3005-0301160003

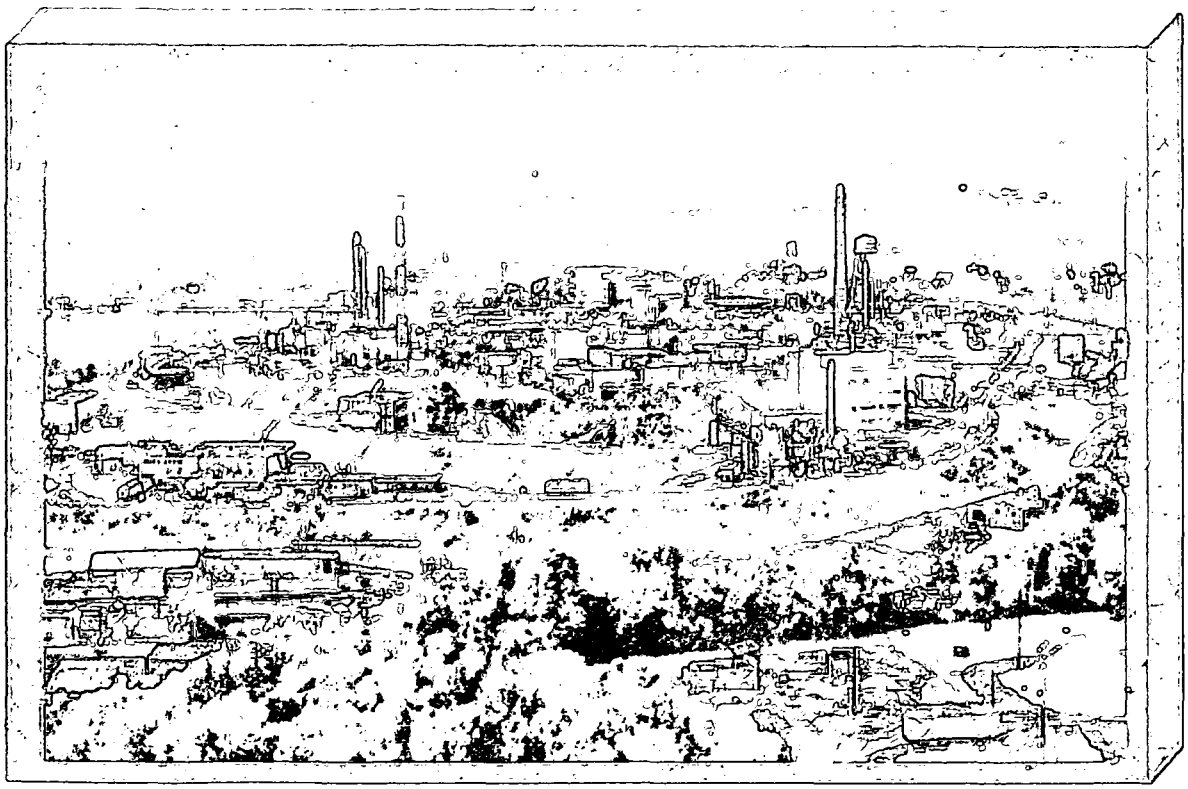
MOUND

Environmental Restoration Program

Ohio EPA

MOUND PLANT
Building Data Package
Building 2

Public Review Draft
February 2002



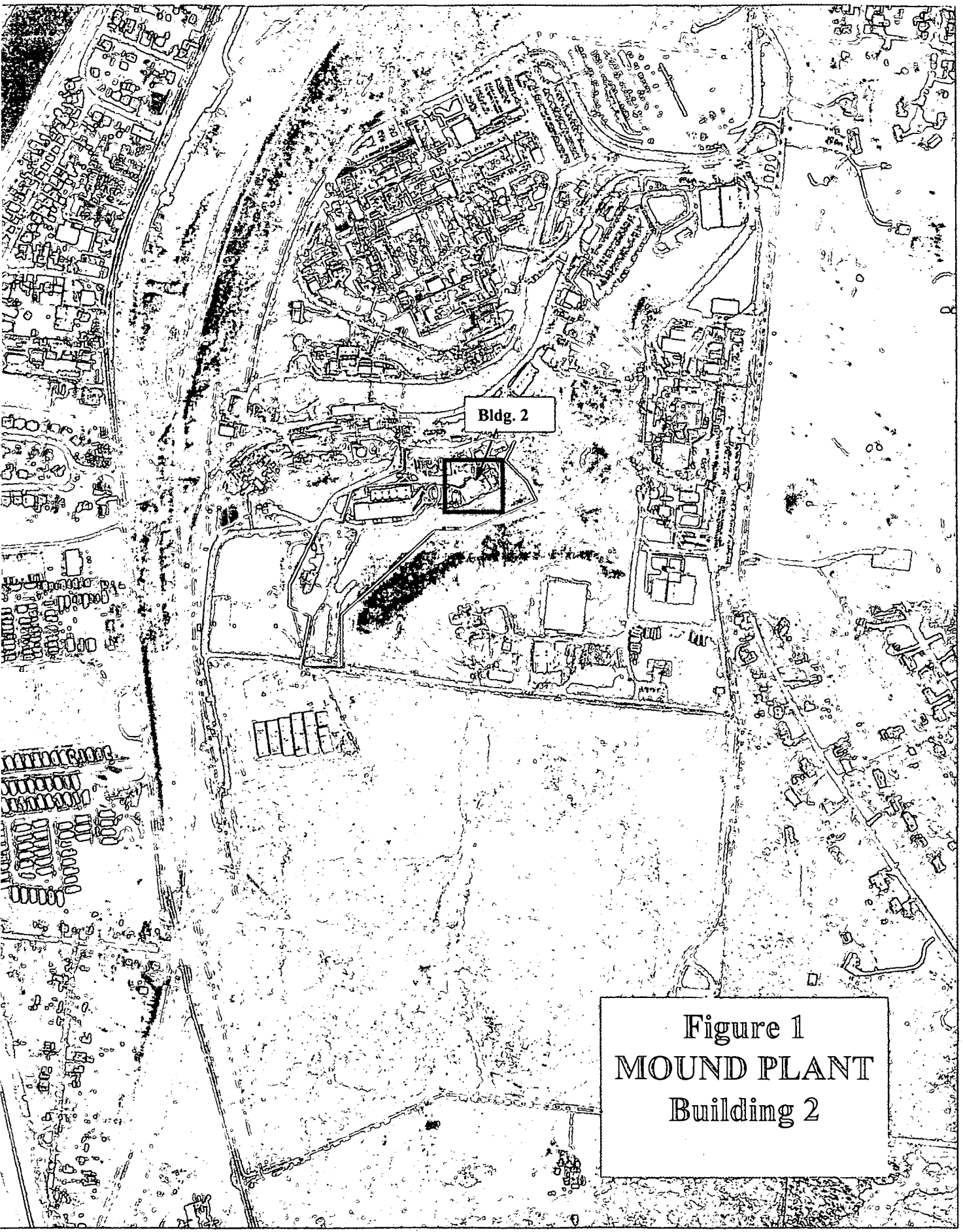
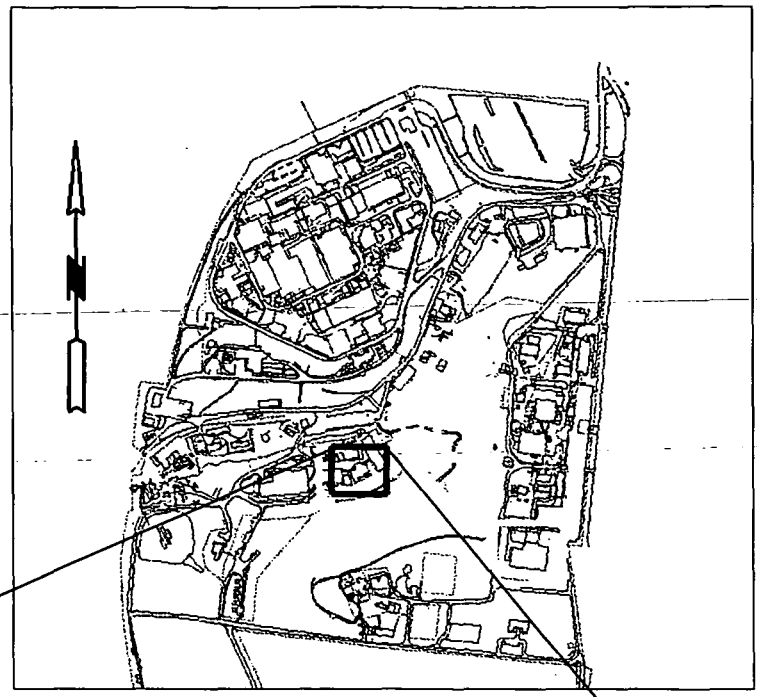


Figure 1
MOUND PLANT
Building 2

Figure 2
Mound Plant
Building 2
EM Test Facility

On the map below:

- Building number and location shown in black
- PRS locations and numbers shown in blue
- Surrounding buildings shown in tan
- Fencing shown in red
- Elevation contours shown in brown



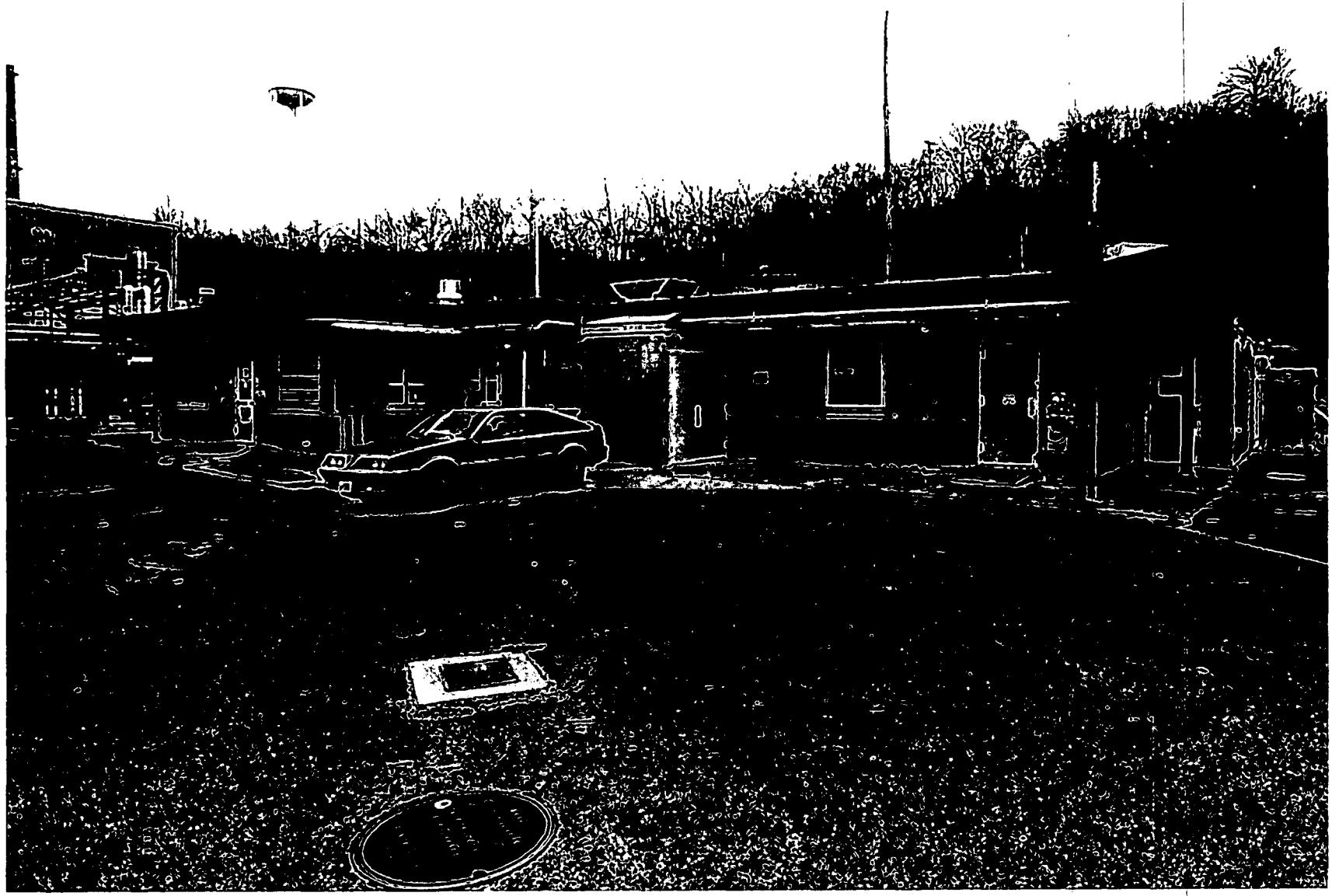


FIGURE 3 :Photo of Building 2

BDP Building 2

REV	DESCRIPTION	DATE
WORKING DRAFT		October 2001
DRAFT	Mislabeled as Draft Proposed Final	November 2001
DRAFT PROPOSED FINAL	Incorporates Core Team comments	January 2002
PUBLIC REVIEW DRAFT	Contains signed recommendation page for NFA	February 2002
FINAL		

MOUND PLANT RECOMMENDATION

Building 2

Background:

Building 2 was built to serve as an energetic materials destructive testing facility. It was constructed in 1956 with five subsequent additions. The building contains three firing rooms/chambers and three dark rooms. The dark rooms were used to develop pictures taken during detonator tests. The building also contained two underground tanks. One tank was a 1,000-gallon fuel oil storage tank removed in 1968, and the other tank was a 450-gallon septic tank, which was abandoned in place in 1984. Building 2 contains 6,291 square feet. Safe Shutdown was concluded in 1995. Almost all equipment has been removed from the building. Building 2 is currently inactive.

Recommendation:

After thorough review of the environmental data and the Building Data Package, the Core Team agrees that all existing environmental issues associated with Building 2 have been resolved. Future use of Building 2 will be restricted to commercial/industrial use. The Core Team hereby recommends that the U.S. Department of Energy submit a letter to the Administrator of the U.S. EPA for final approval of the lease or sale of this property, as required by Section 120(h) of CERCLA.

DOE/MEMP: _____
Robert S. Rothman, Remedial Project Manager

USEPA: _____
Timothy J. Fischer, Remedial Project Manager

OEPA: _____
Brian K. Nickel, Project Manager

BUILDING DATA PACKAGE (BDP)

Building 2

(Transition)

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 transfer of Building 2 to the Miamisburg Mound Community Improvement Corporation (MMCIC) and to identify, if possible, any recognized environmental conditions (defined below) that may affect the subject property.

Recognized Environmental Condition This is 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 2 located at the DOE Mound Plant in Miamisburg, Ohio. This investigation was performed to support procedures as 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 the building, the soil beneath, and a 15-foot wide perimeter border around the building. Soil sampling results are noted in Appendix L. This perimeter includes roadways, sidewalks, pavement, and grass covered areas. The investigation of Building 2 included the following.

1) A building and perimeter inspection.
2) An examination of historical aerial photographs and maps.
3) A review of federal and state regulatory agency records.
4) Personnel interviews.
5) A review of Mound Plant records for:

    A) History of spills and releases
    B) Past sampling data
        - Radiological survey
        - Soil sampling
        - Lead paint
        - Asbestos
        - Radon

Building investigations were conducted by BWXTO personnel.

Information used to compile this Building Data Package included 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
- PRS Information
- MD-222153, Mound Site Radionuclides By Location, July 1995 Contaminant Surveys
- MLM-3791, Mound Facility Physical Characterization, December 1993

2.0 Building Specific Overview

Mound Plant is located in the southern portion of the corporation limits of Miamisburg, Ohio. The entire Mound Plant facility is situated on approximately 300 acres of land and contains approximately 130 buildings. The subject property consists of Mound Plant Building 2, the soil beneath, and a 15-foot wide perimeter around the Building. Building 2 contains 6,291 square feet. It was constructed in 1956 with five subsequent additions. No waste is currently stored in Building 2. See Appendix D.

2.1 Current Uses of Building 2

Building 2 is currently inactive. Safe Shutdown was concluded in 1995. Almost all equipment has been removed from the building.

2.2 Past Uses of Building 2

Building 2 was built to serve as an energetic materials destructive testing facility. The building contains three firing rooms/chambers and three dark rooms. The dark rooms were used to develop pictures taken during detonator tests. The building also contained two underground tanks. One tank was a 1,000-gallon fuel oil storage tank removed in 1968, and the other tank was a 450-gallon septic tank, which was abandoned in place in 1984.

According to Brady Barnhart (Mound employee who supervised the Safe Shutdown activities in Building 2 and worked with the materials at the site), energetic materials tested within the Building 2 cells included PETN, TATB, HMX, RDX, and HNS. Jerry Allison (previous manager of fabrication and testing of energetic components in the test fire valley) reported that only components were tested and loose materials were not handled within or outside of the building. Since the testing process destroys the energetic materials, none would have been exhausted from the stacks to be deposited onto the ground.

2.3 Summary of Environmental Concerns and Findings - Building 2

DESCRIPTION	COMMENT*	RESOLUTION
Lead Paint	Paint was tested with a Niton meter and found to contain less lead than Housing and Urban Development (HUD) action levels	No actions will be taken
Chemicals	N/A	
Fluorescent Lamps and PCBs	Fluorescent lamps were utilized in the building. Ballasts may contain PCBs.	Ballasts will remain in place unless leaking.
Asbestos	The building contains asbestos insulation, but is in good condition	Insulation will remain in place as long it is good repair.
Drainage Sumps	N/A	
Lead	N/A	
HVAC	N/A	
Mercury	N/A	
Radiological	N/A	
Septic System	N/A	
Waste Water	N/A	
Stains & Corrosion	N/A	
Space	N/A	
Storage Tanks	N/A	
Solid Waste Disposal	N/A	
Migratory Hazards	N/A	
Radon	N/A	
Energetic Material	Energetic Materials were tested in this facility	The facility underwent cleaning during Safe Shutdown activities

N/A : Not a contaminant of concern during 1995 shutdown

PCB: Polychlorinated Biphenyls.

2.4 Radiological Characterization Summary for Building 2

An assessment of Building 2 was performed reviewing operational history and radiological survey information. Radiological surveys of the building(s) and equipment indicate no elevated radioactivity levels. Additionally, the building was known as an energetic materials destructive testing facility and it had no history of having handled or stored radioactive materials. Several prior assessments have concluded that the building was non-impacted from site radiological operations.

In accordance with "Generic Process for the Disposition of Buildings That Have Potential or Actual Radiological Contamination", the review team

concluded that the building is radiologically clean. No further radiological surveys are required. Associated radiological survey documentation for the information summarized in the following table is contained in Appendix G.

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm^2)	SURFACE CONTAMINATION GUIDELINES (dpm/100 cm^2) (Note 1)	COMMENTS
Highest Alpha Smearable Activity	98-TF-363	Horizontal Surfaces & Equipment	4.6	20	
Highest Alpha Fixed Activity	Note 2	Misc.	< 100	100	
Highest Beta Smearable Activity	98-TF-363	Horizontal Surfaces & Equipment	5.96	1,000	
Highest Beta Fixed Activity	Note 2	Misc.	< 5000	5,000	
Highest Tritium Smearable Activity	00-TF-430	Horizontal Surfaces & Equipment	47.47	10,000	

Note 1: Core Team determined values
Note 2: All radiological surveys indicated < 100 dpm/100cm^2 alpha and < 5000 dpm/100cm^2 beta

2.5 Associated PRS Table for Building 2

See Appendix N and Paragraph 4.2.3. Also note Mound Plant graphical depiction located in the Introduction to this Building Data Package.

PRS #	CERCLA or BLDG. RELATED	BINNING STATUS	COMMENTS
PRS 72	CERCLA	FA	Currently being evaluated by Soils Project
PRS 83	Building Related Propane Storage Tank[1]	Not yet binned	To be binned with Building 2
PRS 89	Building Related Residual Storage Area[2]	Not yet binned	To be binned with Building 2
PRS 330	CERCLA	NFA 2/19/97	Fuel Oil Tank 260
PRS 331	CERCLA	NFA 4/18/96	Septic Tank 261
PRS 362	CERCLA	NFA 11/20/96	Soil Contamination

Notes: FA-Further assessment, NFA-No Further Action, RA-Removal Action,

[1] Has been removed
[2] Was cleaned up during Safe Shutdown

3.0 Site Description

3.1 Site/Vicinity Location and Characteristics

Building 2 is located at the U.S. Department of Energy Facility known as Mound Plant. Mound Plant is situated in the city of Miamisburg, Miami Township, Montgomery County, State of Ohio. See Appendix B.

The Mound facility is situated on approximately 300 acres of land and contains 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, consists of two hills and an intervening valley that runs approximately east and west. Building 2 is located in the lower valley of the Plant site. The 124-acre tract acquired in 1981 is 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. This area (Parcel 4) was subsequently transferred to MMCIC on April 19, 2001. See maps and drawings in Appendix C.

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 Related to Building 2

The subject property consists of the Mound Plant Building 2 footprint, the soil beneath, and a 15-foot wide perimeter around the building. Building 2 is a one story, 6,291 square foot structure. It is a slab-on grade, reinforced concrete and concrete block structure, with a built-up membrane (coal tar) roof. It was constructed in 1956.

To the west lies Building 3, which was involved in the destructive and environmental testing of energetic materials containing components and is

currently leased. To the east lies Building 49, which was a production laboratory and staging facility for energetic materials containing components. Building 63 with east and west additions lies to the north. The east addition was used for test systems design and fabrication. The west addition was used for spin testing and environmental storage and conditioning of components.

Building 2 is heated by steam and air conditioned by central chiller systems. Potable water and sanitary services are provided by the Mound Plant facility.

3.3 Current and Past Uses of Buildings In Proximity To Building 2

Building 2 is a part of the former Test Fire complex, which includes Buildings 3, 49, 63E and 63W. Building 3 was used for destructive testing of energetic materials, similar to Building 2. Building 49 was used for the fabrication of energetic material components. Building 63E was used as offices and as a tester fabrication facility. Building 63W was used as a spin test facility.

