dinitrophenol	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2,4-Dinitrophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2,4-Dinitrophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2,4-Dinitrophenol	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2,4-Dinitrophenol	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,4-Dinitrotoluene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	2,4-Dinitrotoluene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	2,4-Dinitrotoluene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	2,4-Dinitrotoluene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	2,4-Dinitrotoluene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	2,4-Dinitrotoluene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	2,4-Dinitrotoluene	239.0000	UG/KG	239.0000	OREX	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2,6-Dinitrotoluene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	2,6-Dinitrotoluene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	2,6-Dinitrotoluene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	2,6-Dinitrotoluene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	2,6-Dinitrotoluene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	2,6-Dinitrotoluene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	2,6-Dinitrotoluene	249.0000	UG/KG	249.0000	OREX	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	2-Butanone	1000.0000	UG/KG	1000.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	2-Butanone	1000.0000	UG/KG	1000.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	2-Butanone	1000.0000	UG/KG	1000.0000	ORVOA			U		USTBMI	Soil
SGC003	NAC003	19960213	2-Butanone	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	2-Chloroethylvinylether	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	2-Chloroethylvinylether	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	2-Chloroethylvinylether	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	2-Chloronaphthalene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2-Chloronaphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2-Chloronaphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2-Chloronaphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2-Chloronaphthalene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2-Chloronaphthalene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0017	0017-0001	19910828	2-Chlorophenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2-Chlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2-Chlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2-Chlorophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2-Chlorophenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2-Chlorophenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	2-Hexanone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	2-Hexanone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	2-Hexanone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	2-Hexanone	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	2-Hexanone	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	2-Hexanone	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	2-Hexanone	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	2-Hexanone	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	2-Hexanone	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2-Methylnaphthalene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2-Methylnaphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2-Methylnaphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2-Methylnaphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2-Methylnaphthalene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2-Methylnaphthalene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2-Methylphenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2-Methylphenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2-Methylphenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2-Nitroaniline	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2-Nitroaniline	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2-Nitroaniline	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2-Nitroaniline	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	2-Nitroaniline	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2-Nitroaniline	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	2-Nitrophenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	2-Nitrophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	2-Nitrophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	2-Nitrophenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	2-Nitrophenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	2-Nitrophenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	3,3'-Dichlorobenzidine	900.0000	UG/KG	900.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	3,3'-Dichlorobenzidine	850.0000	UG/KG	850.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	3,3'-Dichlorobenzidine	840.0000	UG/KG	840.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	3,3'-Dichlorobenzidine	840.0000	UG/KG	840.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	3,3'-Dichlorobenzidine	800.0000	UG/KG	800.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	3,3'-Dichlorobenzidine	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	3-Nitroaniline	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	3-Nitroaniline	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	3-Nitroaniline	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	3-Nitroaniline	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	3-Nitroaniline	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	3-Nitroaniline	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4,4'-DDD	10.0000	UG/KG	10.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4,4'-DDD	9.5000	UG/KG	9.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4,4'-DDD	9.4000	UG/KG	9.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4,4'-DDD	9.4000	UG/KG	9.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4,4'-DDD	9.0000	UG/KG	9.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4,4'-DDD	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	4,4'-DDE	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4,4'-DDE	3.7000	UG/KG	3.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4,4'-DDE	3.5000	UG/KG	3.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4,4'-DDE	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4,4'-DDE	3.4000	UG/KG	3.4000	ORPP	1.0	2.0		UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4,4'-DDE	3.3000	UG/KG	3.3000	ORPP	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	4,4'-DDT	11.0000	UG/KG	11.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4,4'-DDT	10.0000	UG/KG	10.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4,4'-DDT	10.0000	UG/KG	10.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4,4'-DDT	10.0000	UG/KG	10.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4,4'-DDT	9.7000	UG/KG	9.7000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4,4'-DDT	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4,6-Dinitro-o-Cresol	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4,6-Dinitro-o-Cresol	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4,6-Dinitro-o-Cresol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4,6-Dinitro-o-Cresol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4,6-Dinitro-o-Cresol	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
SGC003	NAC003	19960213	4,6-Dinitro-o-Cresol	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	4-Amino-2,6-Dinitrotoluene	478.0000	UG/KG	478.0000	OREX	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Bromophenyl-phenyl Ether	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Bromophenyl-phenyl Ether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4-Bromophenyl-phenyl Ether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Bromophenyl-phenyl Ether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Bromophenyl-phenyl Ether	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Bromophenyl-phenyl Ether	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Chloro-3-Methylphenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Chloro-3-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4-Chloro-3-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Chloro-3-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Chloro-3-Methylphenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Chloro-3-Methylphenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Chloroaniline	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Chloroaniline	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4-Chloroaniline	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Chloroaniline	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Chloroaniline	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Chloroaniline	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Chlorophenyl-Phenylether	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Chlorophenyl-Phenylether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4-Chlorophenyl-Phenylether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Chlorophenyl-Phenylether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Chlorophenyl-Phenylether	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Chlorophenyl-Phenylether	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	4-Methyl-2-pentanone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	4-Methyl-2-pentanone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	4-Methyl-2-pentanone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	4-Methyl-2-pentanone	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	4-Methyl-2-pentanone	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	4-Methyl-2-pentanone	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	4-Methyl-2-pentanone	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	4-Methyl-2-pentanone	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	4-Methyl-2-pentanone	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Methylphenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0018	0018-0001	19910828	4-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Methylphenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Methylphenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Methylphenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Nitroaniline	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4-Nitroaniline	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Nitroaniline	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Nitroaniline	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Nitroaniline	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Nitroaniline	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	4-Nitrophenol	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	4-Nitrophenol	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	4-Nitrophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	4-Nitrophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	4-Nitrophenol	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	4-Nitrophenol	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0016	0016-0001	19910828	Acenaphthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Acenaphthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Acenaphthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Acenaphthene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Acenaphthylene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Acenaphthylene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Acenaphthylene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Acenaphthylene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Acenaphthylene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Acenaphthylene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Acetone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Acetone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Acetone	500.0000	UG/KG	500.0000	ORVOA			U		USTBMI	Soil
MND33-0019	0019-1001	19910828	Acetone	140.0000	UG/KG	10.0000	ORVO	1.0	2.0	B	U	MND33	Soil
MND33-0016	0016-0001	19910828	Acetone	69.0000	UG/KG	10.0000	ORVO	1.0	2.0	B	U	MND33	Soil
UST3-2	58505	19901204	Acrolein	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Acrolein	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Acrolein	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-2	58505	19901204	Acrylonitrile	1000.0000	UG/KG	1000.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Acrylonitrile	1000.0000	UG/KG	1000.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Acrylonitrile	1000.0000	UG/KG	1000.0000	ORVOA			U		USTBMI	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
B356	020107	19991201	Actinium-227	0.3956	PCI/G	0.3956	RAD	35.0	40.0	U		PRS 66_	Soil
B356	020102	19991201	Actinium-227	0.3729	PCI/G	0.3729	RAD	10.0	15.0	U		PRS 66_	Soil
B377	020109	19991201	Actinium-227	0.3450	PCI/G	0.3450	RAD	5.0	10.0	U		PRS 66_	Soil
B356	020105	19991201	Actinium-227	0.3316	PCI/G	0.3316	RAD	25.0	30.0	U		PRS 66_	Soil
B356	020106	19991201	Actinium-227	0.3124	PCI/G	0.3124	RAD	30.0	35.0	U		PRS 66_	Soil
B377	020111	19991201	Actinium-227	0.2673	PCI/G	0.2673	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020101	19991201	Actinium-227	0.2577	PCI/G	0.2577	RAD	5.0	10.0	U		PRS 66_	Soil
B377	020108	19991201	Actinium-227	0.2537	PCI/G	0.2537	RAD	0.0	5.0	U		PRS 66_	Soil
B377	020110	19991201	Actinium-227	0.1975	PCI/G	0.1975	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020100	19991201	Actinium-227	0.1925	PCI/G	0.1925	RAD	0.0	5.0	U		PRS 66_	Soil
MND33-0017	0017-0001	19910828	Aldrin	3.7000	UG/KG	3.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aldrin	3.5000	UG/KG	3.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aldrin	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aldrin	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aldrin	3.3000	UG/KG	3.3000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aldrin	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Alpha Chlordane	13.0000	UG/KG	13.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Alpha Chlordane	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Alpha Chlordane	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Alpha Chlordane	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Alpha Chlordane	11.0000	UG/KG	11.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Alpha Chlordane	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Alpha-BHC	2.7000	UG/KG	2.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Alpha-BHC	2.6000	UG/KG	2.6000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Alpha-BHC	2.6000	UG/KG	2.6000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Alpha-BHC	2.5000	UG/KG	2.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Alpha-BHC	2.4000	UG/KG	2.4000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Alpha-BHC	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Americium-241	0.4372	PCI/G	0.4370	RAD	0.0	2.0	U		SGCSP	Soil
B356	020104	19991201	Americium-241	0.2116	PCI/G	0.2116	RAD	20.0	25.0	U		PRS 66_	Soil
B356	020103	19991201	Americium-241	0.1563	PCI/G	0.1563	RAD	15.0	20.0	U		PRS 66_	Soil
B377	020109	19991201	Americium-241	0.1092	PCI/G	0.1092	RAD	5.0	10.0	U		PRS 66_	Soil
B356	020107	19991201	Americium-241	0.1039	PCI/G	0.1039	RAD	35.0	40.0	U		PRS 66_	Soil
B356	020106	19991201	Americium-241	0.0963	PCI/G	0.0963	RAD	30.0	35.0	U		PRS 66_	Soil
B356	020105	19991201	Americium-241	0.0946	PCI/G	0.0946	RAD	25.0	30.0	U		PRS 66_	Soil
B377	020108	19991201	Americium-241	0.0905	PCI/G	0.0905	RAD	0.0	5.0	U		PRS 66_	Soil
B356	020102	19991201	Americium-241	0.0895	PCI/G	0.0895	RAD	10.0	15.0	U		PRS 66_	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
B377	020111	19991201	Americium-241	0.0699	PCI/G	0.0699	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020101	19991201	Americium-241	0.0557	PCI/G	0.0557	RAD	5.0	10.0	U		PRS 66_	Soil
B377	020110	19991201	Americium-241	0.0537	PCI/G	0.0537	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020100	19991201	Americium-241	0.0438	PCI/G	0.0438	RAD	0.0	5.0	U		PRS 66_	Soil
MND33-0017	0017-0001	19910828	Anthracene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Anthracene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Antimony	6.1000	MG/KG	0.0300	INORG	1.0	2.0	B	U	MND33	Soil
MND33-0017	0017-0001	19910828	Antimony	5.9000	MG/KG	5.9000	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Antimony	5.7000	MG/KG	5.7000	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Antimony	5.7000	MG/KG	5.7000	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Antimony	5.4000	MG/KG	5.4000	INORG	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Antimony	0.2000	MG/KG		INORG	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1016	110.0000	UG/KG	110.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1016	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1016	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1016	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aroclor-1016	97.0000	UG/KG	97.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1016	38.0000	UG/KG	38.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1221	110.0000	UG/KG	110.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1221	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1221	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1221	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aroclor-1221	97.0000	UG/KG	97.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1221	75.0000	UG/KG	75.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1232	110.0000	UG/KG	110.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1232	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1232	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1232	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aroclor-1232	97.0000	UG/KG	97.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1232	38.0000	UG/KG	38.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1242	110.0000	UG/KG	110.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1242	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1242	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1242	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Aroclor-1242	97.0000	UG/KG	97.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1242	38.0000	UG/KG	38.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1248	110.0000	UG/KG	110.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1248	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1248	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1248	100.0000	UG/KG	100.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aroclor-1248	97.0000	UG/KG	97.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1248	38.0000	UG/KG	38.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1254	220.0000	UG/KG	220.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1254	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1254	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1254	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aroclor-1254	190.0000	UG/KG	190.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1254	38.0000	UG/KG	38.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Aroclor-1260	220.0000	UG/KG	220.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Aroclor-1260	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Aroclor-1260	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Aroclor-1260	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Aroclor-1260	190.0000	UG/KG	190.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Aroclor-1260	38.0000	UG/KG	38.0000	ORPP	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Benzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Benzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Benzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Benzene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Benzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Benzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Benzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Benzene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Benzene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Benzo(a)anthracene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzo(a)anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzo(a)anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Benzo(a)anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzo(a)anthracene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Benzo(a)pyrene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzo(a)pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzo(a)pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-1001	19910828	Benzo(a)pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzo(a)pyrene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Benzo(b)fluoranthene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzo(b)fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzo(b)fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Benzo(b)fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzo(b)fluoranthene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Benzo(g,h,i)perylene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzo(g,h,i)perylene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzo(g,h,i)perylene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Benzo(g,h,i)perylene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzo(g,h,i)perylene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Benzo(k)fluoranthene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzo(k)fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzo(k)fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Benzo(k)fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzo(k)fluoranthene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Benzoic Acid	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzoic Acid	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzoic Acid	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Benzoic Acid	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzoic Acid	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Benzyl Alcohol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Benzyl Alcohol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Benzyl Alcohol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Benzyl Alcohol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Benzyl Alcohol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Beta-BHC	5.5000	UG/KG	5.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Beta-BHC	5.1000	UG/KG	5.1000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Beta-BHC	5.1000	UG/KG	5.1000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Beta-BHC	5.1000	UG/KG	5.1000	ORPP	1.0	2.0		UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Beta-BHC	4.9000	UG/KG	4.9000	ORPP	0.0	1.0		UJ	MND33	Soil
SGC003	NAC003	19960213	Beta-BHC	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Bis(2-chloroethoxy)methane	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Bis(2-chloroethoxy)methane	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Bis(2-chloroethoxy)methane	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Bis(2-chloroethoxy)methane	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Bis(2-chloroethoxy)methane	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Bis(2-chloroethoxy)methane	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Bis(2-chloroethyl)ether	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Bis(2-chloroethyl)ether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Bis(2-chloroethyl)ether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Bis(2-chloroethyl)ether	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Bis(2-chloroethyl)ether	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Bis(2-chloroethyl)ether	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Bis(2-ethylhexyl)phthalate	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Bis(2-ethylhexyl)phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Bis(2-ethylhexyl)phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Bis(2-ethylhexyl)phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Bis(2-ethylhexyl)phthalate	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Bismuth	1.1000	MG/KG		INORG	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Bismuth-207	0.0857	PCI/G	0.0857	RAD	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Bismuth-210	0.1100	PCI/G	0.1100	RAD	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Bromodichloromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Bromodichloromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Bromodichloromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Bromodichloromethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Bromodichloromethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Bromodichloromethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Bromodichloromethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Bromodichloromethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Bromodichloromethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Bromoform	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Bromoform	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Bromoform	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Bromoform	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Bromoform	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Bromoform	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Bromoform	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Bromoform	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Bromoform	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Bromomethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Bromomethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Bromomethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0017	0017-0001	19910828	Bromomethane	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Bromomethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Bromomethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Bromomethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Bromomethane	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Bromomethane	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0016	0016-0001	19910828	Butyl Benzyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Butyl Benzyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Butyl Benzyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Butyl Benzyl Phthalate	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Butyl Benzyl Phthalate	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Cadmium	0.5200	MG/KG	0.5200	INORG	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Cadmium	0.5100	MG/KG	0.5100	INORG	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Cadmium	0.5100	MG/KG	0.5000	INORG	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Cadmium	0.5000	MG/KG	0.5000	INORG	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Cadmium	0.4800	MG/KG	0.4800	INORG	0.0	1.0	U	UJ	MND33	Soil
UST3-2	58505	19901204	Carbon Disulfide	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Carbon Disulfide	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Carbon Disulfide	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0016	0016-0001	19910828	Carbon Disulfide	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Carbon Disulfide	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Carbon Disulfide	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Carbon Disulfide	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Carbon Disulfide	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Carbon Tetrachloride	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Carbon Tetrachloride	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Carbon Tetrachloride	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Carbon Tetrachloride	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Carbon Tetrachloride	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Carbon Tetrachloride	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Carbon Tetrachloride	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Carbon Tetrachloride	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Carbon Tetrachloride	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Cesium-137	0.1261	PCI/G	0.1260	RAD	0.0	2.0	U		SGCSP	Soil
B356	020105	19991201	Cesium-137	0.0732	PCI/G	0.0732	RAD	25.0	30.0	U		PRS 66_	Soil
B356	020107	19991201	Cesium-137	0.0596	PCI/G	0.0596	RAD	35.0	40.0	U		PRS 66_	Soil
B356	020102	19991201	Cesium-137	0.0507	PCI/G	0.0507	RAD	10.0	15.0	U		PRS 66_	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
B356	020106	19991201	Cesium-137	0.0453	PCI/G	0.0453	RAD	30.0	35.0	U		PRS 66_	Soil
B377	020111	19991201	Cesium-137	0.0450	PCI/G	0.0450	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020100	19991201	Cesium-137	0.0399	PCI/G	0.0399	RAD	0.0	5.0	U		PRS 66_	Soil
B377	020108	19991201	Cesium-137	0.0376	PCI/G	0.0376	RAD	0.0	5.0	U		PRS 66_	Soil
B356	020101	19991201	Cesium-137	0.0293	PCI/G	0.0293	RAD	5.0	10.0	U		PRS 66_	Soil
UST3-2	58505	19901204	Chlorobenzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Chlorobenzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Chlorobenzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Chlorobenzene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Chlorobenzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Chlorobenzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Chlorobenzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Chlorobenzene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Chlorobenzene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Chloroethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Chloroethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Chloroethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Chloroethane	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Chloroethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Chloroethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Chloroethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Chloroethane	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Chloroethane	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-4	58507	19901204	Chloroform	10.0000	UG/KG	10.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Chloroform	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Chloroform	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Chloroform	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Chloroform	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Chloroform	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Chloroform	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Chloromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Chloromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Chloromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Chloromethane	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Chloromethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Chloromethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Chloromethane	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Chloromethane	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Chloromethane	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Chrysene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Chrysene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Chrysene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Chrysene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Chrysene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Cobalt-60	0.1230	PCI/G	0.1230	RAD	0.0	2.0	U		SGCSP	Soil
B356	020103	19991201	Cobalt-60	0.1019	PCI/G	0.1019	RAD	15.0	20.0	U		PRS 66_	Soil
B377	020111	19991201	Cobalt-60	0.0802	PCI/G	0.0802	RAD	15.0	20.0	U		PRS 66_	Soil
B377	020109	19991201	Cobalt-60	0.0713	PCI/G	0.0713	RAD	5.0	10.0	U		PRS 66_	Soil
B356	020105	19991201	Cobalt-60	0.0707	PCI/G	0.0707	RAD	25.0	30.0	U		PRS 66_	Soil
B356	020102	19991201	Cobalt-60	0.0640	PCI/G	0.0640	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020107	19991201	Cobalt-60	0.0589	PCI/G	0.0589	RAD	35.0	40.0	U		PRS 66_	Soil
B377	020110	19991201	Cobalt-60	0.0467	PCI/G	0.0467	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020106	19991201	Cobalt-60	0.0467	PCI/G	0.0467	RAD	30.0	35.0	U		PRS 66_	Soil
B356	020100	19991201	Cobalt-60	0.0443	PCI/G	0.0443	RAD	0.0	5.0	U		PRS 66_	Soil
B356	020104	19991201	Cobalt-60	0.0442	PCI/G	0.0442	RAD	20.0	25.0	U		PRS 66_	Soil
B377	020108	19991201	Cobalt-60	0.0403	PCI/G	0.0403	RAD	0.0	5.0	U		PRS 66_	Soil
B356	020101	19991201	Cobalt-60	0.0247	PCI/G	0.0247	RAD	5.0	10.0	U		PRS 66_	Soil
MND33-0017	0017-0001	19910828	Cyanide	0.6800	MG/KG	0.6800	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Cyanide	0.6400	MG/KG	0.6400	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Cyanide	0.6400	MG/KG	0.6400	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Cyanide	0.6300	MG/KG	0.6300	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Cyanide	0.6100	MG/KG	0.6100	INORG	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Cyanide	0.5600	MG/KG		INORG	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Cyanide	0.1000	MG/KG	0.1000	INORG			U		USTBMI	Soil
UST3-3	58506	19901204	Cyanide	0.1000	MG/KG	0.1000	INORG			U		USTBMI	Soil
UST3-4	58507	19901204	Cyanide	0.1000	MG/KG	0.1000	INORG			U		USTBMI	Soil
MND33-0019	0019-1001	19910828	Delta-BHC	8.6000	UG/KG	8.6000	ORPP	1.0	2.0		UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Delta-BHC	8.2000	UG/KG	8.2000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Delta-BHC	7.7000	UG/KG	7.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Delta-BHC	7.3000	UG/KG	7.3000	ORPP	0.0	1.0		UJ	MND33	Soil
SGC003	NAC003	19960213	Delta-BHC	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Dibenz(a,h)anthracene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Dibenz(a,h)anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Dibenz(a,h)anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-1001	19910828	Dibenz(a,h)anthracene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Dibenz(a,h)anthracene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Dibenzofuran	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Dibenzofuran	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Dibenzofuran	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Dibenzofuran	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Dibenzofuran	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
UST3-2	58505	19901204	Dibromochloromethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Dibromochloromethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Dibromochloromethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Dibromochloromethane	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Dibromochloromethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Dibromochloromethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Dibromochloromethane	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Dibromochloromethane	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Dibromochloromethane	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Dibromomethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Dibromomethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Dibromomethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-2	58505	19901204	Dichlorodifluoromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Dichlorodifluoromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Dichlorodifluoromethane	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-2	58505	19901204	Dichloromethane (Methylene Chloride)	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Dichloromethane (Methylene Chloride)	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Dichloromethane (Methylene Chloride)	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Dichloromethane (Methylene Chloride)	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Dichloromethane (Methylene Chloride)	6.0000	UG/KG	5.0000	ORVO	1.0	2.0	JB	U	MND33	Soil
MND33-0018	0018-0001	19910828	Dichloromethane (Methylene Chloride)	6.0000	UG/KG	5.0000	ORVO	1.0	2.0	JB	U	MND33	Soil
MND33-0019	0019-1001	19910828	Dichloromethane (Methylene Chloride)	6.0000	UG/KG	5.0000	ORVO	1.0	2.0	B	U	MND33	Soil
MND33-0019	0019-0001	19910828	Dichloromethane (Methylene Chloride)	6.0000	UG/KG	5.0000	ORVO	0.0	1.0	JB	U	MND33	Soil
SGC003	NAC003	19960213	Dieldrin	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Dieldrin	1.8000	UG/KG	1.8000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Dieldrin	1.7000	UG/KG	1.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Dieldrin	1.7000	UG/KG	1.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Dieldrin	1.6000	UG/KG	1.6000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Dieldrin	1.6000	UG/KG	1.6000	ORPP	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Diethyl Phthalate	450.0000	UG/KG	330.0000	ORSV	1.0	2.0	JB	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0016	0016-0001	19910828	Diethyl Phthalate	420.0000	UG/KG	330.0000	ORSV	1.0	2.0	JB	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Diethyl Phthalate	420.0000	UG/KG	330.0000	ORSV	1.0	2.0	JB	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Diethyl Phthalate	420.0000	UG/KG	330.0000	ORSV	1.0	2.0	JB	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Diethyl Phthalate	400.0000	UG/KG	330.0000	ORSV	0.0	1.0	JB	UJ	MND33	Soil
SGC003	NAC003	19960213	Diethyl Phthalate	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Dimethyl Phthalate	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Dimethyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Dimethyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Dimethyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Dimethyl Phthalate	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Dimethyl Phthalate	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Di-n-butyl Phthalate	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Di-n-butyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Di-n-butyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Di-n-butyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Di-n-butyl Phthalate	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Di-n-butyl Phthalate	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Di-n-octyl Phthalate	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Di-n-octyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Di-n-octyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Di-n-octyl Phthalate	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Di-n-octyl Phthalate	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Di-n-octyl Phthalate	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Endosulfan I	13.0000	UG/KG	13.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Endosulfan I	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Endosulfan I	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Endosulfan I	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Endosulfan I	11.0000	UG/KG	11.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Endosulfan I	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Endosulfan II	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Endosulfan II	3.7000	UG/KG	3.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Endosulfan II	3.5000	UG/KG	3.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Endosulfan II	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Endosulfan II	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Endosulfan II	3.3000	UG/KG	3.3000	ORPP	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Endosulfan Sulfate	60.0000	UG/KG	60.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Endosulfan Sulfate	57.0000	UG/KG	57.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0016	0016-0001	19910828	Endosulfan Sulfate	56.0000	UG/KG	56.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Endosulfan Sulfate	56.0000	UG/KG	56.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Endosulfan Sulfate	54.0000	UG/KG	54.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Endosulfan Sulfate	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Endrin	5.5000	UG/KG	5.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Endrin	5.1000	UG/KG	5.1000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Endrin	5.1000	UG/KG	5.1000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Endrin	5.1000	UG/KG	5.1000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Endrin	4.9000	UG/KG	4.9000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Endrin	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Endrin Aldehyde	21.0000	UG/KG	21.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Endrin Aldehyde	20.0000	UG/KG	20.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Endrin Aldehyde	20.0000	UG/KG	20.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Endrin Aldehyde	20.0000	UG/KG	20.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Endrin Aldehyde	19.0000	UG/KG	190.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Endrin Aldehyde	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Endrin Ketone	22.0000	UG/KG	22.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Endrin Ketone	21.0000	UG/KG	21.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Endrin Ketone	20.0000	UG/KG	20.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Endrin Ketone	20.0000	UG/KG	20.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Endrin Ketone	20.0000	UG/KG	19.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Endrin Ketone	3.8000	UG/KG	3.8000	ORPP	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Ethylbenzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Ethylbenzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Ethylbenzene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Ethylbenzene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Ethylbenzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Ethylbenzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Ethylbenzene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Ethylbenzene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Ethylbenzene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
MND33-0016	0016-0001	19910828	Fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Fluoranthene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Fluoranthene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Fluoranthene	69.0000	UG/KG	330.0000	ORSV	1.0	2.0	J	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Fluorene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Fluorene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0018	0018-0001	19910828	Fluorene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Fluorene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Fluorene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Gamma Chlordane	13.0000	UG/KG	13.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Gamma Chlordane	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Gamma Chlordane	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Gamma Chlordane	12.0000	UG/KG	12.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Gamma Chlordane	11.0000	UG/KG	11.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Gamma Chlordane	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Gamma-BHC (Lindane)	3.7000	UG/KG	3.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Gamma-BHC (Lindane)	3.5000	UG/KG	3.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Gamma-BHC (Lindane)	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Gamma-BHC (Lindane)	3.4000	UG/KG	3.4000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Gamma-BHC (Lindane)	3.3000	UG/KG	3.3000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Gamma-BHC (Lindane)	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Heptachlor	2.7000	UG/KG	2.7000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Heptachlor	2.6000	UG/KG	2.6000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Heptachlor	2.6000	UG/KG	2.6000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Heptachlor	2.5000	UG/KG	2.5000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Heptachlor	2.4000	UG/KG	2.4000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Heptachlor	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Heptachlor Epoxide	76.0000	UG/KG	76.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Heptachlor Epoxide	71.0000	UG/KG	71.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Heptachlor Epoxide	71.0000	UG/KG	71.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Heptachlor Epoxide	70.0000	UG/KG	70.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Heptachlor Epoxide	68.0000	UG/KG	68.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Heptachlor Epoxide	1.9000	UG/KG	1.9000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Hexachlorobenzene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Hexachlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Hexachlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Hexachlorobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Hexachlorobenzene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Hexachlorobenzene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Hexachlorobutadiene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Hexachlorobutadiene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Hexachlorobutadiene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Hexachlorobutadiene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Hexachlorobutadiene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Hexachlorobutadiene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Hexachlorocyclopentadiene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Hexachlorocyclopentadiene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Hexachlorocyclopentadiene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Hexachlorocyclopentadiene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Hexachlorocyclopentadiene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Hexachlorocyclopentadiene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Hexachloroethane	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Hexachloroethane	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Hexachloroethane	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Hexachloroethane	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Hexachloroethane	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Hexachloroethane	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	HMX	2110.0000	UG/KG	2110.0000	OREX	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Indeno(1,2,3-cd)pyrene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Indeno(1,2,3-cd)pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Indeno(1,2,3-cd)pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Indeno(1,2,3-cd)pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Indeno(1,2,3-cd)pyrene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Isophorone	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Isophorone	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Isophorone	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Isophorone	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Isophorone	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Isophorone	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
B356	020104	19991201	Lead-210	1.5510	PCI/G	1.5510	RAD	20.0	25.0	U		PRS 66_	Soil
B356	020103	19991201	Lead-210	1.1970	PCI/G	1.1970	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020107	19991201	Lead-210	1.0700	PCI/G	1.0700	RAD	35.0	40.0	U		PRS 66_	Soil
B356	020102	19991201	Lead-210	1.0030	PCI/G	1.0030	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020106	19991201	Lead-210	0.9490	PCI/G	0.9490	RAD	30.0	35.0	U		PRS 66_	Soil
B377	020109	19991201	Lead-210	0.9180	PCI/G	0.9180	RAD	5.0	10.0	U		PRS 66_	Soil
B356	020105	19991201	Lead-210	0.7361	PCI/G	0.7361	RAD	25.0	30.0	U		PRS 66_	Soil
B377	020111	19991201	Lead-210	0.5797	PCI/G	0.5797	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020101	19991201	Lead-210	0.5668	PCI/G	0.5668	RAD	5.0	10.0	U		PRS 66_	Soil
B377	020110	19991201	Lead-210	0.5038	PCI/G	0.5038	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020100	19991201	Lead-210	0.3660	PCI/G	0.3660	RAD	0.0	5.0	U		PRS 66_	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0016	0016-0001	19910828	Mercury	0.0600	MG/KG	0.0600	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0017	0017-0001	19910828	Mercury	0.0600	MG/KG	0.0600	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Mercury	0.0600	MG/KG	0.0600	INORG	1.0	2.0	U	U	MND33	Soil
MND33-0017	0017-0001	19910828	Methoxychlor	160.0000	UG/KG	160.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Methoxychlor	150.0000	UG/KG	150.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Methoxychlor	150.0000	UG/KG	150.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Methoxychlor	150.0000	UG/KG	150.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Methoxychlor	140.0000	UG/KG	140.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Methoxychlor	19.0000	UG/KG	19.0000	ORPP	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Naphthalene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Naphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Naphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Naphthalene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Naphthalene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
MND33-0017	0017-0001	19910828	Nitrobenzene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Nitrobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Nitrobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Nitrobenzene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Nitrobenzene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Nitrobenzene	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Nitrobenzene	249.0000	UG/KG	249.0000	OREX	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	N-Nitroso-di-n-propylamine	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	N-Nitroso-di-n-propylamine	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	N-Nitroso-di-n-propylamine	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	N-Nitroso-di-n-propylamine	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	N-Nitroso-di-n-propylamine	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	N-Nitroso-di-n-propylamine	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	N-Nitrosodiphenylamine	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	N-Nitrosodiphenylamine	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	N-Nitrosodiphenylamine	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	N-Nitrosodiphenylamine	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	N-Nitrosodiphenylamine	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	N-Nitrosodiphenylamine	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Pentachlorophenol	2200.0000	UG/KG	2200.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Pentachlorophenol	2100.0000	UG/KG	2100.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Pentachlorophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Pentachlorophenol	2000.0000	UG/KG	2000.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Pentachlorophenol	1900.0000	UG/KG	1900.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Pentachlorophenol	940.0000	UG/KG	940.0000	ORSV	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	PETN	957.0000	UG/KG	957.0000	OREX	0.0	2.0	U		SGCSP	Soil
MND33-0017	0017-0001	19910828	Phenanthrene	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Phenanthrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Phenanthrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Phenanthrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Phenanthrene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
UST3-2	58505	19901204	Phenol	0.1500	MG/KG	0.1500	ORSVO			U		USTBMI	Soil
UST3-3	58506	19901204	Phenol	0.1500	MG/KG	0.1500	ORSVO			U		USTBMI	Soil
UST3-4	58507	19901204	Phenol	0.1500	MG/KG	0.1500	ORSVO			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Phenol	450.0000	UG/KG	450.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Phenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Phenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Phenol	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Phenol	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Phenol	380.0000	UG/KG	380.0000	ORSV	0.0	2.0	U		SGCSP	Soil
B356	020104	19991201	Plutonium-238	43.1100	PCI/G	43.1100	RAD	20.0	25.0	U		PRS 66_	Soil
B356	020103	19991201	Plutonium-238	32.9400	PCI/G	32.9400	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020107	19991201	Plutonium-238	30.8000	PCI/G	30.8000	RAD	35.0	40.0	U		PRS 66_	Soil
B356	020102	19991201	Plutonium-238	28.0500	PCI/G	28.0500	RAD	10.0	15.0	U		PRS 66_	Soil
B377	020109	19991201	Plutonium-238	26.2200	PCI/G	26.2200	RAD	5.0	10.0	U		PRS 66_	Soil
SCR461	88042524	19880425	Plutonium-238	24.0000	PCI/G		RAD	4.0	4.0	U		SCRDAT	Soil
B356	020106	19991201	Plutonium-238	23.9300	PCI/G	23.9300	RAD	30.0	35.0	U		PRS 66_	Soil
B377	020108	19991201	Plutonium-238	21.9000	PCI/G	21.9000	RAD	0.0	5.0	U		PRS 66_	Soil
B356	020105	19991201	Plutonium-238	18.8400	PCI/G	18.8400	RAD	25.0	30.0	U		PRS 66_	Soil
B356	020101	19991201	Plutonium-238	17.4200	PCI/G	17.4200	RAD	5.0	10.0	U		PRS 66_	Soil
SCR469	88051062	19880510	Plutonium-238	16.0000	PCI/G		RAD	3.0	3.0	U		SCRDAT	Soil
B377	020111	19991201	Plutonium-238	14.6000	PCI/G	14.6000	RAD	15.0	20.0	U		PRS 66_	Soil
19.5N10	19.5N10	19940927	Plutonium-238	11.0000	PCI/G	11.0000	RAD	0.0	1.5		U	2680	Soil
B377	020110	19991201	Plutonium-238	10.4400	PCI/G	10.4400	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020100	19991201	Plutonium-238	8.2640	PCI/G	8.2640	RAD	0.0	5.0	U		PRS 66_	Soil
20.25N10.5	20.25N10.5	19940927	Plutonium-238	0.0000	PCI/G	0.0000	RAD	0.0	1.5		U	2680	Soil
20N10	20N10	19940912	Plutonium-238	0.0000	PCI/G	0.0000	RAD	0.0	1.5		U	2680	Soil
SCR469	88051059	19880509	Plutonium-238	0.0000	PCI/G		RAD	2.0	2.0	U		SCRDAT	Soil
SCR469	88051060	19880510	Plutonium-238	0.0000	PCI/G		RAD	2.0	2.0	U		SCRDAT	Soil
UST3-3	58506	19901204	Polychlorinated Biphenyls (PCBs)	0.0400	MG/KG	0.0400	ORPPB			U		USTBMI	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
UST3-4	58507	19901204	Polychlorinated Biphenyls (PCBs)	0.0400	MG/KG	0.0400	ORPPB			U		USTBMI	Soil
MND33-0016	0016-0001	19910828	Pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Pyrene	420.0000	UG/KG	420.0000	ORSV	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-0001	19910828	Pyrene	400.0000	UG/KG	400.0000	ORSV	0.0	1.0	U	UJ	MND33	Soil
B356	020104	19991201	Radium-226	2.0420	PCI/G	2.0420	RAD	20.0	25.0	U		PRS 66_	Soil
B356	020102	19991201	Radium-226	1.0990	PCI/G	1.0990	RAD	10.0	15.0	U		PRS 66_	Soil
SGC003	NAC003	19960213	RDX	957.0000	UG/KG	957.0000	OREX	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Selenium	0.4300	MG/KG		INORG	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Selenium	0.4000	MG/KG	0.4000	INORG			U		USTBMI	Soil
UST3-4	58507	19901204	Selenium	0.4000	MG/KG	0.4000	INORG			U		USTBMI	Soil
UST3-2	58505	19901204	Silver	2.0000	MG/KG	2.0000	INORG			U		USTBMI	Soil
UST3-3	58506	19901204	Silver	2.0000	MG/KG	2.0000	INORG			U		USTBMI	Soil
UST3-4	58507	19901204	Silver	2.0000	MG/KG	2.0000	INORG			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Silver	0.9400	MG/KG	0.0100	INORG	1.0	2.0	B	U	MND33	Soil
MND33-0019	0019-0001	19910828	Silver	0.8600	MG/KG	0.0100	INORG	0.0	1.0	B	U	MND33	Soil
MND33-0019	0019-1001	19910828	Silver	0.8300	MG/KG	0.0100	INORG	1.0	2.0	B	U	MND33	Soil
MND33-0016	0016-0001	19910828	Silver	0.6200	MG/KG	0.0100	INORG	1.0	2.0	B	U	MND33	Soil
MND33-0018	0018-0001	19910828	Silver	0.3800	MG/KG	0.3800	INORG	1.0	2.0	U	UJ	MND33	Soil
UST3-4	58507	19901204	Sodium	10.0000	MG/KG	10.0000	INORG			U		USTBMI	Soil
UST3-2	58505	19901204	Styrene	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Styrene	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Styrene	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Styrene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Styrene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Styrene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Styrene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Styrene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Styrene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Sulfide	1.0000	MG/KG	1.0000	ANION			U		USTBMI	Soil
UST3-3	58506	19901204	Sulfide	1.0000	MG/KG	1.0000	ANION			U		USTBMI	Soil
UST3-4	58507	19901204	Sulfide	1.0000	MG/KG	1.0000	ANION			U		USTBMI	Soil
UST3-2	58505	19901204	Tetrachloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Tetrachloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Tetrachloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Tetrachloroethene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Tetrachloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Tetrachloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-1001	19910828	Tetrachloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Tetrachloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Tetrachloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Tetryl	718.0000	UG/KG	718.0000	OREX	0.0	2.0	U		SGCSP	Soil
SGC003	NAC003	19960213	Thallium	0.2000	MG/KG		INORG	0.0	2.0	U		SGCSP	Soil
B356	020104	19991201	Thorium-230	20.8900	PCI/G	20.8900	RAD	20.0	25.0	U		PRS 66_	Soil
B356	020103	19991201	Thorium-230	16.0700	PCI/G	16.0700	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020107	19991201	Thorium-230	10.3600	PCI/G	10.3600	RAD	35.0	40.0	U		PRS 66_	Soil
B356	020106	19991201	Thorium-230	10.1800	PCI/G	10.1800	RAD	30.0	35.0	U		PRS 66_	Soil
B377	020109	19991201	Thorium-230	10.0300	PCI/G	10.0300	RAD	5.0	10.0	U		PRS 66_	Soil
B356	020102	19991201	Thorium-230	8.8530	PCI/G	8.8530	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020105	19991201	Thorium-230	8.7230	PCI/G	8.7230	RAD	25.0	30.0	U		PRS 66_	Soil
B377	020108	19991201	Thorium-230	8.0700	PCI/G	8.0700	RAD	0.0	5.0	U		PRS 66_	Soil
B377	020111	19991201	Thorium-230	6.4040	PCI/G	6.4040	RAD	15.0	20.0	U		PRS 66_	Soil
B356	020101	19991201	Thorium-230	5.7850	PCI/G	5.7850	RAD	5.0	10.0	U		PRS 66_	Soil
B377	020110	19991201	Thorium-230	5.1000	PCI/G	5.1000	RAD	10.0	15.0	U		PRS 66_	Soil
B356	020100	19991201	Thorium-230	3.7220	PCI/G	3.7220	RAD	0.0	5.0	U		PRS 66_	Soil
SCR461	88042524	19880425	Thorium-232	1.8000	PCI/G		RAD	4.0	4.0	U		SCRDAT	Soil
SCR469	88051062	19880510	Thorium-232	1.6000	PCI/G		RAD	3.0	3.0	U		SCRDAT	Soil
SCR469	88051060	19880510	Thorium-232	1.2000	PCI/G		RAD	2.0	2.0	U		SCRDAT	Soil
19.5N10	19.5N10	19940927	Thorium-232	0.9000	PCI/G	0.9000	RAD	0.0	1.5		U	2680	Soil
SCR469	88051059	19880509	Thorium-232	0.7000	PCI/G		RAD	2.0	2.0	U		SCRDAT	Soil
20N10	20N10	19940912	Thorium-232	0.6000	PCI/G	0.6000	RAD	0.0	1.5		U	2680	Soil
20.25N10.5	20.25N10.5	19940927	Thorium-232	0.2000	PCI/G	0.2000	RAD	0.0	1.5		U	2680	Soil
SGC003	NAC003	19960213	Tin	0.8400	MG/KG		INORG	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Toluene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Toluene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Toluene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Toluene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Toluene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Toluene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Toluene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Toluene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
MND33-0017	0017-0001	19910828	Toxaphene	220.0000	UG/KG	220.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0018	0018-0001	19910828	Toxaphene	210.0000	UG/KG	210.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0016	0016-0001	19910828	Toxaphene	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil
MND33-0019	0019-1001	19910828	Toxaphene	200.0000	UG/KG	200.0000	ORPP	1.0	2.0	U	UJ	MND33	Soil

Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Toxaphene	200.0000	UG/KG	200.0000	ORPP	0.0	1.0	U	UJ	MND33	Soil
SGC003	NAC003	19960213	Toxaphene	190.0000	UG/KG	190.0000	ORPP	0.0	2.0	U		SGCSP	Soil
UST3-4	58507	19901204	Trichloroethene	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Trichloroethene	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Trichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Trichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Trichloroethene	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Trichloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Trichloroethene	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Trichlorofluoromethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Trichlorofluoromethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Trichlorofluoromethane	25.0000	UG/KG	25.0000	ORVOA			U		USTBMI	Soil
UST3-2	58505	19901204	Vinyl Acetate	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Vinyl Acetate	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Vinyl Acetate	100.0000	UG/KG	100.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Vinyl Acetate	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Vinyl Acetate	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Vinyl Acetate	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Vinyl Acetate	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Vinyl Acetate	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Vinyl Acetate	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Vinyl Chloride	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Vinyl Chloride	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Vinyl Chloride	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Vinyl Chloride	14.0000	UG/KG	14.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Vinyl Chloride	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Vinyl Chloride	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Vinyl Chloride	13.0000	UG/KG	13.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-0001	19910828	Vinyl Chloride	12.0000	UG/KG	12.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Vinyl Chloride	12.0000	UG/KG	12.0000	ORVO	0.0	2.0	U		SGCSP	Soil
UST3-2	58505	19901204	Xylenes, Total	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-3	58506	19901204	Xylenes, Total	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
UST3-4	58507	19901204	Xylenes, Total	50.0000	UG/KG	50.0000	ORVOA			U		USTBMI	Soil
MND33-0017	0017-0001	19910828	Xylenes, Total	7.0000	UG/KG	7.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0016	0016-0001	19910828	Xylenes, Total	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0018	0018-0001	19910828	Xylenes, Total	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil
MND33-0019	0019-1001	19910828	Xylenes, Total	6.0000	UG/KG	6.0000	ORVO	1.0	2.0	U	U	MND33	Soil

