OVERSIZE PAGES

LOCATED AT

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DOCUMENT

Administrative Record
3005-981220004 (2)

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-278/98
December 21, 1998

98-TC/12-21

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P.O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Dewain Eckman

SUBJECT: Contract No. DE-AC24-97OH20044
BUILDING 1: DELIVERY OF FINAL BUILDING DATA PACKAGE

REFERENCE: Statement of Work Requirement C.7.1e -- Regulator Reports

Dear Mr. Provencher:

The Building 1 Building Data Package has completed public review. No comments were received. Attached are the change pages and instructions to produce the Final version of the document. Ron Church of MEMP has authorized the release of this revision package to USEPA, OEPA, and ODH. Copies will also be distributed to the MMCIC and the Public Reading Room.

Please advise if additional copies are required. If you require further information, please contact Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/nmg

Enclosures as stated

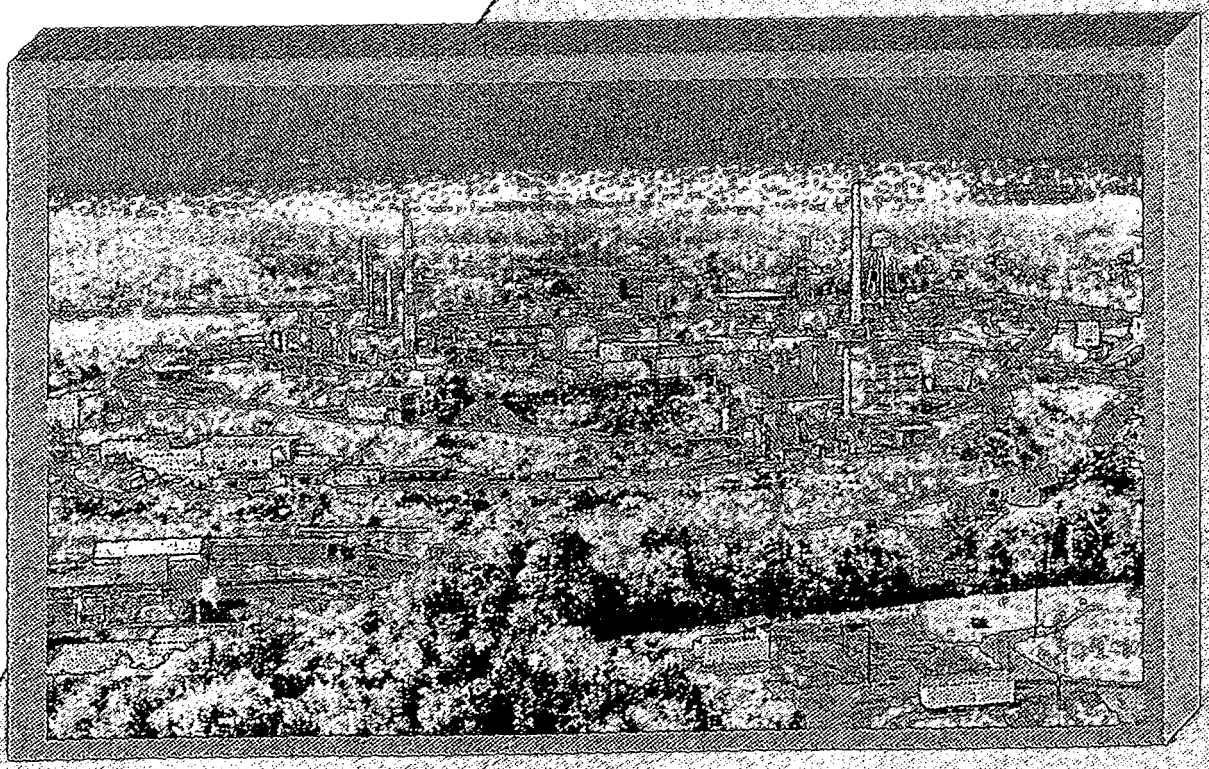
cc: T. Fischer, USEPA, (1) w/attachment
D. Meredith, TechLaw, (1) w/attachment
B. Nickel, OEPA, (1) w/attachment
R. Vandergrift, ODH, (1) w/attachment
T. Tracy, DOE, HQ, (1) w/attachment
O. Vincent, DOE/MEMP, (1) w/attachment
A. Kleinrath, DOE/MEMP, (1) w/attachment
J. Bartee, BWO, (1) w/attachment
D. Bird, MMCIC, (1) w/attachment
Public Reading Room, (5) w/attachment
Administrative Record, (2) w/attachment
DCC, w/o attachment

3005-9812220004

MOUND

Environmental Restoration Program

MOUND PLANT
Building Data Package
Building 1
Located within Release Block C



BDP Building 1

REV	DESCRIPTION	DATE
DRAFT		July 1, 1998
PUBLIC INFORMATION RELEASE 0		Oct. 21, 1998
FINAL 1	No comments. Newspaper "Information Notice" inserted.	Dec. 17, 1998

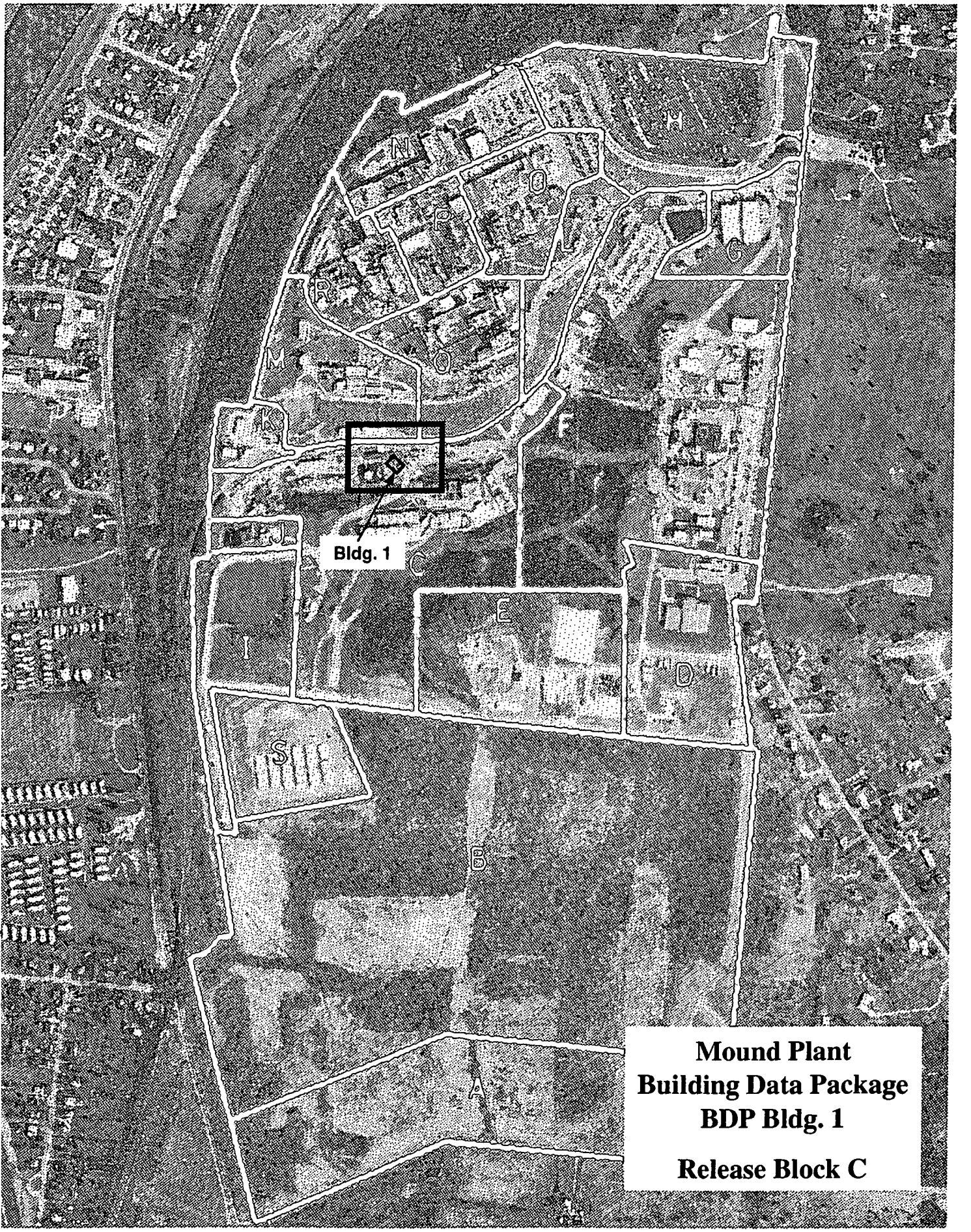
MOUND

Environmental
Restoration
Program

MOUND PLANT
BUILDING DATA PACKAGE
Information Notice

Building 1 will soon be dismantled. A Building Data Package describing Building 1 and its dismantlement is available in the CERCLA Public Reading Room, 305 E. Central Ave., Miamisburg, Ohio.

Questions can be referred to Paul Lucas at (937) 865-4578.