Building	Building Area sq. ft.	Current Use	Direction from Building 2
3	12,391	Leased to MMCIC Sub-leased to Perkin-Elmer	West
49	14,929	Leased to MMCIC Sub-leased to Perkin-Elmer	East
63 E/W	16,461	Leased to MMCIC Sub-leased to Perkin-Elmer	North

4.0 Records Review

4.1 General/Historical CERCLA Information

In compliance with permit requirements under 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 NPDES surface water discharge permit with Facility I.D. number OH 0009857. Permits for the open burning of wastes involving explosives and other fuels have been issued by the Regional Air Pollution Control Agency (RAPCA). Other activities that produce particulate or

vaporous emissions are registered with RAPCA and Ohio Environmental Protection Agency (OEPA). Mound Plant also submits annual Emergency and Hazardous Chemical Inventory forms to the OEPA, pursuant to SARA, Title III, the Emergency Planning and Community Right-to-Know Act. The 2000 version of this report indicated that no chemicals are stored in Building 2 in quantities above the regulatory thresholds.

The Mound Plant was identified as a contaminated site on the National Priority List under CERCLA (Superfund) in 1989. The Mound Plant site was originally listed as a consequence of VOC contamination in the western end of the lower valley area. The clean-up 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 clean-up areas. As the clean-up effort went forward, it became apparent that the Mound Site did not fit the profile for a clean-up strategy based on the operable units. DOE, the United States Environmental Protection Agency (USEPA), and the OEPA designed a new decision making process for the clean-up of Mound. 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 Mound into geographical parcels containing over 400 Potential Release Sites (PRSs) with approximately 200 concerned with potentially contaminated soils, and the balance 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 (see Appendix M)

A search of the occurrence reporting system revealed three reports, all of which were minor:

- Smoke detector false alarm
- Security alarms damaged by electrical storm
- Roofing work set off smoke detector in ventilation ductwork

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 FFA/DOE ER

Program, DOE and BWXTO have tabulated all the Potential Release Sites (PRSs) identified under the various regulatory programs in effect at the site. Of these 440 PRSs, PRS 72, 83, 89, 330, 331, and 362 are related to Building 2 due to proximity of location. See Appendix N.

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 building. Supporting documentation is contained in Appendix G.

4.2.4.2 Soil Sampling Data

Soil sample results within a 15-foot perimeter of Building 2 are depicted in a graphic and presented on a table in Appendix L. All data are below applicable screening levels.

4.2.4.3 Chemical History/Removal

The building housed processes, which used energetic materials and photographic processing chemicals. The building underwent Safe Shutdown in 1995 at which time these materials were removed and the building was determined not to have been impacted. A recent inspection found no chemicals located in the building.

4.2.4.4 Lead Paint

No objective data could be found or was generated during the walk-through assessment of Building 2 to indicate the presence of lead in paint coatings which were present. Therefore, all such coatings were tested with a Niton meter and found to contain lead below HUD action levels.

The general paint coating the exterior of the building was found to exhibit moderate peeling and chalking. A yellow paint wall coating on a limited area of the exterior was seen to be peeling and in poor condition. Paint coating a pipe in the main hallway inside the building as well as a

silver paint coating the explosive tank were found to be peeling and in poor condition. The remainder of the interior paint coatings were found to be peeling over approximately 20% of the surface areas.

4.2.4.5 Asbestos

Previous surveys as well as a walk-through assessment of readily accessible areas of Building 2 indicated the presence of asbestos-containing materials and materials suspect for containing asbestos.

Previous surveys found that asbestos pipe insulation existed in Rooms 103, 110, 111, 113, 117, 120, 124, the restrooms and hallways. Asbestos cement wall and ceiling board was identified in Room 122/A. Explosion-proof light fixture gaskets throughout the building were found to contain asbestos. Analyses indicated that plaster, drywall, and ceiling tiles did not contain asbestos.

The walk-through assessment found asbestos pipe insulation in the Mechanical Room as well as two rolls of roofing felt which were assumed to contain asbestos. Floor tiles and white duct tape located throughout the facility were assumed to contain asbestos. All suspect materials were observed to be intact except some of the floor tiles which had popped up from the substrate due to exposure to water.

4.2.4.6 Radon (see Appendix H)

The results of a 1989-90 Mound Indoor Radon study are included in Appendix H. Building 2 was not included in the study. The EPA recommended standard for radon is 4.0 pCi/l.

4.3 Review of Building Prints

Building prints were reviewed and are included in Appendix D.

4.4 Aerial Photographs

Aerial photographs from 1949, 1959 and 1994 were reviewed and copies are found in Appendix E.

4.5 Interviews

Past Building Manager, Bob Ward, was interviewed using a building manager questionnaire. See Appendix F. The current Building Manager is Gary Weidenbach. No significant items other than the energetic materials testing performed in the building were found.

Appendix A

General Listing of Acronyms

AEA	Atomic Energy Act of 1954
AEC	Atomic Energy Commission
ACM	Asbestos Containing Materials
AL	Action Level
ASTM	American Society for Testing and Materials
BDP	Building Data Package
BUSTR	Bureau of Underground Storage Tank Regulations
BWXTO	BWXT of Ohio
CAA	Clean Air Act
CEG	Conditionally Exempt Generator
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
COD	Chemical Oxygen Demand
CWA	Clean Water Act
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DPM	Disintegrations Per Minute
EMF	Electromagnetic Field
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration (Program)
ERDA	Energy Research and Development Administration
ERNS	Emergency Response Notification System
FFA	Federal Facility Agreement
FINDS	Facility Index System

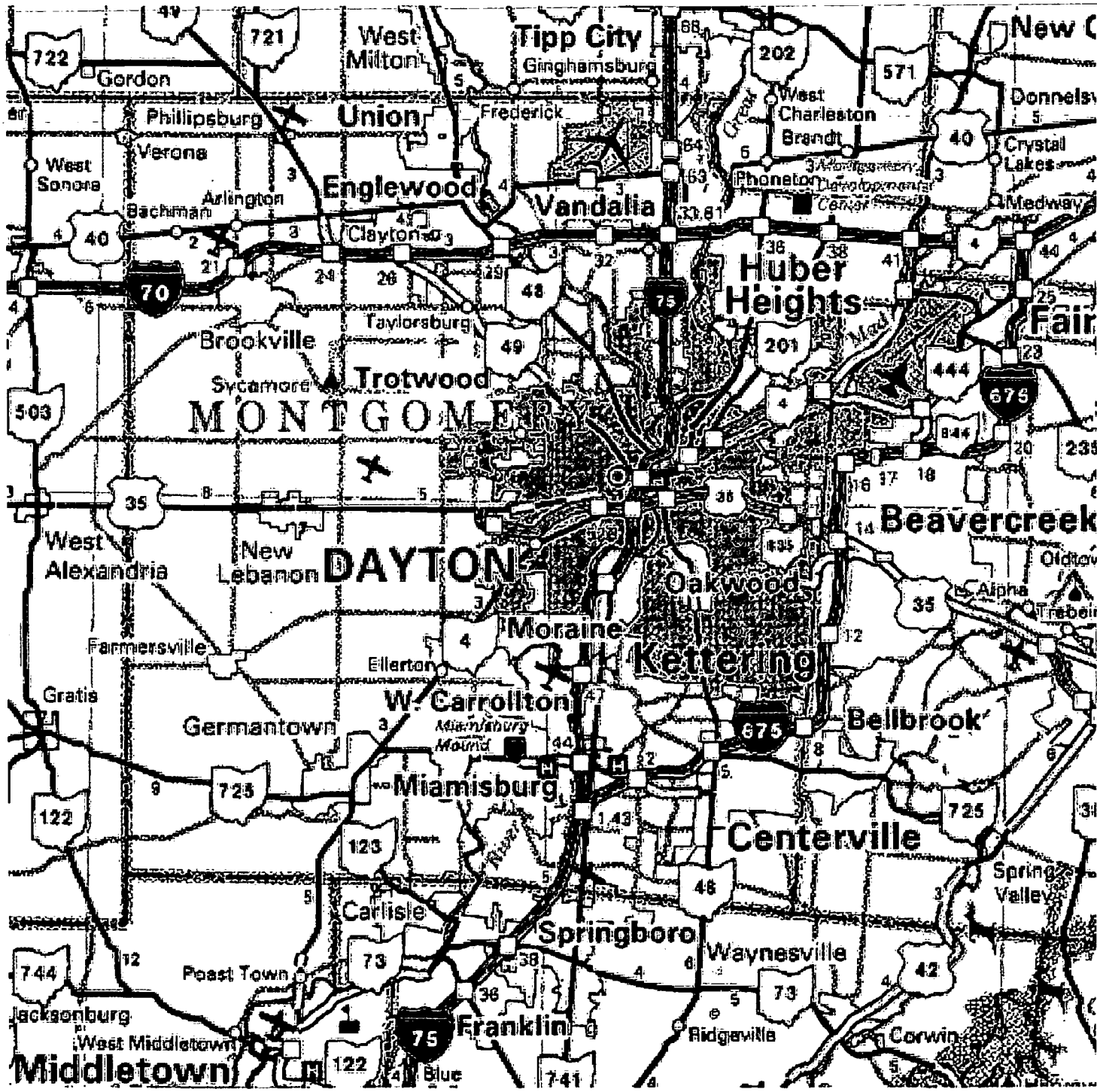
FS	Feasibility Study
GSA	General Services Administration
HEPA	High Efficiency Particulate Air
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tank
M&O	Maintenance and Operations
MARSSIM	Multi-Agency Radiological Survey and Site Investigation Manual
MAT	Mound Applied Technologies
MCC	Monsanto Chemical Company
MEMP	Miamisburg Environmental Management Project
MMCIC	Miamisburg Mound Community Improvement Corporation
MRC	Monsanto Research Corporation
NPDES	National Pollutant Discharge Elimination System
OEPA	Ohio Environmental Protection Agency
ORPS	Occurrence Reporting and Processing System
OU	Operable Unit
PADS	PCB Activity Database
PCB	Polychlorinated Biphenyls
PRS	Potential Release Site
RAPCA	Regional Air Pollution Control Agency
RCRA	Resource Conservation and Recovery Act

REC	Recognized Environmental Condition
RI	Remedial Investigation
RSDS	Radiological Survey Data Sheet
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SQG	Small Quantity Generator
SWMU	Solid Waste Management Unit
TRIS	Toxic Chemical Release Inventory System
TSD	Treatment, Storage, & Disposal Facility
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

Appendix B

Map of Montgomery County

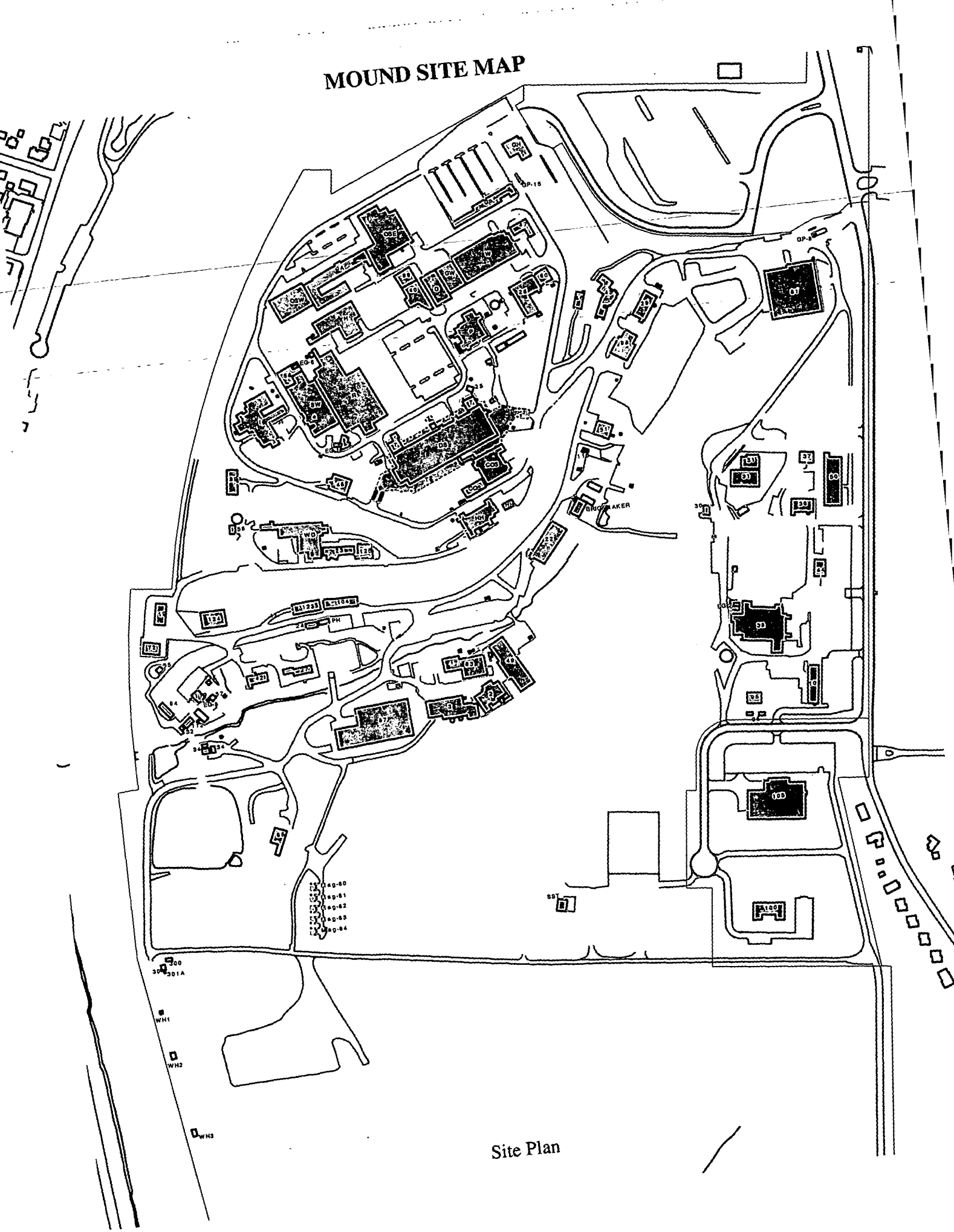
MONTGOMERY COUNTY MAP



Appendix C

Site Plan

MOUND SITE MAP

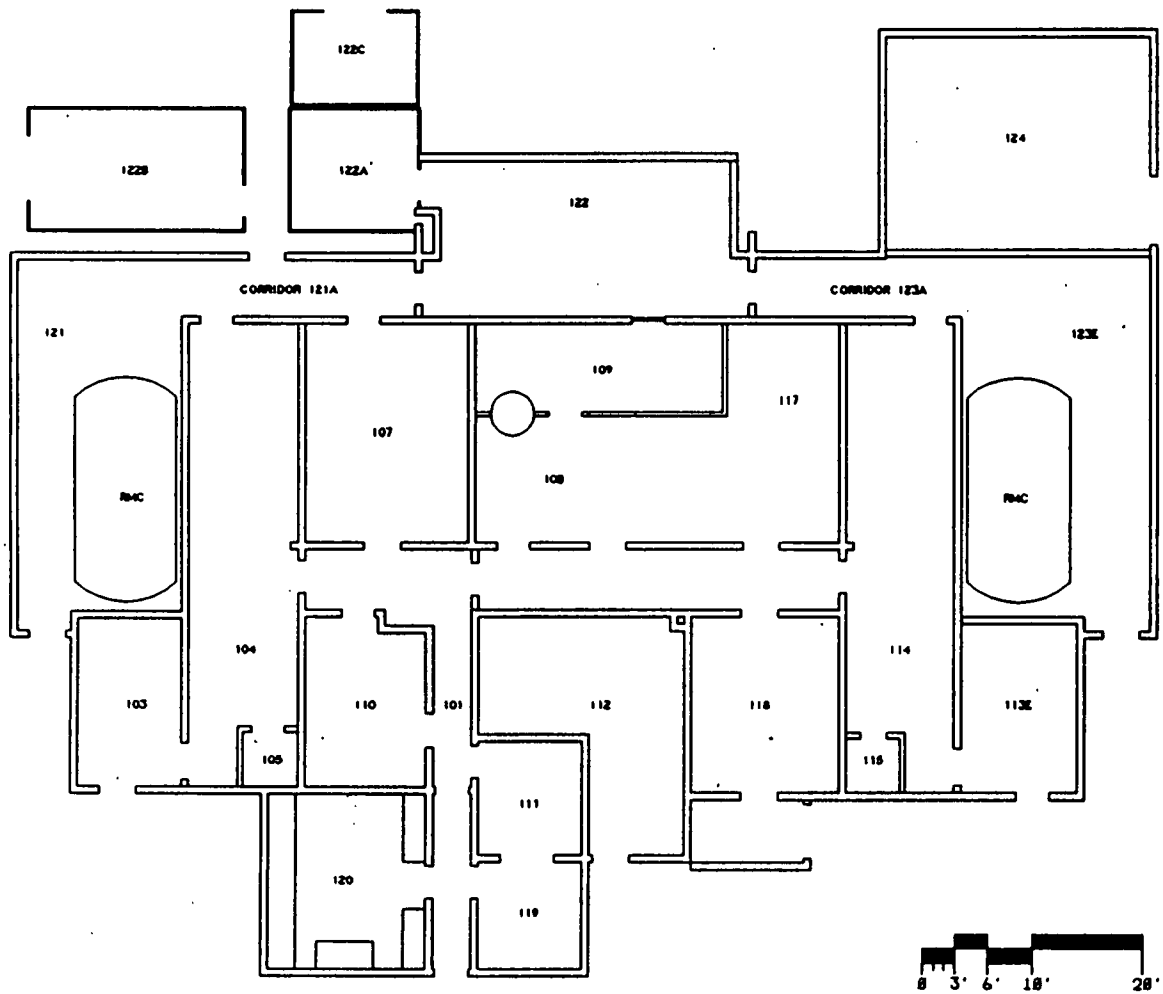


Site Plan

Appendix D

Building Drawings

ISS	DATE	REVISION	BY	CHKR	DES	LPREC	APVD	R
B	12/12/91	ASBUILT ISSUE	DCB				DVD	



BLDG #2
FIRST FLOOR
BLDG CODE:3002

ADMIN. SERVICES - DWG. CONTROL

DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION
Reviewing Official: [signature]
(name/organization)