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Location_nam	Sample_id	Collection_	Value_name	Measured_	Value_	Detection_li	Chem_	Start	End	Lab	Dat	Project_c	Med
MND33-0019	0019-0001	19910828	Xylenes, Total	6.0000	UG/KG	6.0000	ORVO	0.0	1.0	U	U	MND33	Soil
SGC003	NAC003	19960213	Xylenes, Total	6.0000	UG/KG	6.0000	ORVO	0.0	2.0	U		SGCSP	Soil

LABORATORY DATA QUALIFIERS (LABQUAL)

The following qualifiers will be applied to the organic analysis results by the laboratory in accordance with CLP SOW direction:

ORGANICS

U	Indicates compound was analyzed for but not detected. The associated sample quantitation limit will be the CRQL, corrected for dilution and for percent moisture.
J	Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) assuming a 1:1 response, 2) when the qualitative data indicated the presence of a compound that meets the volatile, semivolatile, and pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where identification is based on a mass spectral library search.
P	Used for pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns.
C	Applies to pesticide results where the identification has been confirmed by GC/MS.
B	Used when the analyte is found in the associated blank as well as in the sample. This flag must be used for a TIC as well as for a positively identified target compound.
E	Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
D	Identifies all compounds identified in an analysis at a secondary dilution factor.
A	Indicates that a TIC is a suspected aldol-condensation product.