Mound Plant
Building Data Package
BDP Bldg. 1

Release Block C

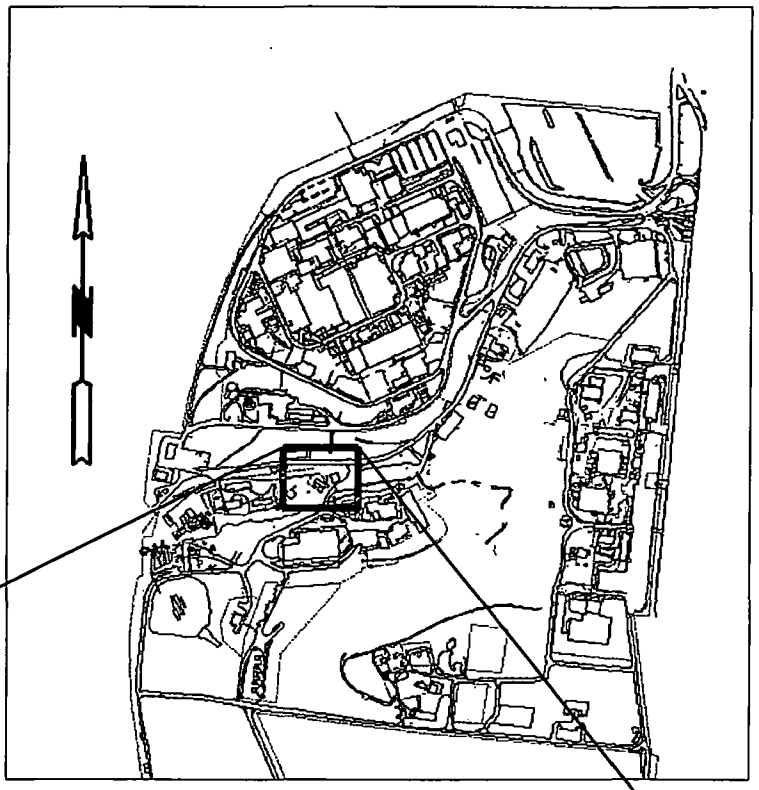
Mound Plant

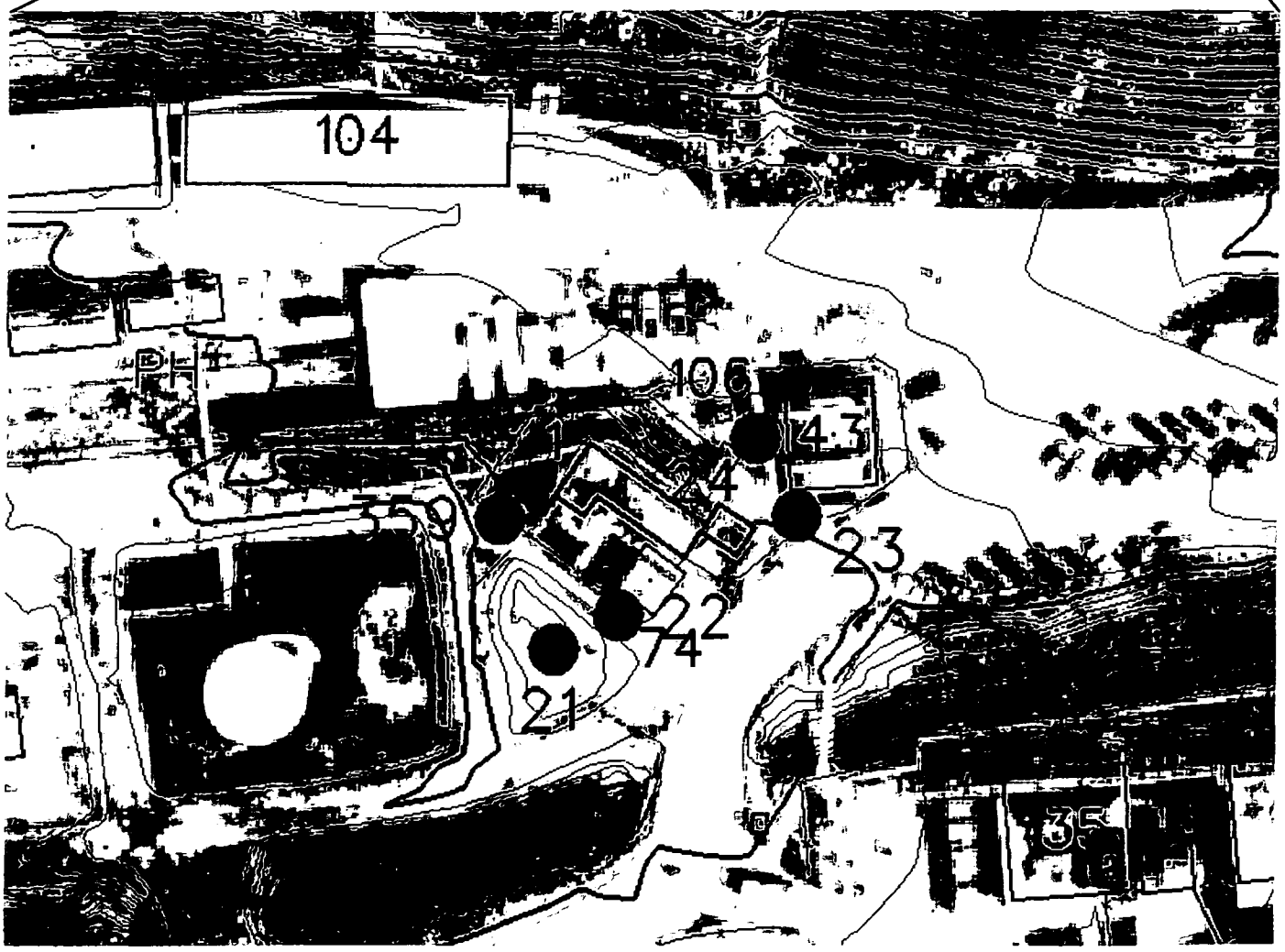
Building 1

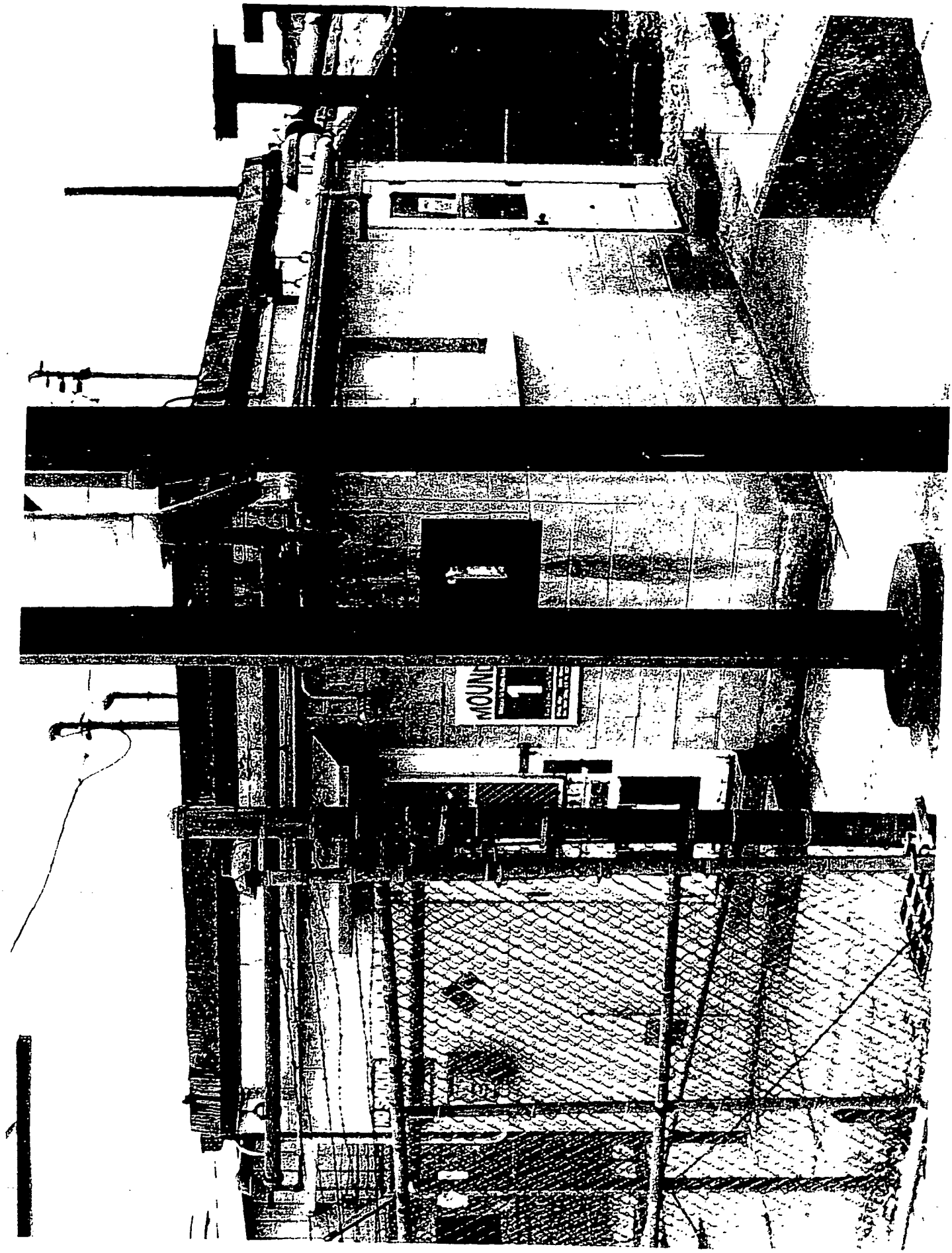
EM Test Facility

Release Block C

On the map below:
Building number and location shown in black
PRS locations and numbers shown in blue
Surrounding buildings shown in green
Fencing shown in red
Elevation contours shown in brown







Mound Plant Building 1

9.36-65

BUILDING DATA PACKAGE (BDP)

BUILDING 1

(Non-CERCLA Demolition)

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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1.0 General Overview

1.1 Introduction

The purpose of this Building Data Package is to identify, if possible, any recognized environmental conditions (defined below) that may affect the subject property.

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

1.2 Scope

This document has been prepared in response to an agreement between the Department of Energy (DOE), the U.S. Environmental Protection Agency, and the Ohio Environmental Protection Agency. It is a Building Data Package of Building 1 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 1527-94).

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 1 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
      - Lead paint
      - Asbestos
      - Radon

The building investigation was conducted by BWO personnel on 5/4/98 .

This report used a variety of previous assessments completed by BWO and/or its subcontractors. The reports used were as follows:

- OU-9 Site Scoping Report, Volumes 1-12
- Mound Facility Physical Characterization, December 1992
- Active Underground Storage Plan, November 1994.
- EDR Report - Radius Map
- Building Prints
- MD-222153, Mound Site Radionuclides By Location, July 1995
- Contaminant Surveys
- Environmental Appraisal of the Mound Plant, March 1996
- Appropriate Potential Release Site (PRS) Documents
- Title Search

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 305 acres of land and contains more than 132 buildings. The subject property consists of Mound Plant Building 1, the soil beneath, and a 15-foot wide perimeter around the Building. Building 1 contains 986 square feet. It was constructed in 1957.

2.1 Current Uses of Building 1

Building 1 is currently inactive.

2.2 Past Uses of Building 1

Building 1 was used to process and blend explosives. Additionally, it served as a final packaging location for containers of explosives destined for shipment.

2.3 Summary of Environmental Concerns and Findings

DESCRIPTION	COMMENT	RESOLUTION
Lead Paint	Due to the age of the building, lead paint is expected. No visible peeling is observed.	Leave the paint intact on the building surfaces. When structure is demolished the debris which has the lead paint will not be hazardous waste and will therefore be disposed of as construction debris at a local landfill.
Chemicals	Bulk explosive powder processing was performed in the building.	Removal of explosive residue and exhaust ducts will be performed prior to demolition.
Fluorescent Lamps	Fluorescent lamps were utilized in the building.	All fluorescent lamps will be removed prior to demolition.
Asbestos	The building does contain asbestos-containing materials. ACM insulations are found in Rooms 102, 103, 105 and 106.	Abatement of ACMs will be performed prior to demolition.
Drainage Sumps	PRS 21, Leach Pit, and PRS 22, Settling Basin North, are suspect of organic solvents.	RCRA closure will be performed by the Soils Project after the building is demolished.
Lead	N/A	
HVAC	N/A	
Mercury	N/A	
Radiological	N/A	
Septic Systems	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	

2.4 Radiological Characterization Summary For Building 1 Structure

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm2)	5400.5 Guidelines for Groups 1, 3, 4 (fixed + loose) (dpm/100 cm2)	NUREG 1500 Guidelines (loose) (dpm/100 cm2)	Attachment 1 Limit (fixed + loose) (See Note 2.) (dpm/100 cm2)	COMMENTS
Highest Alpha Smearable Activity	98-TF-659	Room 105	4	20	211	20	No Action Necessary
Highest Alpha Fixed Activity	All	All	<100	100	Note 1	100	No Action Necessary
Highest Beta Smearable Activity	98-TF-659	Room 102	7	1,000	9,940	1,000	No Action Necessary
Highest Beta Fixed Activity	All	All	<5,000	5,000	Note 1	5,000	No Action Necessary
Highest Tritium Smearable Activity	98-TF-659	Building	102	1,000	Note 1	1,000	No Action Necessary

Note 1: NUREG-1500 gives guidelines for loose beta and alpha only.
Note 2: The limits referenced above are based on MD-80043, Radiological work Requirements Procedure 400 "Transfer of Radioactive Material and Unrestricted Release of Property/Waste," Attachment 1.

2.5 Associated PRS Table for Building 1

PRS #	CERCLA or BLDG. RELATED	BINNING STATUS	COMMENTS
PRS 21	Building Related	Requires RCRA Closure	Leach Pit
PRS 22	Building Related	Requires RCRA Closure	Explosive Wastewater Settling Basin

3.0 Site Description

3.1 Site/Vicinity Location and Characteristics

Building 1 is located at the U.S. Department of Energy Facility known as Mound Plant. Mound is situated in the city of Miamisburg, Miami Township, Montgomery County, state of Ohio.

The Mound facility is situated on 305 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 Engineering District in 1946, consists of two hills and an intervening valley that runs approximately east and west. Building 1 is located in the lower valley of the Mound 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.

To the west lies a Conrail Railroad line and the north south trending Miami-Erie Canal. The northern boundaries of the site abut the historic 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 1

The subject property consists of the Mound Plant Building 1 footprint, the soil beneath, and a 15-foot wide perimeter around the building. Building 1 contains 986 square feet. It was constructed in 1957.

There are no other structures, roads, or improvements that would impact the environmental condition of the building.

3.3 Current and Past Uses of Buildings Adjacent To Building 1

Proximity to Building 1	Building Area (Sq. Ft.)	Current Use	Past Use	Direction From Building
Building 43	1500	Vacant	Thermite R&D	E
Building 74	400	Vacant	Packaging	SW

4.0 Records Review

4.1 General/Historical CERCLA Information

The Mound Plant site 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 historic disposal practices including use of a commercial/industrial landfill, various spills, and the use of underground storage tanks, resulting in the contamination of soils and drinking water. The original contaminants of concern were calcium cyanide, copper cyanide, plutonium and its isotopes and compounds, specifically plutonium-238, and uranium, its isotopes and compounds. 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. The Department of Energy (DOE), the United States Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (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 in 19 Release Blocks containing over 400 Potential Release Sites (PRSs) with approximately 200 concerned with potentially contaminated soils, and the balance with potential contamination in buildings.

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 treatment and storage facility under a new RCRA Part B permit dated October 18, 1996. Mound Plant also maintains a NPDES surface water discharge permit with Facility I.D. number OH 009857. Permits for the open burning of wastes involving explosives and other fuels have been issued by the Regional Air Pollution Control Agency (RAPCA). Other operations that produce particulate or vaporous emissions are registered with RAPCA and 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 1995 version of this report indicated that no chemicals are stored in Building 1 in quantities above the regulatory thresholds.

4.2 Specific Record Sources

4.2.1 Occurrence Reports

On November 13, 1994 a fire sprinkler was activated due to a room overheat. An inoperative thermostat caused the overheat. Damage was limited to water damage. See Appendix M.

4.2.2 Spills and Releases

No spills or releases of the magnitude that would require an occurrence report are associated with Building 1.

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 BWO have tabulated all the Potential Release Sites (PRSs) identified under the various regulatory programs in effect at the site. Many additional contaminants of concern and types of operations were identified beyond the original NPL listing of site activities. Of these 416 PRSs, PRS 21 and PRS 22 are attributed to Building 1.

PRS 21 - Building 1 Leach Pit. This leach pit is located at the southwest corner of Building 1. The leach pit was used to dispense waste water from explosives processes within Building 1. Organic solvents, primarily acetone, are suspected in the leach pit soils. The leach pit was determined to be a RCRA concern and will undergo RCRA closure. See Appendix L.

PRS 22 - Building 1 Explosives Waste Water Settling Basin (Tank 200). This settling basin tank is located to the south and is adjacent to Building 1. An underground drain pipe extends from the tank to the leach pit (PRS 21). Organic solvents, primarily acetone, are suspected in the settling basin. This settling basin is also a RCRA concern and will undergo RCRA closure. See Appendix L.

4.3 Review of Building Prints

Building prints were reviewed and are included in Appendix D.

4.4 Aerial Photographs

Aerial photographs from 1994, 1983, 1973, 1968, 1965, 1959, and 1949 were reviewed and copies are found in Appendix E.

4.5 Interviews

The Building Manager, Robert Ward, was interviewed using a building manager questionnaire. See Appendix F.