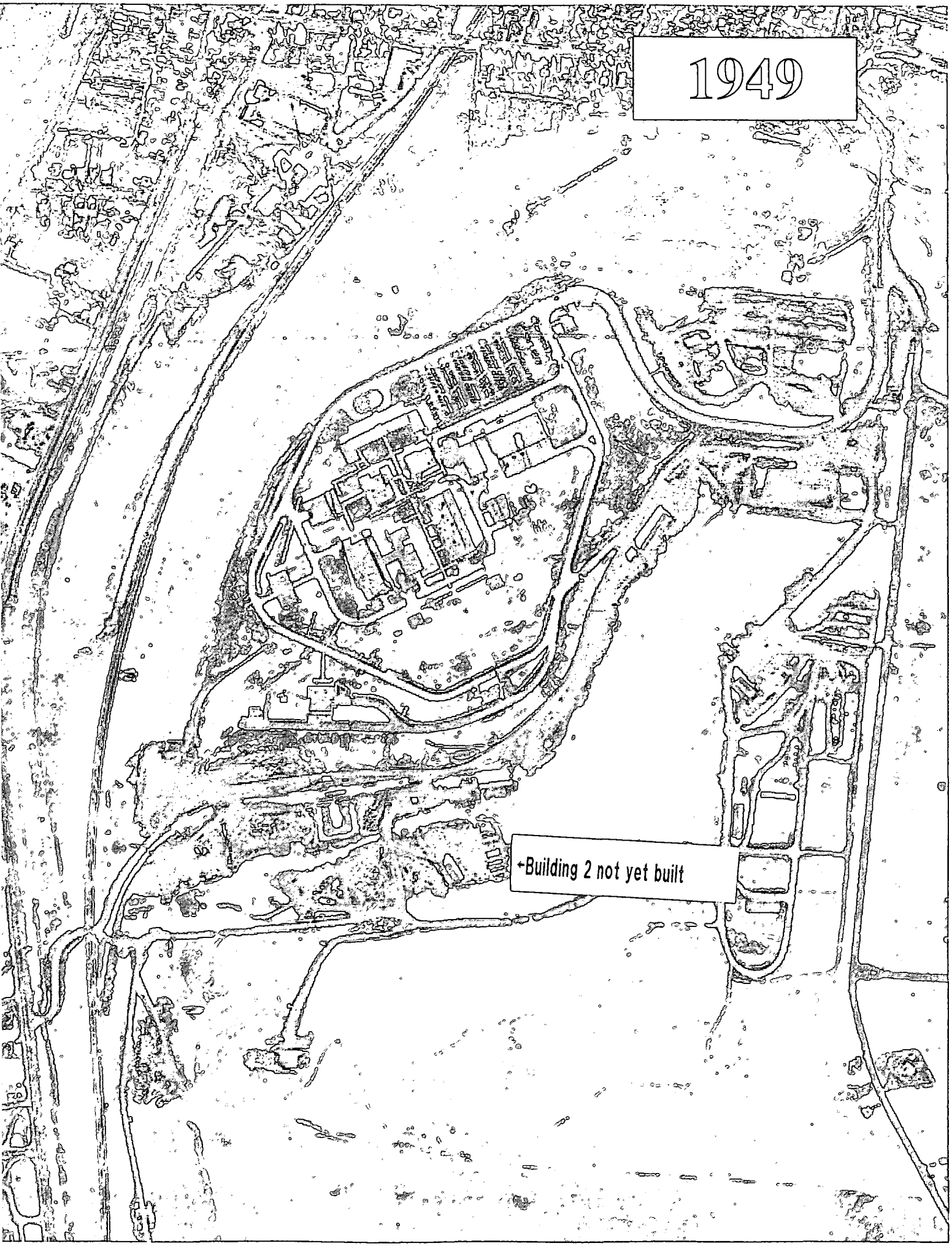
Date: 10-09-01

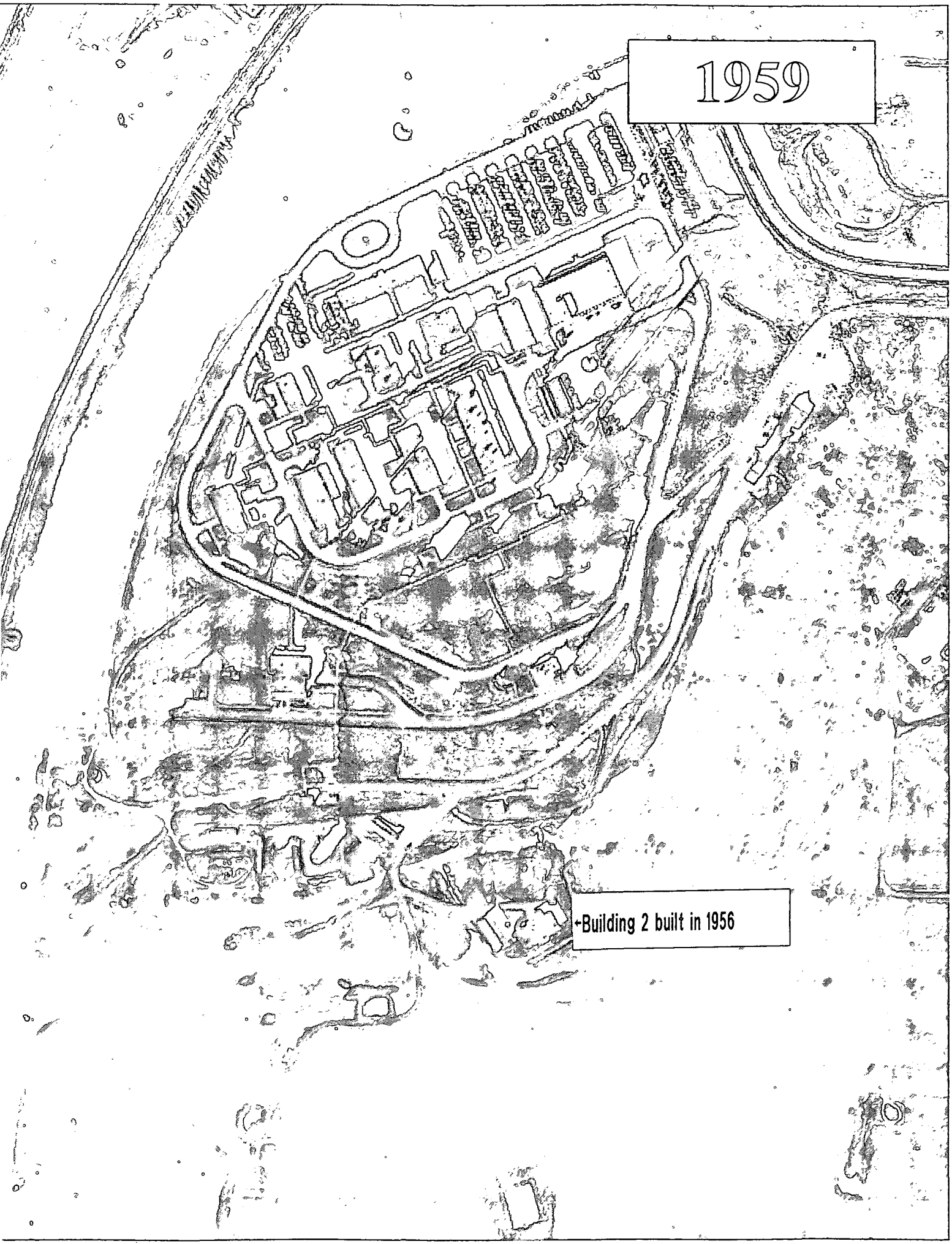
APPROVALS:	DATE:
SAFETY COMMITTEE REQUIRED: ___ NONE ___ TRUEBOC ___ TEBOC ___ EMBOC	
TECH. REP.	
BR. MGR.	
TRUEBOC	
TEBOC	
EMBOC	

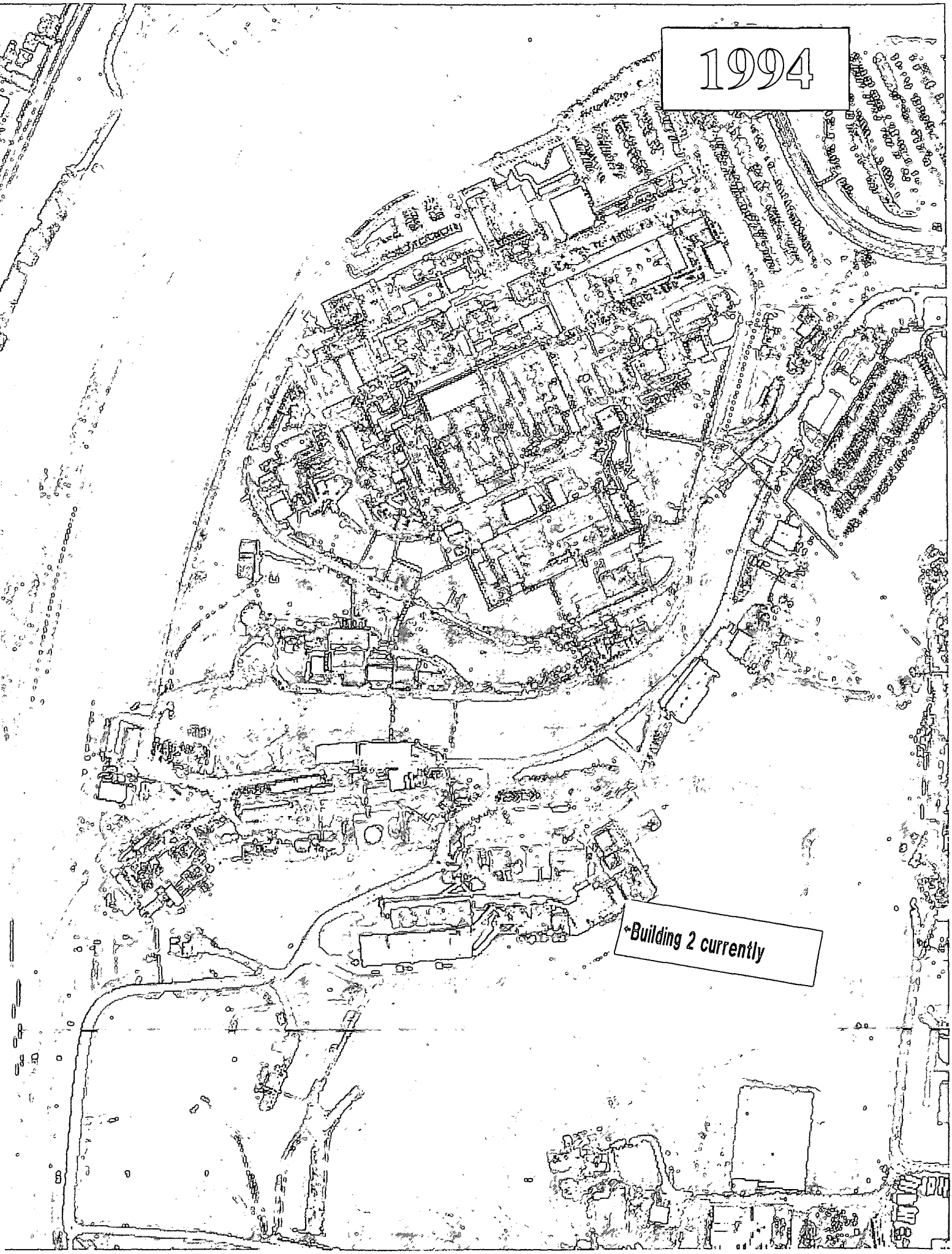
DESIGN ENG	PROJ MGR	SHEET 1 2 3 4 5 6	TITLE (U) TITLE CLASSIFICATION
SPONS	ENG SUPV	ISSUE B	BLDG #2 FLOOR PLANS
LP & EC	PROD REV	PART CLASSIFICATION	
ENG MGR		DRAWING CLASSIFICATION ~~UCNI~~ UNCL	SIZE C / DRAWING NUMBER FSC911227 / JOB NUMBER 12335
APVD	DATE	DWG TYPE SFP / FROM BLDG #2 / CAME 14065 / SCALE AS NOTED / SHEET 1 OF 1	
		STATUS MD-REL-12/12/91	ORIGIN MD-BR3-V3.0

Appendix E

Aerial Photographs


1949
←Building 2 not yet built


1959
←Building 2 built in 1956


1994
←Building 2 currently

Appendix F

Environmental Appraisal Report of the Mound Plant (Excerpt)

9.37 BUILDING 2

9.37.1 Scope of Building 2 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 2 on the morning of February 21, 1996. The Environmental Appraisal Checklist (EAC) was used to record findings. The EAC is found in Attachment 1 (Section 9.37.6.1). The appraisers were accompanied by the process manager. Other information was supplied by the building manager and recorded on the Building Manager's Questionnaire (BMQ), included as Attachment 2 (Section 9.37.6.2).

9.37.2 Description of Building 2

Building 2, Energetic Materials Destructive Testing, is a one-story, 6,291-square-foot, reinforced concrete and concrete block structure. It is constructed slab-on-grade with a built-up membrane roof. The building has two attached metal storage sheds. The location is shown in Attachment 3 (Section 9.37.6.3). The building is bounded by a paved access road. Across the road, to the north, is Building 63-E/63-W. Buildings 3 and 49 are to the west and east, respectively. Floor plans are presented as Attachment 4 (Section 9.37.6.4). Currently, this building is empty and is undergoing Safe Shutdown. The building was serviced by systems providing central steam and chilled water, a fire sprinkler system and potable water (both secured), and electric service of 480V (*Mound Facility Physical Characterization*, 12-1-93).

Building 2 was constructed in 1953 * (MD-10391, *Asbestos Program Manual*, 9-14-95). The building has been used for the same purpose since construction. The building is undergoing Safe Shutdown and is no longer occupied. All office furnishings, controls, and x-ray and photographic materials and equipment plus chemicals have been removed.

9.37.3 Summary of Findings

The building appears in "fair" condition except for the metal storage sheds attached to the building, and is listed as such in the *Capital Assets Management Process, CAMP Report FY96* (3-96). There are no issues of environmental concern identified during the walk-through or during review of reference materials. Utilities except electricity have been disconnected. The building is not contaminated with any radioactive materials. The two test cell tanks (Rooms 121 and 123B) are potentially contaminated with energetic material residue. Under the Safe Shutdown procedure, the process manager indicated that the cells were scheduled for residue testing and cleanup, if any, beginning the first week in March.

* Building drawings indicate construction in 1956. 3Jan02

9.37.4 Observations

9.37.4.1 Air Emissions

During operation of the test cells, overpressure exhaust was discharged through filters and two aboveground water mufflers. The cells are listed in the Mound Air Emissions Database and a determination was made by the EG&G Environmental Technology and Monitoring Group that the sources were *de minimis*. A permit application was filed with the Ohio Environmental Protection Agency (OEPA) in 1992. No permit was granted. Since air emission sources in the building are no longer active, the Regional Air Pollution Control Agency (RAPCA) should be notified of this change in status.

There are no fumehoods. There are no fuel-burning units in the building. There is no evidence of fugitive dust or other materials caused by the safe shutdown operation.

9.37.4.2 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.

9.37.4.2.1 Sanitary Wastewater

The building had sanitary services, now secured. According to a diagram of underground utility lines, presented as Attachment 5 (Section 9.37.6.5), the building is serviced by a sanitary line. Confirmation of drainage of sanitary waste and floor drains in the three mechanical rooms into sanitary conveyance lines was not within the scope of this effort; therefore, neither dye tests nor smoke tests were conducted.

Sanitary effluent is conveyed to the onsite tertiary wastewater treatment facility, and subsequently discharged to the Great Miami River. There is no monitoring of building effluent. Based on operations data, supplied by the process owner, effluent from Building 2 does not deviate from that expected by the sanitary treatment plant manager.

9.37.4.2.2 Storm Wastewater

The exterior of the building is serviced by storm drains. Exterior grates and drains were not tested to confirm that they connect to the storm drainage system. Inspection showed no sign of odors, colored discharges, or scarring which would indicate that any materials other than storm water has entered the storm drainage system.

9.37.4.2.3 Chemicals

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.

According to the process manager, there were no reported incidents of chemicals entering the storm or sanitary drains. Inspection showed no sign of odors, colored discharges, or scarring that would indicate that any chemicals entered the storm or sanitary drains.

9.37.4.3 Potable and Service Water

Potable water was supplied to the building; the system is now secured. Backflow prevention devices are installed at all visible points of potential cross connection in the janitor and mechanical rooms. The fountains which supplied drinking water have been removed from the building. There is service water supplied to the building; it was distributed only to the mechanical rooms and throughout the fire sprinkler system which both have been disconnected and drained.

9.37.4.4 Chemical Storage and Hazardous Materials

Chemicals had been stored in the building in accordance with applicable standards. Records indicated that all had been removed during safe shutdown and turned over to Waste Management for disposition. Material Safety Data Sheets (MSDS's) are still located in the building. An empty flammable storage cabinet which meets standard National Fire Protection Association (NFPA) requirements remains in the mechanical Room 124. Any chemical storage cabinets serving the photo labs were removed.

The building is equipped with appropriate charged fire extinguishers and their respective inspection tags were present and current. Each extinguisher is bar-coded. The inspection date database is maintained in the Fire Station, Building 98. There is an Emergency Evacuation Plan, and signs were posted within the building.

There are no aboveground storage tanks, except for the test cells, in or around the building. The two test cell tanks are still located within the building. The tanks are exposed to the ground as they were originally located outside and the building was extended to protect them from the

weather. There are no sumps, separators, or catch basins, in or around the building. There are no underground storage tanks associated with this building.

The building has been tested and does contain asbestos-containing building material (MD-10391, *Asbestos Program Manual*, 9-14-95). There are no signs of friable asbestos and the asbestos is not being disturbed by the Safe Shutdown process.

There are no capacitors or transformers containing polychlorinated biphenyls (PCB's) located in the building. There is no record of past presence (1995 PCB Annual Document Log).

No research, development, or production activities using radioactive materials have occurred in the building. Research and testing activities using energetic materials did occur in the building (*Mound Facility Physical Characterization*, 12-1-93).

9.37.4.5 Solid, Hazardous, and Radioactive Wastes

During the Safe Shutdown process, hazardous materials and/or mixed wastes are generated in the process of cleaning idle equipment, furnishings, and personal property; removing tanks, cylinders, and process piping; and cleaning sumps and pits; etc. A review of procedures and requirements contained in MD-10431, *Safe Shutdown Standard Operating Procedures*, and the Safe Shutdown process manager's records indicate that the wastes are placed in containers, characterized (including testing for radionuclides), and then transferred to Waste Management for disposition. A copy of the inventory, chemical profile of each container, and Waste Management's acceptance become a permanent part of the Mound Safe Shutdown Plan for the specific building. 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. There is no evidence that hazardous waste entered either the storm or sanitary systems.

9.37.4.6 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.

9.37.5 Findings and Recommendations

Photographs were taken to document environmental appraisal activities. They are included as Attachment 6 (Section 9.37.6.6). The environmental appraisal of Building 2 indicates that the following action item should be planned and scheduled for accomplishment thus assuring that best management and operating practices are in place.

2-1 If a permit application was filed with the Ohio Environmental Protection Agency in 1992 and no permit was granted, the Regional Air Pollution Control Agency (RAPCA) should be notified of the change in status, since air emission sources in the building are no longer active.

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ENVIRONMENTAL APPRAISAL CHECKLIST

Building Name 2 ENERGETIC MATERIALS DESTRUCTIVE TESTING

Appraisers:

TEAM # 4

Name	Discipline
MARK GILLIAT	ENGINEER
MARCIA VANNET	CHEMIST
MYRON SMITH, JR	ENGINEER
—	

Building Manager: BOB WARD (x-3821)

Process Manager: DON HOMAN (x-3116)

Date: 21 FEBRUARY 1996

ENVIRONMENTAL APPRAISAL CHECKLIST

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Environmental A, ,raisal Checklist

Building Name: 2 Appraisers: Team #3 Date: 2-21-96

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	NO CHEMICALS PHOTO LABS REMOVED
	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	WATER SECURED
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)	

9.37-11

9.37-12

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	TWO TEST TANKS OUT OF SERVICE RM 121 & 123 B
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	N/A
	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	PRIOR AIR FROM TEST TANK WERE FILTERED. SHOCK EXHAUST THE PASSED THROUGH A ABOVE GROUND WATER MUFFLER

SAFE SHUTDOWN ACTIVITIES COMPLETED EXCEPT FOR RESIDUAL ENERGETIC MATERIAL THAT MAY BE IN THE

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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
			Y / N	Y / N					
			Y / N	Y / N		Blank			
			Y / N	Y / N					
			Y / N	Y / N					
			Y / N	Y / N					

Source:

9.37-13

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Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	REMOVED TRANSFER SHEETS TO WM VERIFIED
29 CFR 1910.1200(g)	MSDS shall be available to the employees in close proximity to the work area.	Y / N	STILL IN BLDG
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	ALL EMPTY
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	EMPTY - IN MECHANICAL ROOM 124
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	N/A

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	Blank
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	

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Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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)	BLAST CELLS ONLY WERE NO INVENTORY Rm 121 & 123B

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
				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

Blank

Source: _____

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team # 4 Date: 2-21-96

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
			Blank

* DISCONNECTED & DRAINED

Source: _____

* FIRE DELUGE SYSTEM DISCONNECTED & DRAINED

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Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	Blank
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	

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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. If yes, answer the following.	Y / N	Blank
	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: 2 Appraisers: Team #4 Date: 2-21-96

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: 2 Appraisers: Team #4 Date: 2-21-96

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	Blank
	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	

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Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	
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	Blank
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 . .ppraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

Asbestos Screening Checklist

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

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?	(Y)/ N	
	If no for this building or area note this conclusion in the comment section.		
	Is there any evidence of friable asbestos?	Y /(N)	UNDISTURBED DURING SAFE SHUT DOWN
	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	Blank
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: .2 Appraisers: Team #4 Date: 2-21-96

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	

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	
40 CFR 761.65 (b) (8)	Are all PCB articles and containers labeled with the date they were placed in storage?	Y / N	Blank
	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: 2 Appraisers: Team #4 Date: 2-21-96

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:

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	Blank
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	

9.37-27

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	

9.37-29

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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: 2 Appraisers: Team #4 Date: 2-21-96

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:

9.37-31

9.37-32

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team # 4 Date: 2-21-96

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	Blank
	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	

9.37-33

9.37-34

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	Blank
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	

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9.37-36

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

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	Blank
	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	

Environmental Appraisal Checklist

Building Name: 2 Appraisers: Team #4 Date: 2-21-96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	If there is a recycling program, what technique is used?	Y / N	
	Distillation?	Y / N	
	Solids removal?	Y / N	
	Dispersion breaking?	Y / N	Blank
	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?	_____ _____	

9.37-37

9.37.6.2 Building Manager's Questionnaire

Building Manager's Questionnaire

Building Name: 2 Building Manager: R.A. Ward Phone: [illegible] Date: 12-07-95
Alternate: [illegible] Phone: [illegible]

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

THE BUILDING IS EMPTY OF EQUIPMENT AND PERSONNEL. NO TRAINING OR CLEARANCE FOR ACCESS IS REQUIRED

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.

Building 2 is a reinforced concrete and concrete block structure with a BUR roof (carboline). Total area in the single-story building is 6,291 ft². HVAC systems are central steam and chilled water. The building is contaminated with energetic materials and contains asbestos.

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

5. Provide a drawing of the building.

Attached

6. What is the current building use?

Building is used for destructive test firing of explosives. Steel test cells are rated at 225 gm of explosive material with testing controlled remotely from a control room.

CURRENTLY THE BUILDING IS EMPTY & SHUTDOWN

Source: Mound Buildings, 5-9-95

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

HISTORY

Source: Mound Buildings, 5-9-95

9.37-41

Building Manager's Questionnaire

Building Name: 2 Building Manager: R.A. Waro Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

3. 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: Testing of explosive components

How Wastes Are Generated:

Building 2 has two large test cells, and the adjacent portion of Building 3 contains one large and four single-point cells. Exhaust from the single-point test cells is filtered to remove any particulate material. When the filters are changed, they are sent to the onsite burn area for destruction.

A film processor is housed in Building 2. Used developer and fixer are collected in plastic drums which are picked up by Waste Management.

Contact:
Phone #

Source: Characterization of Mound's Hazardous, Radioactive, and Mixed Wastes, 8-18-90).

Building Manager's Questionnaire

Building Name: 2 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

EQUIPMENT REMOVED

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
Gas Shutdown	[illegible]							
Gas Shutdown	103							

Source: Mound Air Emissions Database 11/30/95

9.37-43

Building Manager's Questionnaire

Building Name: 2 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. None Listed

Process Source	Emissions	Control Equipment	Functioning
			Y / N
			Y / N
			Y / N
			Y / N
			Y / N

Source: Air Permits 2/4/95

12. For existing permits are emissions monitored? At what frequency? Where are the records maintained? None Listed

Process Source	Permit	Log	Permit Conditions & Frequency of Monitoring
		Y / N	
		Y / N	
		Y / N	
		Y / N	
		Y / N	

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? Yes

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

CURRENTLY ASBESTOS CLEANUP OF THE TANKS IS IN PROCESS.

Building Manager's Questionnaire

Building Name: 2 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

9.37-45

Building Manager's Questionnaire

Building Name: 2 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?

NONE

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

NONE

23. Where do excess janitorial supplies go?

NONE

Source: _____

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

Chemical	Amount	Chemical	Amount

Source: _____

Building Manager's Questionnaire

Building Name: 2 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.

REMOVED

Registration Number	Content	Quantity	Last Inspection Date	Preventive Maintenance Performed	Inside Or Outside
7727-37-9	nitrogen	04C		Y / N	outside
				Y / N	

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)

REMOVED →

Materials	Amount
Filter Materials - Test Fire	96.0
Lead Cleanup Debris	137.5

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

9.37-47

Building Name: 2 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: _____

Building Manager's Questionnaire

Building Name: 2 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: _____

9.37-49

Building Name: 2 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.