INORGANICS

B	Indicates that the reported value was obtained from a reading that was less than the CRDL but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates that the analyte was analyzed for but not detected.
E	Indicates the reported value is estimated because of the presence of interferences.
M	Duplicate injection precision was not met.
N	Spiked sample recovery not within control limits.
S	Reported value was determined by the Method of Standard Additions (MSA).
W	Post-digestion spike for Furnace AA analysis is out of control limits, while sample absorbency is less than 50% of spike absorbency.
*	Duplicate analysis not within control limits.
+	Correlation coefficient for the MSA is less than 0.995.

DATA QUALIFIER CODES (DATAQUAL)

ORGANICS AND INORGANICS

U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	The data are unusable (compound may or may not be present). Resampling and reanalysis is necessary for verification.
N	Presumptive evidence of the presence of the material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

SUB-QUALIFIER CODES

ORGANICS

D	Duplicates
B	Qualified due to blank
C	Qualified due to calibration
H	Holding time exceeded
K	Qualified due to surrogate recovery
L	Qualified due to Laboratory Control Sample
S	Qualified due to matrix spike recovery
I	Qualified due to internal standard
N	Tentative identification (only for TICs)
P	Pesticide/PCB results have >25 percent difference on two different columns
+	Positive bias (added after subqualifier)
-	Negative bias (added after subqualifier)

INORGANICS

D	Duplicates
B	Qualified due to blank
C	Qualified due to calibration
H	Holding time exceeded
L	Qualified due to Laboratory Control Sample
S	Qualified due to matrix spike recovery
I	Qualified due to interference
+	Positive bias (added after subqualifier)
-	Negative bias (added after subqualifier)
Examples of final qualification might be J-C, UJ-S(+), UJ-BC(-), etc.	

The subqualifiers have been included to clarify any reports you may use. The subqualifiers have been captured when it was included in the electronic data submitted by the contractor. Most of the data in MEIMS does not include them.

The above data was extracted from the OU9 Site Wide Quality Assurance Project Plan, pages 9-16 and Appendix H page 3-1. It was updated from the Methods Compendium.

1	107-06-2	1,2-Dichloroethane	3.20E+00	MG/KG
1	118-96-7	2,4,6-Trinitrotoluene	1.91E+02	MG/KG
1	72-55-9	4,4'-DDE	9.00E+00	MG/KG
1	50-29-3	4,4'-DDT	9.00E+00	MG/KG
1	309-00-2	Aldrin	1.80E-01	MG/KG
1	5103-71-9	Alpha Chlordane	8.50E+00	MG/KG
1	12672-29-6	Aroclor-1248	3.85E-01	MG/KG
1	11096-82-5	Aroclor-1260	3.85E-01	MG/KG
1	7440-38-2	Arsenic	1.20E+03	MG/KG
1	71-43-2	Benzene	8.90E+00	MG/KG
1	56-55-3	Benzo(a)anthracene	4.10E+00	MG/KG
1	50-32-8	Benzo(a)pyrene	4.10E-01	MG/KG
1	205-99-2	Benzo(b)fluoranthene	4.10E+00	MG/KG
1	207-08-9	Benzo(k)fluoranthene	4.10E+01	MG/KG
1	7440-41-7	Beryllium	7.00E-01	MG/KG
1	319-85-7	Beta-BHC	1.65E+00	MG/KG
1	117-81-7	Bis(2-ethylhexyl)phthalate	2.15E+02	MG/KG
1	75-27-4	Bromodichloromethane	4.80E+01	MG/KG
1	75-25-2	Bromoform	3.75E+02	MG/KG
1	7440-43-9	Cadmium	1.00E+04	MG/KG
1	56-23-5	Carbon Tetrachloride	4.60E+00	MG/KG
1	67-66-3	Chloroform	3.10E+00	MG/KG
1	7440-47-3	Chromium	1.50E+03	MG/KG
1	218-01-9	Chrysene	4.10E+02	MG/KG
1	53-70-3	Dibenz(a,h)anthracene	4.10E-01	MG/KG
1	124-48-1	Dibromochloromethane	3.55E+01	MG/KG
1	75-09-2	Dichloromethane	3.95E+02	MG/KG
1	60-57-1	Dieldrin	1.85E-01	MG/KG
1	5103-74-2	Gamma Chlordane	8.50E+00	MG/KG
1	58-89-9	Gamma-BHC (Lindane)	2.30E+00	MG/KG
1	76-44-8	Heptachlor	0.66	MG/KG
1	1024-57-3	Heptachlor Epoxide	0.33	MG/KG
1	193-39-5	Indeno(1,2,3-cd)pyrene	4.10E+00	MG/KG
1	78-59-1	Isophorone	3.15E+03	MG/KG
1	86-30-6	N-Nitrosodiphenylamine	6.00E+02	MG/KG
1	87-86-5	Pentachlorophenol	2.50E+01	MG/KG
1	121-82-4	RDX	2.70E+01	MG/KG
1	79-01-6	Trichloroethene	4.10E+01	MG/KG
1	7440-41-7	1,1,1,2-Tetrachloroethane	1.10E-02	MG/L
1	7440-38-2	1,1,2,2-Tetrachloroethane	1.40E-03	MG/L
1	7440-34-8	Actinium-227	4.50E-01	PCI/G
1	14596-10-2	Americium-241	6.30E+00	PCI/G
1	13982-38-2	Bismuth-207	1.60E-01	PCI/G
1	10045-97-3	Cesium-137	3.40E-01	PCI/G
1	10198-40-0	Cobalt-60	7.00E-02	PCI/G
1	14255-04-0	Lead-210	6.20E-01	PCI/G
1	13981-16-3	Plutonium-238	6.10E+00	PCI/G
1	15117-48-3	Plutonium-239	5.50E+00	PCI/G

1	PU239/240	Plutonium-240		5.50E+00	PCI/G
1	13966-00-2	Potassium-40		1.42E+00	PCI/G
1	14331-85-2	Protactinium-231		3.90E-01	PCI/G
1	13982-63-3	Radium-226		9.00E-02	PCI/G
1	10098-97-2	Strontium-90		3.00E+00	PCI/G
1	14274-82-9	Thorium-228		1.40E-01	PCI/G
1	14269-63-7	Thorium-230		9.00E-02	PCI/G
1	7440-29-1	Thorium-232		7.00E-02	PCI/G
1	10028-17-8	Tritium		2.35E+04	PCI/G
1	13968-55-3	Uranium-233		9.68E-01	PCI/G
1	13966-29-5	Uranium-234		1.05E+01	PCI/G
1	15117-96-1	Uranium-235		1.60E+00	PCI/G
1	24678-82-8	Uranium-238		1.00E-01	PCI/G
1	14596-10-2	Americium-241		4.90E-01	PCI/L
1	14331-79-4	Bismuth-210		2.20E+01	PCI/L
1	15262-20-1	Radium-228		3.30E-01	PCI/L
1	13967-73-2	Strontium-85		1.10E+02	PCI/L
1	10098-97-2	Strontium-90		3.90E+00	PCI/L
1	15623-47-9	Thorium-227		4.00E+00	PCI/L
1	14274-82-9	Thorium-228		6.90E-01	PCI/L
1	14269-63-7	Thorium-230		1.20E-01	PCI/L
1	7440-29-1	Thorium-232		3.10E-01	PCI/L
1	24678-82-8	Uranium-238		1.10E-01	PCI/L
2	72-54-8	4,4'-DDD		4.2	MG/KG
2	72-55-9	4,4'-DDE		4.3	MG/KG
2	50-29-3	4,4'-DDT		13	MG/KG
2	309-00-2	Aldrin	ND		MG/KG
2	5103-71-9	Alpha Chlordane	ND		MG/KG
2	319-84-6	Alpha-BHC	ND		MG/KG
2	7429-90-5	Aluminum		19000	MG/KG
2	14596-10-2	Americium-241	ND		MG/KG
2	12672-29-6	Aroclor-1248	ND		MG/KG
2	11097-69-1	Aroclor-1254		58	MG/KG
2	11096-82-5	Aroclor-1260	ND		MG/KG
2	7440-38-2	Arsenic		8.6	MG/KG
2	7440-39-3	Barium		180	MG/KG
2	7440-41-7	Beryllium		1.3	MG/KG
2	319-85-7	Beta-BHC	ND		MG/KG
2	7440-69-9	Bismuth	ND		MG/KG
2	13982-38-2	Bismuth-207	ND		MG/KG
2	13982-38-2	Bismuth-207	ND		MG/KG
2	14331-79-4	Bismuth-210m	ND		MG/KG
2	7440-43-9	Cadmium		2.1	MG/KG
2	7440-70-2	Calcium		310000	MG/KG
2	7440-47-3	Chromium		20	MG/KG
2	7440-48-4	Cobalt		19	MG/KG
2	7440-50-8	Copper		26	MG/KG
2	57-12-5	Cyanide	ND		MG/KG

2	60-57-1	Dieldrin	ND	MG/KG
2	959-98-8	Endosulfan I	ND	MG/KG
2	1031-07-8	Endosulfan Sulfate	ND	MG/KG
2	72-20-8	Endrin	ND	MG/KG
2	7421-93-4	Endrin Aldehyde	ND	MG/KG
2	53494-70-5	Endrin Ketone	ND	MG/KG
2	5103-74-2	Gamma Chlordane	ND	MG/KG
2	58-89-9	Gamma-BHC (Lindane)	ND	MG/KG
2	76-44-8	Heptachlor	ND	MG/KG
2	1024-57-3	Heptachlor Epoxide	ND	MG/KG
2	77-47-4	Hexachlorocyclopentadiene	ND	MG/KG
2	7439-89-6	Iron	35000	MG/KG
2	7439-92-1	Lead	48	MG/KG
2	7439-93-2	Lithium	26	MG/KG
2	7439-95-4	Magnesium	40000	MG/KG
2	7439-96-5	Manganese	1400	MG/KG
2	7439-97-6	Mercury	ND	MG/KG
2	72-43-5	Methoxychlor	30	MG/KG
2	7439-98-7	Molybdenum	27	MG/KG
2	7440-02-0	Nickel	32	MG/KG
2	7440-09-7	Potassium	1900	MG/KG
2	7782-49-2	Selenium	ND	MG/KG
2	7440-22-4	Silver	1.7	MG/KG
2	7440-23-5	Sodium	240	MG/KG
2	7440-28-0	Thallium	0.46	MG/KG
2	7440-31-5	Tin	20	MG/KG
2	7440-62-2	Vanadium	25	MG/KG
2	7440-66-6	Zinc	140	MG/KG
2	7440-34-8	Actinium-227	1.10E-01	PCI/G
2	10045-97-3	Cesium-137	0.42	PCI/G
2	14255-04-0	Lead-210	1.20E+00	PCI/G
2	13981-16-3	Plutonium-238	0.13	PCI/G
2	15117-48-3	Plutonium-239	1.80E-01	PCI/G
2	PU239/240	Plutonium-240	1.80E-01	PCI/G
2	13966-00-2	Potassium-40	37	PCI/G
2	14331-85-2	Protactinium-231	1.10E-01	PCI/G
2	13982-63-3	Radium-226	2	PCI/G
2	10098-97-2	Strontium-90	0.72	PCI/G
2	14274-82-9	Thorium-228	1.5	PCI/G
2	14269-63-7	Thorium-230	1.9	PCI/G
2	7440-29-1	Thorium-232	1.4	PCI/G
2	10028-17-8	Tritium	1.6	PCI/G
2	13966-29-5	Uranium-234	1.1	PCI/G
2	15117-96-1	Uranium-235	0.11	PCI/G
2	24678-82-8	Uranium-238	1.2	PCI/G
3	7439-92-1	Lead	400	MG/KG
3	7440-34-8	Actinium-227	5.60E-01	PCI/G
3	14596-10-2	Americium-241	6.3	PCI/G