Appendix A

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
BWO	Babcock and Wilcox 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
MAT	Mound Applied Technologies
MCC	Monsanto Chemical Company
MEMP	Mound 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

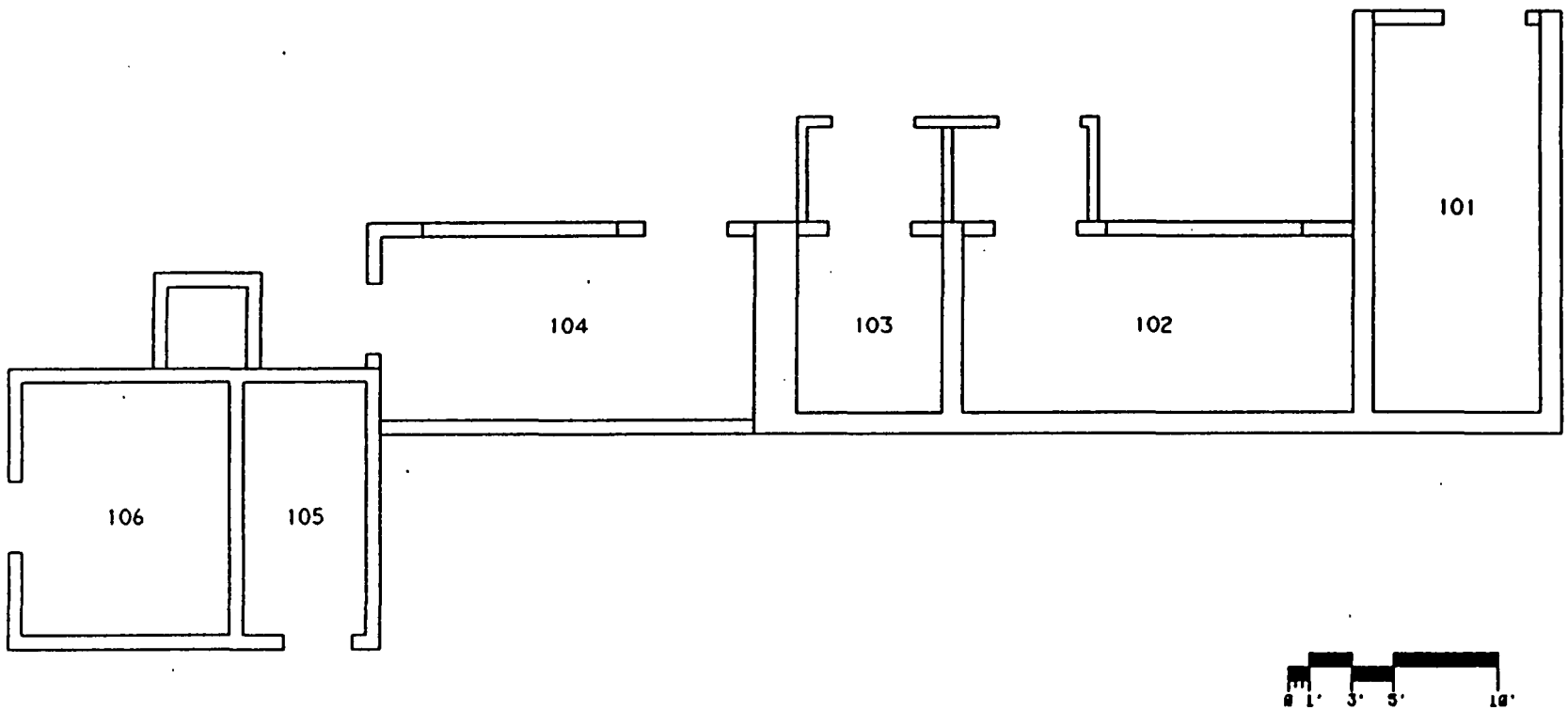
Appendix C

Site Plan and PRS Release Blocks

Appendix D

Building Drawings

ISS	DATE	REVISION	BY	CHKR	CKD	UPKEY	APVD	R
0	12/12/91	ASBUILT ISSUE	DCW				DVD	



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FIRST FLOOR
BLDG CODE:3001

APPROVALS: DATE:
SAFETY COMMITTEE REQUIRED:
___ NONE ___ CRUEROC ___ TEROC ___ CHROC
TECH. REP. ___
SR. MGR. ___
TRUEROC ___
TEROC ___
CHROC ___

DESIGN CKD | PROJ MGR
BRCHD | CKD SUPV
LP & EC | PROJ REV
CKD MGR
APVD | DATE

SHEET	1	2	3	4	5	6	TITLE (U) TITLE CLASSIFICATION
ISSUE	0						BLDG #1 FLOOR PLANS
FACT CLASSIFICATION							
DRAWING CLASSIFICATION: UNCLASSIFIED	SIZE: C	DRAWING NUMBER: FSC911226	JOB NUMBER: 12335				
DWG TYPE: SFP	FROM: BLDG #1	CAGE: 14865	SCALE: AS NOTED	SHEET 1 OF 1			
STATUS: MD-REL-12/12/91	ORIGIN: MD-BRJ-V3.0						

UNCLASSIFIED

E.G. & G. - MOUND

UNDERGROUND WATER & WASTE LINES
BLDG. 1

DATE: 3-4-96

9.36-61

Appendix E

Aerial Photographs

Appendix F

Environmental Appraisal of the Mound Plant (Extract)

9.36 BUILDING 1

9.36.1 Scope of Building 1 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 1 on the morning of February 7,1996. The Environmental Appraisal Checklist (EAC) (Attachment 1—Section 9.36.6.1) was used to record findings. The appraisers were accompanied by the building manager. Other information was supplied by the building manager and recorded on the Building Manager's Questionnaire (BMQ), included as Attachment 2 (Section 9.36.6.2).

9.36.2 Description of Building 1

Building 1, is a one-story, 986-square-foot concrete block structure, with a sheet metal addition on one side. The roof is of built-up membrane coal tar and asphalt. Location is shown in Attachment 3 (Section 9.36.6.3). Building 43, on the east, and Building 74, to the southwest, are adjacent to Building 1. Floor Plans are presented as Attachment 4 (Section 9.36.6.4). The building has electrical service of 240V and central steam (*Mound Facility Physical Characterization*, 12-1-93).

Building 1 was constructed in 1958 (MD-10391, *Asbestos Program Manual*, 9-14-95). It consists of four heavy-walled rooms, plus a small office area with a window air conditioner. The facility has been used to support the same program since construction. Research and testing activities involving energetic materials have been conducted in the building. In the past, the building was used for processing and blending of explosive powders. More recently, it was used for packaging of energetic materials (*Mound Facility Physical Characterization*, 12-1-93) It is currently undergoing Safe Shutdown.

9.36.3 Summary of Findings

Two issues of environmental concern were identified during the walk-through and the review of reference materials.

9.36.4 Observations

9.36.4.1 Air Emissions

There was one air emission source in the building, in Room 106. When the building was operating, ethanol and acetone were released. The process has been discontinued. This source

is documented in the Mound air emission database. An application was submitted on 3-5-92 to the Ohio Environmental Protection Agency (OPEA), but no permit was received. There are no fuel-burning units in the building. There is no evidence of fugitive dust.

9.36.4.2 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.

9.36.4.2.1 Sanitary Wastewater

Building 1 is serviced by a sanitary line, according to site underground utility drawings, presented in Attachment 5 (Section 9.36.6.5). It is equipped with a fire sprinkler system. Confirmation of drainage of sanitary waste and floor drains into sanitary conveyance lines was not within the scope of the effort; therefore, neither dye tests nor smoke test 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 1 does not deviate from that expected by the sanitary treatment plant manager.

9.36.4.2.2 Storm Wastewater

The building is directly serviced by storm drains according to underground utility drawings, presented in Attachment 5 (Section 9.36.6.5). Storm water from the building drains is collected in a concrete catch basin and then discharged into the storm sewer. Building runoff becomes part of the surface water and flows to the nearest storm drain inlet. The concrete catch basin outside of the building, at the time of the inspection, was completely filled with ice, which would indicate that the outfall to the storm sewer line is plugged.

9.36.4.2.3 Chemicals

All chemicals have been removed from the building, as part of the Safe Shutdown process. They were transferred to Waste Management.

A review of the procedures and requirements contained in MD-10431, Safe Shutdown Standards Operating Procedures, and the Safe Shutdown Process Managers' 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 (at Mound or transferred to the City of Miamisburg), subject to age and condition, are identified and processed separately.

Subsequently, all the remaining chemicals are containerized, characterized, and transferred to Waste Management for disposition. A copy of the inventory, chemical profile of each container, and Waste Management's acceptance becomes a permanent part of the Mound Safe Shutdown Plan for the specific building. As chemicals are transferred to Waste Management, a central chemical database in the Program Manager's Office is updated monthly to reflect the disposition. All activities are conducted in accordance with MD-70523, 40 CFR 265, and OAC 3745.52. As hazardous waste generators, all Safe Shutdown Process Managers have received training in accordance with 40 CFR 265.16. There is no evidence that chemicals entered the storm or sanitary drains.

9.36.4.3 Potable and Service Water

The building is equipped with potable water. A backflow prevention device was installed at all visible points of potential cross connection (mechanical room). There were no water coolers or fountains.

9.36.4.4 Chemical Storage and Hazardous Material

There are no chemicals stored in the building. The building is contaminated with energetic materials (*Mound Facility Physical Characterization*, 12-1-93). There is idle equipment, which has not been cleaned, nor have the contents been characterized.

There are now no aboveground storage tanks in or around the building. According to the BMQ, a 300,000-gallon No. 2 fuel oil tank was located across the road from Building 1. This aboveground tank, which was associated with Building 1 has been removed and the site decontaminated and decommissioned. Other than the storm sewer catch basin, there are no sumps or separators in or around the building. There are no underground storage tanks associated with this building.

The building was tested and does contain asbestos-containing building material (MD-10391, *Asbestos Program Manual*, 9-14-95). There was no evidence of friable asbestos; the Safe Shutdown process is not disturbing the asbestos.

There are no capacitors or transformers containing polychlorinated biphenyls (PCBs) located in the building (1995 PCB Annual Document Log).

9.36.4.5 Solid, Hazardous, and Radioactive Wastes

There are no solid, hazardous, or radioactive wastes currently generated in the building. When the building was used for blending of explosive powders, hazardous waste was generated.

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 containerized, 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.

9.36.4.6 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.

9.36.5 Findings and Recommendations

The environmental appraisal of Building 1 indicates that the following action items, in recommended priority, should be planned and scheduled for accomplishment thus assuring that best management and operating practices are in place.

1-1. Resource Conservation and Recovery Act (RCRA) regulations require that waste be removed from idled manufacturing and waste producing equipment within 90 days. Idle is defined as occurring either from the cessation of production or idled between production runs. In the EG&G Mound Safe Shutdown Program, equipment is not addressed until funding, resources, and schedule permits, and/or ultimate disposition is known. The Safe Shutdown Program should review 40 CFR 261.4 and develop appropriate procedures for handling idle equipment.

1-2 Update Mound air emissions database. Remove source listed as B-1. As permit application information is no longer correct, notify OEPA.

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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)	Chemicals have been removed, turned over to Waste Management
	Is the building in operation? What are the processes and where do they discharge to?	Y / (N) _____ _____	
	Do the floor drains, sinks & toilets appear to be draining properly?	(Y) / N	
OAC 3745-33	Do the floor drains and sinks drain to a sanitary or storm sewer?	(Sanitary) Storm	
	Is there a sump/pit in the building? If so, what does it contain? How often is it pumped out? Does water collect in sump? Does sump have secondary containment?	Y / (N) _____ _____ Y / N Y / N	
	Are there any manholes, catch basins, drains, or fill pipes in or around the building? If so, are there any unusual appearances, colors, and/or odors? Describe in comment section. Can chemicals flow into the drain?	(Y) N Y / N Y / N	NO outfall. Filled w/ ice

* Process terminated. Building undergoing Safe Shutdown

Fire deluge system

9.36-9

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	106
OAC 3745-35	Using the air emissions inventory reference for this building, are there any sources in the building that are not documented?	Y / N	
	Is there evidence of fugitive dust emissions inside or outside of the building	Y / N	

CAA Checklist

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

9.36-10

Building Name: 1 Appraisers: Team H4 Date: 2-7-96

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:_____

9.36-11

9.36-12

Building Name: 1 Appraisers: Team H 4 Date: 2-7-96

Hazardous Materials (HM) Screening Checklist

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

HM Checklist

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

* All chemicals listed on page 7 of BMQ have been removed

Building Name: \ Appraisers: Team #4 Date: 2-7-96

HM Checklist

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

9.36-13

9.36-14

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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 *	

Blank

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

* No. 2 fuel oil tank (300,000 gal) (reg. 68476-30-2) D+D'd.

Source: _____

Building Name: 1 Appraisers: Team # 4 Date: 2-7-94

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 NA	
	Are sources of service water (janitorial and laboratory faucets, or outdoor spigots) posted as non-potable water sources?	Y / N NA	water marked as potable
	Does the facility contain any water coolers or fountains that are not lead free? Complete Table C.	Y / (N)	no water fountains

TABLE C—Water Fountain Survey

Building	Location	Model #	Comments / Date of Analysis for Lead

Source: _____

9.36-15

Building Name: 1 Appraisers: Team H4 Date: 2-7-96

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	
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	

9.36-16

Building Name: 1 Appraisers: Team 44 Date: 2-7-96

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. BLANK	Y / N	
	Are the containers marked with the words hazardous waste, or other words denoting the hazard?	Y / N	
	Are the containers in good condition?	Y / N	
	Are the waste compatible with the containers?	Y / N	
	Are containers managing ignitable hazardous waste stored at least 50 feet from the plant site boundary?	Y / N	
	Are containers kept closed and locked except during filling?	Y / N	
	Are containers moved within 3 days of being filled?	Y / N	

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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:		
	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.		