NONE

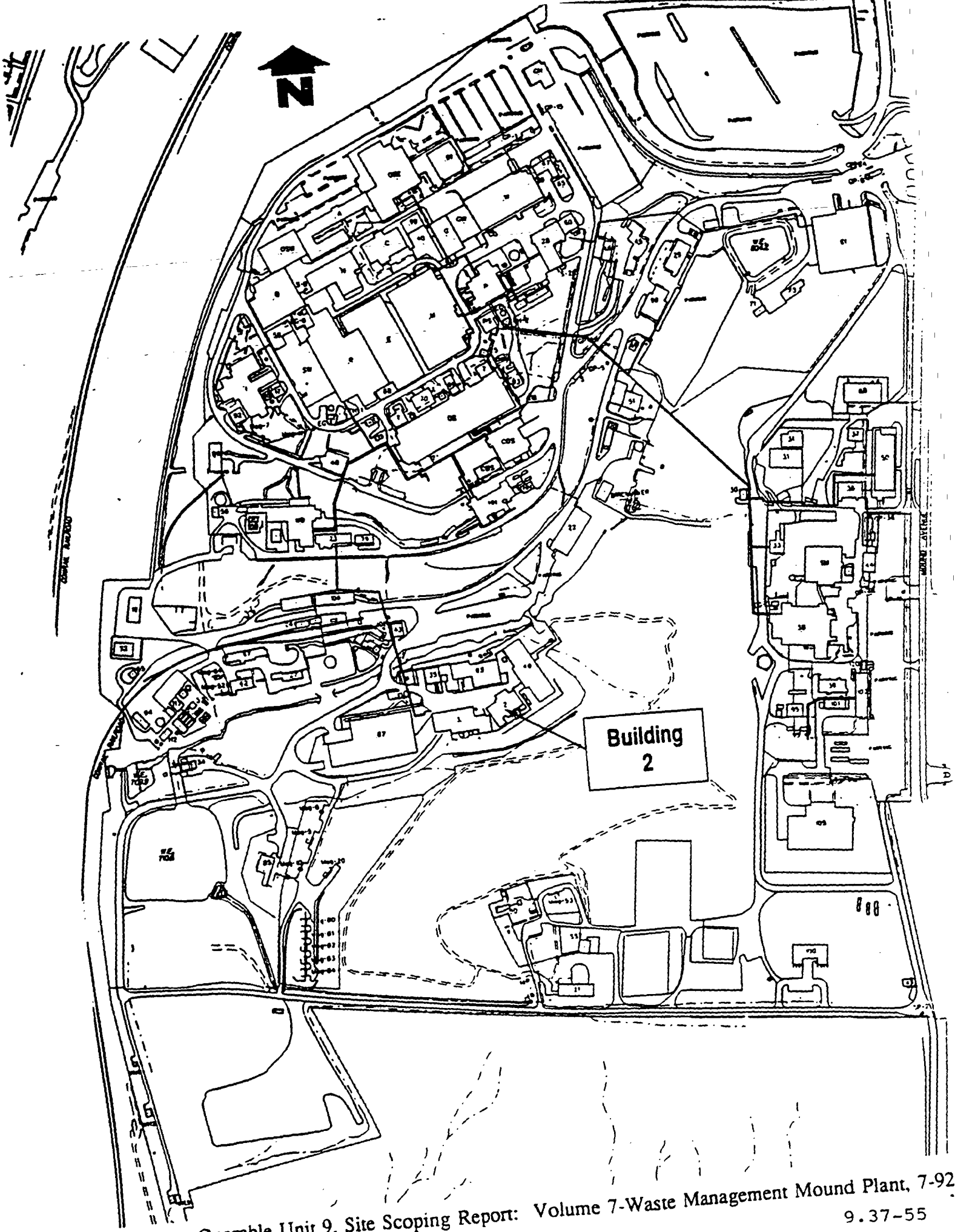
Building Manager's Questionnaire

Building Name: 2 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

9.37-51



SOURCE: Operable Unit 9, Site Scoping Report: Volume 7-Waste Management Mound Plant, 7-92

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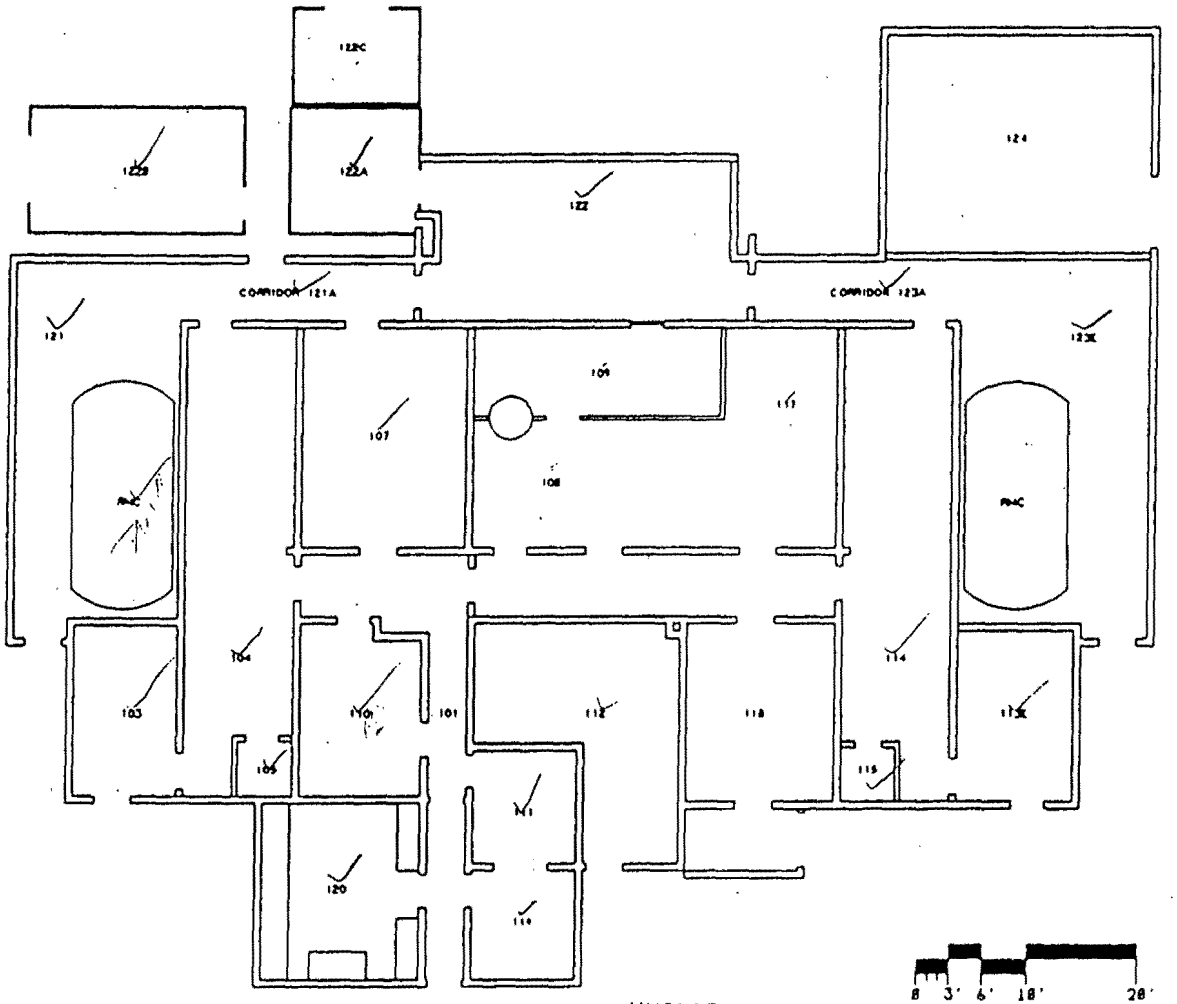
REV	DATE	REVISION	BY	CHKD	CHG	UPKD	APVD	R
0	12/12/91	ASBUILT ISSUE	DCB				DVD	



8 3' 6' 18' 28'

UNCLASSIFIED & NON-SENSITIVE
Reviewed by Mound Declassification Office. Reviewer Initials: Paul H. Dowd
Sr. Chem. Consultant 10-25-01
to BWXTO Chem. Offic

NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

BLDG #2
FIRST FLOOR
BLDG CODE:3002

APPROVALS: SAFETY COMMITTEE REQUIRED: ___ NONE ___ TRUEBOC ___ TEROC ___ CHROC
TECH. REP. ___ DATE: ___
GR. MGR. ___
TRUEBOC ___
TEROC ___
CHROC ___

SHEET	1	2	3	4	5	6
TOTAL	8					

FACT CLASSIFICATION

DRAWING CLASSIFICATION: UCNI

TITLE: BLDG #2 FLOOR PLANS

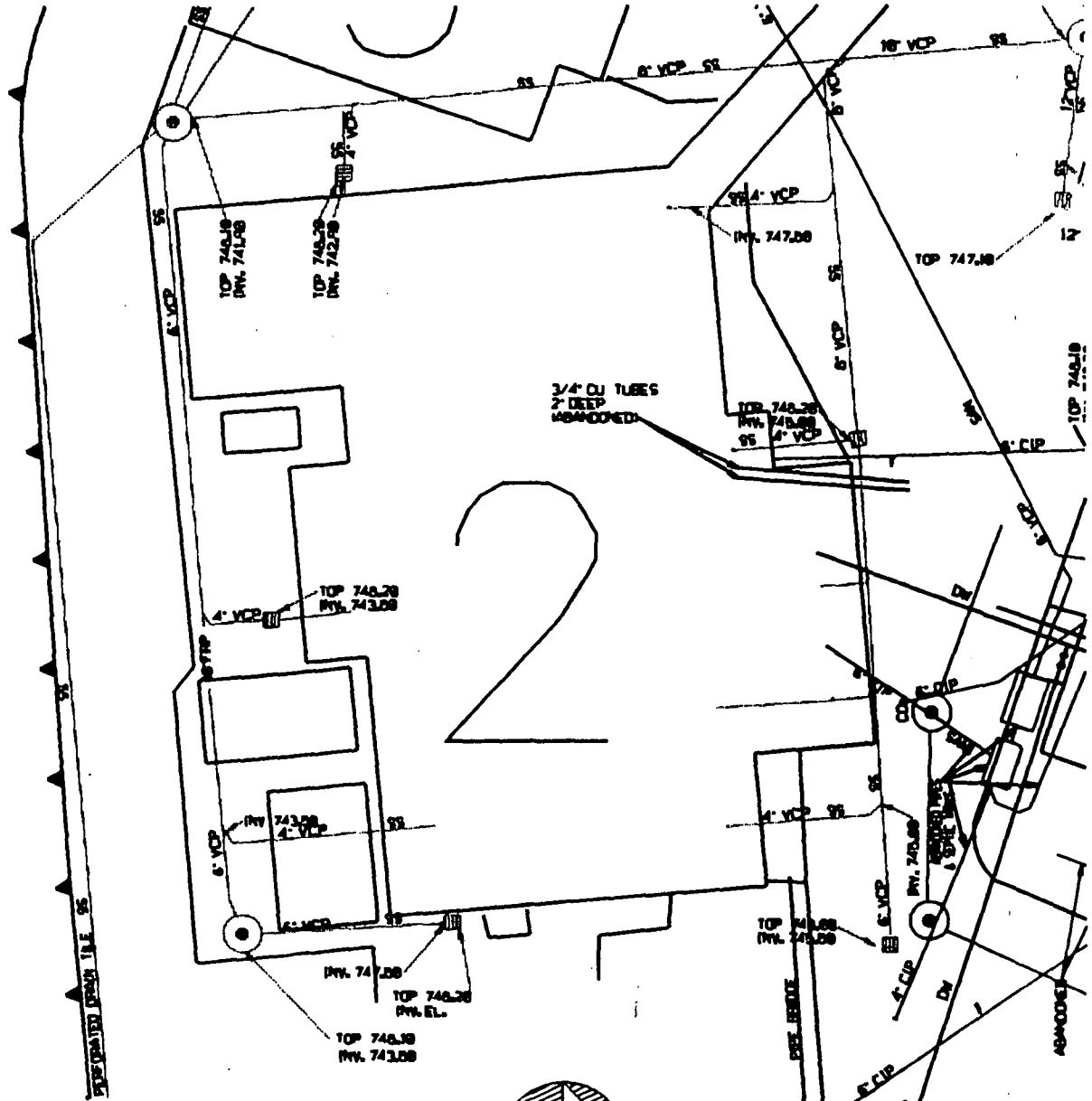
(U) TITLE CLASSIFICATION

DRAWING NUMBER: FSC911227 — JOB NUMBER: 12333

DWG TYPE: SFP — FROM: BLDG #2 — LAYER: 14865 — SCALE AS NOTED — SHEET 1 OF 1

STATUS: MO-REL-12/12/91 — ORIGIN: MO-BRJ-V3.0

9.37.6.5 Underground Utility Lines



FIRE
POTABLE
RAW
SANITARY
STORM
RADIOLOGICAL

UNCLASSIFIED

E.G. & G. - MOUND

UNDERGROUND WATER & WASTE LINES
BLDG. 2

DATE: 2/29/96

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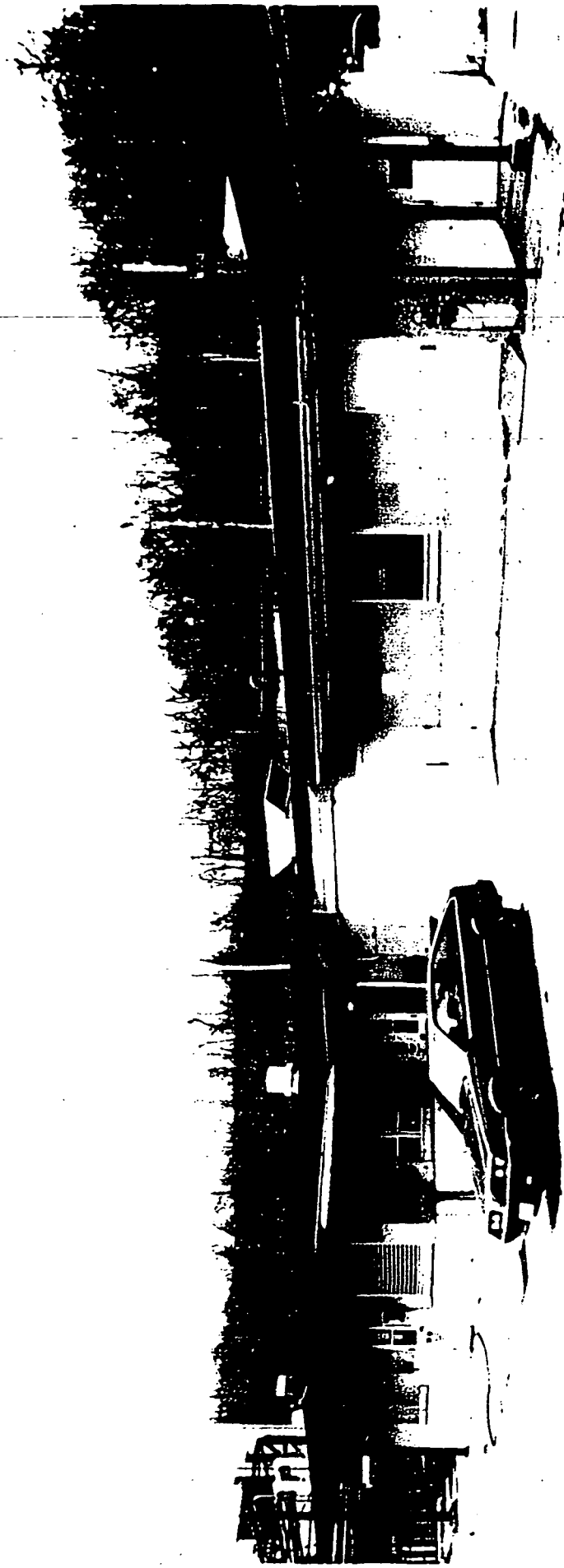
9.37.6.6 Photographs



Mound Plant Building 2

At Building 2 the lean-to is not scheduled for removal under Safe Shutdown. Note the view of a blast surge chamber.

Appendix G

Radiological Summary/Information

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG. / ROOM / AREA) Building 2	SURVEY NO. 01-OSA-062
PURPOSE: Confirmatory Survey	RWP NO. N/A
	DATE: 10-11-01
	TIME: 14:00

MAP / DRAWING

COPY

1. Surveys performed using the guidance contained in "Generic Process for the Disposition of Buildings..."
2. Floor plans and direct measurements listed on page 2.
3. Direct measurements using N.E. Electra are: $\alpha < 100$ dpm/100 cm^2, $\beta^- < 5000$ dpm/100 cm^2 unless otherwise noted. Direct measurements using Ludlum 2350 and 43-37 detector are listed on pages 4 and 5.
4. (Fxx) Denotes floor measurement locations

   (Dxx) Denotes floor drain measurement locations

   (Wxx) Denotes wall measurement locations
5. Large area wipes (> 1ft^2) taken in all rooms with direct measurements: $\alpha < 100$ dpm, $\beta^- < 5000$ dpm per swipe.

LEGEND:
- # = mrem/hr (γ) whole body
- #E = mrem/hr ($\beta+\eta+\gamma$) 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 cm^2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Ludlum 2350	5671/5675	9-21-02
N.E. Electra	5393/5407	7-17-02
		A
N		

[redacted]

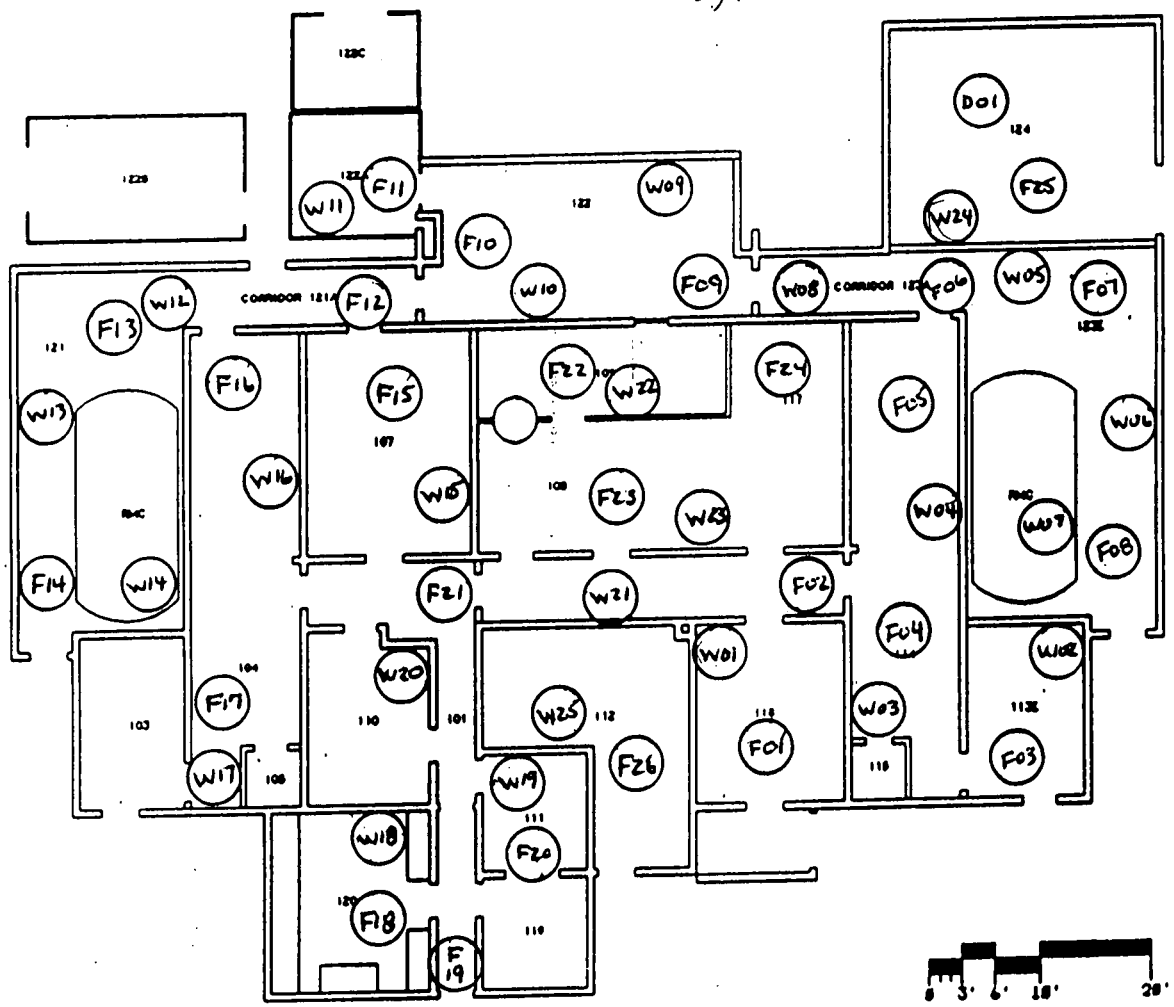
HP#	Date:
6178 6196	10-16-01
HP#	Date: A
HP# 8405	Date: 10/17/01

ML-9620 (2-98) Computer Generated

01-OSA-062 2 of 5

DOH

REV	DATE	REVISION	BY	CHKD	ENG	LINES	APVD	D
B	12/12/91	ASBUILT ISSUE	DCW				DVD	



(F xx) DENOTES DIRECT MEASUREMENTS TAKEN ON FLOOR; LUDLUM 2350 w/43-37 DETECTOR USED

(D xx) DENOTES DIRECT MEASUREMENTS TAKEN ON FLOOR DRAINS; LUDLUM 2350 w/43-37 DETECTOR USED

(W xx) DENOTES DIRECT MEASUREMENTS TAKEN ON WALL SURFACES; NE ELECTRA USED $\alpha < 100$ dpm/100 cm^2 $\beta < 5000$ dpm/100 cm^2

LARGE AREA WIPES (>1 ft^2) TAKEN IN ALL ROOMS WITH DIRECT MEASUREMENTS $\alpha < 100$ dpm/ft^2 $\beta < 5000$ dpm

BLDG #2
FIRST FLOOR
BLDG CODE:3002

ADMIN: SERVICES - DWG. CONTROL

DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION
Reviewing Official: [signature]
(name/organization)

Date: 10-09-01

SHEET	1	2	3	4	5	6
ISSUE	B					

TITLE: BLDG #2 FLOOR PLANS

(U) TITLE CLASSIFICATION

CLASSIFICATION: ~~CONF~~ UNCL

SIZE: C | DRAWING NUMBER: FSC911227 | JOB NUMBER: 12333

CAD TYPE: GFP | FILE: BLDG #2 | CODE: 14015 | SCALE AS NOTED | SHEET 1 OF 1

DRAWN: MO-RBL-12/12/91 | CHECKED: MO-RBL-V3.0

CONTAMINATION PROBE INTEGRATED COUNT MDA

<SELECT> Probe Type		584	Model 43-37 cm2	Active Probe Area
<ENTER> Isotopic Efficiency Listed on Probe	Ei	[redacted]	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	0.083		Total Efficiency (CALCULATED =Ei * Es)
<ENTER> Background Count Rate	Rb	[redacted]	CPM	Background Count Rate
<ENTER> Background Count Time (minutes)	Tb	[redacted]	min.	