3	10045-97-3	Cesium-137	0.76	PCI/G
3	10198-40-0	Cobalt-60	7.00E-02	PCI/G
3	14255-04-0	Lead-210	1.80E+00	PCI/G
3	13981-16-3	Plutonium-238	55	PCI/G
3	14331-85-2	Protactinium-231	4.00E+00	PCI/G
3	13982-63-3	Radium-226	2.1	PCI/G
3	14274-82-9	Thorium-228	3	PCI/G
3	14269-63-7	Thorium-230	3	PCI/G
3	7440-29-1	Thorium-232	1.47	PCI/G
3	15117-96-1	Uranium-235	1.7	PCI/G
3	24678-82-8	Uranium-238	1.3	PCI/G
5	71-55-6	1,1,1-Trichloroethane	0.2	MG/L
5	79-00-5	1,1,2-Trichloroethane	0.005	MG/L
5	75-35-4	1,1-Dichloroethene	0.007	MG/L
5	120-82-1	1,2,4-Trichlorobenzene	0.07	MG/L
5	156-59-2	1,2-cis-Dichloroethene	0.07	MG/L
5	106-93-4	1,2-Dibromoethane	0.00005	MG/L
5	95-50-1	1,2-Dichlorobenzene	0.6	MG/L
5	107-06-2	1,2-Dichloroethane	0.005	MG/L
5	78-87-5	1,2-Dichloropropane	0.005	MG/L
5	156-60-5	1,2-trans-Dichloroethene	0.01	MG/L
5	106-46-7	1,4-Dichlorobenzene	0.075	MG/L
5	95-95-4	2,4,5-Trichlorophenol	0.05	MG/L
5	94-75-7	2,4-D	0.07	MG/L
5	7440-36-0	Antimony	0.0006	MG/L
5	7440-38-2	Arsenic	0.05	MG/L
5	7440-39-3	Barium	2	MG/L
5	71-43-2	Benzene	0.005	MG/L
5	50-32-8	Benzo(a)pyrene	0.002	MG/L
5	7440-41-7	Beryllium	0.004	MG/L
5	117-81-7	bis(2-ethylhexyl)phthalate	0.006	MG/L
5	75-27-4	Bromodichloromethane	0.008	MG/L
5	75-25-2	Bromoform	0.008	MG/L
5	7440-43-9	Cadmium	0.005	MG/L
5	56-23-5	Carbon Tetrachloride	0.005	MG/L
5	57-74-9	Chlordane	0.002	MG/L
5	108-90-7	Chlorobenzene	0.1	MG/L
5	67-66-3	Chloroform	0.008	MG/L
5	7440-47-3	Chromium	0.1	MG/L
5	7440-50-8	Copper	1.3	MG/L
5	57-12-5	Cyanide	0.2	MG/L
5	96-12-8	Dibromochloropropane	0.0002	MG/L
5	75-09-2	Dichloromethane (Methylene Chloride)	0.005	MG/L
5	88-85-7	Dinoseb	0.007	MG/L
5	1746-01-6	Dioxin	0.00000003	MG/L
5	72-20-8	Endrin	0.002	MG/L
5	100-41-4	Ethylbenzene	0.07	MG/L
5	16984-48-8	Flouride	4	MG/L

5	58-89-9	Gamma-BHC (Lindane)	0.0002	MG/L
5	76-44-8	Heptachlor	0.0004	MG/L
5	1024-57-3	Heptachlor Epoxide	0.0002	MG/L
5	118-74-1	Hexachlorobenzene	0.001	MG/L
5	77-47-4	Hexachlorocyclopentadiene	0.05	MG/L
5	7439-92-1	Lead	0.015	MG/L
5	7439-97-6	Mercury	0.002	MG/L
5	72-43-5	Methoxychlor	0.04	MG/L
5	7440-02-0	Nickel	0.1	MG/L
5	NO3	Nitrate	10	MG/L
5	14797-65-0	Nitrite	1	MG/L
5	87-86-5	Pentachlorophenol	0.001	MG/L
5	7782-49-2	Selenium	0.05	MG/L
5	100-42-5	Styrene	0.1	MG/L
5	127-18-4	Tetrachloroethene	0.005	MG/L
5	7440-28-0	Thallium	0.002	MG/L
5	108-88-3	Toluene	1	MG/L
5	8001-35-2	Toxaphene	0.003	MG/L
5	79-01-6	Trichloroethene	0.005	MG/L
5	75-01-4	Vinyl Chloride	0.002	MG/L
5	1330-20-7	Xylenes, Total	10	MG/L
5	7440-34-8	Actinium-227	0.4	PCI/L
5	14596-10-2	Americium-241	1.2	PCI/L
5	13982-38-2	Bismuth-207	1200	PCI/L
5	10045-97-3	Cesium-137	120	PCI/L
5	10198-40-0	Cobalt-60	400	PCI/L
5	13981-16-3	Plutonium-238	1.6	PCI/L
5	13982-63-3	Radium-226	4	PCI/L
5	10098-97-2	Strontium-90	40	PCI/L
5	14274-82-9	Thorium-228	16	PCI/L
5	14269-63-7	Thorium-230	12	PCI/L
5	7440-29-1	Thorium-232	2	PCI/L
5	10028-17-8	Tritium	20000	PCI/L
5	13968-55-3	Uranium-233	20	PCI/L
5	13966-29-5	Uranium-234	20	PCI/L
5	15117-96-1	Uranium-235	24	PCI/L
5	24678-82-8	Uranium-238	24	PCI/L
6	76-13-1	1,1,2-Trichloro-1,2,2triflouroethane	7.00E+04	MG/KG
6	75-34-3	1,1-Dichloroethane	7.80E+00	MG/KG
6	120-82-1	1,2,4-Trichlorobenzene	2.04E+04	MG/KG
6	156-59-2	1,2-cis-Dichloroethene	2.13E+03	MG/KG
6	156-60-5	1,2-trans-Dichloroethene	4.30E+03	MG/KG
6	99-65-0	1,3-Dinitrobenzene	2.00E+02	MG/KG
6	118-96-7	2,4,6-Trinitrotoluene	1.00E+03	MG/KG
6	78-93-3	2-Butanone	9.30E+03	MG/KG
6	95-57-8	2-Chlorophenol	1.06E+03	MG/KG
6	108-10-1	2-Methyl-4-pentanone	7.00E+02	MG/KG
6	50-29-3	4,4'-DDT	1.10E+02	MG/KG

6	106-44-5	4-Methylphenol	1.10E+03 MG/KG
6	67-64-1	Acetone	2.10E+04 MG/KG
6	309-00-2	Aldrin	6.4 MG/KG
6	5103-71-9	Alpha Chlordane	110 MG/KG
6	7429-90-5	Aluminum	210000 MG/KG
6	120-12-7	Anthracene	6.40E+04 MG/KG
6	7440-36-0	Antimony	8.50E+01 MG/KG
6	11097-69-1	Aroclor-1254	4.30E+00 MG/KG
6	7440-38-2	Arsenic	6.40E+01 MG/KG
6	7440-39-3	Barium	1.50E+04 MG/KG
6	65-85-0	Benzoic Acid	8.50E+05 MG/KG
6	7440-41-7	Beryllium	1.10E+03 MG/KG
6	117-81-7	Bis(2-ethylhexyl)phthalate	4.30E+03 MG/KG
6	75-27-4	Bromodichloromethane	4.30E+03 MG/KG
6	75-25-2	Bromoform	4.30E+03 MG/KG
6	85-68-7	Butyl Benzyl Phthalate	4.30E+04 MG/KG
6	7440-43-9	Cadmium	2.10E+02 MG/KG
6	75-15-0	Carbon Disulfide	2.80E+02 MG/KG
6	56-23-5	Carbon Tetrachloride	1.50E+02 MG/KG
6	75-00-3	Chloroethane	1.60E+02 MG/KG
6	67-66-3	Chloroform	2.10E+03 MG/KG
6	7440-47-3	Chromium	1.10E+03 MG/KG
6	18540-29-9	Chromium-VI	6.39E+02 MG/KG
6	7440-50-8	Copper	7.90E+03 MG/KG
6	57-12-5	Cyanide	4.30E+03 MG/KG
6	53-70-3	Dibenz(a,h)anthracene	4.08E-02 MG/KG
6	124-48-1	Dibromochloromethane	4.30E+03 MG/KG
6	75-09-2	Dichloromethane	1.00E+03 MG/KG
6	60-57-1	Dieldrin	1.10E+01 MG/KG
6	84-74-2	Di-n-butyl Phthalate	2.10E+04 MG/KG
6	117-84-0	Di-n-octyl Phthalate	4.30E+03 MG/KG
6	959-98-8	Endosulfan I	1300 MG/KG
6	33213-65-9	Endosulfan II	1300 MG/KG
6	100-41-4	Ethylbenzene	4.80E-01 MG/KG
6	86-73-7	Flourene	8.50E+03 MG/KG
6	206-44-0	Fluoranthene	8.50E+03 MG/KG
6	5103-74-2	Gamma Chlordane	110 MG/KG
6	58-89-9	Gamma-BHC (Lindane)	64 MG/KG
6	76-44-8	Heptachlor	110 MG/KG
6	1024-57-3	Heptachlor Epoxide	2.8 MG/KG
6	110-54-3	Hexane	9.10E+01 MG/KG
6	193-39-5	Indeno(1,2,3-cd)pyrene	4.08E-01 MG/KG
6	78-59-1	Isophorone	4.30E+04 MG/KG
6	7439-96-5	Manganese	2.70E+04 MG/KG
6	7439-97-6	Mercury	6.40E+01 MG/KG
6	72-43-5	Methoxychlor	1100 MG/KG
6	7440-02-0	Nickel	4.30E+03 MG/KG
6	87-86-5	Pentachlorophenol	6.40E+03 MG/KG

6	108-95-2	Phenol	1.30E+05 MG/KG
6	129-00-0	Pyrene	6.40E+03 MG/KG
6	7782-49-2	Selenium	1100 MG/KG
6	7440-22-4	Silver	1.10E+03 MG/KG
6	127-18-4	Tetrachloroethene	2.10E+03 MG/KG
6	7440-28-0	Thallium	17 MG/KG
6	7440-31-5	Tin	130000 MG/KG
6	108-88-3	Toluene	2.50E+02 MG/KG
6	75-69-4	Trichlorofluoromethane	7.30E+02 MG/KG
6	7440-62-2	Vanadium	1.50E+03 MG/KG
6	1330-20-7	Xylenes, Total	4.30E+05 MG/KG
6	7440-66-6	Zinc	6.40E+04 MG/KG
6	7440-41-7	1,1,1,2-Tetrachloroethane	2.90E-01 MG/L
6	7440-38-2	1,1,2,2-Tetrachloroethane	2.50E-01 MG/L
6	71-55-6	1,1,1-Trichloroethane	1.80E+00 MG/L
6	76-13-1	1,1,2-Trichloro-1,2,2triflouroethane	2.50E+03 MG/L
6	7429-90-5	Aluminum	100 MG/L
6	7440-42-8	Boron	9.00E+00 MG/L
6	18540-29-9	Chromium-VI	3.00E-01 MG/L
6	7440-48-4	Cobalt	6 MG/L
6	7440-50-8	Copper	4.00E+00 MG/L
6	7439-98-7	Molybdenum	0.5 MG/L
6	7782-49-2	Selenium	0.5 MG/L
6	7440-28-0	Thallium	0.008 MG/L
6	7440-31-5	Tin	60 MG/L
6	2691-41-0	HMX	1.10E+04 UG/KG
6	121-82-4	RDX	6.40E+04 UG/KG

1 Value is 10-6 Risk-Based Guide Value
2 Value is OU9 Soil Background Value
3 Value is screening level
5 Value is MCL
6 Value is the Guide Value based on the hazard index

Note:
Edited on 10/08/01
01/29/02 Removed all color

Appendix M

Occurrence Reports

No occurrence reports were issued for this facility.

Appendix N

PRS Information

Recommendation pages are not generated for PRSs that require Further Assessment (FA) or that have been unbinned. Accordingly, there are no recommendation pages included for PRS 38, 39, 398, and 399.

MOUND PLANT
PRS 37/399
FORMER TANK SITE
BUILDING 51 SOLVENT WASTE TANK

RECOMMENDATION:

Potential Release Site (PRS) 37 was identified as an underground storage tank used to hold waste solvents prior to incineration, in Building 51. PRS 399 was identified as a single elevated relative soil gas reading near the tank site. The tank was removed, in 1990, in accordance with the Ohio BUSTR program.

Subsequent to the removal, soil sampling in 1991, 1992, and 1996 failed to detect any organics above guideline criteria. In addition, all samples indicated that radionuclides are below guideline criteria.

Therefore, NO FURTHER ASSESSMENT (NFA) is recommended.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath 11/21/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 11/19/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 11/21/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 11/29/96 to 01/01/97

☒ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

Page R

MOUND PLANT
PRS 40
SOIL CONTAMINATION - BUILDING 66 PARKING LOT

RECOMMENDATION:

Potential Release Site (PRS) 40 was identified as a local area of plutonium-238 contamination found during a construction project.

Plutonium-238 has been found at concentrations of up to 7 nanocuries per gram (7,000 picocuries per gram) at a depth of 4 to 6 feet. The concentrations of plutonium-238 in the soil are above both the Mound ALARA Guideline Criteria of 25 picocuries per gram and the 10^{-4} Risk Based Guideline Value of 550 picocuries per gram. All other contaminants were detected or calculated to be at acceptable soil concentrations or below guideline criteria.

Plutonium-238 exists in the PRS 40 soils at levels presenting unacceptable risk to future construction workers. Therefore, a RESPONSE ACTION is recommended.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath, Remedial Project Manager — 3/18/97 (date)

USEPA: Timothy J. Fischer, Remedial Project Manager — 3/18/97 (date)

OEPA: Brian K. Nickel, Project Manager — 3/18/97 (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 5/8/97 to 6/16/97

☒ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

MOUND PLANT RECOMMENDATION

PRS 66

Background:

Potential Release Site (PRS) 66 encompasses a historical ravine that was leveled with fill and paved over with asphalt. From the mid-1950s to mid-1960s, an estimated 10,000 to 15,000 emptied thorium drums from repackaging operations were crushed and buried along the western part of the original ravine. In either 1959 or 1960, three truckloads of soil and debris contaminated with radium-226, actinium-227, and thorium-228 was excavated from the SW Building and disposed of in an old septic tank on the northeastern edge of PRS 66. The area near the septic tank (PRS 86) was excavated during a CERCLA removal action and subsequently designated No Further Action (NFA) by the Core Team in 1998. Records show the practice of disposing waste items into the ravine continued through the mid-1960s. During construction excavation in 1986, plutonium contaminated soil was discovered in the far southwest corner of the historic ravine, known as PRS 40.