PLANK

Building Name: L Appraisers: Team #4 Date: 2-7-96

RCRA Checklist

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

BLANK

9.36-19

9-36-20

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	
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:

Building Name: 1 Appraisers: Team H4 Date: 2-7-96

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? If no for this building or area note this conclusion in the comment section.	(Y) / N	
	Is there any evidence of friable asbestos?	Y / (N)	
	Is the asbestos removal properly managed? (See questions listed below)	Y / N NA	If there is no asbestos removal, do not complete the following section.
NESHAPS FOR ASBESTOS FOR ANY ONGOING ASBESTOS REMOVAL:			no removal work
40 CFR 61.156	There are no discharges of visible emissions to the outside air from collection, processing, packaging, transporting, or deposition of ACBM during the removal.	Y / N	
40 CFR 61.152(b) (1)	ACBM is treated with water in accordance with 40 CFR 152(b)?	Y / N	
40 CFR 61.154	Is friable asbestos adequately wetted during stripping? Or, has an adequate ventilation and collection system been installed?	Y / N	
40 CFR 61.152	Is wetting continued until the waste friable asbestos is collected for disposal?	Y / N	

Building Name: 1. Appraisers: Team #4 Date: 2-7-96

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	
	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	

9.36-22

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	
	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	

9.36-23

Building Name: | Appraisers: Team #4 Date: 2-7-96

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:

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

Low-Level Waste and Transuranic Waste Screening Checklist

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

Low-Level Waste and Transuranic Waste Checklist

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

BLANK

9.36-25

Building Name: L Appraisers: Team #4 Date: 2-7-96

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	

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	
	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	

BLANK

9.36-27

Building Name: 1 Appraisers: Team H 4 Date: 2-7-96

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	
	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	

BY PN

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	
	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:

9.36-29

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	

Building Name: 1 Appraisers: Team H4 Date: 2-7-96

Waste Minimization/Pollution Prevention Activities Checklist

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

BLANK

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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

9.36-32

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

Waste Minimization/Pollution Prevention Activities Checklist

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

BLANK

Building Name: 1 Appraisers: Team #4 Date: 2-7-96

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	
	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	

9.36-34

Building Name: 1 Appraisers: Team H4 Date: 2-7-96

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	
	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?	_____ _____	

PL PAINT

Building Manager's Questionnaire

Building Name: 1 Building Manager: R.A. Ward Phone: 3821 Date: 12-07-95
Alternate: A. KOEHLER Phone: 1886

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

NONE

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

NONE

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

4. Provide a physical description of the building.

Building is a concrete block structure containing 986 ft^2. Roof is BUM (coal tar and asphalt). Building consists of four heavy-walled rooms. Although the building contains asbestos, there is no significant contamination from radiological or energetic materials.

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

5. Provide a drawing of the building.

Attached

6. What is the current building use?

Packaging energetic materials.

BUILDING IS SHUTDOWN

Source: Mound Buildings, 5-9-95

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

1) PROCESSING PETN
2) BLENDING PBX - POWDERS
3) BLENDING TETRYL
4) PACKAGING H-NAB, HNS

Source: Mound Buildings, 5-9-95

Building Manager's Questionnaire

Building Name: 1 Building Manager: R.A. Ward Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

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

Process(es) Housed: Packaging of explosives

How Wastes Are Generated:

Bulk explosive wastes are generated when samples of explosive powder in small vials are no longer needed and must be disposed of. The powder is poured into waste containers and sent to the burn area for destruction.

Less concentrated explosive wastes are generated during other routine operations in Building 1. Spatulas used when subdividing a large package of explosive into several small packages for storage are cleaned with paper or cloth. The paper or cloth becomes explosive waste. Empty sample vials and filters from the building's air filtering system are also explosive waste. Heads of mops used to clean out magazines are dried and put in the explosive waste containers. All of these explosive wastes are burned onsite.

Liquids containing small amounts of explosives are put in one 55-gal waste drum with a rigid polyethylene liner. The sources of liquid are a 20:80 mixture of acetone and water used to clean containers or equipment contaminated with explosives, a 50:50 mixture of ethanol and water in which PETN is shipped and stored, and water used for mopping magazines. When the waste drum is full, it is taken to Building 27 where it is run through a filter and put in a drum for pickup by Waste Management. About one drum of waste is generated each year in Building 1.

Other materials that might be of concern: Trichloroethane - used to degrease and clean new storage containers for PETN. We generally reuse old containers and have not cleaned a new one in 2 or 3 years. After trichloroethane is used, it is put in a waste can for disposal. Calcium chloride solution - used to pack PETN for shipment. Any excess solution is flushed down the drain and through the leach bed. Note that the solution is not contaminated with explosives.

Contact: *
Phone #

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

* Building is shutdown & no process waste is generated

Building Manager's Questionnaire

Building Name: 1 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 CLOSED DOWN

10. Does the building have air emission sources? (Yes) No room 100 *

Process Source	Room Number	Hood Number	Active	Chemicals Used	Quantity Used	Quantity to Waste Management	Lbs./Yr. Operation	Air Emissions
Test Fire Operations	106		Y	ethanol acetone	0.014 0.871		0.336 20.904	
			Y / N					
			Y / N					
			Y / N					
			Y / N					

Source: Mound Air Emissions Databases 11/30/95

* currently inactive

Building Manager's Questionnaire

Building Name: 1 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

9.36-42

Building Manager's Questionnaire

Building Name: 1 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

9.36-43

Building Manager's Questionnaire

Building Name: 1 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: _____

9.36-44

Building Manager's Questionnaire

Building Name: 1 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) Unknown
For each tank, list the content, quantity, last inspection, registration number.

Registration Number	Content	Quantity	Last Inspection Date	Preventive Maintenance Performed	Inside Or Outside
68476-30-2	No.2 fuel oil	300K Gal		Y / N	
				Y / N	

Source: Emergency & Hazardous chemical inventory form - chemical storage tanks on EGG Mound Site owned & Maintained by outside contractors 8/8/94

26. Is there a sump or pit or underground tank in or around the building? (Yes) No
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?
SEE BACK OF PAGE #7

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

Source: _____

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

Materials	Amount
Adiprene	1.0
Antifreeze Waste	446.6
Citric Acid	1.0
Conductive Adhesive Part A	3.6
Conductive Adhesive Part B	3.1
EPON 828	1.0
Ethanol Waste	39.3
Methyl Red	0.1
Rexarc	5.0
Silver Flake	3.1
Trichloroethane (1,1,1-)	55.0
Ultra Carbon	1.0
Zinc Metal	0.3

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

 * None present 2-7-96

Building Manager's Questionnaire

Building Name: 1 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: 1 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: _____

9.36-47

Building Manager's Questionnaire

Building Name: 1 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.

9.36-48

Building Manager's Questionnaire

Building Name: 1 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)

Appendix G

Radiological Summary/Information

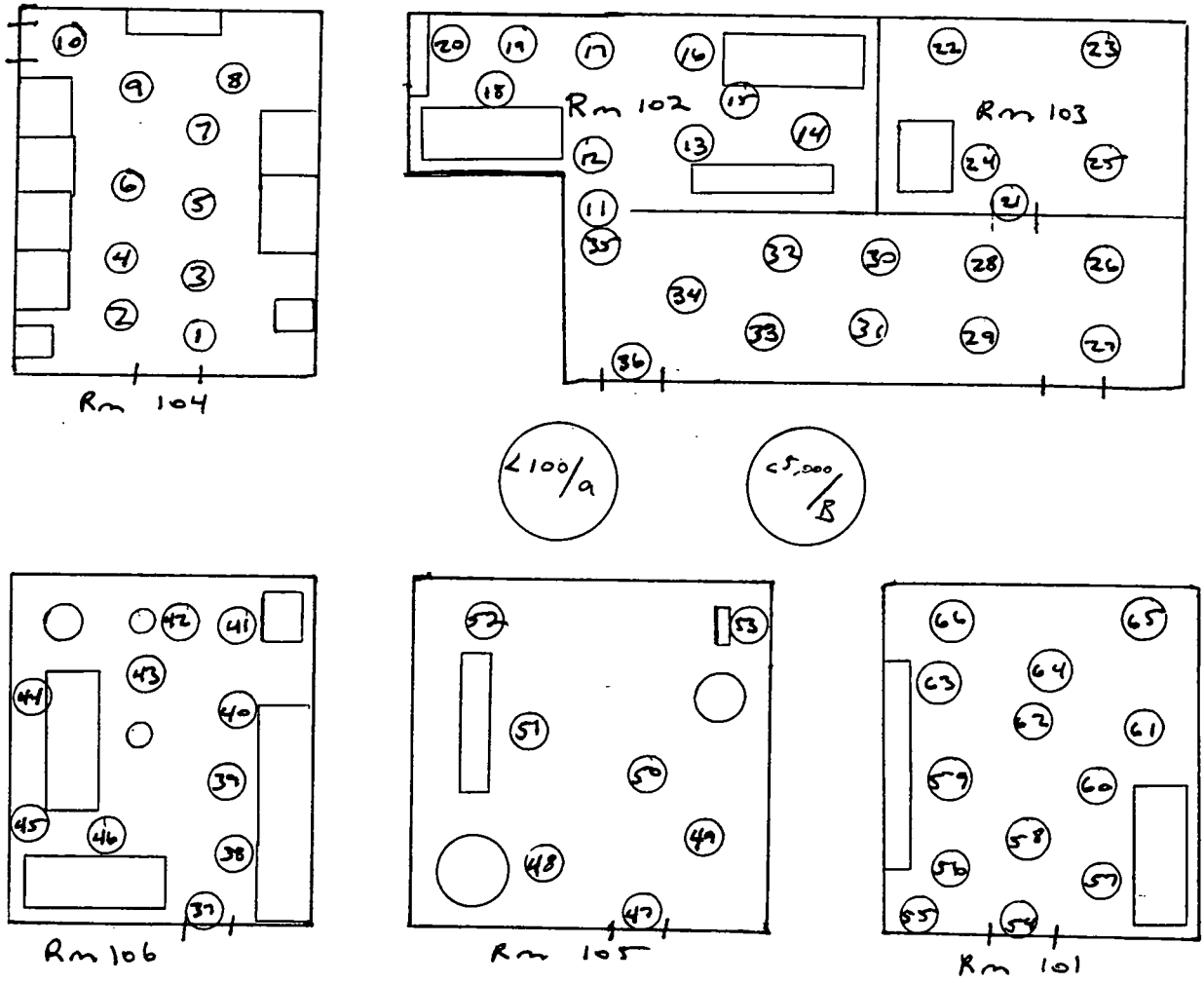
RADIOLOGICAL SURVEY DATA SHEET

#2 30-10 1-66

LOCATION: (BLDG/AREA/ROOM) /	SURVEY NO. 98-TF-659
PURPOSE: Contamination Survey	RWP NO. N/A
	DATE: 6.9.98
	TIME: 0920

MAP/DRAWING

COPY



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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Electra	5439/5440	11.27.98

[redacted]

HP#	Date:
8258	6.9.98
[redacted]	
5268	6/4/98
6015	6/16/98

ML-9620 (2-98)

3 of 7

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR040
Batch Ended: 6/9/98 13:39
Cal. Due Date: 3/9/99
Serial Number: 26966-3

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

Batch ID: T 98-TF-659 ADKINS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.04	<MDA	0.00	1.49	<MDA
A2	2	1.80	2.13	<AL	0.00	1.51	<MDA
A3	3	0.00	1.99	<MDA	1.81	2.32	<MDA
A4	4	0.00	2.01	<MDA	0.63	1.94	<MDA
B1	5	0.00	2.24	<MDA	4.14	3.21	<AL
B2	6	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	7	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	8	0.00	2.01	<MDA	1.75	2.28	<MDA
C1	9	0.00	2.00	<MDA	1.70	2.40	<MDA
C2	10	0.00	2.05	<MDA	0.00	1.50	<MDA
C3	11	0.00	2.06	<MDA	2.85	2.74	<MDA
C4	12	0.00	2.11	<MDA	6.18	4.19	<AL
D1	13	1.81	2.09	<AL	0.00	1.50	<MDA
D2	14	0.00	2.06	<MDA	0.00	1.47	<MDA
D3	15	0.00	1.90	<MDA	0.00	1.42	<MDA
D4	16	1.56	1.95	<AL	2.84	2.56	<MDA
A1	17	0.00	2.11	<MDA	7.31	3.62	<AL
A2	18	0.00	2.13	<MDA	0.00	1.51	<MDA
A3	19	0.00	1.99	<MDA	3.11	2.66	<AL
A4	20	0.00	2.01	<MDA	0.63	1.94	<MDA
B1	21	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	22	0.00	2.15	<MDA	0.23	2.04	<MDA
B3	23	0.00	1.98	<MDA	0.00	1.44	<MDA
B4	24	0.00	2.01	<MDA	0.47	1.89	<MDA
C1	25	0.00	1.99	<MDA	0.37	2.00	<MDA
C2	26	0.00	2.05	<MDA	0.00	1.50	<MDA
C3	27	0.00	2.04	<MDA	0.21	2.01	<MDA
		✓		✓	✓		✓

COPY

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR040
Batch Ended: 6/9/98 13:39
Cal. Due Date: 3/9/99
Serial Number: 26966-3