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

Sample Integrated Count Time (sec.)		[redacted]	sec.
Sample Count Time (minutes) (Tsb)		0.30	min.
*	MDA	50	dpm/100 cm2

Minimum Activity Detected Per Probe Area (dpm/Probe)

294

Performed by: [redacted] HP#: 7707 Date: 10/11/01

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

01-OSA-062 DH 3 of 5 DH 10-16-01

BUILDING 2 M-2350 SURVEY

RSDS#01-OSA-062 RCT: [illegible] RCT: [illegible]

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671	6178	5675	4	11	10/11/01	9:53	27	300	10
SRCCHECK	5671	6178	5675	4	12	10/11/01	9:58	2202	60	4121
SRCCHECK	5671	6178	5675	4	13	10/11/01	9:59	2263	60	4235
SRCCHECK	5671	6178	5675	4	14	10/11/01	10:01	2265	60	4239
SRCCHECK	5671	6178	5675	4	15	10/11/01	10:02	2162	60	4046
SRCCHECK	5671	6178	5675	4	16	10/11/01	10:04	2164	60	4050
SRCCHECK	5671	6178	5675	4	17	10/11/01	10:05	2257	60	4224
SRCCHECK	5671	6178	5675	4	18	10/11/01	10:07	2179	60	4078
SRCCHECK	5671	6178	5675	4	19	10/11/01	10:08	2200	60	4117
SRCCHECK	5671	6178	5675	4	20	10/11/01	10:10	2209	60	4134
SRCCHECK	5671	6178	5675	4	21	10/11/01	10:12	2183	60	4085
SRCCHECK	5671	6178	5675	4	22	10/11/01	10:13	2200	60	4117
SRCCHECK	5671	6178	5675	4	23	10/11/01	10:15	2221	60	4156
BLD2D01	5671	6178	5675	4	87	10/11/01	14:50	2	18	12
BLD2F01	5671	6178	5675	4	64	10/11/01	14:13	4	18	25
BLD2F02	5671	6178	5675	4	65	10/11/01	14:14	4	18	25
BLD2F03	5671	6178	5675	4	66	10/11/01	14:16	1	18	6
BLD2F04	5671	6178	5675	4	67	10/11/01	14:17	1	18	6
BLD2F05	5671	6178	5675	4	68	10/11/01	14:18	2	18	12
BLD2F06	5671	6178	5675	4	69	10/11/01	14:20	1	18	6
BLD2F07	5671	6178	5675	4	7	10/15/01	12:50	3	17	20
BLD2F08	5671	6178	5675	4	8	10/15/01	12:50	1	17	7
BLD2F09	5671	6178	5675	4	70	10/11/01	14:24	1	18	6
BLD2F10	5671	6178	5675	4	71	10/11/01	14:29	2	18	12
BLD2F11	5671	6178	5675	4	72	10/11/01	14:30	0	18	0
BLD2F12	5671	6178	5675	4	73	10/11/01	14:31	1	18	6
BLD2F13	5671	6178	5675	4	74	10/11/01	14:32	2	18	12
BLD2F14	5671	6178	5675	4	75	10/11/01	14:33	4	18	25
BLD2F15	5671	6178	5675	4	76	10/11/01	14:34	1	18	6
BLD2F16	5671	6178	5675	4	77	10/11/01	14:36	0	18	0
BLD2F17	5671	6178	5675	4	78	10/11/01	14:37	1	18	6
BLD2F18	5671	6178	5675	4	79	10/11/01	14:39	4	18	25
BLD2F19	5671	6178	5675	4	80	10/11/01	14:39	2	18	12
BLD2F20	5671	6178	5675	4	81	10/11/01	14:40	4	18	25
BLD2F21	5671	6178	5675	4	82	10/11/01	14:42	2	18	12
BLD2F22	5671	6178	5675	4	83	10/11/01	14:44	2	18	12
BLD2F23	5671	6178	5675	4	84	10/11/01	14:45	0	18	0
BLD2F24	5671	6178	5675	4	85	10/11/01	14:46	3	18	19
BLD2F25	5671	6178	5675	4	86	10/11/01	14:49	2	18	12

BUILDING 2 M-2350 SURVEY

RSDS# 01-OSA-062 RCT: 29 A RCT: MOL

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
BLD2F26	5671	6178	5675	4	88	10/11/01	14:54	3	18	19
SCRBKG	5671	6178	5675	4	89	10/11/01	15:23	27	300	10
SRCCHECK	5671	6178	5675	4	90	10/11/01	15:27	2264	60	4237
SRCCHECK	5671	6178	5675	4	91	10/11/01	15:28	2113	60	3954
SRCCHECK	5671	6178	5675	4	92	10/11/01	15:30	2306	60	4315
SRCCHECK	5671	6178	5675	4	93	10/11/01	15:32	2150	60	4024
SRCCHECK	5671	6178	5675	4	94	10/11/01	15:34	2087	60	3906
SRCCHECK	5671	6178	5675	4	95	10/11/01	15:35	2271	60	4250

RADIOLOGICAL SURVEY DATA SHEET

F1/F48 30/10 Pa

LOCATION: (BLDG./AREA/ROOM) Bldg 2	SURVEY NO. 98-TF-363
PURPOSE: Annual Routine General Survey	RWP NO. N/A
	DATE: 4-1-98
	TIME: 1355

MAP/DRAWING

SEE LOCATIONS ON BACK

COPY

<100/a

<5,000/B

~~RO-20 readings were <.2 mr/hr~~ at

D.S. Rate <0.05 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) or /β = direct cont. measurement in dpm/100cm 2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Electra	5264/5279	8.3.98
RO-20	3754	9.30.98
Micro R	3864	7/6/98

Completed by: (Signature)	HP#	Date:
[redacted]	8258	4-1-98
	HP# 5681	Date: 4/1/98
	HP# 6015	Date: 5/11/99

ML-9620 (2-98)

48

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				113
2				113
3				113
4				113
5				113
6				113
7				114
8				114
9	S	S	S	114
10	E	E	E	114
11	E	E	E	114
12				114
13	A	A	A	114
14	T	T	T	114
15	T	T	T	114
16	A	A	A	114
17	C	C	C	115
18	H	H	H	115
19	E	E	E	118
20	D	D	D	118
21				118
22				118
23				118
24				118
25				1
26				1
27				1
28				1
29				Main Hall
30				Main Hall
31				Main Hall
32				Main Hall
33				120
34				120
35				120

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	See	Attached		120
37				119
38				119
39				119
40				119
41				110
42				110
43				110
44				110
45				Hallway
46				Hallway
47				Hallway
48				Hallway

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 (2-98)

Health Physics Counting Lab -- Wipe Analysis

Date: 4/2/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2C000.csv
Batch Ended: 4/1/98 17:32
Crosstalk Correction: Applied
Cal. Due Date: 11/26/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-TF-363 ADKISON BLDG.2 GR.C (48) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
97	1	0.000	2.03	<MDA	5.96	3.83	<AL	1.50	4/1/98 16:12
24	2	2.619	2.72	<AL	0.00	2.33	<MDA	1.50	4/1/98 16:14
95	3	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:16
139	4	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	4/1/98 16:17
124	5	0.829	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:19
14	6	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	4/1/98 16:21
1	7	0.901	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:22
7	8	0.000	2.01	<MDA	2.93	3.17	<MDA	1.50	4/1/98 16:24
1	9	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	4/1/98 16:26
14	10	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:27
21	11	0.829	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:29
97	12	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 16:31
71	13	0.757	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 16:33
70	14	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	4/1/98 16:34
113	15	0.000	2.01	<MDA	2.93	3.17	<MDA	1.50	4/1/98 16:36
23	16	0.757	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 16:38
78	17	0.000	2.02	<MDA	4.45	3.51	<AL	1.50	4/1/98 16:39
16	18	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:41
73	19	0.829	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:43
112	20	0.685	1.99	<MDA	1.24	2.78	<MDA	1.50	4/1/98 16:44
61	21	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	4/1/98 16:46
33	22	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:48
68	23	2.403	2.74	<MDA	4.09	3.51	<AL	1.50	4/1/98 16:50
10	24	0.901	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:51
146	25	0.000	2.01	<MDA	2.93	3.17	<MDA	1.50	4/1/98 16:53
50	26	0.829	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 16:55
116	27	0.685	1.99	<MDA	1.24	2.78	<MDA	1.50	4/1/98 16:56
94	28	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 16:58
37	29	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:00
75	30	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:01

COPY

3 of 5

Health Physics Counting Lab -- Wipe Analysis

Date: 4/2/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2C000.csv
Batch Ended: 4/1/98 17:32
Crosstalk Correction: Applied
Cal. Due Date: 11/26/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-TF-363 ADKISON BLDG.2 GR.C (48) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
9	31	0.000	2.02	<MDA	4.45	3.51	<AL	1.50	4/1/98 17:03
86	32	4.552	3.29	<AL	0.00	1.77	<MDA	1.50	4/1/98 17:05
35	33	0.685	1.99	<MDA	1.24	2.78	<MDA	1.50	4/1/98 17:06
7	34	0.829	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:08
103	35	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:10
83	36	4.408	3.30	<AL	0.88	2.78	<MDA	1.50	4/1/98 17:11
71	37	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:13
37	38	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 17:15
84	39	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:17
14	40	0.000	2.01	<MDA	2.93	3.17	<MDA	1.50	4/1/98 17:18
41	41	0.901	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:20
38	42	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:22
11	43	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 17:23
39	44	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:25
141	45	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:27
36	46	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	4/1/98 17:28
113	47	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:30
23	48	0.000	1.97	<MDA	0.00	1.77	<MDA	1.50	4/1/98 17:32

02 Apr 98 08:12 ALPHA/BETA - 1.01 ~~Page #1~~
Protocol #: 2 PW 5CC H3 #403727 User : 56

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

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	5.20
Region B:	2.0	- 18.6	0	0.0	5.10
Region C:	40.0	- 2000	0	0.0	11.60

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-TF-363 ADKISON BLDG.2 (F1-F48) CYR
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

COPY

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	5.20	5.10	11.60	600.59	2	B		0.00
0	2.00	1654.30	1574.40	0.00	624.63	0		3656.40	286.41
1	2.00	0.00	0.00	0.00	561.93	0		0.00	0.00
2	2.00	2.80	1.90	0.00	539.94	0		6.80	10.34
3	2.00	0.00	0.00	0.00	549.66	0		0.00	0.00
4	2.00	2.80	2.90	0.00	510.34	0		7.03	10.68
5	2.00	0.80	0.90	0.00	561.11	0		1.90	8.91
6	2.00	0.80	0.90	0.00	491.53	0		2.05	9.62
7	2.00	2.30	1.90	0.00	511.22	0		5.77	10.37
8	2.00	1.30	1.40	2.40	559.63	0		3.09	9.24
9	2.00	0.00	0.00	1.40	535.90	0		0.00	0.00
10	2.00	4.80	4.90	0.00	567.30	0		11.32	11.11
11	2.00	3.30	3.40	0.00	512.96	0		8.26	10.95
12	2.00	1.80	1.90	0.00	559.28	0		4.28	9.55
13	2.00	3.30	3.40	1.40	556.31	0		7.88	10.44
14	2.00	0.00	0.00	0.00	527.75	0		0.00	0.00
15	2.00	3.30	2.90	0.90	539.13	0		8.02	10.64
16	2.00	1.80	1.90	0.00	535.98	0		4.39	9.79
17	2.00	0.00	0.00	0.00	535.04	0		0.00	0.00
18	2.00	2.80	2.90	1.40	513.89	0		7.00	10.64
19	2.00	0.00	0.00	0.90	481.68	0		0.00	0.00
20	2.00	0.30	0.40	0.00	476.95	0		0.77	9.28
21	2.00	0.00	0.00	0.00	464.66	0		0.00	0.00
22	2.00	1.30	1.40	0.00	471.13	0		3.33	9.96
23	2.00	2.30	2.40	0.00	465.72	0		5.90	10.61
24	2.00	1.30	1.40	0.00	477.87	0		3.33	9.96
25	2.00	2.80	2.40	0.00	501.84	0		7.09	10.79
26	2.00	4.30	3.90	0.00	581.08	0		9.96	10.66
27	2.00	3.80	3.40	0.00	545.41	0		9.18	10.84
28	2.00	1.80	1.90	0.00	472.02	0		4.62	10.29
29	2.00	1.80	1.90	0.00	569.68	0		4.23	9.43
30	2.00	1.30	0.90	0.00	516.57	0		3.24	9.68
31	2.00	1.80	1.90	0.00	540.81	0		4.37	9.74
32	2.00	1.30	1.40	0.00	518.84	0		3.23	9.66
33	2.00	0.30	0.40	0.00	497.36	0		0.76	9.21
34	2.00	2.30	1.90	0.00	465.48	0		5.90	10.61
35	2.00	2.80	2.40	1.40	444.04	0		7.22	10.97

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.00	439.06	0		0.00	0.00
37	2.00	1.30	0.80	0.00	478.02	0		3.33	9.96
38	2.00	0.00	0.00	0.00	431.28	0		0.00	0.00
39	2.00	0.00	0.00	0.00	387.49	0		0.00	0.00
40	2.00	0.00	0.00	0.00	495.51	0		0.00	0.00
41	2.00	0.00	0.00	0.00	441.36	0		0.00	0.00
42	2.00	0.00	0.00	0.00	500.70	0		0.00	0.00
43	2.00	2.30	2.40	0.00	553.39	0		5.51	9.91
44	2.00	0.30	0.40	0.40	522.26	0		0.74	8.96
45	2.00	0.00	0.00	0.00	471.39	0		0.00	0.00
46	2.00	1.30	1.40	0.00	481.41	0		3.33	9.96
47	2.00	0.00	0.00	0.00	393.80	0		0.00	0.00
48	2.00	0.80	0.40	0.00	527.13	0		1.97	9.25

√

FIDLER SURVEY RECORD

SURVEYOR 5524 / 5892 / [redacted]2347 / 5416 / [redacted]2813

INSTRUMENT PROBE # 3657/3658-3028/3663-3651/3528-363

DATE 01-28-94

DOE NO./SN B863E - A705G - A842B - B8558

AREA Building 2

CALIB. DATE 4/12/94 - 4/24/94 - 3/21/94 - 4/6/94

	CH	BKG (cpm)	Pu CHECK SOURCE (cpm)	Th CHECK SOURCE (cpm)
Pu-238	1	120, 160, 200, 140	20K, 20K, 23K, 20K	2.5K, 3.5K, 4K, 2K
Th-232	2	3.2K, 4K, 6K, 3.8K	4.3K, 5K, 6K, 4K	27K, 26K, 32K, 23K

LOCATION	Pu	OUT Pu	LOCATION	Pu	OUT Th	LOCATION	Pu	Th
123E	ND	7K	122B	ND	ND			
113-1	ND	ND	122C	ND	ND			
115	ND	ND	122	ND	ND			
123-1	ND	ND	109	ND	ND			
119	ND	ND	108	ND	ND			
111	ND	ND	117	ND	ND			
120	ND	ND	Corr. 123A	ND	ND			
Corr. 101	ND	ND	123E	ND	ND			
110	ND	ND	113E	ND	ND			
103	ND	ND	115	ND	ND			
105	ND	ND	114	ND	ND			
104	ND	ND	118	ND	ND			
Rm. 121 TANK	ND	ND	112	ND	ND			
Corr. 121A	ND	ND						
107	ND	ND						
122	ND	ND						
122A	ND	ND						

COMMENTS:

Rm. 123E 7K cpm on out Channel on 7 fire sets sitting on tabletop

ND = NONE DETECTABLE

All tritium Exit Signs had bar codes

MRC ML-8183

Attachment

FACILITY CLASSIFICATION CHECKLIST

Site: MOUND Date: 3-17-92

Facility Name: NONE
(If none, so state)

Facility Building Number: BD-2 ROOM 102
(If none, so state)

Point of contact for facility information:
(usually M&O contractor)

Name and organization DON HASTINGS, NDT ENGINEERING

Telephone number (FTS) 774-3292 (Commercial) 513-865-3292

If the answer to question 1, 2, or 3 is yes, then complete checklist. If the answer to all three is no, then do not complete the checklist (no need to fill in and save the checklist).

1. Does or will the facility contain or use radioactive material (not including residual contamination)? [X] Yes [ ] No

2. Does the facility contain fixed radioactive contamination? [ ] Yes [X] No

3. Does the facility contain removable radioactive contamination? [ ] Yes [X] No

4. Does the building contain more than one facility?

   If yes, list the facility names and complete a separate sheet for each facility. [ ] Yes [ ] No

FACILITY CLASSIFICATION CHECKLIST (continued)

5. What is the current operational status of the facility?

____	Operating	Date operations began ____
____	Operational Standby	Date placed in standby ____
____	Shut down Pending Decommissioning	Date shut down ____
____	Decommissioning	Date decommissioning began ____
X	Under construction	Expected date for introducing radioactive material UNKNOWN

6. Check functions performed at the facility.

- X Radiography
- ____ Isotope production
- ____ Accelerator
- ____ Maintenance of contaminated equipment
- ____ Calibration of nuclear equipment
- ____ Radioactive material storage vaults
- ____ Shipping and receiving of contaminated nuclear equipment or radioactive material
- ____ Analytical, chemical, or metallurgical laboratory
- ____ Sealed source
- ____ Environmental sampling for radioactive material (e.g., stacks, effluents)
- ____ High level waste treatment, storage, or disposal
- ____ TRU waste treatment, storage, or disposal
- ____ Low level waste treatment, storage, or disposal
- ____ Incinerator
- ____ Reactor
- ____ Hot cells
- ____ Fuel fabrication
- ____ Tritium
- ____ Pu-238
- ____ Pu-239
- ____ Pu-242
- ____ Np-237
- ____ Utility or waste support facility
- ____ Spent fuel storage
- ____ Device Assembly
- ____ Other (please describe) _____

- ____ Am-241
- ____ Am-243
- ____ Cm-244
- ____ Thorium
- ____ Ca-252
- ____ U-235
- ____ U-233
- ____ U-238
- ____ U enrichment

FACILITY CLASSIFICATION CHECKLIST (continued)

7. Is there any safety documentation for the facility?

If yes, 1) check any type that applies and 2) designate if under development, current or being revised by entering the date of approval or the estimated date of completion. Comments section is for additional information.

[ ] Yes
[X] No

Facility name: NONE date: 3-17-92

Building number: BD-2 ROOM 102

	Safety Documentation	Development	Current		Revision	Document Name
		Estimated date of completion	Date of contractor approval	Date of DOE approval	Estimated date of completion	(add additional sheets if needed)
	PSAR					
	FSAR					
	TSRs					
	EIS/EA					
	EP					
	PRA					
	FMEA					
	FHA					
	PSA					
	Other					

PSAR - Preliminary Safety Analysis Report
FSAR - Final Safety Analysis Report
TSRs - Technical Specifications or Operational Safety Requirements
EIS/EA - Environmental Impact Statement or Environmental Assessment
EP - Emergency Preparedness Plan
PRA - Probabilistic Risk Assessment
FMEA - Failure Modes and Effects Analysis
FHA - Fire Hazards Analysis
PSA - Process Safety Analysis (Process Hazards Analysis, HAZOPS and Process Vulnerability Analysis)

FACILITY CLASSIFICATION CHECKLIST (continued)

8. The DOE HQ PSO office responsible for the facility.

X DP ___ NE ___ EM ___ NP ___ RW ___ ER

Name and telephone number of the HQ Program Manager.

9. The DOE field office (include area and site offices if any) responsible for the facility.

AL / DAO

Name and telephone number of the DOE Facility Representative (not necessarily 5000.3A rep).

10. The M&O contractor responsible for the facility.

Name and telephone number of the contractor Facility Manager.

Attachment

FACILITY CLASSIFICATION CHECKLIST

Site: MOUND Date: 3-17-92

Facility Name: NONE
(If none, so state)

Facility Building Number: BD 2 - ROOMS 103, 104, 105, 107, 113, 114, 115
(If none, so state) 121, 122, 123 DESTRUCTIVE TESTING AREA

Point of contact for facility information:
(usually M&O contractor)

Name and organization JERRY ALLISON, DESTRUCTIVE TESTING

Telephone number (FTS) 774-4533 (Commercial) 513-865-4533

If the answer to question 1, 2, or 3 is yes, then complete checklist. If the answer to all three is no, then do not complete the checklist (no need to fill in and save the checklist).