Recommendation:

Potential Release Site 40, 66, 79, 80, 86, 235, 309, and 338 are found within PRS 66. This area has been periodically filled in with materials contaminated with thorium-232, polonium-210 and some actinium-227. On August 20, 1996, the Core Team recommended Further Assessment (FA) for PRS 66. Subsequently, the cost of further investigation versus removing the potentially contaminated soils were evaluated. On July 10, 1997, this evaluation resulted in the decision to continue with the original FA recommendation. As a result of this further assessment, elevated plutonium-238, cesium-137 and americium-241 contamination was found.

By December 1999, the Mound Gamma Spectrometry Lab had analyzed approximately 162 investigative soil samples taken during the 1999 PRS 66 Core Sampling Characterization. The maximum plutonium-238 concentration measured was 5,868 pCi/g, as compared to the 10^{-5} Risk Based Guideline Value of 55 pCi/g. The maximum thorium-232 concentration measured was 397 pCi/g compared to a 10^{-5} Risk Based Guideline Value of 1.1 pCi/g. The Core Team, therefore, now recommends that a <u>REMOVAL ACTION</u> be accomplished for PRS 66.

Concurrence:

DOE/MEMP: Art Kleinrath — Feb 17 2000
Art Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer — 2/22/2000
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian Nickel — Feb 17, 2000
Brian Nickel, Project Manager (date)

Appendix O

Work Plan

WORK PACKAGE / PRELIMINARY HAZARD ANALYSIS

☐ **Office Master Copy (Original Approval Signatures)** ☐ **Field Working Copy (Original Field Sign -Offs)** ☐ **Review Copy** ☐ **Other Copy [Note: Mark this section in color]**

The Project Engineer is responsible for completing Sections 1 through 10. On subcontractor projects, the subcontractor shall complete sections 6, 9, and 10.

1. WORK PACKAGE TITLE: Building 51 Demolition

2. WORK PACKAGE NUMBER. SMPP/TFV - *29953 -0*

3. WORK PACKAGE SCOPE:

The purpose of this work package is for demolition of Building 51, which has already been safely shutdown. Demolition includes sizing, disposition of and removal of building debris, followed by temporary restoration of the building area, which has been disturbed. This will be accomplished by establishing a construction zone, confirming that all utilities have been isolated, removing miscellaneous equipment, and using heavy duty equipment to demolish the building. Final demolition of Lower Back Section concrete will be included in the by the PRS 66 removal action.

4. WORK PACKAGE PHASES:

1.Establish Work Zone
2.Front Upper Section Superstructure Demolition
3.Front Upper Section Concrete Demolition
4.Lower Back Section Superstructure Demolition
5.Lower Back Section Concrete Disposition
6.Temporary Area Restoration

5. WORK LOCATION:

Building #: 51

Room #: N/A

Other: Spoils area

6. SPECIAL MATERIALS AND EQUIPMENT:

1.Tracked excavator with shear, grapple, hoe ram, concrete cracker/pulverizer, or bucket attachment.

2. Rubber tired and tracked front-end loaders.

3. Rock crusher.

4. Transport equipment as required.

7. DETAILED WORK STEPS:

1. See attached Job Specific Work Plan (JSWP)

Insert the activities to be performed during the job. Describe the specific methods of accomplishing these activities. Activities listed must be grouped under the Work Package phases listed in item 4.

8. *Note: Comments, to identify activities/hazards that are common to multiple phases of the project. Identification of these items will facilitate the option of addressing the items once in the pre-job briefing, as opposed to redundantly listing them in the JSHAs for different phases.* **COMMENTS:**

Enter any review comment or issues in this section and/or information generated as a result of completing detailed work steps.

9. REVIEW SIGNATURES:

Project Superintendent: _____ Date: ___/___/___ Phone:

Project Foreman: _____ Date: ___/___/___ Phone:

Industrial Safety & Hygiene: _____ Date: ___/___/___ Phone:

Rad. Controls: _____ Date: ___/___/___ Phone:

ES&C: _____ Date: ___/___/___ Phone:

Waste Mgmt: _____ Date: ___/___/___ Phone:

Bldg. Mgmt: _____ Date: ___/___/___ Phone:

Trades: _____ Date: ___/___/___ Phone:

Trades: _____ Date: ___/___/___ Phone:

Trades: _____ Date: ___/___/___ Phone:

10. USQ SCREEN / DETERMINATION REQUIRED? ❑YES ❑NO

Brief Explaination _____

USQ Trained Person: _____ Date: ___/___/___ Phone:

10. AUTHORIZATION SIGNATURE:

Project Manager: _____ Date: ___/___/___ Phone:

11. WORK PACKAGE CLOSURE:

Job Supervisor: _____ Date: ___/___/___ Phone:

Project Manager: _____ Date: ___/___/___ Phone:

RETURN PHA TO IS&H AT JOB COMPLETION.

APPROVAL CONTINUATION SHEET

Reviews:

Name	Signature	Date	Department

Reference Drawings	Rev.	Reference Procedures	Rev.

PRELIMINARY HAZARD ANALYSIS (PHA)
FOR WORK PACKAGE ACTIVITIES

SECTION A, INDUSTRIAL SAFETY - TO BE COMPLETED BY THE INDUSTRIAL SAFETY AND HEALTH REPRESENTATIVE
Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. lead compliance plans, confined space plans, hearing conservation programs, etc.). Including any notations for future Hazard Analyses. Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards, that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Blockage of exits or means of egress	NO		[EGRESS]
Blockages/obstructions (Identify)	NO		
Burning, welding, hot-work (Fire Watch)	YES	2	Possible use of cutting torch during demolition. Test for lead prior to cutting painted materials.[BURN]
Chemical compatibility of corrosives/flammables	NO		
Chemical process safety	NO		
Compressed gas cylinders	NO		
Confined space entry	NO		[CONFINE]
Crane operations, overhead or mobile	NO		
Critical lifts (heavy or high value loads)	NO		[CLIFT]
Electrical hazards	NO		[LIVEL]
Elevated work/fall protection	YES	ALL	[ELEV] Use barricades and warning tape to delineate the fall hazard between upper level and lower level. Use fall protection harnesses when working from manlifts.
Emergency eyewash/shower available	YES	ALL	[EWASH] Use portable eye wash system.
Emergency alarms or evacuation plans required	YES	ALL	[EMERG] Use radios if alarm system is disabled.
Explosive/flammable atmosphere	NO		
Explosives	NO		
Fire protection system/equipment outage	NO		[FIRE/EFIRE]
Fire Hazards Analysis Required of Demolition	NO		[FHA/ADJA]
Flammable liquids/gases	NO		[FLAM]
Forklifts, aerial lifts or material handling equipment	NO		
Grounding of electrical equipment	YES	ALL	Use GFCI on corded hand tools and lights.
Hazards due to condition of facility or terrain (Identify)	YES	ALL	Upper slab work is 13' above lower incinerator floor area. Use barricades and warning tape.
Hoisting and rigging	NO		[HOIST]
Lighting/illumination/adequacy	YES	2	[MLITE] Portable lighting maybe needed.

SECTION A, INDUSTRIAL SAFETY - TO BE COMPLETED BY THE SAFETY AND HEALTH REPRESENTATIVE

Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. lead compliance plans, confined space plans, hearing conservation programs, etc.), Including any notations for future Job Safety and Health Analysis (JSHA). Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Lockout/tagout of hazardous sources:	NO		[LOTO/ISO]
Electrical	YES	ALL	Building to be "safe shutdown", prior to demolition. LOTO streetlights.
Mechanical (steam, hydraulic, pneumatic)	NO		Building to be "safe shutdown", prior to demolition.
Interlocks	NO		[ILOCK]
Chemical	NO		
Radiological	NO		
Machine guards	NO		
Modification to Fire Wall/Door	NO		[FIREWAL]
Obstruction of fire protection equipment (pull boxes, hydrants, fire department connections, control panels, fire extinguishers, etc.)	NO		
Off-shift work	NO		
Outages of the plant public announcement (PA) system or the emergency notification system	NO		[OUTAGE]
Overhead or underground utilities (Identify)	YES	2&3	[UITL] The site's street light circuit may need to be LOTO.
Penetrations into walls, floors, etc.	NO		[PENETR]
Plastic sheeting or wood framing/enclosures	NO		
Powder-actuated tools	NO		
Public utilities (Identify)	NO		[WATER]
Repetitive work	NO		[ERGO]
Structural Modification	NO		[STRUCT]
Special Fire Protection Equipment Required	NO		[FIREQU]
Trenching/Shoring	NO		[DIG]
Temporary heating facilities	NO		
Temporary/portable buildings or structures	NO		[FACIL]
Temporary service hook-ups (Identify)	NO		
Traffic control/flagman	NO		[TRAFIC]
Work in attics, ceilings, chases, or crawlspaces	NO		
Work impacting adjacent normally occupied areas	NO		[ADJAC/BMAPP/SIGNS/NOTIF]
Work Requiring Scaffolding, construction and inspection	NO		[SCAFF]
Other (Specify)	NO		

SECTION B, INDUSTRIAL HYGIENE - TO BE COMPLETED BY INDUSTRIAL HYGIENE REPRESENTATIVE

Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. lead compliance plans, confined space plans, hearing conservation programs, etc.). Including any notations for future Job Safety and Health Analysis (JSHA). Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Abrasive blast (☐ MSDS available)*	NO		
Asbestos	NO		[ASBEST] Trace amount in vermiculite block filler, normal demolition dust control will mitigate risk.
Beryllium	NO		
Blood-borne pathogens*	NO		
Cadmium	NO		
Carcinogens (☐ MSDS available)*	NO		[CARC]
Chemicals/solvents (☐ MSDS available)*	NO		[CHEM/MSDS]
Chlorofluorcarbon (CFC)	NO		[CFC]
Coal, tar or asphalt products	NO		
Coating/painting (☐ MSDS available)*	NO		
Corrosives/acids/caustics (☐ MSDS available)*	NO		
Dusty operations	YES	ALL	Keep debris moist during demolition and loading. Wear respirator as required by I.H. [POWDER].
Hazardous Waste Operations (HAZWOPER)*	NO		
High Pressure systems	NO		[HIPRES]
Insulation/man-made mineral fibers (☐ MSDS available)*	NO		Keep debris moist during demolition and loading.
Lasers	NO		
Lead	YES	2	Possible lead paint, analyze for prior to torch cutting, if present, strip prior to cutting.
Foam in Place Operations	NO		
Mercury	NO		
Noise in excess of 85 dBA	YES	ALL	[NOISE] Use hearing protection.
Polychlorinated biphenyl's (PCBs)	NO		
Removal of ceiling tiles*	NO		
Spraying/generation of mists*	NO		
Temperature extremes (heat or cold stress)	NO		[CRYRO/COLD/HEAT]
Ventilation or Air Monitoring requirements	YES	2	[VENTIL/IH]
Welding, brazing, or thermal cutting operations	YES	2	[BURN] If cutting Torches are used.
Other (specify)	NO		

***NOTE:** Requires a description of the materials involved which present a hazard. Identify the physical location of the MSDS.

SECTION C, RADIOLOGICAL PROTECTION - TO BE COMPLETED BY RADIOLOGICAL CONTROLS REPRESENTATIVE

Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. RWP, ALARA Plan, etc.). Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item		Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Location:	Controlled Area	YES	2	Lower Back Section of bldg. has fixed contamination area, minimize contact with afflicted area. Will have RWP.
	Contamination Area	YES	2	[STP]
	High Contamination Area	NO		[STP]
	Radioactive Materials Storage Area	NO		
	Airborne Radioactivity Area (STP or OBT)	NO		
	Radiation Area	NO		
	High Radiation Area	NO		
	Very High Radiation Area	NO		
	Other (Specify)	NO		
Activities:	Criticality Safety Concerns	NO		
	Digging/Soil Removal	YES	All	[DIG] Foundation and Footer removal
	Surface destruction of radioactively contaminated materials or equipment?	NO		[SURFAC]
	Welding, burning, or grinding?	YES	2	[SURFAC] Possible use of cutting torch, keep fire extinguisher near by.
	Hammering, chipping or scraping?	YES	2	[SURFAC] Dust control with water misting.
	Abrasive blasting?	NO		[SURFAC]
	Dust-collecting equipment or systems?	NO		
	Decontamination and clean-up?	NO		
	Rad Waste Storage and Disposal Required	NO		[RWSTOR/WASTE/CHAR]
	Other (Specify)	NO		
Sources:	X-Ray machine/generator	NO		[XRAY]
	Sealed radioactive sources	NO		
	Unsealed radioactive sources	NO		
Controls:	Radiological Work Permit	NO		[RWP/RWP=JS/RWP=N/R/RPGEN]
	ALARA Plan	NO		[ALARA]
	Air Flow Studies	NO		[AIRFLOW/CAM]
	Urinalysis program	NO		
	Preliminary or in-process characterization	NO		[SURVPS/SURVIP]
	Anti-contamination clothing	NO		
	Respiratory protection	NO		[RESP]
	Needs Analysis Evaluation	NO		
	Hazards Analysis	NO		
	Engineering Controls	YES	ALL	Use warning tape for fall prevention, water misting for dust control, proper PPE for safe demolition.
	Administrative Controls	NO		
	Supplemental dosimetry	NO		
	Shielding	NO		
	Personnel monitoring (frisking)	NO		

SECTION D - OTHER CONDITIONS, CONCERNS, OR SUPPLEMENTAL INFORMATION FROM SECTIONS A THROUGH C

Identify Assembly Points: Assemble at building 98.

Job Specific Work Plan
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Job Specific Work Plan

1. WORK SCOPE

1.1. Introduction

This Job Specific Work Package (JSWP) follows the outline of PP-1059A, Integrated Work Control Program at the Mound Site, Miamisburg, Ohio. Included are a Preliminary Hazard Analysis (PHA) and a Job Safety & Hazard Analysis (JSHA). A Pre-Job Briefing Form (ML-9657) and the Project Manager's Authorization to Commence Work signature will be completed to document that the workers were briefed on the activities covered in this JSWP before work begins.

1.2. Workpackage scope

1.2.1 The purpose of this effort is to demolish Building 51, remove the debris, and restore the area. This will be accomplished by confirming that all utilities have been isolated by safe shut down activities, establishing a construction zone, and demolition of the building using heavy duty equipment, radiological survey and removal of debris as directed by waste management.

1.2.2 The demolition of the Building 51 structure has been divided into four separate categories for waste handling purposes and the structure has been divided into to two sections as defined as:

- **Front upper section** – From the northwestern front of the building southeast 39'-71/2" to the expansion joint between the concrete slab and the vertical retaining wall.