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

Batch ID: T 98-TF-659 ADKINS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	2.07	<MDA	1.14	3.34	<MDA
D1	29	0.00	2.10	<MDA	1.76	2.40	<MDA
D2	30	0.00	2.06	<MDA	0.00	1.47	<MDA
D3	31	0.00	1.90	<MDA	0.53	1.91	<MDA
D4	32	0.00	1.94	<MDA	1.71	2.24	<MDA
A1	33	0.00	2.09	<MDA	4.62	3.08	<AL
A2	34	0.00	2.13	<MDA	0.00	1.51	<MDA
A3	35	1.73	1.97	<AL	0.00	1.43	<MDA
A4	36	3.66	2.81	<AL	0.36	1.94	<MDA
B1	37	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	38	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	39	0.00	1.99	<MDA	0.32	1.93	<MDA
B4	40	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	41	0.00	1.98	<MDA	0.00	1.50	<MDA
C2	42	0.00	2.05	<MDA	0.49	2.00	<MDA
C3	43	0.00	2.05	<MDA	1.53	2.40	<MDA
C4	44	0.00	2.10	<MDA	4.92	3.99	<MDA
D1	45	0.00	2.09	<MDA	0.43	2.00	<MDA
D2	46	0.00	2.07	<MDA	0.59	1.99	<MDA
D3	47	0.00	1.91	<MDA	3.08	2.62	<AL
D4	48	0.00	1.93	<MDA	0.00	1.40	<MDA
A1	50	0.00	2.04	<MDA	0.00	1.49	<MDA
A2	51	0.00	2.15	<MDA	2.09	2.46	<MDA
A3	52	3.68	2.78	<AL	0.00	1.43	<MDA
A4	53	0.00	2.01	<MDA	0.63	1.94	<MDA
B1	54	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	55	1.64	2.16	<MDA	1.44	2.45	<MDA
B3	56	0.00	1.98	<MDA	0.00	1.44	<MDA
B4	57	0.00	2.00	<MDA	0.00	1.40	<MDA

COPY

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR042
Batch Ended: 6/9/98 14:08
Cal. Due Date: 3/9/99
Serial Number: 26966-3

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

Batch ID: T 98-TF-659 -ADKINS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	58	0.00	2.06	<MDA	1.92	2.42	<MDA
A2	59	0.00	2.14	<MDA	0.72	2.04	<MDA
A3	60	0.00	1.98	<MDA	0.51	1.93	<MDA
A4	61	0.00	2.00	<MDA	0.00	1.44	<MDA
B1	62	0.00	2.21	<MDA	0.00	2.13	<MDA
B2	63	1.64	2.16	<MDA	1.44	2.45	<MDA
B3	64	1.64	2.00	<AL	1.48	2.32	<MDA
B4	65	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	66	0.00	2.00	<MDA	1.70	2.40	<MDA

COPY

09 Jun 1998 16:10 ALPHA/BETA - 1.08 ~~Page #1~~
Protocol #: 2 Pw H3 20cc #405828 User : 5268

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	6.46
Region B:	2.0	- 18.6	0	0.0	6.24
Region C:	40.0	- 2000	0	0.0	11.20

COPY

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-T-659 - ADKINS(30-10 1-66)
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT1.DAT
Count Data Filename: c:\data\SDATA2.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	6.46	6.24	2	B	618.34		0.00	11.20
0	2.00	1653.44	1533.96	0		621.83	3651.05	305.28	4.80
1	2.00	0.00	0.00	0		559.70	0.00	0.00	1.30
2	2.00	0.54	0.76	0		552.93	1.27	9.61	0.00
3	2.00	2.04	2.26	0		610.19	4.54	9.88	0.00
4	2.00	4.04	4.26	0		592.70	9.15	11.03	0.00
5	2.00	0.00	0.00	0		612.95	0.00	0.00	0.00
6	2.00	3.97	3.41	0		605.14	8.90	10.87	0.00
7	2.00	2.54	2.51	0		584.86	5.79	10.37	0.00
8	2.00	0.00	0.00	0		628.61	0.00	0.00	0.00
9	2.00	4.54	3.97	0		610.59	10.12	11.08	0.00
10	2.00	0.04	0.26	0		622.46	0.08	8.71	0.00
11	2.00	0.54	0.26	0		593.58	1.21	9.22	0.00
12	2.00	0.00	0.00	0		574.06	0.00	0.00	0.00
13	2.00	0.00	0.00	0		625.61	0.00	0.00	0.00
14	2.00	2.45	2.67	0		633.19	5.35	9.88	0.00
15	2.00	0.94	0.67	0		603.39	2.11	9.36	0.30
16	2.00	0.00	0.00	0		545.85	0.00	0.00	0.00
17	2.00	0.04	0.00	0		563.15	0.09	9.22	0.00
18	2.00	0.04	0.26	0		636.68	0.08	8.61	0.30
19	2.00	3.77	3.17	0		622.50	8.31	10.61	0.00
20	2.00	0.00	0.00	0		599.93	0.00	0.00	0.00
21	2.00	2.04	1.26	0		533.19	4.90	10.66	0.00
22	2.00	0.00	0.00	0		615.73	0.00	0.00	0.00
23	2.00	2.54	1.58	0		544.87	6.03	10.80	0.00
24	2.00	0.00	0.00	0		467.91	0.00	0.00	0.00
25	2.00	3.04	3.26	0		639.67	6.60	10.11	0.00
26	2.00	2.54	2.05	0		562.53	5.93	10.61	0.00
27	2.00	5.63	5.58	0		525.33	13.67	12.60	0.00
28	2.00	1.04	1.26	0		532.38	2.50	10.10	0.00
29	2.00	2.29	2.52	0		624.17	5.05	9.89	0.00
30	2.00	2.54	2.48	0		602.19	5.70	10.20	0.00
31	2.00	1.87	1.42	0		539.11	4.46	10.50	0.00
32	2.00	2.54	2.76	0		635.73	5.53	9.91	0.00
33	2.00	1.54	1.09	0		634.64	3.36	9.42	0.00
34	2.00	0.04	0.26	0		624.59	0.08	8.70	0.00

9 Jun 1998 17:48 ALPHA/BETA - 1.08 **COPY** ~~Page #2~~

rotocol #: 2 Pw H3 20cc #405828 User : 5268

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	0.80	1.02	0	E	654.03	1.74	8.98	0.00
36	2.00	0.04	0.26	0		587.38	0.08	8.99	0.00
37	2.00	0.80	1.02	0		416.49	2.23	11.57	1.80
38	2.00	0.49	0.14	0		607.65	1.10	9.08	0.00
39	2.00	0.00	0.00	0		514.67	0.00	0.00	0.00
40	2.00	2.04	1.76	0		604.44	4.57	9.93	0.66
41	2.00	0.00	0.00	0		576.29	0.00	0.00	0.00
42	2.00	0.00	0.00	0		571.87	0.00	0.00	0.00
43	2.00	0.00	0.00	0		565.60	0.00	0.00	0.00
44	2.00	1.54	1.76	0		571.96	3.56	9.98	0.00
45	2.00	0.00	0.00	0		564.72	0.00	0.00	0.00
46	2.00	4.46	3.84	0		633.81	9.74	10.83	0.00
47	2.00	0.54	0.76	0		619.37	1.19	9.01	0.00
48	2.00	1.67	1.89	0		586.88	3.79	9.89	0.00
49	2.00	0.00	0.00	0		598.43	0.00	0.00	0.00
50	2.00	2.54	2.76	0		620.57	5.61	10.04	1.80
51	2.00	0.00	0.00	0		604.04	0.00	0.00	0.00
52	2.00	2.54	2.76	0		583.96	5.80	10.38	0.00
53	2.00	1.54	1.25	0		542.09	3.66	10.28	0.00
54	2.00	5.04	5.26	0		606.33	11.27	11.36	0.30
55	2.00	0.00	0.00	0		569.05	0.00	0.00	0.00
56	2.00	5.04	4.99	0		596.58	11.37	11.45	0.00
57	2.00	0.00	0.00	0		533.37	0.00	0.00	0.30
58	2.00	0.13	0.15	0		542.81	0.32	9.47	0.80
59	2.00	1.38	1.60	0		599.68	3.11	9.63	0.00
60	2.00	1.04	1.26	0		466.99	2.67	10.78	0.00
61	2.00	3.04	2.76	0		646.73	6.60	10.11	0.00
62	2.00	2.54	2.46	0		614.03	5.64	10.10	0.00
63	2.00	2.81	2.53	0		446.66	7.44	12.19	0.00
64	2.00	2.54	2.48	0		604.71	5.69	10.18	0.00
65	2.00	3.04	2.76	0		558.15	7.13	10.92	0.00
66	2.00	0.00	0.00	0		586.03	0.00	0.00	0.30

✓

Appendix H

Radon Survey/Information

(None)

Appendix I

Asbestos Summary/Information

ASBESTOS SURVEY REQUEST COPY

A. PROJECT ENGINEER COMPLETES THIS SECTION

PROJECT TITLE: Building 1 Data Package

CHARGE NO.: 809260

LOCATION (CRAWL SPACE, PENTHOUSE, ETC.) AND TYPE OF MATERIAL TO BE SAMPLED:
Provide synopsis of existing building data on asbestos and lead.

KNOWN HISTORICAL ASBESTOS INFORMATION (Review the drawings for this project, if asbestos is identified briefly indicate the location, quantity, and identity.)
Review of Past Survey(S): PEI 1989
BWSTC 1993
EG+G 1996

PROJECT ENGINEER:	PHONE:	DATE SUBMITTED:
Dean Buchner	x3407	8/21/97

B. INDUSTRIAL HYGIENE COMPLETES THIS SECTION

FINDINGS:
- Floor Tile + Mastic Assumed to contain asbestos.
- Roof Materials Assumed to contain asbestos.
- Condensate tape located in Room 106 positively contains asbestos.
- Thermal System insulation located in Room 105 positive for asbestos content.
- Condensate tape located in Room 105 positive for asbestos content.
- Transite wallboard located outside Rooms 102 + 103 positive for asbestos.
- Due to the buildings age & date of construction all painted surfaces shall be considered to contain lead.

IF HIDDEN ASBESTOS IS ENCOUNTERED DURING THIS PROJECT, STOP WORK AND CALL INDUSTRIAL HYGIENE.

IS ALL ASBESTOS ACCOUNTED FOR ACCORDING TO PAST SURVEYS? ☒ YES ☐ NO

ABATEMENT ACTION REQUIRED:
- No materials to be disturbed prior to industrial hygiene being notified.
- Materials are in good condition and pose no exposure potential to plant personnel at present. (Damaged sections have been repaired since 1996 survey)

DATE:	APPROVED:
8-27-97	Evan T. Vick AHAS, AHES, INDUSTRIAL HYGIENE REP.

ML-8682 (3-94)

ASBESTOS INSPECTION FORM

COPY

A. PRE-SURVEY DATA:

BUILDING: 1	SURVEY DATE: 5/96
RESPONSE AREA DESIGNATION: A	RESPONSE AREA DESCRIPTION: ROOM 105 - THERMAL SYSTEM INSULATION
ROOMS INCLUDED: 105	
MATERIAL INCLUDED: PIPE JOINT INSULATION - HARD w/FIBERGLASS RUNS PIPE INSULATION - AIRCELL PIPE JOINT INSULATION - AIRCELL	
MATERIAL PREVIOUSLY INSPECTED? (CHECK ONE RESPONSE): [X] YES [ ] NO [ ] N/A	PREVIOUS HAZARD RANKING: [ ] 5 / PREVIOUS PRIORITY LEVEL: [ ] ASAP

B. INSPECTION DATA:

IS MATERIAL FRIABLE? (CHECK ONE RESPONSE): [X] YES [ ] NO	ARE ASBESTOS LABELS PRESENT & IN GOOD CONDITION? (CHECK ONE): [X] YES [ ] NO [ ] N/A
WHAT IS THE PHYSICAL CONDITION? (CHECK ONE): [ ] GOOD [X] DAMAGED [ ] SIGNIFICANTLY DAMAGED	
SAMPLING OF MATERIAL REQUIRED? (CHECK ONE): [ ] YES [X] NO	
SAMPLE NUMBERS: [X] N/A	
WHAT IS THE POTENTIAL FOR DAMAGE? (CHECK ONE): [ ] LOW POTENTIAL [X] POTENTIAL FOR DAMAGE [ ] POTENTIAL FOR SIGNIFICANT DAMAGE	
CURRENT HAZARD RANKING: 3	CURRENT PRIORITY LEVEL: 5
RESPONSE OPTIONS (CHECK OPTIONS THAT APPLY): [ ] REMOVE [ ] ENCAPSULATE [X] REPAIR [ ] ENCLOSE [X] MANAGE IN PLACE	
COMMENTS (NOTE LOCATION OF ANY DAMAGED MATERIAL IN THIS SECTION): Most areas since previous surveys have been adressed and repaired. The building has been unnoccupied for quite some time.	
NAME OF INSPEC[redacted]	HP NUMBER: 6021

ASBESTOS INSPECTION FORM

COPY

A. PRE-SURVEY DATA:

BUILDING: 1	SURVEY DATE: 5/96

RESPONSE AREA DESIGNATION: B	RESPONSE AREA DESCRIPTION: ROOM 106 PIPE WRAP; CONDENSATE TAPE
ROOMS INCLUDED: 106	
MATERIAL INCLUDED: PIPE WRAP CONDENSATE TAPE	

MATERIAL PREVIOUSLY INSPECTED? (CHECK ONE RESPONSE):	PREVIOUS HAZARD RANKING:	PREVIOUS PRIORITY LEVEL:
[X] YES [ ] NO [ ] N/A	[ ] 2	[ ] PLANNED