1. Does or will the facility contain or use radioactive material (not including residual contamination)? [ ] Yes [X] No

2. Does the facility contain fixed radioactive contamination? [ ] Yes [X] No

3. Does the facility contain removable radioactive contamination? [ ] Yes [X] No

4. Does the building contain more than one facility?

   If yes, list the facility names and complete a separate sheet for each facility. [ ] Yes [ ] No

FACILITY CLASSIFICATION CHECKLIST (continued)

5. What is the current operational status of the facility?

____ Operating
____ Operational Standby
____ Shut down Pending Decommissioning
____ Decommissioning
____ Under construction

Date operations began ____
Date placed in standby ____
Date shut down ____
Date decommissioning began ____
Expected date for introducing radioactive material ____

6. Check functions performed at the facility.

____ Radiography
____ Isotope production
____ Accelerator
____ Maintenance of contaminated equipment
____ Calibration of nuclear equipment
____ Radioactive material storage vaults
____ Shipping and receiving of contaminated nuclear equipment or radioactive material
____ Analytical, chemical, or metallurgical laboratory
____ Sealed source
____ Environmental sampling for radioactive material (e.g., stacks, effluents)
____ High level waste treatment, storage, or disposal
____ TRU waste treatment, storage, or disposal
____ Low level waste treatment, storage, or disposal
____ Incinerator
____ Reactor
____ Hot cells
____ Fuel fabrication
____ Tritium
____ Pu-238
____ Pu-239
____ Pu-242
____ Np-237
____ Utility or waste support facility
____ Spent fuel storage
____ Device Assembly
____ Other (please describe) _____

____ Am-241
____ Am-243
____ Cm-244
____ Thorium
____ Ca-252
____ U-235
____ U-233
____ U-238
____ U enrichment

FACILITY CLASSIFICATION CHECKLIST (continued)

7. Is there any safety documentation for the facility?

If yes, 1) check any type that applies and 2) designate if under development, current or being revised by entering the date of approval or the estimated date of completion. Comments section is for additional information.

☐ Yes
☐ No

Facility name: _____ date: _____

Building number: _____

	Safety Documentation	Development	Current		Revision	Document Name
		Estimated date of completion	Date of contractor approval	Date of DOE approval	Estimated date of completion	(add additional sheets if needed)
	PSAR					
	FSAR					
	TSRs					
	EIS/EA					
	EP					
	PRA					
	FMEA					
	FHA					
	PSA					
	Other					

PSAR - Preliminary Safety Analysis Report
FSAR - Final Safety Analysis Report
TSRs - Technical Specifications or Operational Safety Requirements
EIS/EA - Environmental Impact Statement or Environmental Assessment
EP - Emergency Preparedness Plan
PRA - Probabilistic Risk Assessment
FMEA - Failure Modes and Effects Analysis
FHA - Fire Hazards Analysis
PSA - Process Safety Analysis (Process Hazards Analysis, HAZOPS and Process Vulnerability Analysis)

FACILITY CLASSIFICATION CHECKLIST (continued)

8. The DOE HQ PSO office responsible for the facility.

   ___ DP ___ NE ___ EM ___ NP ___ RW ___ ER

   Name and telephone number of the HQ Program Manager.

   _____

9. The DOE field office (include area and site offices if any) responsible for the facility.

   _____

   Name and telephone number of the DOE Facility Representative (not necessarily 5000.3A rep).

   _____

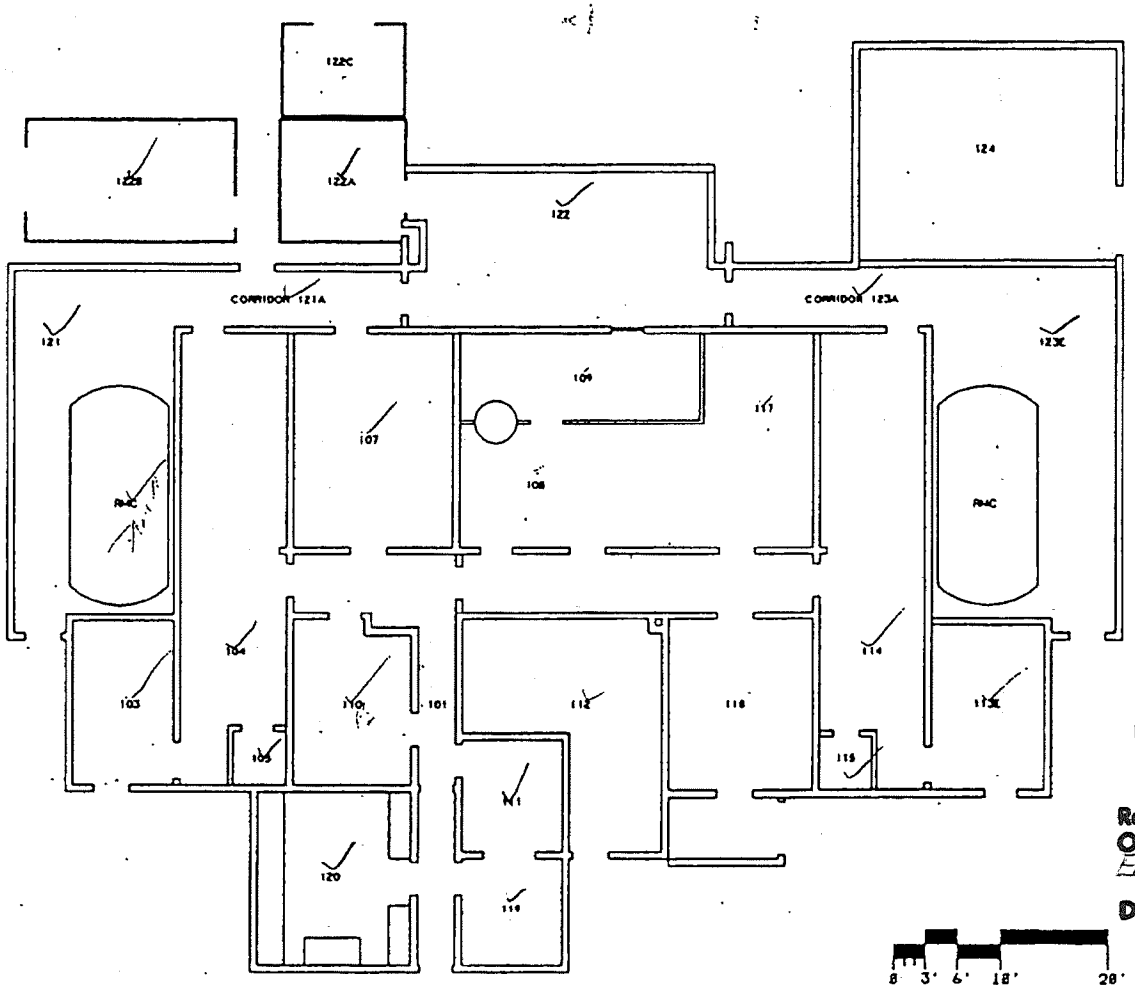
10. The M&O contractor responsible for the facility.

   _____

   Name and telephone number of the contractor Facility Manager.

   _____

ISS	DATE	REVISION	BY	CHKD	DWN	UPDT	APVD	R
B	12/12/91	ASBUILT ISSUE	DCW				DVD	



DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing Official: J. A. NESHEIM
EMCBC Classifier Name Office
Date: 08-26-08

BLDG #2
FIRST FLOOR
BLDG CODE:3002

APPROVALS: DATE:
SAFETY COMMITTEE REVIEWED:
___ NONE ___ TRUEBOC ___ TEBOC ___ EMBOC
TECH. REVP. ___
GR. MGR. ___
TRUEBOC ___
TEBOC ___
EMBOC ___

~~NOT FOR PUBLIC DISSEMINATION~~

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

SECTION CHIEF | PROJ MGR
BPO-8 | DWG SUPV
CR & DZ | PROJ REV
CHIEF MGR
APVD | DATE

SHEET	1	2	3	4	5	6
ISSUE	B					

TITLE (U) TITLE CLASSIFICATION
BLDG #2
FLOOR PLANS

PART CLASSIFICATION
DRAWING CLASSIFICATION: UCNI

SIZE C | DRAWING NUMBER FSC911227 | JOB NUMBER 12335

DWG TYPE SFP | PROJ BLDG #2 | CHKR 14865 | SCALE AS NOTED | SHEET 1 OF 1
STATUS MO-REL-12/12/91 | ORIGIN MO-BR3-V3.0

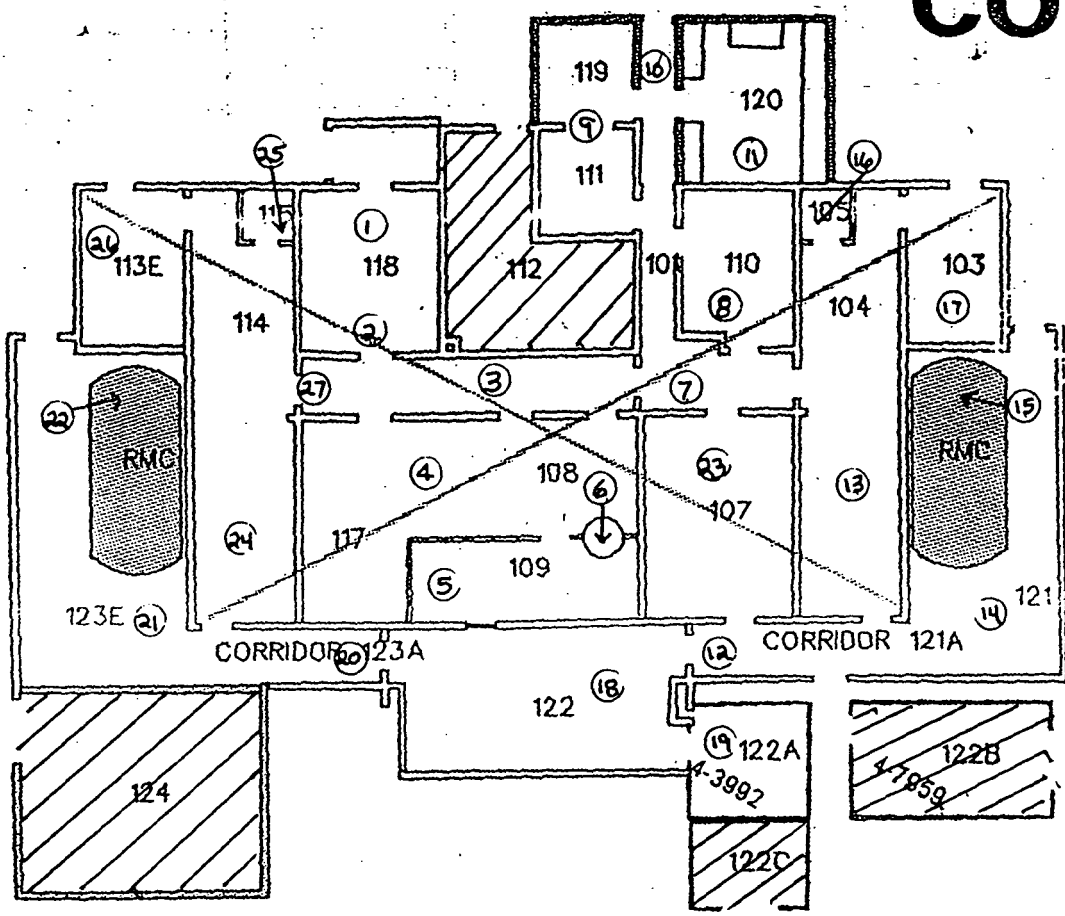
RADIOLOGICAL SURVEY DATA SHEET

P3

LOCATION (BLDG/AREA/ROOM) BLDG. 2	SURVEY NO. 00-TT-430
PURPOSE Annual Routine Survey (Contamination Survey Only)	RWP NO. N/A
	DATE 12-12-00
	TIME 1040

MAP / DRAWING

COPY



direct scan @ smear locations:
< 100 dpm/100cm² α
< 5000 dpm/100cm² β−

Electra Bkg. = 3.6 dpm/100cm² α

/// : denotes areas not surveyed/accessed.

LEGEND
= mrem/hr (γ) whole body
#E = mrem/hr (β+n+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
Electra	5435-5436	04-30-01

Completed by (Signature)	HP#	Date
[redacted]	7787	12-14-00
	5681	12-12-00
	7737	1-11-01

NL-0020 (2-98) Computer Generated

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED			FLOOR
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				FLOOR
		N	A	

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

COPY

COMMENTS: SMEARS Scanned: < 1000 dpm/100cm² β-α

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: Blue
Data file name: SMEAR096
Batch Ended: 12/12/2000 15:50
Cal. Due Date: 5/22/2001
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: 00-TF-430 JONES BLDG.#2 (27) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	1	0.00	2.23	<MDA	2.10	2.43	<MDA
A3	2	0.00	1.93	<MDA	0.00	1.31	<MDA
A4	3	0.00	2.12	<MDA	0.32	1.99	<MDA
B1	4	0.00	2.03	<MDA	0.00	1.65	<MDA
B2	5	0.00	1.90	<MDA	1.38	2.34	<MDA
B3	6	0.00	2.04	<MDA	1.47	2.56	<MDA
B4	7	0.00	1.92	<MDA	0.13	1.98	<MDA
C1	8	1.25	1.68	<MDA	0.00	1.27	<MDA
C2	9	0.00	1.81	<MDA	1.05	1.96	<MDA
C3	10	0.00	1.99	<MDA	0.24	1.87	<MDA
C4	11	0.00	1.77	<MDA	0.00	1.25	<MDA
D1	12	0.00	2.05	<MDA	1.30	2.37	<MDA
D2	13	0.00	2.10	<MDA	2.67	2.37	<AL
D3	14	0.00	2.12	<MDA	0.00	1.57	<MDA
D4	15	0.00	2.01	<MDA	0.00	1.31	<MDA
A2	16	0.00	2.23	<MDA	2.10	2.43	<MDA
A3	17	0.00	1.94	<MDA	0.34	1.75	<MDA
A4	18	0.00	2.13	<MDA	1.67	2.40	<MDA
B1	19	0.00	2.05	<MDA	4.29	3.25	<AL
B2	20	1.36	1.89	<MDA	0.00	1.48	<MDA
B3	21	0.00	2.03	<MDA	0.00	1.59	<MDA
B4	22	0.00	1.91	<MDA	0.00	1.48	<MDA
C1	23	0.00	1.68	<MDA	0.00	1.27	<MDA
C2	24	0.00	1.78	<MDA	0.00	1.25	<MDA
C3	25	0.00	2.02	<MDA	2.73	2.58	<MDA
C4	26	0.00	1.83	<MDA	3.59	2.55	<AL
D1	27	1.41	2.02	<MDA	0.00	1.48	<MDA

COPY

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL3 Quench Set: SMVIAL3
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	7.43
Region B:	2.0 -	18.6	0	0.0	6.80
Region C:	40.0 -	2000	0	0.0	10.90

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
00-TF-430 JONES BLDG.#2 (30-23 J1-J27) 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\SDATA3.DAT
Spectrum Data Drive & Path: C:\DATA

COPY

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	7.43	6.80	1	B	630.35		0.000	10.90
0	2.00	840.82	769.41	0		509.66	3001.16	214.491	1.10
1	2.00	0.00	0.00	0		528.42	0.00	0.000	0.00
2	2.00	1.57	0.68	0		452.32	3.82	11.168	0.00
3	2.00	0.00	0.00	0		400.20	0.00	0.000	0.60
4	2.00	0.00	0.00	0		479.11	0.00	0.000	0.00
5	2.00	0.00	0.00	0		479.94	0.00	0.000	0.00
6	2.00	0.00	0.00	0		518.60	0.00	0.000	0.00
7	2.00	1.36	1.99	0		536.74	7.67	25.652	0.00
8	2.00	0.00	0.00	0		439.35	0.00	0.000	0.00
9	2.00	2.22	2.10	5		380.86	5.98	12.697	0.00
10	2.00	1.13	1.76	0		536.22	6.31	25.083	0.00
11	2.00	0.00	0.00	0		420.11	0.00	0.000	0.00
12	2.00	0.07	0.00	0		447.92	0.16	10.397	0.00
13	2.00	5.08	4.77	0		506.75	17.43	18.189	0.00
14	2.00	0.00	0.09	0		506.40	0.00	0.000	0.00
15	2.00	3.36	0.60	0		493.38	9.81	14.485	0.00
16	2.00	0.00	0.00	0		548.76	0.00	0.000	0.00
17	2.00	1.01	1.00	0		486.20	2.72	12.052	0.00
18	2.00	1.78	2.35	0		464.35	4.27	11.107	0.00
19	2.00	0.86	0.81	0		359.34	2.41	12.392	0.00
20	2.00	0.00	0.00	0		429.30	0.00	0.000	0.00
21	2.00	0.00	0.00	0		442.10	0.00	0.000	0.00
22	2.00	0.00	0.00	0		473.08	0.00	0.000	0.60
23	2.00	1.07	0.05	0		527.01	4.99	20.893	0.00
24	2.00	2.57	1.63	0		483.29	6.74	12.590	0.00
25	2.00	1.49	1.67	0		574.79	47.47	145.139	1.10
26	2.00	1.77	0.88	0		561.31	21.31	55.767	0.00
27	2.00	1.57	1.70	0		546.33	11.18	32.686	0.55

Appendix H

Radon Summary/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 3000
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

		Room	pCi/l	pCi/l	Manid	Dupid	Date	Date	Comments
21		ABOVE AIR SAMPLER	161.1	125.0	1678055	1666782	12/14/89	2/16/90	MET - OLD THORIUM STORAGE
21		ABOVE AIR SAMPLERS	116.7		1668588		12/14/89	2/16/90	MET - OLD THORIUM STORAGE
	SW	19 MID EAST WALL	4.8		1661547		12/12/89	2/19/90	HISTORY OF ELEVATED READINGS
48		114 B CLOSET ON SPRINKLER PIPE	3.2		1671292		12/12/89	2/19/90	
19		ROOM 1	2.6		1678051		12/12/89	2/19/90	
	OLD SO BLDG	BASEMENT RIGHT CABINET	2.4		1681595		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	1.8		1681565		12/12/89	2/19/90	
67		143	1.5		1681563		12/12/89	2/19/90	
898	FIRE STATION	ROOM 402 EQUIPMENT ROOM WITH SUMP	1.4		1654468		12/12/89	2/19/90	
24		ROOM 1 PLANT NORTH WALL	1.3		1672087		12/12/89	2/19/90	
	PAINT SHOP	PS 4	1.2		1661516		12/12/89	2/16/90	
30		ROOM 3 EAST	1.1		1671262		12/12/89	2/19/90	
100		103 MIDDLE OF NORTH WALL	1.0		1678060		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		1681577		12/14/89	2/19/90	
61		RM 221 MIDDLE OF NORTH WALL	.9		1681585		12/13/89	2/19/90	
67		101 N	.9		1678029		12/12/89	2/19/90	
G-13	LOG	G-614 WEST WALL	.9		1661544		12/12/89	2/16/90	
	T	CORRIDOR 28	.9		1678039		1/15/90	2/19/90	
	T	153	.9		1678067		1/15/90	2/19/90	
	T	78	.9		1678077		1/15/90	2/19/90	
	T	38	.9		1681586		1/15/90	2/19/90	
105	PARTS MACHINING BUILDING	STAIRWELL NEXT TO ROOM 127	.9		1681564		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	
	SW	8 WEST WALL AT OLD RECOVERY	.8		1672057		12/11/89	2/16/90	
	MO BLDG	MO 8	.8		1678045		12/18/89	2/16/90	
87		124	.8		1678032		12/12/89	2/19/90	
88		ROOM 116 ON NORHT WALL RIGHT OF CEN	.7	.6	1661524	1661635	12/12/89	2/19/90	
89		101 NEAR BACK CORNER BY ROOF DRAIN	.7	.5	1666783	1666532	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		1681552		12/18/89	2/16/90	
	POWER HOUSE PH-1	REPAIR SHOP NORTH EAST CORNER	.7		1678040		12/12/89	2/19/90	
	M BLDG	M-135	.7		1681553		12/12/89	2/16/90	
26		ROOM 84 SOUTH WEST WALL	.6	.8	1672040	1667158	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		1671279		12/13/89	2/16/90	
35		RM 7	.6		1654458		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		1681628		12/13/89	2/20/90	
98	FIRE STATION	ROOM 114 DORM	.6		1661507		12/12/89	2/19/90	
	COS	NW STAIRWELL AT BASEMENT LEVEL	.6		1672086		12/14/89	2/19/90	
	OSW	120 C	.6		1681573		12/12/89	2/16/90	
	SW	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	
47		102 MIDDLE OF EAST WALL	.5	.5	1658114	1666819	12/12/89	2/16/90	

Area	Bldg	Bldg Description	Room	Avg Radon pCi/l	Duplicate Radon pCi/l	Monitor Monid	Dupid	Monitor Install Date	Monitor Retrieve Date	Comments
	45		WORK STATION AREA	.4		1681568		12/14/89	2/19/90	
	46		81 EAST WALL	.4		1672070		12/12/89	2/19/90	
	49		WALL OUTSIDE RM 125	.4		1678020		12/14/89	2/19/90	
	51		107 TOP OF FUME HOOD	.4		1681575		12/12/89	2/19/90	
	63		ROOM 134	.4		1672059		12/13/89	2/20/90	
	63W		RM 4	.4		1678078		12/14/89	2/19/90	
	65		ROOM 10 CONFERANCE ROOM	.4		1671284		12/14/89	2/19/90	
	66		OFFICE AREA	.4		1681554		12/12/89	2/19/90	
	68		EAST WALL CENTER BEAM	.4		1681555		12/14/89	2/19/90	
	69		RM 18A	.4		1681576		12/12/89	2/19/90	
	70		170 MEETING ROOM CENTER WALL	.4		1678041		12/12/89	2/19/90	
	88		ROOM 116	.4		1671285		12/12/89	2/19/90	
	95	SW/PP	95- BLD-ROOM81	.4		1661531		12/12/89	2/20/90	
		DS BUILDING	CORRIDOR 2 - 6 FT. ABOVE FLOOR	.4		1678071		12/13/89	2/19/90	
		I	I HALLWAY	.4		1667184		12/12/89	2/19/90	
		N BUILDING	N 21 WEST WALL	.4		1678057		12/15/89	2/20/90	
		POWER HOUSE PH-1	OFFICE SUPERVISOR	.4		1678036		12/12/89	2/19/90	
		R BUILDING	12 SOUTH WALL	.4		1681566		12/13/89	2/19/90	
	34		BURN ROOM			1654481		12/12/89		BURNT (NOT AVAILABLE)
	61		RM 151			1681567		12/13/89		MISSING