- **Lower Back Section** – From and including the retaining wall southeast 14'-1" to the back wall of the structure and the outside lower loading dock structure. This demolition will be controlled under a radiological work permit (RWP).

Building waste demolition/survey/disposal guidance-

- Front upper section's structural steel, equipment, block interior partitions and siding – these wastes require radiological survey using the "debris pile/roll off survey" method to allow for free release.

- Front upper section's slab, asphalt apron and footings – require radiological surveys top and bottom prior to being disposed of or sent to the spoils area/crusher, thus requiring each piece to be turned over use heavy equipment to provide access for the radiological control technicians performing the surveys.

- Lower Back Section's structural steel, siding and equipment –will be performed as a Radiological Work Permit (RWP) area and demolished, handled, containerized and disposed of as Low Level Waste.

- Lower Back Section's concrete retaining wall, wing wall, floor slab, loading dock slab, and stem walls-remain in place and will not disturbed. These pieces are to be removed by the Environmental Restoration (ER) project under PRS 66.

1.2.3 Demolish the metal siding, equipment, block walls and structural steel from the Front Upper Section of the building down to grade level, using heavy equipment. Providing the least possible disturbance to the debris and positioned in order for radiation control technicians can thoroughly survey it.

1.2.4 Following the Front Upper Section's superstructure demolition, the Front Upper Section's concrete slabs, asphalt apron, grade beams, foundations, and footers will be demolished/removed down to 3-feet below grade (excluding the Lower Back Section of the structure).

HOLD POINT: Lower Back Section of the structure is a Radiological Work Permit area, this requires the area to be posted, an approved RWP in place and the workers briefed and signed in on the RWP. Workers to follow the requirements stated on the RWP.

_____ _____
Project Foreman Date

1.2.5 Lower Back Section portion of the building's structural steel, equipment and siding will be demolished as Low Level Waste and needs to be handled, containerized and disposed of as LLW.

1.2.6 Lower Back Section retaining wall between the upper and lower levels of the building and including the lower level slab, wing wall, loading dock slab, stem wall and foundation are to be left in place. These concrete components have been identified as having fixed contamination above release limits and will be removed as part of PRS 66 removal action.

1.2.7 The last step will be to temporarily restore by grading and seeding the area. Restoration will be temporary in scope since the area is scheduled to be disturbed in the near future by the efforts of PRS 66 removal actions.

1.3. Site Information

1.3.1 Building 51 was constructed in 1972, [1 2 3] and is located in the plant valley area, just off the flank of the SM/PP Hill. Building 51 contains 3,541 square feet. [4 5]

[1] Tonne, William R., et. al., *Mound Facility Physical Characterization*, MLM-3791 December 1, 1993.
[2] The construction date in EG&G Mound Applied Technologies, Volume 9 *Environmental Appraisal of the Mound Plant* (March 1996) is listed as 1970; the as-build drawings note a date of December 1971 for the issuance date on the "as-built" drawings.
[3] BWXT of Ohio, MD-10391, *Asbestos Program Manual*, Issue 6, June 9, 1999.

[6] There have been two additions to Building 51; both located completely within the shell of the building. The exterior of Building 51 has remained much like it was, when constructed. Each of the additions consisted of the construction of a single room constructed as a free-standing building, within the shell of the Building 51 high bay area. The two-room addition is roofed, and has its own utility system. [7] [8] The addition rooms were constructed in 1979 (Room 106)[9], and in 1986 (Room 107)[10].

1.3.2 Building 51 previously housed an incinerator that was designed to burn nearly all of the plant's non-radioactive refuse including some liquids such as paints, oils, and solvents. The operation was plagued with problems and never performed at its designed capacity. The incinerator operated at various loading capacities from 1971 until February 15, 1974, when it was completely shutdown *(OU 9 Site Scoping Report: Vol. 7 - Waste Management).* The incinerator was disassembled, and removed from Mound on May 22, 1979. The associated waste oil tank, which stored waste oils and waste solvents slated for incineration, was removed in November of 1990 *(OU 9 Site Scoping Report: Vol. 7 - Waste Management).*

Building 51 was most recently used in support of thermite (energetic material) production and the production of carbon for a lithium battery capacitor research project. All support operations in the facility have ceased and the facility is currently undergoing preparations for demolition.

Even though historical documentation does not indicate that radioactive wastes were ever in the building, the presence of radioactive contamination (see Section 2.4), on the floor and wall below and next to where the incinerator had been located, suggests that radioactive wastes were processed in the building at one time.

1.3.3 Incinerator (PRS 38) and scrubber (PRS 39) associated with Building 51 were removed. Potentially contaminated soil resulting from emissions will be addressed as part of the PRS 66 cleanup effort. PRS 38 and 39 will be closed out separately from Building 51.

2. DRAWINGS AND REFERENCES

PP-1059A, Issue 7, "Integrated Work Control Program"
MD-50000, Issue 10, "Maintenance Work Order and Material Processing"

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[4] EG&G Mound Applied Technologies, Volume 9 *Environmental Appraisal of the Mound Plant*, March 1996.
[5] Tonne, William R., et. al., *Mound Facility Physical Characterization*, MLM-3791 December 1, 1993.
[6] BWXT of Ohio, MD-10391, *Asbestos Program Manual*, Issue 6, June 9, 1999.
[7] Hertweck, F., *Site Related Activities--November 10, 1997*, November 11, 1997.
[8] Hertweck, F., *Waste Management Visit to Building 51 Site*, February 11, 1998.
[9] Mound Drawing FSD18670, Process Control Floor Building Modifications, Original Issue, July 13, 1979.
[10] Mound Engineering Drawing Number FSD851829, Building 51 Equipment Installation Plan View and Demolition, Original Issue September 30, 1985.

3. INITIAL CONDITIONS AND PREREQUISITES

3.1. Lessons Learned

A search of the Lessons Learned Database found the following relevant item:

Catastrophic Failure of 15,000-Pound Demolition Shear

See Appendix F for the full report. The result of the Lessons Learned is that the shear should not be used as a hammer and the shear should be inspected periodically for cracks and signs of failure.

3.2. Industrial Safety and Health Requirements

3.2.1 A Job Specific Hazards Analysis (JSHA) is required. The construction zone, as defined in Appendix A, identifies construction boundaries, evacuation routes, the take shelter area, and the assembly area. Debris will be cleared from the immediate demolition zone as required to promote safe equipment activity.

3.2.2 Underground electrical utilities will be identified and field located by scanning the area prior to any activities beginning. Lock-out-tag-out procedures will be followed and electrical energy detection will be performed prior to any electrical demolition activities.

3.2.3 An excavation/soil disturbance permit will be required prior to demolition activities.

3.2.4 Monitoring for crystalline silica (concrete dust) will be performed periodically as determined by previous monitoring results and site Safety and Health. Site Safety and Health will be notified before the demolition of concrete begins.

3.2.5 Whole body vibration will be administratively controlled and by reviewing topic at Pre-job meeting.

3.2.6 A Hot Work Permit will be required if a torch is used for cutting and possibly for generator operation. Coordinate with site Safety and Health.

3.2.7 Monitoring of noise levels will be performed as determined by previous monitoring results and site Safety and Health. Ear plugs will be worn, as appropriate.

3.2.8 Due to the many high weeds in the area to the north of Building 51 and the likely presence of chiggers and ticks, the area will be mowed prior to work beginning. If necessary the area will be sprayed with insecticide and insect repellant will be made available to the workers.

4. RADIATION PROTECTION REQUIREMENTS

Survey data indicates no elevated radiological readings in the Front Upper Section of the building, however it was agreed to do a thorough debris pile/roll off survey. The lower, rear portion of the building affected by incinerator operations, was determined to be radiologically contaminated and has been determined to require a RWP.

4.1. CERCLA

The demolishing of the upper front section and rear section of the superstructure of building 51 will be accomplished as non-CERCLA project. Incinerator (PRS 38) and scrubber (PRS 39) associated with Building 51 were removed. Potentially contaminated soil resulting from emissions will be addressed as part of the PRS 66 RA. PRSs 38 and 39 will be closed out separately from Building 51.

4.2. National Emissions Standards for Hazardous Air Pollutants (NESHAPs)

Per Environmental Practice 2.2, if buildings to be demolished have a surface area less than 72 million square feet, direct readings below MDA, and wipe results below applicable action levels, additional dose calculations are not necessary.

4.3. Notification

A Notification of Demolition and Renovation form must be filed with the Regional Air Pollution Control Agency (RAPCA) at least 10 business days before planned building demolition.

4.4. Restriction of emission of fugitive dust (OAC 3745-17-08)

Reasonably available control measures must be employed to prevent fugitive dust from becoming airborne. Visual particulate emissions from any fugitive dust source shall not exceed 20% opacity as a three-minute average. Appropriate activities would include:

5.4.1 Water misting or other suitable dust suppression will be used to minimize fugitive dust from demolition activities.

5.4.2 Periodic application of water or other suitable dust suppression to adjacent roadways and parking lots will be used to prevent dust from becoming airborne.

5.4.3 Trucks hauling debris to the onsite spoils area should be covered while in transit.

5.4.4 Segregate any lead pipe conduits if present from concrete debris going to the spoils area in order to avoid producing lead dust and particulate.

4.5. Clean Water Act & Storm Water Pollution Prevention

5.5.1 All inlets to the sanitary and storm systems will be plugged to prevent accidental discharges to the wastewater treatment plant or the environment.

5.5.2 The site's National Pollutant Discharge Elimination System (NPDES) Permit No. 1IO00005*HD requires the use of control measures to ensure the quality of storm water leaving the site. These control measures and practices are outlined in the site's Storm Water Pollution Prevention Plan OPA980099. Appropriate activities would include:

5.5.3 Redirect flow patterns around the project site to prevent storm water run-on.

5.5.4 Provide inlet protection to the storm sewer system by covering catch basins immediately adjacent to the project site and plugging roof drains at ground level until which time the underground pipes can be appropriately abandoned.

5.5.5 Exercise good housekeeping techniques by segregating materials in a timely manner, including the prompt disposal of wastes, and sweeping debris from the streets to prevent storm water pollution.

5.5.6 Water that has collected in an open excavation or in sumps, must be monitored prior to discharging to the sanitary or storm sewer systems. Contact Environmental Monitoring at extension 4188 for monitoring and review of these non-routine discharges.

4.6. National Historic Preservation Act (NHPA)

5.6.1 Building 51 is not listed as a historic structure with the Ohio Historic Preservation Office (OHPO).No mitigative documentation package is required. However, if any items or artifacts are discovered as this project progresses, the Cultural Resource Representative will be notified at extension 3691. Work will be suspended until which time the items or artifacts have been recovered.

4.7. Safe Drinking Water Act

The potable water supply to Building 51 was turned off and capped to protect the integrity of the water supply to that portion of the plant site.

4.8. Emergency Spill Response

Building 51 has been disconnected from all utility services and the lines drained. There should be no regulated component that will be encountered. In the event of a major spill of any regulated substances, or the rupture of a non-isolated utility line (fire, domestic water, ethylene glycol) call 911 if using an onsite phone or 937-865-4040 if using a cell or other outside phone to report it. All spills must be contained onsite and should be prevented from entering the storm drains if possible. If spills enter the storm drains, all effluent must be retained onsite at the overflow pond.

5. CHEMICAL AND WASTE MANAGEMENT REQUIREMENTS

All waste will be managed in accordance with the Waste Management Plan for the Mound Exit Project, MD-10499. The Waste Coordinator will ensure that this is accomplished and summarize in a Job Specific Waste Management Plan, which is included below.

Fluorescent tubes and non-PCB containing ballasts will be left in place, and will be demolished with the building. However, if PCB containing ballasts are encountered, they will be removed and disposed of through Waste Management. Note: If fluorescent tube breakage would present a safety hazard while workers are in the building, the tubes may be removed separately. It has been determined that the seals on the explosion-proof lights are not asbestos containing. Therefore, they will not be removed, but will be demolished with the building. Note: If a suspect seal is encountered, contact site Safety and Health for guidance.

6. QUALITY ASSURANCE REQUIREMENTS

The Quality Level for this project is 2 due to the hazards of demolition. This work plan and the accompanying JSHA fulfill the requirements for QA. See Appendix B.

7. EMERGENCY PREPAREDNESS

7.1. Site Notification Procedures

8.1.1 Use **911** for all emergency services onsite. This is the first response for any emergency, spill, or release. If using a cell phone, dial **865-4040**. This number will ring into the plant 911 system.

8.1.2 Any injury, no matter how minor, shall be reported immediately to the Medical Department for evaluation and treatment. The injured employee shall report any injury to the supervisor in charge or designee.

8.1.3 Employees working will be notified of emergency or abnormal conditions by the plant paging system or project two-way radios. Additionally, unique sheltering and evacuation signals are available should site-wide protective actions be necessary.

7.2. Evacuation Route/Assembly Areas

The assembly area is northeast of Building 51 at the west side of Building 98. See map per Appendix E.

7.3. Take Shelter Area

The take shelter area is in the basement of Building 98 in Rooms 002, 003, and 004. See map per Appendix E.

8. PRE-DEMOLITION SEQUENCE OF WORK

8.1. Site Characterization

8.1.1. Physical Characterization

A structural engineering survey was performed and documented for Building 51 to meet the requirements of OSHA 29 CFR 1926.850(a). A walkdown of the structure was used to identify potential hazards as listed in 29 CFR 1926.850(e) through (i). It has been determined the building does not meet the criteria that cause the structure to be historically significant.

8.1.2. Radiological Characterization

An assessment of Building 51 was performed reviewing operational history and radiological survey information. Operational history indicates that the building contained an incinerator for non-radiological use, and may have contained a Uranium enrichment process. It is unclear if the enrichment process was ever started. The building super-structure and equipment housed within were determined to be uncontaminated.