B. INSPECTION DATA:

IS MATERIAL FRIABLE? (CHECK ONE RESPONSE):	ARE ASBESTOS LABELS PRESENT & IN GOOD CONDITION? (CHECK ONE):
[ ] YES [X] NO	[X] YES [ ] NO [ ] N/A

WHAT IS THE PHYSICAL CONDITION? (CHECK ONE):

[X] GOOD [ ] DAMAGED [ ] SIGNIFICANTLY DAMAGED

SAMPLING OF MATERIAL REQUIRED? (CHECK ONE): [ ] YES [X] NO

SAMPLE NUMBERS: [X] N/A

WHAT IS THE POTENTIAL FOR DAMAGE? (CHECK ONE):

[X] LOW POTENTIAL [ ] POTENTIAL FOR DAMAGE

[ ] POTENTIAL FOR SIGNIFICANT DAMAGE

CURRENT HAZARD RANKING: 2	CURRENT PRIORITY LEVEL: 6

RESPONSE OPTIONS (CHECK OPTIONS THAT APPLY):

[ ] REMOVE [ ] ENCAPSULATE

[ ] REPAIR [ ] ENCLOSE

[X] MANAGE IN PLACE

COMMENTS (NOTE LOCATION OF ANY DAMAGED MATERIAL IN THIS SECTION):

NAME OF INSPECTOR [redacted]	HP NUMBER: 6021

T.Eilers\\b:inspect.frm

COPY

ASBESTOS INSPECTION FORM

A. PRE-SURVEY DATA:

BUILDING: 1	SURVEY DATE: 5/96

RESPONSE AREA DESIGNATION:	RESPONSE AREA DESCRIPTION:
C	TRANSITE WALLBOARD

ROOMS INCLUDED: EXTERIOR STORAGE SHED

MATERIAL INCLUDED:
TRANSITE WALLBOARD

MATERIAL PREVIOUSLY INSPECTED? (CHECK ONE RESPONSE):	PREVIOUS HAZARD RANKING:	PREVIOUS PRIORITY LEVEL:
[X] YES [ ] NO [ ] N/A	[ ] 2	[ ] PLANNED

B. INSPECTION DATA:

IS MATERIAL FRIABLE? (CHECK ONE RESPONSE):	ARE ASBESTOS LABELS PRESENT & IN GOOD CONDITION? (CHECK ONE):
[ ] YES [X] NO	[ ] YES [X] NO [ ] N/A

WHAT IS THE PHYSICAL CONDITION? (CHECK ONE):
[X] GOOD [ ] DAMAGED [ ] SIGNIFICANTLY DAMAGED

SAMPLING OF MATERIAL REQUIRED? (CHECK ONE): [ ] YES [X] NO

SAMPLE NUMBERS: [X] N/A

WHAT IS THE POTENTIAL FOR DAMAGE? (CHECK ONE):
[X] LOW POTENTIAL [ ] POTENTIAL FOR DAMAGE
[ ] POTENTIAL FOR SIGNIFICANT DAMAGE

CURRENT HAZARD RANKING: 2	CURRENT PRIORITY LEVEL: 6

RESPONSE OPTIONS (CHECK OPTIONS THAT APPLY):
[ ] REMOVE [ ] ENCAPSULATE
[ ] REPAIR [ ] ENCLOSE
[X] MANAGE IN PLACE

COMMENTS (NOTE LOCATION OF ANY DAMAGED MATERIAL IN THIS SECTION):
Material is part of a "dormer" covering the entrances to rooms 102 & 103. The materials resemble 1/2" plywood sheeting sections.

NAME OF INSPECTO[redacted]	HP NUMBER: 6021

T.Eilers\\b:inspect.frm

COPY

ASBESTOS INSPECTION FORM

A. PRE-SURVEY DATA:

BUILDING: 1	SURVEY DATE: 5/96
RESPONSE AREA DESIGNATION: D	RESPONSE AREA DESCRIPTION: FLOORING
ROOMS INCLUDED: 103; 104	
MATERIAL INCLUDED: FLOOR TILE MASTIC	

MATERIAL PREVIOUSLY INSPECTED? (CHECK ONE RESPONSE):	PREVIOUS HAZARD RANKING:	PREVIOUS PRIORITY LEVEL:
[X] YES [ ] NO [ ] N/A	[ ] 1	[ ] PLANNED

B. INSPECTION DATA:

IS MATERIAL FRIABLE? (CHECK ONE RESPONSE): [ ] YES [X] NO	ARE ASBESTOS LABELS PRESENT & IN GOOD CONDITION? (CHECK ONE): [ ] YES [X] NO [ ] N/A
WHAT IS THE PHYSICAL CONDITION? (CHECK ONE): [X] GOOD [ ] DAMAGED [ ] SIGNIFICANTLY DAMAGED	
SAMPLING OF MATERIAL REQUIRED? (CHECK ONE): [X] YES [ ] NO	
SAMPLE NUMBERS: [X] N/A	
WHAT IS THE POTENTIAL FOR DAMAGE? (CHECK ONE): [X] LOW POTENTIAL [ ] POTENTIAL FOR DAMAGE [ ] POTENTIAL FOR SIGNIFICANT DAMAGE	
CURRENT HAZARD RANKING: 2	CURRENT PRIORITY LEVEL: 6
RESPONSE OPTIONS (CHECK OPTIONS THAT APPLY): [ ] REMOVE [ ] ENCAPSULATE [ ] REPAIR [ ] ENCLOSE [X] MANAGE IN PLACE	
COMMENTS (NOTE LOCATION OF ANY DAMAGED MATERIAL IN THIS SECTION): All flooring materials were assumed to contain asbestos and should be sampled prior to any disturbance of the materials.	
NAME OF INSPECTOR: [redacted]	HP NUMBER: 6021

Appendix J

Lead Summary/Information

ASBESTOS SURVEY REQUEST COPY

A. PROJECT ENGINEER COMPLETES THIS SECTION

PROJECT TITLE: Building 1 Data Package

CHARGE NO.: B09260

LOCATION (CRAWL SPACE, PENTHOUSE, ETC.) AND TYPE OF MATERIAL TO BE SAMPLED:
Provide synopsis of existing building data on asbestos and lead.

KNOWN HISTORICAL ASBESTOS INFORMATION (Review the drawings for this project, if asbestos is identified briefly indicate the location, quantity, and identity.)
Review of Past Survey(S): PEI 1989
BWSTC 1993
EG+G 1996

PROJECT ENGINEER:	PHONE:	DATE SUBMITTED:
Dean Buchner	x 3407	8/21/97

B. INDUSTRIAL HYGIENE COMPLETES THIS SECTION

FINDINGS:
- FLOOR TILE + MASTIC ASSUMED TO CONTAIN ASBESTOS.
- ROOF MATERIALS ASSUMMED TO CONTAIN ASBESTOS.
- Condensate tape located in Room 106 POSITIVELY CONTAINS ASBESTOS.
- THERMAL SYSTEM INSULATION LOCATED IN ROOM 105 POSITIVE FOR ASBESTOS CONTENT.
- CONDENSATE TAPE LOCATED IN ROOM 105 POSITIVE FOR ASBESTOS CONTENT.
- TRANSITE WALLBOARD LOCATED OUTSIDE ROOMS 102 + 103 POSITIVE FOR ASBESTOS.
- DUE to the BUILDINGS AGE & DATE OF CONSTRUCTION ALL PAINTED SURFACES SHALL BE CONSIDERED TO CONTAIN LEAD.

IF HIDDEN ASBESTOS IS ENCOUNTERED DURING THIS PROJECT, STOP WORK AND CALL INDUSTRIAL HYGIENE.

IS ALL ASBESTOS ACCOUNTED FOR ACCORDING TO PAST SURVEYS? ☒ YES ☐ NO

ABATEMENT ACTION REQUIRED:
- NO MATERIALS TO BE DISTURBED PRIOR TO INDUSTRIAL HYGIENE BEING NOTIFIED.
- MATERIALS ARE IN GOOD CONDITION AND POSE NO EXPOSURE POTENTIAL TO PLANT PERSONNEL AT PRESENT. (DAMAGED SECTIONS HAVE BEEN REPAIRED SINCE 1996 SURVEY)

DATE:	APPROVED:
8-27-97	Evan T. Vick AHAS, AHES, INDUSTRIAL HYGIENE REP.

ML-8682 (3-94)

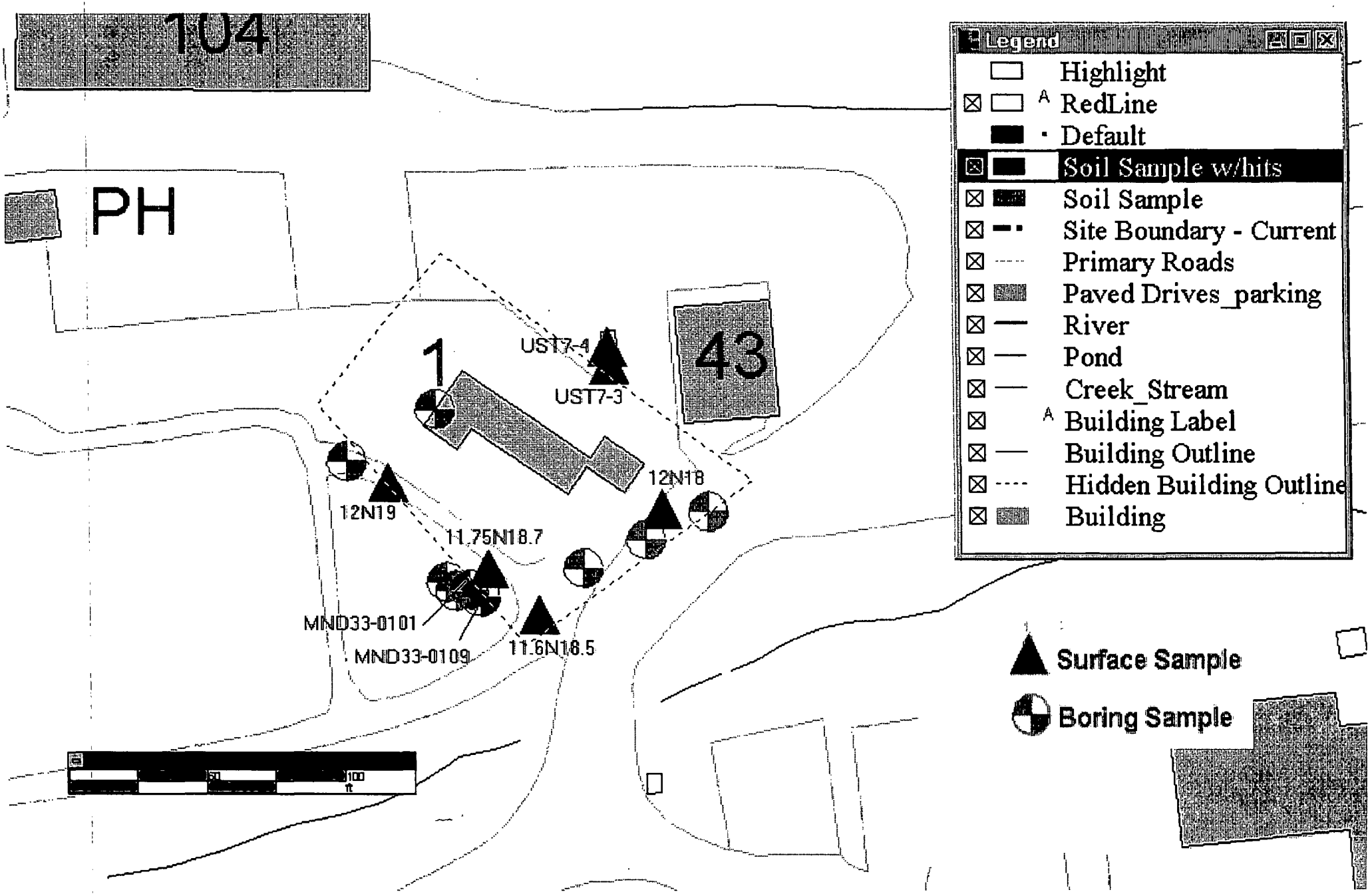
Appendix K

Chemical Summary/Information

Associated Chemicals

Building 1

Adiprene
Antifreeze Waste
Citric Acid
Conductive Adhesive Part A
Conductive Adhesive Part B
EPON 828
Ethanol Waste
Methyl Red
Rexarc
Silver Flake
Trichloroethane (1,1,1-)
Ultra Carbon
Zinc Metal
Acetone
Carbon Blacks
Alcohol
HMX Powder Solution


1U4
PH
1
43
UST7-4
UST7-3
12N18
12N19
11.75N18.7
MND33-0101
MND33-0109
11.6N18.5
Legend
Highlight
RedLine
Default
Soil Sample w/hits
Soil Sample
Site Boundary - Current
Primary Roads
Paved Drives_parking
River
Pond
Creek_Stream
Building Label
Building Outline
Hidden Building Outline
Building
Surface Sample
Boring Sample
50
100
ft