Bldg	Bldg Description	Room	Avg Radon pCi/l	Duplicate Radon pCi/l	Monitor Monid	Monitor Dupid	Monitor Install Date	Monitor Retrieve Date	Comments
	R BUILDING	163 NEXT TO NORTH WALL	.5	.5	1660533	1660816	12/13/89	2/16/90	
101		ROOM 5 ON SOUTH WEST WALL IN OFFSET	.5		1671200		12/12/89	2/19/90	
	"B" 175	175 WEST WALL	.5		1670040		12/12/89	2/16/90	
.6		ELECTRICAL PANEL RM IN ELECTRONICS	.5		1670062		12/12/89	2/19/90	
40		100	.5		1654480		12/13/89	2/16/90	
43		1 EAST WALL OVER WATER DISPENSER	.5		1670076		12/12/89	2/20/90	
44		ON BULLETIN BOARD	.5		1670047		12/12/89	2/16/90	
47		102 MIDDLE OF EAST WALL	.5		1670059		12/12/89	2/16/90	
50		CELL 113	.5		1661582		12/13/89	2/19/90	
79		CENTRAL HALLWAY WEST OF DOOR TO RM7	.5		1661605		12/18/89	2/16/90	
89		101 NEAR BACK CORNER BY ROOF DRAIN	.5		1670079		12/15/89	2/19/90	
91		1ST FLOOR	.5		1661525		12/15/89	2/16/90	
91		2ND FLOOR OUTSIDE RM215	.5		1661593		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	1080 WEST WALL	.5		1661580		12/14/89	2/16/90	
	COS	110 N WALL NEAR PUNCH PRESS	.5		1654456		12/12/89	2/19/90	
	COS	310 WALL CABINET TO RIGHT OF SINK	.5		1661590		12/12/89	2/19/90	
	E BUILDING	150 WEST WALL	.5		1670033		12/14/89	2/16/90	
	E BUILDING	103 WEST WALL	.5		1670072		12/14/89	2/16/90	
	E ANNEX	E 212 NORTH WALL	.5		1661587		12/18/89	2/16/90	
	GH BUILDING	ROOM 2	.5		1670065		12/12/89	2/16/90	
	GP 81	1A MIDDLE OF WEST WALL	.5		1670054		12/12/89	2/19/90	
	H BLDG	ROOM 127	.5		1661571		12/12/89	2/16/90	
	HH	HH-8	.5		1671260		12/18/89	2/19/90	
	I BUILDING	BASEMENT LEFT CRAWL SPACE DOOR	.5		1671260		12/12/89	2/19/90	
	N BUILDING	N 108	.5		1670056		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		1672084		12/15/89	2/16/90	
	OSM	4HT FLOOR	.5		1670028		12/12/89	2/16/90	
	OSE	CORR 212 SOUTH WALL NEAR 218 DOOR	.5		1670036		12/15/89	2/16/90	
	OSM	319	.5		1670069		12/13/89	2/16/90	
	OSM	2ND FLOOR	.5		1661611		12/12/89	2/16/90	
	POWER HOUSE PH-1	STATIONARY BOARD CORNER	.5		1670073		12/12/89	2/19/90	
	R BUILDING	145 WEST WALL ABOVE BALANCE	.5		1654530		12/14/89	2/16/90	
	SM/R TRITIUM COMPLEX	120 OVER LARGE METAL FLOOR DISC	.5		1670019		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		1670027		12/15/89	2/16/90	
TF-2		114 EAST WALL CENTER OF ROOM	.4		1670064		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	.5	1672135	1661542	12/12/89	2/19/90	
105	PARTS MACHINING BUILDING	136 QC OFFICE	.4		1670017		12/12/89	2/19/90	
27		CELL 8 - WALL	.4		1661583		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	
30	PP BLDG	PP CORR 16/BAY 2 WALL	.4		1661570		12/14/89	2/19/90	
39		BREAK RM	.4		1670050		12/14/89	2/19/90	
42		101 B EAST WALL	.4		1670031		12/13/89	2/19/90	

Appendix I

Asbestos Summary/Information

MOUND ASBESTOS SURVEY
BUILDING SUMMARY

BUILDING 2

FLOORS:	One	PIPE CHASES:	None
DATE BUILT:	1959	PENTHOUSE:	None
CRAWLSPACE:	None	GROSS AREA, SQ. FT.:	6,291
SUSPENDED CEILING:	None	ADDITIONS:	1967

Asbestos was found to be present in Thermal System Insulation and/or other material in Building 2. The homogeneous areas for the suspect Asbestos Containing Materials are shown below. Refer to the Mound Asbestos Survey Sample Data Report for specific information on sample constituents, estimated amounts of the material, assessments, and percentages of each constituent in the sample.

HOMOGENEOUS AREAS
Sample Numbers: 0.855-0.874

No.	Description	Result
1	Pipe Insulation, Type II, Hard	Positive
2	Pipe Joint Insulation, Type II, Hard	Positive
3	Pipe Joint Insulation, Type I, Hard Joints w/Fiberglass Runs	Negative
4	Ceiling Tile, CT1-H, (1'x1'), Holes	Negative
5	Transite Wall	Positive
6	Explosion-Proof Light Gaskets	Positive
7	Plaster	Negative
8	Drywall	Negative

Assumed ACM:	Amount	Location
* Floor Tile	N/A	N/A

Drawing Reference: P2

* Floor tile quantities not included in scope.

4.32 Building 2

The following asbestos-containing materials were identified in Building 2:

- Air-cell-paper pipe insulation
- Layered-paper pipe insulation
- Transite
- Floor tile

All of the asbestos-containing air-cell-paper pipe insulation and layered-paper pipe insulation identified in this building is currently in good condition and nonfriable.

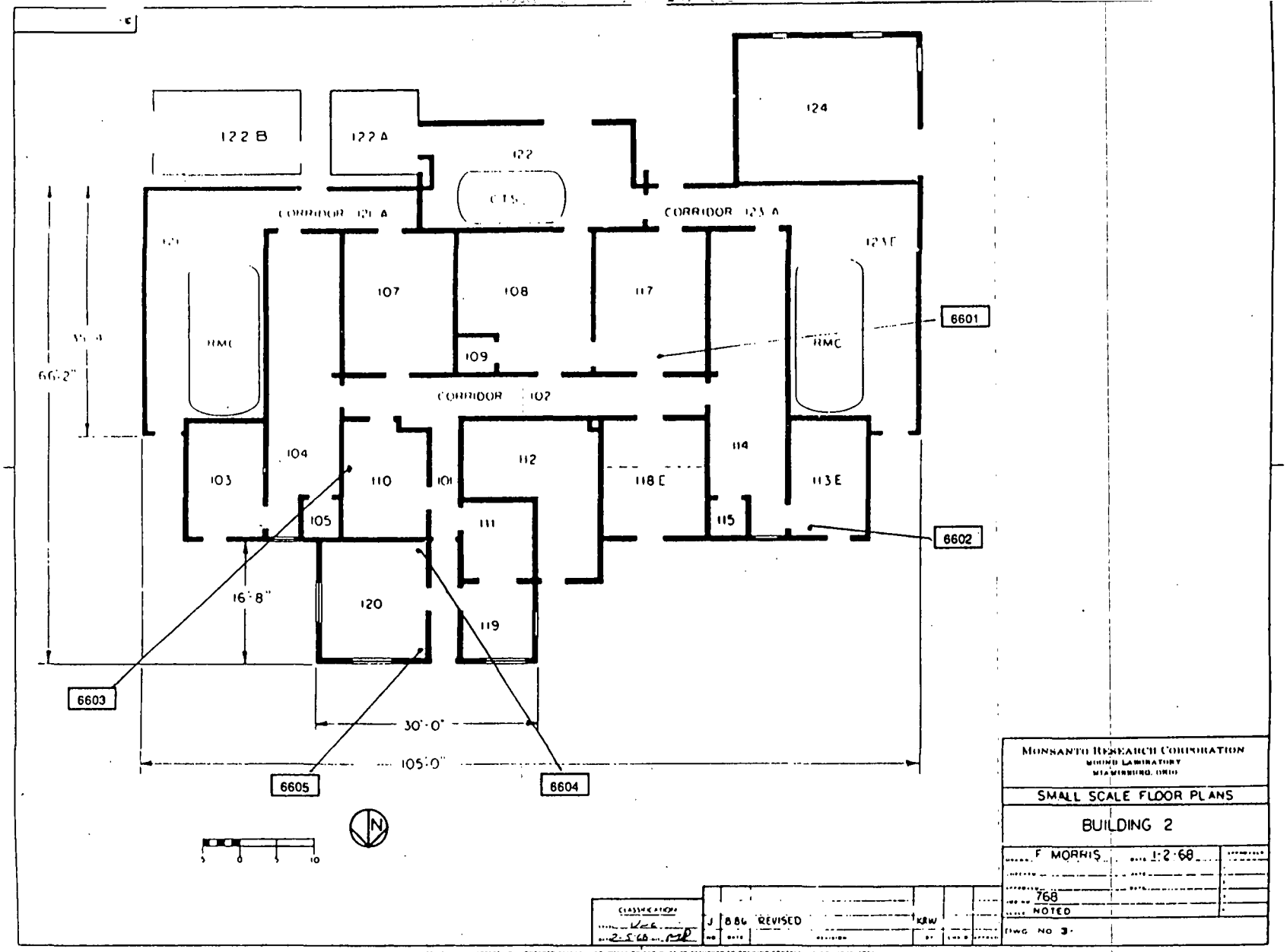
Transite wall paneling was identified in Room 122. The paneling is currently nonfriable and nonhazardous.

TABLE 1. HOMOGENEOUS AREAS OF SUSPECT ASBESTOS-CONTAINING MATERIALS IN BUILDING 2, EG&G MOUND APPLIED TECHNOLOGIES, INC.
(Inspected October 27, 1988)

Homogeneous area No.	Type of material	Description of homogeneous area	Does homogeneous material contain asbestos? (assumed/sampled)
1	Thermal system insulation	Air-cell-paper pipe insulation located on domestic hot-water lines	Yes/sampled
2	Thermal system insulation	Layered-paper pipe insulation on domestic cold-water lines	Yes/sampled
3	Miscellaneous	Vinyl floor tile located throughout selected areas of building	Yes/assumed
4	Miscellaneous	Transite panels in Room 122	Yes/assumed
5	Miscellaneous	1-ft by 1-ft (large dot/small dot) ceiling tile in Room 120	No/sampled

TABLE 2. DATA SUMMARY FOR BULK SAMPLES OF SUSPECT ASBESTOS-CONTAINING MATERIALS IN BUILDING 2, EG&G MOUND APPLIED TECHNOLOGIES, INC.

Homo-geneous area No.	Field sample No.	Sample date (1988)	PEI Laboratory requisition No.	Floor/room No.	Sample location	Asbestos fiber content
1	MRC-6601	10/27	T8-11-002-12A	1/117	Along north wall above windows	20% chrysotile
1	MRC-6602	10/27	T8-11-002-13A	1/113	Along north wall above radiator	20% chrysotile
2	MRC-6603	10/27	T8-11-002-14A	1/Room 110	To left of utility sink	5% chrysotile
5	MRC-6604	10/27	T8-11-002-15A	1/120	Southwest corner of room	None detected
5	MRC-6605	10/27	T8-11-002-16A	1/120	3 feet to left of doorway as you enter room, above heat line	None detected


122 B
122 A
122
124
CORRIDOR 121 A
CORRIDOR 123 A
121
123 E
107
108
117
109
RMC
RMC
6601
66'-2"
CORRIDOR 102
104
103
110
101
112
118 E
114
113 E
105
111
115
6602
16'-8"
120
119
6603
30'-0"
105'-0"
6605
6604
N
5 0 5 10
MONSANTO RESEARCH CORPORATION
MOUND LABORATORY
MIAMISBURG, OHIO
SMALL SCALE FLOOR PLANS
BUILDING 2
F MORRIS
1-2-68
768
NOTED
DWG NO 3
CLASSIFICATION
2-5-68
J 8 86 REVISED
KRW

Appendix J

Lead Summary/Information

There is no existing information for this section.

Appendix K

Chemical Summary/Information

Chemical Assessment for Bld's 2, 102, SST (Salt Shed)

On Oct 1, 2001 I completed a random assessment of Bld. 2, 102, SST (Salt Shed). The purpose of these assessments is:

1) To document inappropriate accumulation of unwanted materials
2) To identify materials for disposition/disposal
3) Answer questions SMPP/TFV Engineers/Generators have.

All Buildings listed are undergoing safe shutdown activities and presented no storage problems. Below is a list of what remain in WIDS (Waste Inventory Data System) Chemical Data Records last updated 02/01/01.

Bld. 102	Alcohol, Ethyl, Plastic Bottle, 1 Gallon
Bld. 102-109	Lubricant Tube, Plastic, 12 - 1.50 Liq. Ounce
Bld. 102-111	Graphite, Can Metal, Pound
Bld. 102-111	Lubricant, Can Metal, Ounce (Dry)
Bld. 102-207	Sealant, Plastic Bottle, .50 Liq. Ounce
Bld. 102-207	Disodium Salt, Glass Bottle, 2- 500 Grams

Bld. 2 No chemical found.
Closed for Approx 5 yrs

Bld. SST 3 Sided Bld. All materials (salt) will be used up this coming winter. No other chemical found.

Willis L. Daniel
Project Operation, SMPP/TFV

Appendix L

Noted Soil Sampling, Vicinity

This Appendix L consists of three elements.

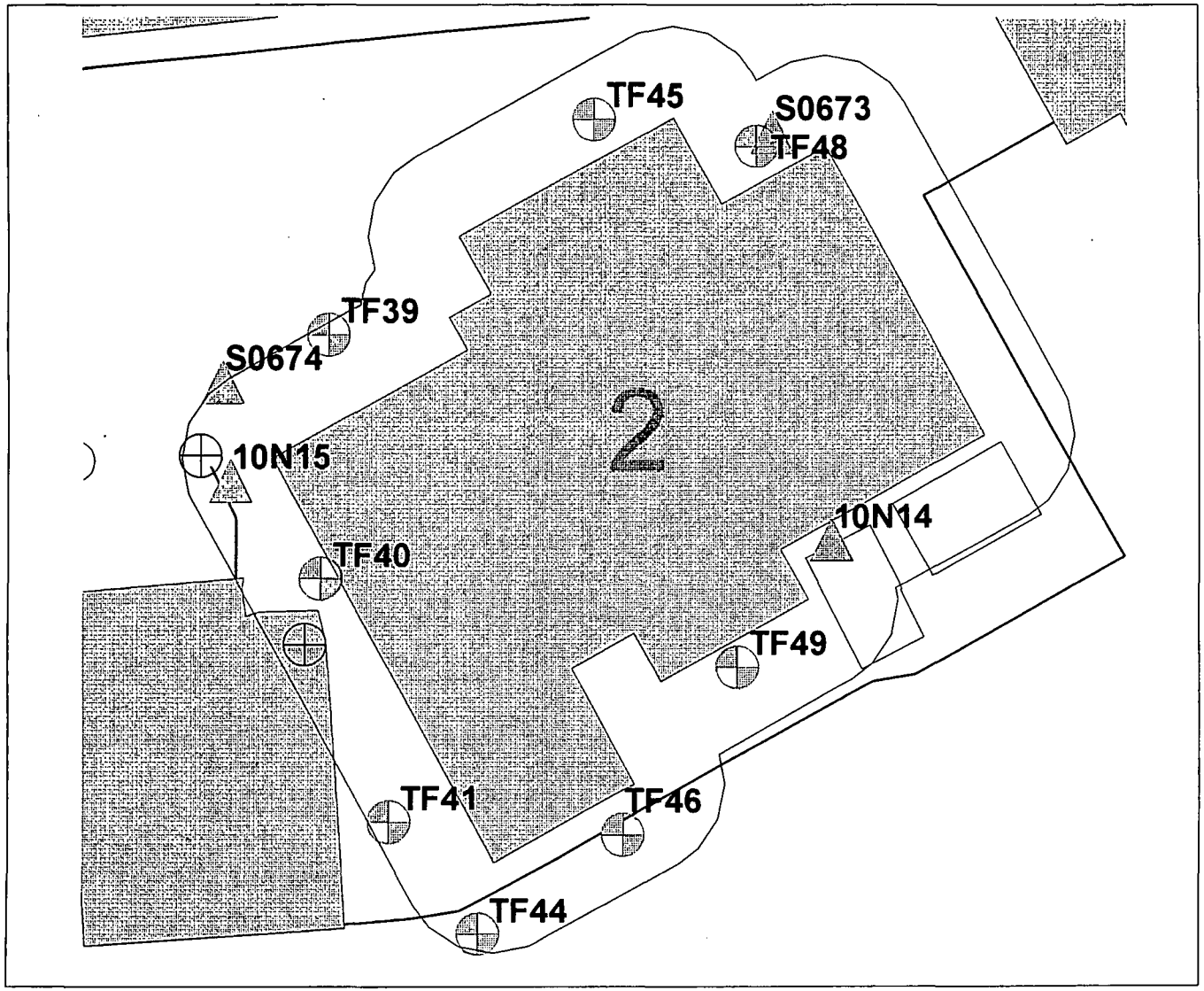
Element one is a graphic depiction of soil sampling in and around the subject property. Triangles signify surface sampling and circles denote boring (at dept) samples. The magenta color denotes a detection. A gray colored triangle or circle indicates a non-detection. Sampling detections are assigned a location alpha-numeric identifier.

Element two is a spreadsheet detailing the element one detections. Detections (magenta colored symbols) identified in element one are listed. The first or left-most column entries of the element two spreadsheet can be matched to the element one identifiers. Sample detections that exceed comparison values are highlighted by bold text in the Measured Value column of the spreadsheet. Additionally these comparison values are also identified in the Comments column of element two.

Element three is a table of comparison values. The constituent of concern can be found in the center column of this table, identified as parameter name. Comparison values are located to the immediate right of these constituents. The first or left-most column of the element three table contains a single digit number identifying the basis of comparison value. Basis identification is found on the last page of the element three table, and is again, listed here:

Comparison Value Basis Number:	Comparison Value Basis Definition
1	10E-6 Risk-Based Guideline Value
2	Soil Background Value (OU9)
3	Other Criteria, Such as Mound Plant Plutonium/Thorium Protocol
5	MCL Value
6	Guideline Value Based on Hazard Index

Bldg 2 Sample Locations



Bldg 2 Sample Detects Outline
Bldg 2 Sample Detects
Bldg 2 Sample Locations Outline
Soil Boring Outline
Surface Sample Outline
Building Label
Text Bldg ID
Building Outline
Hidden 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

Location	Sample_id	Location_ty	Collection_da	Value_name	Measured_value	Value_un	Detection	Chem_d	Start_	End_d	CAS_numbe	Lab_d	Data	Project_cd	Media	Collection_method	Comments
TF49	000027	Borehole	20010706	Lead-210	0.9563	PCI/G	0.9509	RAD	0.0	4.0	14255-04-0			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF48	000020	Borehole	20010706	Lead-210	1.0390	PCI/G	1.0140	RAD	0.0	4.0	14255-04-0			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF45	000019	Borehole	20010706	Lead-210	1.3430	PCI/G	0.9274	RAD	0.0	4.0	14255-04-0			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV. 2-Exceeds background value.
TF44	000029	Borehole	20010706	Lead-210	1.3670	PCI/G	0.9534	RAD	0.0	4.0	14255-04-0			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV. 2-Exceeds background value.
S0673	4043	Surface loc	19831001	Plutonium-238	0.0800	PCI/G	0.0100	RAD	0.0	0.0	13981-16-3			RSS	Soil	Not Applicable	
S0674	4028	Surface loc	19831001	Plutonium-238	0.5400	PCI/G	0.0100	RAD	0.0	0.0	13981-16-3			RSS	Soil	Not Applicable	2-Exceeds background value.
TF46	000028	Borehole	20010706	Radium-226	1.1940	PCI/G	0.8708	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF40	000015	Borehole	20010706	Radium-226	1.2410	PCI/G	0.7895	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF48	000020	Borehole	20010706	Radium-226	1.7020	PCI/G	1.4050	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF39	000016	Borehole	20010706	Radium-226	1.7350	PCI/G	0.9168	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF49	000027	Borehole	20010706	Radium-226	1.7560	PCI/G	1.1760	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF44	000029	Borehole	20010706	Radium-226	1.9640	PCI/G	1.0340	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF41	000030	Borehole	20010706	Radium-226	1.9800	PCI/G	0.8487	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF45	000019	Borehole	20010706	Radium-226	1.9900	PCI/G	1.0420	RAD	0.0	4.0	13982-63-3			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF45	000019	Borehole	20010706	Thorium-232	0.3375	PCI/G	0.1813	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF46	000028	Borehole	20010706	Thorium-232	0.3697	PCI/G	0.2697	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF48	000020	Borehole	20010706	Thorium-232	0.4262	PCI/G	0.2165	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF49	000027	Borehole	20010706	Thorium-232	0.4322	PCI/G	0.2078	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF41	000030	Borehole	20010706	Thorium-232	0.4666	PCI/G	0.1649	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF44	000029	Borehole	20010706	Thorium-232	0.4920	PCI/G	0.1892	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
TF40	000015	Borehole	20010706	Thorium-232	0.6254	PCI/G	0.1293	RAD	0.0	4.0	7440-29-1			TF2001	Soil	Auger, hollow stem	1-Exceeds soil 10-6 GV.
10N14	10N14	Surface loc	19941004	Total Aromatic Hydrocarbo	64010.0000	IC		GENERA	0.0	1.5	AHYD			2680	Soil	Auger, hand	
10N15	10N15	Surface loc	19941004	Total Aromatic Hydrocarbo	12436663.0000	IC		GENERA	0.0	1.5	AHYD			2680	Soil	Auger, hand	
10N14	10N14	Surface loc	19941004	Total C5 TO C11 Petroleum	203391.0000	IC		GENERA	0.0	1.5	TOGRHY			2680	Soil	Auger, hand	
10N15	10N15	Surface loc	19941004	Total C5 TO C11 Petroleum	20643468.0000	IC		GENERA	0.0	1.5	TOGRHY			2680	Soil	Auger, hand	
10N15	10N15	Surface loc	19941004	Total Halogenated Hydroca	6304.0000	IC		GENERA	0.0	1.5	THAHYC			2680	Soil	Auger, hand	
10N14	10N14	Surface loc	19941004	Total Halogenated Hydroca	658498.0000	IC		GENERA	0.0	1.5	THAHYC			2680	Soil	Auger, hand	
10N14	10N14	Surface loc	19941004	Total Semivolatile Hydrocar	715.0000	IC		GENERA	0.0	1.5	TSVHYC			2680	Soil	Auger, hand	
10N15	10N15	Surface loc	19941004	Total Semivolatile Hydrocar	10089.0000	IC		GENERA	0.0	1.5	TSVHYC			2680	Soil	Auger, hand	
S0673	4043	Surface loc	19831001	Tritium	0.1500	PCI/ML		RAD	0.0	0.0	10028-17-8			RSS	Soil	Not Applicable	

Mound Guideline and Screening Values (pCi/g)
for Soil/Sediment

RADIONUCLIDE	BKGD.	Guideline [1] Value 10^{-6}	Screening Level [6]
Actinium^{227+D}	0.11 [2]	0.45	0.56
Americium^{241}	ND	6.3	6.3
Cesium^{137+D}	0.42	0.34	0.76
Cobalt^{60}	NC	.07	.07
Lead $^{210+D}$	1.2 [2]	0.62	1.8
Plutonium^{238}	0.13	6.1	55 [3]
Protactinium^{231+D}	.11 [2]	0.39	4 [4]
Radium^{226+D}	2.0	0.09	2.1
Thorium^{230+D}	1.9	0.09	[5]
Thorium^{232+D}	1.4	0.07	1.47
Uranium^{234}	1.1	10.5	[6]
Uranium^{235}	0.11	1.6	1.7
Uranium^{238}	1.2	11.6	12.8
Uranium^{238+D}	1.2	0.1	1.3

NOTES:

[1] These guideline values are based on the more restrictive of the Construction Worker and Site Employee Values. These values were calculated using the methodology contained in Risk Based Guideline Values, March 1997, Final but were performed using April 2001 HEAST slope factors.