Some years ago, a radiological survey found a location on the basement floor with fixed contamination. The area was determined to be Pu-238 and was approximately 600 to 700 dpm/100cm^2. The area has been remediated and resurveyed, see Figure 3.0. Subsequently, a 100% scan survey was conducted of the basement floors and adjacent walls using a Ludlum model 2350 gas flow proportional counter with data logging capabilities. During the course of the 100% floor survey, one additional location of fixed contamination was discovered with a maximum reading of 700 dpm/100cm^2 direct alpha. The contamination was acid-etched and isotopic identification has determined the isotope to be predominately Plutonium 238. The building was then reclassified in accordance with the MARSSIM Manual to perform more in-depth surveys. During the course of the random sampling in the lower section of the building (Class 2 Area), another spot of contamination was discovered on the inside of the south sheet metal wall (~200-300 dpm/100cm^2 direct alpha). That spot was also acid-etched and identified as Plutonium 238. The contaminated surfaces seem to be directly related to the old incinerator conveyor system. The conveyor system transported the incinerator ash from the bottom of the water "catch basin" then outside to be collected and disposed of. The conveyor then traveled up and over the top of the incinerator, down the North wall of the lower building section and back under the incinerator in a continuous loop. The identified areas of contamination fall in the vicinity of the path of travel of the conveyor. At this point, further surveys of the lower section of the building were determined to be economically impracticable. And the decision was made to dispose of the entire back section of the building as Low Level Radiological Waste. The contaminated concrete lower slab and retaining wall will be

segregated and disposed of as radiological waste as part of PRS 66 removal action.

8.1.3. Chemical and Metals Characterization

Building 51 housed an incinerator that was designed to burn nearly all of the plant's non-radioactive refuse including some liquids such as paints, waste oils, and solvents. Most recently, Building 51 housed processes that used energetic materials and photographic processing chemicals. The building underwent Safe Shutdown in 1996 at which time these materials were removed from the building. The annual chemical inventory report found no chemicals located in the building.

8.1.4. Asbestos Characterization

Asbestos-containing material were identified and remediated in connection with Building 51, no further action is required.

8.2. Site Preparation

8.2.1. Site Access Control

The demolition area will be identified utilizing the existing fence around the building, or at the discretion of the project construction manager/foreman, marked off with barricade tape/fencing.

8.2.2. Clearing and Grubbing

The area around the building will be mowed and insecticide will be sprayed if appropriate. Coordinate with site Safety and Health and Environmental Compliance.

HAZARD	MITIGATION
Insect bites Exposure to insecticide	Mow area around building. If appropriate, wear long pants and long sleeve shirt. Tape arm and leg opening, if desired. Follow requirements of MD-10286 D2. Use licensed personnel. Follow label directions and MSDS.

8.2.3. Temporary Utilities

The only temporary utility that may be required is electrical. A portable generator would be utilized. A Hot Work Permit may be required to operate the generator. Coordinate with site Safety and Health.

HAZARD	MITIGATION
Carbon monoxide.	Place generator outside the structure.

8.2.4. Temporary Facilities

This project may use the existing Building 44 and Building 38 shower/restroom area or utilize SMPP/TVF project new trailer complex to be located in Mound exiting "C" parking lot. Also, a portable toilet has been located at the job site.

8.2.5. Temporary Communications

Temporary communications are required (cell phone, radios) due to the difficulty of hearing plant announcements and emergency notifications. At the job site, plant announcements and emergency notifications can be heard on the Plant radio channel.

8.2.6. Staging Areas

The project site is of sufficient size to also be used as a staging area.

8.3. Preliminary Activities

8.3.1. Domestic water, fire water, electrical, fire alarm system and communications lines have been disconnected under separate safe shutdown MSR. 30024.An excavation/soil disturbance permit will be required prior to excavation activities.

8.3.2. Verify equipment with printed circuit boards have been removed. If found dispose through Waste Management as lead-containing waste.

8.3.3. Verify all mercury containing switches have been removed. If found, dispose through Waste Management.

8.3.4. Confirm all Freon has been previously removed and recycled from HVAC units inside and outside of the building.

8.3.5. Fluorescent tubes, ballasts, and explosion proof lights will remain in place. If PCB-containing ballasts are encountered, remove and dispose through Waste Management. Note: Contact site Safety and Health with any concerns about fluorescent tubes, ballast, or explosion proof fixture seals.

HAZARD	MITIGATION
Fall hazard	Follow requirements of MD-10286 M-14

9. BUILDING DEMOLITION SEQUENCE OF WORK

9.1. Establish Work Zone

Establish work zone boundary using the existing fence and/or with barricade tape as directed by the Project Foreman. Proper signage will be placed at all access points to the

site. This zone is not to be entered by anyone not directly involved with the demolition unless they have contacted the Project Manager/Foreman first.

Do not begin any demolition activities until the following items are completed.

All new workers assigned to this project have received a pre-job briefing prior to performing work and a walkdown of the project area. The following must be completed prior to starting work.

Review of the *Preliminary Hazard Analysis* for work package activities must be complete.

9.1.1. The *Pre-Job Briefing Record* must be complete and signed.

9.1.2. The *Job Specific Hazards Analysis (JSHA) must be reviewed.*

NOTE: All workers have Stop Work Authority. Situations where stop work authority is to be exercised are:

- **To stop unsafe work.**
- **To stop unauthorized work, for example, work outside the scope of this work package.**

9.1.3. Confirm electric/communication has been disconnected to Building 51.

9.1.4. Confirm all utilities have been isolated and blanked-off.

9.1.5. All pre-demolition notifications have been made.

9.1.6. Install sediment/storm water control fence around designated construction area as necessary.

9.1.7. Prepare water distribution system for the control of dust.

HAZARD	MITIGATION
Contact overhead power lines with heavy duty equipment.	If heavy duty equipment will be operating within 10' of overhead powers, perform LOTO.
Struck by flying debris Struck by moving equipment Noise Hazard	Establish construction boundary Wear Hard Hat Safety Glasses, Safety Shoes, Reflective Vest inside construction area Maintain the following distances from operating equipment: Shear – 75 feet Hoe Ram – 50 feet Other heavy duty equipment – 30 feet Bobcat – 15 feet Wear hearing protection while running heavy duty equipment Follow the requirements of MD-10286 D9
Burns from torch cutting	Obtain and follow Hot Work permit per MD-10286 O2
Heat/Cold Stress	Follow the requirements of MD-10286 D13/D16

Exact sequence of demolition will be left up to the skill of the craft.

9.2. Front Upper Section Superstructure Demolition

Demolish the Front Upper Section of the building's rollup doors, siding, interior concrete block room partition walls and structural steel using heavy equipment and layout for radiological survey. Following survey and release, place into appropriate hauling containers or trucks.

9.3. Front Upper Section Concrete Demolition

HAZARD	MITIGATION
Strike underground utilities	Obtain Excavation permit and follow its requirements per MD-10286 O5

Using heavy equipment break apart the Front Upper Section's concrete slab, asphalt apron, foundation, and footers to 3' below grade, torch cut the rebar as required (Hot Work Permit is required if used) to support demolition and downsizing. During the concrete demolition operation using heavy equipment to assist radiological control personnel to perform radiological screening of all concrete surfaces. Based on radiological screening results, transport to Mound's spoils area, offsite disposal or rail spur as directed by Waste Management.

Note: The progressions of the building demolition will ultimately be determined in the field.

9.4. Lower Back Section Superstructure Demolition

HOLD POINT: Lower Back Section of the structure is a Radiological Work Permit area, this requires the area to be posted, an approved RWP in place and the workers briefed and signed in on the RWP. Workers to follow the requirements stated on the RWP.

_____ _____

Project Foreman Date

Demolish the Lower Back Section's structural steel, siding and equipment using heavy equipment as needed to demolish, size, containerize and disposed of as LLW.

9.5. Lower Back Section Concrete Disposition

Lower Back Section's retaining wall, floor slab, loading dock slab, and stem walls - remain in place and not disturbed , and will be removed by the Environmental Restoration (ER) project

9.6. Temporary Area Restoration

The last step will be to temporarily restore area by grading and seeding. Remove any unnecessary remaining sediment/storm water control fences. Remove dust control water distribution system, fencing and any traffic control. Restoration will be temporary in scope

since the area is scheduled to be disturbed in the near future by the efforts of PRS 66 removal actions.

Appendix A
JSHA/HASP

Project/Activity: Building 51 Demolition
Name: Lee Koehmstedt

10. JSHA CRITERIA CHECKLIST	YES	NO	N/A
1. Work performed with a 6 ft. or greater fall hazard, excluding portable ladders. See Item 14 for further requirements.	X		
2. Roof work requiring the use of fall protection (within 6 ft of an unprotected edge) or special fall protection procedures.		X	
3. Potential hazardous chemical exposure above action levels or permissible exposure limits (PELs), or ACGIH Threshold Limit Values (TLVs).		X	
4. Work activity in an immediately dangerous to life or health (IDLH) breathing hazard environment.		X	
5. Fire or explosion hazards. Are fire hazards beyond a Hot Work Permit? (Reference O2, MD-10286)		X	
6. Work within close proximity of live electrical than 50 volts, conductors, and/or work that requires multiple locks, multiple hazard sources, or complicated lockout/tagout circumstances. (Reference MD-10444, *Lockout/Tagout Procedure Manual*, for multiple energy lockout/tagout.)		X	
7. Any maintenance or repair of equipment under pressure where the pressure cannot be shut off and de-energized.		X	
8. Work with high or extreme exposure to ionizing or nonionizing radiation (reference MD-80036, Op 10002), noise, or heat or cold stress (reference D9, D13 & D16, MD-10286).		X	
9. Determined by an appropriate core team, building manager, member of general or executive management, or the IS&H manager to require a JSHA.	X		
10. Any onsite construction or service project directed to have JSHAs based on this procedure and/or instruction from project personnel or IS&H staff.	X		
11. Near-miss event with the potential for loss of life or limb or disabling injury/illness if repeated.		X	
12. Excessive trauma/motion/vibration work situations or manual lifting involving heavy, large, and/or awkward-to-handle objects (reference MD-10407, *Ergonomics Program.*		X	
13. Unguarded, unmarked close clearance, pinch point, exposed moving machinery parts.		X	
14. Known potential falling object hazards (e.g., employees working above other employees, potential for dropping tools, falling equipment or material) or working in areas with the potential for flying objects (flying chips, sandblasting, etc.), exposure to sharp or protruding objects (e.g., working inside plenums, air mover ducts, etc.).		X	

MANDATORY JSHA REQUIRED TO ADDRESS ANY/ALL (YES) RESPONSES

JOB SAFETY & HEALTH ANALYSIS

JSHA MASTER DOCUMENT CONTROL NO:
SMPP/TFV – 29953-0

DATE: 7/31/01	_X_ NEW ___ REV	BUILDING: 51	JOB: Demolish Building 51
DEPARTMENT/COMPANY: SMPP/TFV			SECTION: N/A
OCCUPATIONS: Heavy Duty, Demo Tech, Construction Craft, Pipefitter/Welder, Electrical Control, Fab Mechanic, RCT, IH			

SIGNATURES

ORIGINATOR: Lee Koehmstedt
REVIEW/REV. Jared Willis
REVIEW/REV: Bill Wahler
REVIEW/REV: Gary Weidenbach
APPROVED. C.D Thompson

REQUIRED PERSONAL PROTECTIVE EQUIPMENT:	MSDS(s)/CHEMICALS ASSOCIATED WITH THE JOB:
Hard Hat, Safety Glasses with side shields, safety shoes, safety vest	Insecticide

BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES
Break the job down into basic steps that tell what is done first, what is done next, and so on Record the job steps in their normal order of occurrence. Describe what is done, not the details of how it is done. Usually, three or four words are sufficient to describe each job step. For example, the job of "replacing a light bulb" may break down into basic steps as follows: 1 Bring and set up ladder 2 Ascend ladder 3 Remove light globe & bulb 4 Replace light bulb 5 Replace light globe 6. Descend ladder 7 Remove and store ladder	Ask yourself for each job what accidents/illnesses could occur to the employee doing the job. Record potential accidents/illnesses by combining one of the abbreviations below with the agent of contact. For example, "struck by a crane hook" is recorded "SB-crane hook." Number each potential accident SB - Struck by CB - Contacted by SA - Struck against CW - Contact with CI - Caught in CO - Caught on IB - Caught between F - Fall SO - Strain-overexertion* E - Exposure (occ. illness) *Show ergonomic stresses as SO (repetitive trauma, single event strain, or awkward position)	For each potential accident/illness, ask yourself exactly what the employee should do or not do to avoid the accident/illness Describe specific precautions in detail. Give each precaution the same number given in the potential accident (center column) to which it applies. Avoid generalities such as "Be alert," "Be careful," and "Take caution." Use simple do or don't statements; e.g., "Lock out main power switch," "Stand clear of lift before signaling," or "Check wrench grip before exerting full force." If necessary, explain how, as well as what, to do. Amount of detail is a matter of judgment Describe ergonomic solutions (job redesign, new tools, worker lift assistance, etc.)
General Safety Note	A wide variety of incidents occur on a regular basis that potentially could result in injury or illness	1) Be cognizant of your own safe work practices as well as those of your co-workers 2) Review any related safety procedures of which you are unsure 3) Utilize STOP WORK Authority as necessary
Pre-job meeting with involved personnel to discuss the work plan and safety requirements.	NA	This project engages in Enhanced Work Planning(EWP), a ISM process that evaluates and improves the approach by which work is identified, planned, approved, controlled, and executed.
Removing equipment using ladders or manlifts, such as lighting, fluorescent tubes and ballasts	Fall hazard	Follow requirements of MD-10286 M-14

JOB SAFETY AND HEALTH ANALYSIS FORM
(CONTINUATION SHEET)

BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES
Demolish building and slab using excavator mounted shear, hoe ram, grapple, loader, and bobcat	Struck by flying debris Struck by moving equipment Noise Hazard	Establish construction boundary Wear Hard Hat Safety Glasses, Safety Shoes, Reflective Vest inside construction area Maintain the following distances from operating equipment: Shear – 75 feet Hoe Ram – 50 feet Other heavy duty equipment – 30 feet Bobcat – 15 feet Wear hearing protection while running heavy duty equipment Follow the requirements of MD-10286 D9
Torch cut rebar or to weaken structural members	Burns	Obtain and follow Hot Work permit per MD-10286 O2
Working in excessive heat/cold	Heat Stress/Cold Stress	Follow the requirements of MD-10286 D13/D16
Slab removal	Strike underground utilities	Obtain Excavation permit and follow its requirements per MD-10286 O5
Possible use of a gas powered generator for temporary power	Carbon monoxide.	Place generator outside the structure.
Electric overhead lines	Electrocution	LOTO all electrical overhead lines.

SIGN-OFF SHEET

I have read and understand the attached Job Specific Work Plan and JSHA:

SIGNATURE	Date	Department