Location_nam	Location_	Collection_d	Media	Value_name	Measured_v	Value_ur	Detection_	Chem_cla	Start	End_d	Depth_u	Cas_number	
MND33-0101	Borehole	19920117	Soil	Cyanide	**0.28**	MG/KG	0.2	INORG	8	11.5	FT	57-12-5	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Aluminum	6850	MG/KG	6	INORG	8	11.5	FT	7429-90-5	
MND33-0101	Borehole	19920117	Soil	Iron	16200	MG/KG	1	INORG	8	11.5	FT	7439-89-6	
MND33-0101	Borehole	19920117	Soil	Lead	17.2	MG/KG	0.2	INORG	8	11.5	FT	7439-92-1	
MND33-0101	Borehole	19920117	Soil	Magnesium	10500	MG/KG	5	INORG	8	11.5	FT	7439-95-4	
MND33-0101	Borehole	19920117	Soil	Manganese	776	MG/KG	0.2	INORG	8	11.5	FT	7439-96-5	
MND33-0101	Borehole	19920117	Soil	Nickel	19	MG/KG	2	INORG	8	11.5	FT	7440-02-0	
MND33-0101	Borehole	19920117	Soil	Potassium	850	MG/KG	10	INORG	8	11.5	FT	7440-09-7	
MND33-0101	Borehole	19920117	Soil	Silver	**14.8**	MG/KG	1	INORG	8	11.5	FT	7440-22-4	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Sodium	**282**	MG/KG	10	INORG	8	11.5	FT	7440-23-5	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Antimony	12	MG/KG	3	INORG	8	11.5	FT	7440-36-0	
MND33-0101	Borehole	19920117	Soil	Arsenic	2.4	MG/KG	0.2	INORG	8	11.5	FT	7440-38-2	
MND33-0101	Borehole	19920117	Soil	Barium	54.6	MG/KG	0.2	INORG	8	11.5	FT	7440-39-3	
MND33-0101	Borehole	19920117	Soil	Beryllium	**0.75**	MG/KG	0.2	INORG	8	11.5	FT	7440-41-7	Exceeds soil 10-6 GV.
MND33-0101	Borehole	19920117	Soil	Cadmium	1.5	MG/KG	0.2	INORG	8	11.5	FT	7440-43-9	
MND33-0101	Borehole	19920117	Soil	Chromium	**26.3**	MG/KG	1	INORG	8	11.5	FT	7440-47-3	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Cobalt	10.6	MG/KG	1	INORG	8	11.5	FT	7440-48-4	
MND33-0101	Borehole	19920117	Soil	Copper	18.8	MG/KG	1	INORG	8	11.5	FT	7440-50-8	
MND33-0101	Borehole	19920117	Soil	Vanadium	24.2	MG/KG	1	INORG	8	11.5	FT	7440-62-2	
MND33-0101	Borehole	19920117	Soil	Zinc	38.7	MG/KG	0.5	INORG	8	11.5	FT	7440-66-6	
MND33-0101	Borehole	19920117	Soil	Calcium	76800	MG/KG	2	INORG	8	11.5	FT	7440-70-2	
MND33-0101	Borehole	19920117	Soil	Acenaphthene	110	UG/KG	840	ORSVO	8	11.5	FT	83-32-9	
MND33-0101	Borehole	19920117	Soil	1,2-Dichloroethene	36	UG/KG	6	ORVOA	13	15	FT	540-59-0	
MND33-0101	Borehole	19920117	Soil	Bis(2-ethylhexyl)phthalate	1300	UG/KG	870	ORSVO	0	3	FT	117-81-7	
MND33-0101	Borehole	19920117	Soil	Cyanide	**0.31**	MG/KG	0.2	INORG	0	3	FT	57-12-5	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Aluminum	2830	MG/KG	6	INORG	0	3	FT	7429-90-5	
MND33-0101	Borehole	19920117	Soil	Iron	8400	MG/KG	1	INORG	0	3	FT	7439-89-6	
MND33-0101	Borehole	19920117	Soil	Lead	18.5	MG/KG	0.2	INORG	0	3	FT	7439-92-1	
MND33-0101	Borehole	19920117	Soil	Magnesium	**62900**	MG/KG	5	INORG	0	3	FT	7439-95-4	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Manganese	276	MG/KG	0.2	INORG	0	3	FT	7439-96-5	
MND33-0101	Borehole	19920117	Soil	Mercury	**1.2**	MG/KG	0.02	INORG	0	3	FT	7439-97-6	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Nickel	22	MG/KG	2	INORG	0	3	FT	7440-02-0	
MND33-0101	Borehole	19920117	Soil	Potassium	523	MG/KG	10	INORG	0	3	FT	7440-09-7	
MND33-0101	Borehole	19920117	Soil	Silver	**21.5**	MG/KG	1	INORG	0	3	FT	7440-22-4	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Sodium	**877**	MG/KG	10	INORG	0	3	FT	7440-23-5	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Pyrene	6100	UG/KG	870	ORSVO	0	3	FT	129-00-0	
MND33-0101	Borehole	19920117	Soil	Antimony	42.8	MG/KG	3	INORG	0	3	FT	7440-36-0	
MND33-0101	Borehole	19920117	Soil	Arsenic	1.6	MG/KG	0.2	INORG	0	3	FT	7440-38-2	
MND33-0101	Borehole	19920117	Soil	Barium	20.5	MG/KG	0.2	INORG	0	3	FT	7440-39-3	
MND33-0101	Borehole	19920117	Soil	Beryllium	**0.71**	MG/KG	0.2	INORG	0	3	FT	7440-41-7	Exceeds soil 10-6 GV.
MND33-0101	Borehole	19920117	Soil	Cadmium	**8.3**	MG/KG	0.2	INORG	0	3	FT	7440-43-9	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Chromium	**32.2**	MG/KG	1	INORG	0	3	FT	7440-47-3	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Cobalt	7.7	MG/KG	1	INORG	0	3	FT	7440-48-4	
MND33-0101	Borehole	19920117	Soil	Copper	**31**	MG/KG	1	INORG	0	3	FT	7440-50-8	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Vanadium	**25.1**	MG/KG	1	INORG	0	3	FT	7440-62-2	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Zinc	**150**	MG/KG	0.5	INORG	0	3	FT	7440-66-6	Exceeds background value.
MND33-0101	Borehole	19920117	Soil	Calcium	153000	MG/KG	2	INORG	0	3	FT	7440-70-2	

MND33-0101	Borehole	19920117	Soil	Acenaphthene	1300	UG/KG	870	ORSVO	0	3	FT	83-32-9	
MND33-0101	Borehole	19920117	Soil	2-Methylnaphthalene	170	UG/KG	870	ORSVO	0	3	FT	91-57-6	
MND33-0101	Borehole	19920115	Soil	Cyanide	**0.19**	MG/KG	0.1	INORG	3	7	FT	57-12-5	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Aluminum	9170	MG/KG	6	INORG	3	7	FT	7429-90-5	
MND33-0101	Borehole	19920115	Soil	Iron	19300	MG/KG	1	INORG	3	7	FT	7439-89-6	
MND33-0101	Borehole	19920115	Soil	Lead	4.5	MG/KG	0.2	INORG	3	7	FT	7439-92-1	
MND33-0101	Borehole	19920115	Soil	Magnesium	12800	MG/KG	5	INORG	3	7	FT	7439-95-4	
MND33-0101	Borehole	19920115	Soil	Manganese	443	MG/KG	0.2	INORG	3	7	FT	7439-96-5	
MND33-0101	Borehole	19920115	Soil	Nickel	24.4	MG/KG	2	INORG	3	7	FT	7440-02-0	
MND33-0101	Borehole	19920115	Soil	Potassium	1650	MG/KG	10	INORG	3	7	FT	7440-09-7	
MND33-0101	Borehole	19920115	Soil	Silver	**16**	MG/KG	1	INORG	3	7	FT	7440-22-4	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Sodium	**707**	MG/KG	10	INORG	3	7	FT	7440-23-5	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Thallium	**0.5**	MG/KG	0.5	INORG	3	7	FT	7440-28-0	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Chrysene	990	UG/KG	840	ORSVO	3	7	FT	218-01-9	
MND33-0101	Borehole	19920115	Soil	Pyrene	1500	UG/KG	840	ORSVO	3	7	FT	129-00-0	
MND33-0101	Borehole	19920115	Soil	Antimony	13.5	MG/KG	3	INORG	3	7	FT	7440-36-0	
MND33-0101	Borehole	19920115	Soil	Arsenic	1.7	MG/KG	0.2	INORG	3	7	FT	7440-38-2	
MND33-0101	Borehole	19920115	Soil	Barium	18.7	MG/KG	0.2	INORG	3	7	FT	7440-39-3	
MND33-0101	Borehole	19920115	Soil	Beryllium	**0.75**	MG/KG	0.2	INORG	3	7	FT	7440-41-7	Exceeds soil 10-6 GV.
MND33-0101	Borehole	19920115	Soil	Cadmium	1.9	MG/KG	0.2	INORG	3	7	FT	7440-43-9	
MND33-0101	Borehole	19920115	Soil	Chromium	**30.7**	MG/KG	1	INORG	3	7	FT	7440-47-3	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Cobalt	12.6	MG/KG	1	INORG	3	7	FT	7440-48-4	
MND33-0101	Borehole	19920115	Soil	Copper	**31.3**	MG/KG	1	INORG	3	7	FT	7440-50-8	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Vanadium	23.4	MG/KG	1	INORG	3	7	FT	7440-62-2	
MND33-0101	Borehole	19920115	Soil	Zinc	58.3	MG/KG	0.5	INORG	3	7	FT	7440-66-6	
MND33-0101	Borehole	19920115	Soil	Calcium	91900	MG/KG	2	INORG	3	7	FT	7440-70-2	
MND33-0101	Borehole	19920115	Soil	Selenium	**0.75**	MG/KG	0.75	INORG	3	7	FT	7782-49-2	Exceeds background value.
MND33-0101	Borehole	19920115	Soil	Phenanthrene	1200	UG/KG	840	ORSVO	3	7	FT	85-01-8	
MND33-0101	Borehole	19920115	Soil	Acetone	230	UG/KG	14	ORVOA	8	11.5	FT	67-64-1	
MND33-0101	Borehole	19920115	Soil	2-Butanone	34	UG/KG	14	ORVOA	8	11.5	FT	78-93-3	
MND33-0109	Borehole	19920120	Soil	Bis(2-ethylhexyl)phthalate	110	UG/KG	840	ORSVO	3	7	FT	117-81-7	
MND33-0109	Borehole	19920120	Soil	Cyanide	**0.21**	MG/KG	0.4	INORG	3	7	FT	57-12-5	Exceeds background value.
MND33-0109	Borehole	19920120	Soil	Aluminum	8780	MG/KG	12	INORG	3	7	FT	7429-90-5	
MND33-0109	Borehole	19920120	Soil	Iron	18900	MG/KG	2	INORG	3	7	FT	7439-89-6	
MND33-0109	Borehole	19920120	Soil	Lead	6.9	MG/KG	0.4	INORG	3	7	FT	7439-92-1	
MND33-0109	Borehole	19920120	Soil	Magnesium	16300	MG/KG	10	INORG	3	7	FT	7439-95-4	
MND33-0109	Borehole	19920120	Soil	Manganese	454	MG/KG	0.4	INORG	3	7	FT	7439-96-5	
MND33-0109	Borehole	19920120	Soil	Mercury	**0.12**	MG/KG	0.12	INORG	3	7	FT	7439-97-6	Exceeds background value.
MND33-0109	Borehole	19920120	Soil	Nickel	24.3	MG/KG	4	INORG	3	7	FT	7440-02-0	
MND33-0109	Borehole	19920120	Soil	Potassium	1440	MG/KG	20	INORG	3	7	FT	7440-09-7	
MND33-0109	Borehole	19920120	Soil	Silver	**17.2**	MG/KG	2	INORG	3	7	FT	7440-22-4	Exceeds background value.
MND33-0109	Borehole	19920120	Soil	Sodium	**278**	MG/KG	20	INORG	3	7	FT	7440-23-5	Exceeds background value.
MND33-0109	Borehole	19920120	Soil	Antimony	13	MG/KG	6	INORG	3	7	FT	7440-36-0	
MND33-0109	Borehole	19920120	Soil	Arsenic	1.9	MG/KG	0.4	INORG	3	7	FT	7440-38-2	
MND33-0109	Borehole	19920120	Soil	Barium	24.9	MG/KG	0.4	INORG	3	7	FT	7440-39-3	
MND33-0109	Borehole	19920120	Soil	Beryllium	**0.8**	MG/KG	0.4	INORG	3	7	FT	7440-41-7	Exceeds soil 10-6 GV.
MND33-0109	Borehole	19920120	Soil	Cadmium	**3.7**	MG/KG	0.4	INORG	3	7	FT	7440-43-9	Exceeds background value.
MND33-0109	Borehole	19920120	Soil	Chromium	**33.5**	MG/KG	2	INORG	3	7	FT	7440-47-3	Exceeds background value.