[2] These radionuclides have comparatively short half-lives and are deduced to be in secular equilibrium with the parent nuclide. Thus the background value measured for the parent is considered to be the appropriate value for these as well. The validity of using this method for background determination for other radionuclides will be assessed on a case by case basis.

[3] The 55pCi/g value was retained because of its familiarity to the public.

[4] These values represent 1E-5 risk value

[5] In areas where Th-230 is not a contaminant of potential concern, Mound will use our normal sample analysis process through gamma spectroscopy and will assure that the result and MDA are less than 10 pCi/g. If the detected value for Th-230 is greater than MDA, Mound will reanalyze the sample. If Th-230 is a Contaminant of Potential Concern the detection limits of the analysis will be at or below the listed guideline value of 0.09 pCi/g above background.

[6] The Screening Level is reflective of onsite Gamma Spec Laboratory capabilities and will be used to determine if additional characterization or removal may be necessary. Soil Screening is not an appropriate technique for U-234. However, detection of U-235 or U-238 is anticipated in conjunction with U-234 contamination. Positive detection of either U-235 or U-238 (above guideline values) will trigger alpha spectroscopic analysis of the sample.

Radionuclides labeled with a D indicate that pertinent daughters are included within the the risk calculation.

U-238 may be assessed for secular equilibrium and appropriate GV used.

NC = Not Calculated ND = Not detected

This table is an update of the March 2001 Draft version. On September 25 2001, Guideline Values were recalculated using HEAST slope factors dated April 2001.

comp_no	par_code	par_name	comp_value	units
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

comp_no	par_code	par_name	comp_value	units
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

comp_no	par_code	par_name	comp_value	units
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

comp_no	par_code	par_name	comp_value	units
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

comp_no	par_code	par_name	comp_value	units
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

comp_no	par_code	par_name	comp_value	units
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

comp_no	par_code	par_name	comp_value	units
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

Appendix M

Occurrence Reports

ALO-DA-EGGM-EGGMAT03-1992-0001 Final Report

Occurrence Report

Main Hill Facilities

(Name of Facility)

Explosive

(Facility Function)

Mound Plant EG&G Mound Applied Technologies

(Laboratory, Site, or Organization)

Name: Fischbein, Robert A.
Title: Director, Operations **Telephone No.:** (513) 865-3727

(Facility Manager/Designee)

Name: J. L. ALLISON
Title: BUILDING MANAGER **Telephone No.:** (513) 865-4533

(Originator/Transmitter)

Name: **Date:**

(Authorized Classifier (AC))

1. **Occurrence Report Number:** ALO-DA-EGGM-EGGMAT03-1992-0001

BLDG 2 EVACUATION; GROUP 1 FACILITY CONDITION I OFF-NORMAL -SUB PARAGRAPH (F)

2. **Report Type and Date:** Final

	Date	Time
Notification:	02/25/1992	14:06 (MTZ)
Initial Update:	03/09/1992	09:46 (MTZ)
Latest Update:	03/09/1992	09:46 (MTZ)
Final:	06/05/1992	05:31 (MTZ)

3. **Occurrence Category:** Off-Normal

4. **Number of Occurrences:** 1 **Original OR:**

5. **Division or Project:** EG&G MOUND APPLIED TECHNOLOGIES

6. **Secretarial Office:** DP - Defense Programs

7. **System, Bldg., or Equipment:** BLDG 2 ROOM 114

8. **UCNI?:** No

9. **Plant Area:** TEST FIRE

10. **Date and Time Discovered:** 02/25/1992 13:03 (ETZ)

11. Date and Time Categorized: 02/25/1992 13:38 (ETZ)

12. DOE Notification:

Date	Time	Person Notified	Organization
02/25/1992	13:45 (ETZ)	M. A. REKER	DOE/DAO

13. Other Notifications:

14. Subject or Title of Occurrence:

BLDG 2 EVACUATION; GROUP 1 FACILITY CONDITION I OFF-NORMAL -SUB PARAGRAPH (F)

15. Nature of Occurrence:

01) Facility Condition
H. Operations

16. Description of Occurrence:

"This Occurrence Report was reviewed by an Derivative Classifier (Frank Weyler) and contains no classified nor UCNI information."

On 02/25/92 at 1303 hours the smoke detectors in building 2, room 114 went off. Test Fire building 2 operations were in the normal mode at the time of the occurrence. There were no injuries or environmental release associated with this incident. It did not degrade any safety or production system. There is no public inquiry, congressional inquiries or press release planned.

17. Operating Conditions of Facility at Time of Occurrence:

NORMAL FIRST SHIFT OPERATING CONDITIONS. AT THE TIME OF THE OCCURRENCE THERE WAS A HEAVY ATMOSPHERIC INVERSION.

18. Activity Category:

03 - Normal Operations

19. Immediate Actions Taken and Results:

The building was evacuated as a precautionary measure which is standard procedure in explosives areas when an

alarm sounds.

The Fire Department conducted their emergency run survey and reset the alarm system.

20. Direct Cause:

4) Design Problem
B. Inadequate or Defective Design

21. Contributing Cause(s):

7) External Phenomena
A. Weather or Ambient Condition

22. Root Cause:

7) External Phenomena
A. Weather or Ambient Condition

23. Description of Cause:

During routine testing operations of several large explosive detonators exhaust gases were drawn into the facility's air handling equipment (DIRECT CAUSE). The test exhaust particulate level was increased in the testing control room activating the far side (South) smoke detector.

At the time of testing there was a heavy atmospheric inversion (ROOT CAUSE). The test exhaust was held down due to prevailing weather conditions causing the facility's air handling unit to partially uptake some of the test exhaust.

24. Evaluation (by Facility Manager/Designee):

Since heavy atmospheric inversion is only an occasional local phenomenon it has minimum effect on plant testing schedules.

25. Is Further Evaluation Required?: No

26. Corrective Actions
(* = Date added/revised since final report was approved.)

1.	Incidents of this type are now monitored under the Performance Indicator Program and as such are subject for trending analysis. Since heavy atmospheric inversion is only an occasional local phenomenon, additional corrective actions are not warranted unless future trending analysis indicates a reconsideration of this decision.	
	Target Completion Date: 03/05/1992	**Completion Date:** 03/05/1992

27. Impact on Environment, Safety and Health:

There was no environmental, health and safety impact.

28. Programmatic Impact:

Approximately 30 minutes of testing work activities of five employees.

29. Impact on Codes and Standards:

There were no standards or code violations.

30. Lessons Learned:

A Cost Benefit Analysis to modify the facility's air handling unit would not prove cost effective considering the infrequent occurrences of heavy atmospheric inversions in the local area.

31. Similar Occurrence Report Numbers:

1. ALO-DA-EGGM-EGGMAT04-1991-1008

32. User-defined Field #1:

33. User-defined Field #2:

34. DOE Facility Representative Input:

35. DOE Program Manager Input:

36. Approvals:

Approved by: Fischbein, Robert A., Facility Manager/Designee
Date: 05/21/1992
Telephone No.: (513) 865-3727

Approved by: GARTRELL, GEORGE R., Facility Representative/Designee
Date: 06/04/1992
Telephone No.:

Approved by: HAGAN, RALPH A., Program Manager/Designee
Date: 06/05/1992
Telephone No.:

ALO-DA-EGGM-EGGMAT04-1991-1003 Final Report

Occurrence Report

Sites and Grounds

(Name of Facility)

Balance-of-Plant

(Facility Function)

Mound Plant EG&G Mound Applied Technologies

(Laboratory, Site, or Organization)

Name: Castleberry, V. E.
Title: Director, Engineering **Telephone No.:** (513) 865-3458

(Facility Manager/Designee)

Name: Jon D. Yonko
Title: Manager, Facilities Maintenance **Telephone No.:** (513) 865-3151

(Originator/Transmitter)

Name: **Date:**

(Authorized Classifier (AC))

1. Occurrence Report Number: ALO-DA-EGGM-EGGMAT04-1991-1003

Electrical Storm

2. Report Type and Date: Final

	Date	Time
Notification:	05/17/1991	09:11 (MTZ)
Initial Update:	05/31/1991	09:54 (MTZ)
Latest Update:	05/31/1991	09:54 (MTZ)
Final:	06/11/1991	05:03 (MTZ)

3. Occurrence Category: Off-Normal

4. Number of Occurrences: 1 **Original OR:**

5. Division or Project: EG&G Mound

6. Secretarial Office: DP - Defense Programs

7. System, Bldg., or Equipment: Elec Pumps & Alarms

8. UCNI?: No

9. Plant Area: Electrical Utilities

10. Date and Time Discovered: 05/16/1991 15:25 (ETZ)

11. Date and Time Categorized: 05/16/1991 16:30 (ETZ)

12. DOE Notification:

Date	Time	Person Notified	Organization
05/17/1991	10:00 (ETZ)	James A. Morley	DAO

13. Other Notifications:

14. Subject or Title of Occurrence:

Electrical Storm

15. Nature of Occurrence:

01) Facility Condition
H. Operations

16. Description of Occurrence:

At approximately 3:25 p.m. to 3:35 p.m. on Thursday, May 16, an electrical storm caused a one half second power dip on the main power feed to the plant site, plus the separate power feed to the deep well water supply pumps went single phase for a period of time. There were also at least two lightning strikes on site The electric pump motors on wells #2 an #3 kicked out at approximately 3:30 p.m. due to the single phasing. A lightning strike also caused the loss of sections of the security alarm communication systems at Buildings 50, 49, 87 and 85. The power dip to the main distribution system caused no outages in itself as all protective systems reacted properly.

17. Operating Conditions of Facility at Time of Occurrence:

Normal Operations - An electrical storm alert had previously been communicated to plant personnel to suspend sensitive operations.

18. Activity Category:

03 - Normal Operations

19. Immediate Actions Taken and Results:

Although the electrical motors for Wells #2 and #3

were out of service, the pumps were operational via the backup propane driven engines. In addition, the water systems have at least eight hours of reserve available in the water towers, should the supply systems be completely lost. The outage of the security alarm communication system at those buildings was compensated for by the posting of additional security inspectors in those areas. The electric pump-motors were restarted at

approximately 6:15 p.m. when D.P.&L. restored the incoming service. There was no damage to the motors. All the security alarm systems were back on-line by 10:10 p.m.

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20. Direct Cause:

7) External Phenomena
A. Weather or Ambient Condition

21. Contributing Cause(s):

7) External Phenomena
A. Weather or Ambient Condition

22. Root Cause:

7) External Phenomena
A. Weather or Ambient Condition

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23. Description of Cause:

The lightning strikes caused damage to five electronic circuit boards within the security alarm communication system. The electrical storm also caused D.P.&L. to lose two phases on our separate power feed to the deep wells motors which kicked them off-line.

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24. Evaluation (by Facility Manager/Designee):

The security alarm communication system is protected against electrical surges as per industry standards. Over the last year, however, the security system at Building 2 has been particularly susceptible to lightening strikes in the general

vicinity. Therefore, additional lightning protection was added to that system on May 30, 1991.

The potable and fire water system is designed with adequate redundancy, (three wells and backup motors), and water tower capacity to withstand an interruption in D.P.&L.'s service. No modifications to the system are required.

25. Is Further Evaluation Required?: No

26. Corrective Actions

(* = Date added/revised since final report was approved.)

1.

None	
Target Completion Date: 05/30/1991	**Completion Date:** 05/30/1991

27. Impact on Environment, Safety and Health:

None

28. Programmatic Impact:

None

29. Impact on Codes and Standards:

30. Lessons Learned:

Electrical storms occasionally cause upsets to our facility, but the lightning protection systems and the built-in backup systems have minimized the impacts.

31. Similar Occurrence Report Numbers:

1. EGGMAT-OF-91-04

32. User-defined Field #1:

33. User-defined Field #2:

34. DOE Facility Representative Input:

35. DOE Program Manager Input:

36. Approvals:

Approved by: Castleberry, V. E., Facility Manager/Designee
Date: 06/05/1991
Telephone No.: (513) 865-3458

Approved by: Gartrell, George R., Facility Representative/Designee
Date: 06/10/1991
Telephone No.:

Approved by: Hagan, Ralph A., Program Manager/Designee
Date: 06/11/1991
Telephone No.:

ALO-DA-EGGM-EGGMAT04-1991-1008 Final Report

Occurrence Report

Sites and Grounds

(Name of Facility)

Balance-of-Plant

(Facility Function)

Mound Plant EG&G Mound Applied Technologies

(Laboratory, Site, or Organization)

Name: Castleberry, V. E.
Title: Director, Engineering **Telephone No.:** (513) 865-3458

(Facility Manager/Designee)

Name: Jon D. Yonko
Title: Manager, Facilities Maintenance **Telephone No.:** (513) 865-3151

(Originator/Transmitter)

Name: **Date:**

(Authorized Classifier (AC))

1. Occurrence Report Number: ALO-DA-EGGM-EGGMAT04-1991-1008

Evacuation Alarm

2. Report Type and Date: Final

	Date	Time
Notification:	09/19/1991	16:09 (MTZ)
Initial Update:	10/03/1991	11:52 (MTZ)
Latest Update:	10/03/1991	11:52 (MTZ)
Final:	10/07/1991	06:58 (MTZ)

3. Occurrence Category: Off-Normal

4. Number of Occurrences: 1 **Original OR:**

5. Division or Project: EG&G Mound

6. Secretarial Office: DP - Defense Programs

7. System, Bldg., or Equipment: Smoke Alarm

8. UCNI?: No

9. Plant Area: Building 2

10. Date and Time Discovered: 09/19/1991 11:33 (ETZ)

11. Date and Time Categorized: 09/19/1991 13:00 (ETZ)

12. DOE Notification:

13. Other Notifications:

14. Subject or Title of Occurrence:

Evacuation Alarm

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15. Nature of Occurrence:

01) Facility Condition
H. Operations

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16. Description of Occurrence:

There were two evacuation alarms for Building #2 on Thursday, September 19, both caused by a smoke detector being triggered in the HVAC system. The first event occurred at 11:33 and the second at 15:20. The alarm was triggered due to roofing work being done by Enterprise Roofing. The contractor had positioned their tar kettle on the north side of Building #2 which appeared to be an optimal location in relationship to the HVAC air intakes of this building and the surrounding buildings. Despite the consideration taken in locating the kettle, smoke from the unit still entered the air intake on top of the roof and tripped the HVAC smoke detector. For the first event at 11:33, the pathway for the smoke was thought to be an equipment room door close to the kettle that had been left open. The door was closed and the tar kettle was started back up in the afternoon, only to have the smoke alarm go off a second time. Sufficient quantities of smoke entered into the HVAC air intake on top of the building and tripped the detector.

This occurrence report was reviewed by an authorized derivative classifier and contains no classified information.

17. Operating Conditions of Facility at Time of Occurrence:

Normal Operations

18. Activity Category:

03 - Normal Operations

19. Immediate Actions Taken and Results:

The HVAC unit was shutdown to prevent any smoke from being drawn into the system. Due to building modification work, there are currently very few active operations within Building 2 which thereby allowed the shutdown of the HVAC system.

20. Direct Cause:

6) Management Problem
B. Work Organization/Planning Deficiency

21. Contributing Cause(s):

3) Personnel Error
A. Inattention to Detail

7) External Phenomena
A. Weather or Ambient Condition

22. Root Cause:

6) Management Problem
B. Work Organization/Planning Deficiency

23. Description of Cause:

In planning the location of the tar kettle, the air intake on top of building was thought to be far enough away. The location of all the surrounding buildings and the air intakes were taken into consideration in initially locating the tar kettle. The smoke from the kettle entered the Building #2 air intake and activated the smoke alarm.

24. Evaluation (by Facility Manager/Designee):

In any roofing job, the tar kettle needs to be located close to the building where the

work is being done. In some cases, it is difficult to position the kettle so that the odors are minimized to the surrounding building personnel--not to mention the potential for tripping smoke detectors. On future roofing jobs in tight locations, any vulnerable ventilation systems will be shut down. (if possible), or shielded.

25. Is Further Evaluation Required?: No

26. Corrective Actions

(* = Date added/revised since final report was approved.)

1.

None	
Target Completion Date: 09/19/1991	**Completion Date:** 09/19/1991

27. Impact on Environment, Safety and Health:

None

28. Programmatic Impact:

None

29. Impact on Codes and Standards:

None

30. Lessons Learned:

In doing roofing repair work, care must be taken in where the tar kettle is located in relationship to building air intakes.

31. Similar Occurrence Report Numbers:

1. None

32. User-defined Field #1:

33. User-defined Field #2:

34. DOE Facility Representative Input:

35. DOE Program Manager Input:

36. Approvals:

Approved by: Castleberry, V. E., Facility Manager/Designee
Date: 10/03/1991
Telephone No.: (513) 865-3458

Approved by: Gartrell, George R., Facility Representative/Designee
Date: 10/05/1991
Telephone No.:

Approved by: Ordaz, John C., Program Manager/Designee
Date: 10/07/1991
Telephone No.:

Appendix N

PRS Information

MOUND PLANT
PRS 330
FORMER TANK SITE – BUILDING 2 FUEL OIL TANK

RECOMMENDATION:

PRS 330 is the site of a former underground storage tank located in the western sector of the original Mound plant. In 1994, qualitative hydrocarbon detections were found during the PETREX soil gas portion of the ***OU5, Non Area of Concern*** investigation. No radioactive or hazardous waste generating processes or activities are known to have occurred at PRS 330.

In 1996, the Soil Gas Confirmation Sampling effort sampled the locations with the highest ion counts (confirmation sample locations 7, 11, and 18) in the western sector and discovered no contamination above the 10^{-6} risk range. PRS 330 was not sampled as part of the Soil Gas Confirmation Sampling but the PRS had lower ion counts than confirmation sample locations 7, 11, and 18. This implies that PRS 330 has similar or lower health risk than confirmation sample locations 7, 11, and 18.

All radiological samples collected near this PRS indicate that radionuclides are below their applicable 10^{-6} Risk Based Guideline Values, ALARA or regulatory levels. Therefore, NO FURTHER ASSESSMENT is recommended for PRS 330.

CONCURRENCE:

DOE/MB: Arthur Kleinrath — 2/19/97
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer — 2/19/97
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel — 2/19/97
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 4/3/97 to 5/8/97

☒ No comments were received during the comment period.

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

MOUND PLANT
PRS 331
BUILDING 2 SEPTIC TANK

RECOMMENDATION:

This location was identified as a Potential Release Site (PRS) because the tank had been used to receive the discharge of sanitary waste water from Building 2.

No radionuclide nor hazardous waste generating processes were known to have occurred in Building 2. The OU5 Non-AOC Field survey did not detect any contamination above screening levels. Soil plutonium concentrations were below the Mound ALARA guideline of 25 pCi/g, and thorium was below the accepted regulatory standard of 5 pCi/g (surface) and 15 pCi/g (subsurface).

Therefore, PRS 331 requires NO FURTHER ASSESSMENT.

CONCURRENCE:

DOE/MB: Arthur Kleinrath 10/3/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 10/3/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 10/3/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 10/15/96 to 11/15/96

☒ No comments were received during the comment period.

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

MOUND PLANT
PRS 351/352/353/357/359/360/361/362/385/386/387
SOIL CONTAMINATION

RECOMMENDATION:

PRSs 351, 352, 353, 357, 359, 360, 361, 362, 385, 386, and 387 are located in the western sector of the original Mound plant. These soil locations were identified as PRSs due to qualitative hydrocarbon detections found during the PETREX soil gas portion of the ***OU5, Non Area of Concern*** investigation. No radioactive or hazardous waste generating processes or activities are known to have occurred at these PRSs.

In 1996, the Soil Gas Confirmation sampling effort sampled the locations with the highest ion counts (confirmation sample locations 7, 11, and 18) in the western sector and discovered no contamination above the 10^{-6} risk range. PRSs 351, 352, 353, 357, 359, 360, 361, 362, 385, 386, and 387 were not sampled as part of the *Soil Gas Confirmation Sampling* but the PRSs had lower ion counts than confirmation sample locations 7, 11, and 18. This implies that these PRSs will have similar or lower health risk.

All radiological samples collected near these PRSs indicate that radionuclides are below their applicable 10^{-6} Risk Based Guideline Criteria, ALARA, regulatory, or background levels. Therefore, NO FURTHER ASSESSMENT is recommended.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath 11/20/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 11/20/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 11/26/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 12/19/96 to 1/23/97

☒ No comments were received during the comment period.

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

Page R