MND33-0109	Borehole	19920120	Soil	Cobalt	13.2	MG/KG	2	INORG	3	7	FT	7440-48-4	
MND33-0109	Borehole	19920120	Soil	Copper	19.2	MG/KG	2	INORG	3	7	FT	7440-50-8	
MND33-0109	Borehole	19920120	Soil	Vanadium	24.8	MG/KG	2	INORG	3	7	FT	7440-62-2	
MND33-0109	Borehole	19920120	Soil	Zinc	42	MG/KG	1	INORG	3	7	FT	7440-66-6	
MND33-0109	Borehole	19920120	Soil	Calcium	116000	MG/KG	4	INORG	3	7	FT	7440-70-2	
MND33-0109	Borehole	19920120	Soil	2-Butanone	3	UG/KG	12	ORVOA	3	7	FT	78-93-3	
12N18	Surface lc	19941004	Soil	Total Aromatic Hydrocarbons	130944	IC		GENERA	0	1.5	FT	AHYD	
12N18	Surface lc	19941004	Soil	Total C5 TO C11 Petrolium Hydrocarbons	265177	IC		GENERA	0	1.5	FT	TOGRHY	
12N18	Surface lc	19941004	Soil	Total Halogenated Hydrocarbons	313351	IC		GENERA	0	1.5	FT	THAHYC	
12N19	Surface lc	19941004	Soil	Total Aromatic Hydrocarbons	8682028	IC		GENERA	0	1.5	FT	AHYD	
12N19	Surface lc	19941004	Soil	Total Semivolatile Hydrocarbons	859	IC		GENERA	0	1.5	FT	TSVHYC	
12N19	Surface lc	19941004	Soil	Total C5 TO C11 Petrolium Hydrocarbons	15211532	IC		GENERA	0	1.5	FT	TOGRHY	
11.6N18.5	Surface lc	19941011	Soil	Total Aromatic Hydrocarbons	28610	IC		GENERA	0	1.5	FT	AHYD	
11.6N18.5	Surface lc	19941011	Soil	Total C5 TO C11 Petrolium Hydrocarbons	66209	IC		GENERA	0	1.5	FT	TOGRHY	
11.6N18.5	Surface lc	19941011	Soil	Total Halogenated Hydrocarbons	8451	IC		GENERA	0	1.5	FT	THAHYC	
11.75N18.7	Surface lc	19941011	Soil	Total Aromatic Hydrocarbons	64076	IC		GENERA	0	1.5	FT	AHYD	
11.75N18.7	Surface lc	19941011	Soil	Total Semivolatile Hydrocarbons	1562	IC		GENERA	0	1.5	FT	TSVHYC	
11.75N18.7	Surface lc	19941011	Soil	Total C5 TO C11 Petrolium Hydrocarbons	234446	IC		GENERA	0	1.5	FT	TOGRHY	
11.75N18.7	Surface lc	19941011	Soil	Total Halogenated Hydrocarbons	8137	IC		GENERA	0	1.5	FT	THAHYC	
UST7-3	Excavatic	19901130	Soil	Iron	4400	MG/KG		INORG				7439-89-6	
UST7-3	Excavatic	19901130	Soil	Manganese	160	MG/KG		INORG				7439-96-5	
UST7-3	Excavatic	19901130	Soil	Mercury	**0.03**	MG/KG		INORG				7439-97-6	Exceeds background value.
UST7-3	Excavatic	19901130	Soil	Sodium	87	MG/KG		INORG				7440-23-5	
UST7-3	Excavatic	19901130	Soil	Barium	12	MG/KG		INORG				7440-39-3	
UST7-3	Excavatic	19901130	Soil	Chromium	5.1	MG/KG		INORG				7440-47-3	
UST7-3	Excavatic	19901130	Soil	pH	7.5	STD UNIT		GENERA				1006	
UST7-3	Excavatic	19901130	Soil	Total C5 TO C11 Petroleum Hydrocarbons	30	MG/KG		GENERA				TOGRHY	
UST7-4	Excavatic	19901130	Soil	Chloroform	18	UG/KG		ORVOA				67-66-3	
UST7-4	Excavatic	19901130	Soil	Iron	2600	MG/KG		INORG				7439-89-6	
UST7-4	Excavatic	19901130	Soil	Manganese	71	MG/KG		INORG				7439-96-5	
UST7-4	Excavatic	19901130	Soil	Sodium	64	MG/KG		INORG				7440-23-5	
UST7-4	Excavatic	19901130	Soil	Arsenic	1.6	MG/KG		INORG				7440-38-2	
UST7-4	Excavatic	19901130	Soil	Barium	5	MG/KG		INORG				7440-39-3	
UST7-4	Excavatic	19901130	Soil	Chromium	2.4	MG/KG		INORG				7440-47-3	
UST7-4	Excavatic	19901130	Soil	pH	7.8	STD UNIT		GENERA				1006	
UST7-4	Excavatic	19901130	Soil	Total C5 TO C11 Petroleum Hydrocarbons	17	MG/KG		GENERA				TOGRHY	

comp_no	par_code	parameter name	comparison value	units
1	7440-41-7	Beryllium	7.00E-01	MG/KG
1	7440-43-9	Cadmium	5.00E+04	MG/KG
1	7440-47-3	Chromium	7.50E+03	MG/KG
1	121-82-4	RDX	2.70E+01	UG/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	12672-29-6	Aroclor-1248	3.85E-01	MG/KG
1	11096-82-5	Aroclor-1260	3.85E-01	MG/KG
1	319-85-7	Beta-BHC	1.65E+00	MG/KG
1	60-57-1	Dieldrin	1.85E-01	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	117-81-7	Bis(2-ethylhexyl)phthalate	2.15E+02	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	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	107-06-2	1,2-Dichloroethane	1.10E+01	MG/KG
1	71-43-2	Benzene	3.20E+01	MG/KG
1	75-27-4	Bromodichloromethane	4.80E+01	MG/KG
1	75-25-2	Bromoform	3.75E+02	MG/KG
1	56-23-5	Carbon Tetrachloride	1.20E+01	MG/KG
1	67-66-3	Chloroform	1.55E+01	MG/KG
1	124-48-1	Dibromochloromethane	3.55E+01	MG/KG
1	75-09-2	Dichloromethane	3.95E+02	MG/KG
1	79-01-6	Trichloroethene	1.25E+02	MG/KG
1	AC-227	Actinium-227	1.00E+00	PCI/G
1	14596-10-2	Americium-241	4.95E+00	PCI/G
1	13982-38-2	Bismuth-207	1.75E-01	PCI/G
1	BI-207	Bismuth-207	1.75E-01	PCI/G
1	10045-97-3	Cesium-137	4.60E-01	PCI/G
1	10198-40-0	Cobalt-60	1.00E-01	PCI/G
1	13981-16-3	Plutonium-238	5.50E+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	13982-63-3	Radium-226	1.40E-01	PCI/G
1	10098-97-2	Strontium-90	3.00E+00	PCI/G
1	14274-82-9	Thorium-228	8.50E-01	PCI/G
1	14269-63-7	Thorium-230	4.40E+01	PCI/G
1	7440-29-1	Thorium-232	5.00E+01	PCI/G
1	10028-17-8	Tritium	2.35E+04	PCI/G
1	U-233	Uranium-233	3.70E+01	PCI/G
1	13966-29-5	Uranium-234	3.75E+01	PCI/G
1	15117-96-1	Uranium-235	3.35E+00	PCI/G
1	24678-82-8	Uranium-238	1.10E+01	PCI/G
2	7429-90-5	Aluminum	19000	MG/KG

comp_no	par_code	parameter name	comparison value	units
2	7440-38-2	Arsenic	8.6	MG/KG
2	7440-39-3	Barium	180	MG/KG
2	7440-69-9	Bismuth	ND	MG/KG
2	7440-41-7	Beryllium	1.3	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	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	7439-98-7	Molybdenum	27	MG/KG
2	7440-02-0	Nickel	32	MG/KG
2	7440-09-7	Potassium	1900	MG/KG
2	7440-22-4	Silver	1.7	MG/KG
2	7782-49-2	Selenium	ND	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	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	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	319-85-7	Beta-BHC	ND	MG/KG
2	60-57-1	Dieldrin	ND	MG/KG
2	959-98-8	Endosulfan I	ND	MG/KG
2	1031-07-8	Endosulfan Sulfate	ND	MG/KG
2	72-20-8	Endrin	ND	MG/KG
2	7421-93-4	Endrin Aldehyde	ND	MG/KG
2	53494-70-5	Endrin Ketone	ND	MG/KG
2	5103-74-2	Gamma Chlordane	ND	MG/KG
2	58-89-9	Gamma-BHC (Lindane)	ND	MG/KG
2	76-44-8	Heptachlor	ND	MG/KG
2	1024-57-3	Heptachlor Epoxide	ND	MG/KG
2	72-43-5	Methoxychlor	30	MG/KG
2	77-47-4	Hexachlorocyclopentadiene	ND	MG/KG
2	14596-10-2	Americium-241	ND	MG/KG
2	13982-38-2	Bismuth-207	ND	MG/KG

comp_no	par_code	parameter name	comparison value	units
2	BI-207	Bismuth-207	ND	MG/KG
2	BI-210M	Bismuth-210m	ND	MG/KG
2	10045-97-3	Cesium-137	0.42	PCI/G
2	13981-16-3	Plutonium-238	0.13	PCI/G
2	13966-00-2	Potassium-40	37	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	13982-63-3	Radium-226	5	PCI/G
3	13981-16-3	Plutonium-238	25	PCI/G
3	7440-29-1	Thorium-232	5	PCI/G
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	7440-41-7	Beryllium	0.004	MG/L
5	7440-43-9	Cadmium	0.005	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	7439-92-1	Lead	0.015	MG/L
5	7439-97-6	Mercury	0.002	MG/L
5	7440-02-0	Nickel	0.1	MG/L
5	7782-49-2	Selenium	0.05	MG/L
5	7440-28-0	Thallium	0.002	MG/L
5	16984-48-8	Flouride	4	MG/L
5	NO3	Nitrate	10	MG/L
5	NO2	Nitrite	1	MG/L
5	57-74-9	Chlordane	0.002	MG/L
5	72-20-8	Endrin	0.002	MG/L
5	76-44-8	Heptachlor	0.0004	MG/L
5	1024-57-3	Heptachlor Epoxide	0.0002	MG/L
5	72-43-5	Methoxychlor	0.04	MG/L
5	8001-35-2	Toxaphene	0.003	MG/L
5	120-82-1	1,2,4-Trichlorobenzene	0.07	MG/L
5	95-95-4	2,4,5-Trichlorophenol	0.05	MG/L
5	50-32-8	Benzo(a)pyrene	0.002	MG/L
5	118-74-1	Hexachlorobenzene	0.001	MG/L
5	77-47-4	Hexachlorocyclopentadiene	0.05	MG/L
5	87-86-5	Pentachlorophenol	0.001	MG/L
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	156-59-2	1,2-cis-Dichloroethene	0.07	MG/L

comp_no	par_code	parameter name	comparison value	units
5	107-06-2	1,2-Dichloroethane	0.005	MG/L
5	78-87-5	1,2-Dichloropropane	0.005	MG/L
5	106-46-7	1,4-Dichlorobenzene	0.075	MG/L
5	108-90-7	Chlorobenzene	0.1	MG/L
5	96-12-8	Dibromochloropropane	0.0002	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	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	94-75-7	2,4-D	0.07	MG/L
5	156-60-5	1,2-trans-Dichloroethene	0.01	MG/L
5	71-43-2	Benzene	0.005	MG/L
5	75-27-4	Bromodichloromethane	0.008	MG/L
5	75-25-2	Bromoform	0.008	MG/L
5	56-23-5	Carbon Tetrachloride	0.005	MG/L
5	67-66-3	Chloroform	0.008	MG/L
5	100-41-4	Ethylbenzene	0.07	MG/L
5	58-89-9	Gamma-BHC (Lindane)	0.0002	MG/L
5	117-81-7	bis(2-ethylhexyl)phthalate	0.006	MG/L
5	100-42-5	Styrene	0.1	MG/L
5	127-18-4	Tetrachloroethene	0.005	MG/L
5	108-88-3	Toluene	1	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	AC-227	Actinium-227	0.4	PCI/L
5	14596-10-2	Americium-241	12	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	16	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	U-233	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	7440-47-3	Chromium	1.10E+03	MG/KG
6	7440-36-0	Antimony	8.50E+01	MG/KG
6	7440-38-2	Arsenic	6.40E+01	MG/KG
6	7440-39-3	Barium	1.50E+04	MG/KG
6	7440-41-7	Beryllium	1.10E+03	MG/KG
6	7440-43-9	Cadmium	2.10E+02	MG/KG
6	57-12-5	Cyanide	4.30E+03	MG/KG
6	7439-96-5	Manganese	2.70E+04	MG/KG

comp_no	par_code	parameter name	comparison value	units
6	7439-97-6	Mercury	6.40E+01	MG/KG
6	7440-02-0	Nickel	4.30E+03	MG/KG
6	7440-22-4	Silver	1.10E+03	MG/KG
6	7440-62-2	Vanadium	1.50E+03	MG/KG
6	7440-66-6	Zinc	6.40E+04	MG/KG
6	2691-41-0	HMX	1.10E+04	UG/KG
6	121-82-4	RDX	6.40E+04	UG/KG
6	50-29-3	4,4'-DDT	1.10E+02	MG/KG
6	11097-69-1	Aroclor-1254	4.30E+00	MG/KG
6	60-57-1	Dieldrin	1.10E+01	MG/KG
6	106-44-5	4-Methylphenol	1.10E+03	MG/KG
6	120-12-7	Anthracene	6.40E+04	MG/KG
6	65-85-0	Benzoic Acid	8.50E+05	MG/KG
6	117-81-7	Bis(2-ethylhexyl)phthalate	4.30E+03	MG/KG
6	85-68-7	Butyl Benzyl Phthalate	4.30E+04	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	206-44-0	Fluoranthene	8.50E+03	MG/KG
6	78-59-1	Isophorone	4.30E+04	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	75-34-3	1,1-Dichloroethane	7.80E+00	MG/KG
6	156-60-5	1,2-trans-Dichloroethene	4.30E+03	MG/KG
6	108-10-1	2-Methyl-4-pentanone	7.00E+02	MG/KG
6	67-64-1	Acetone	2.10E+04	MG/KG
6	75-27-4	Bromodichloromethane	4.30E+03	MG/KG
6	75-25-2	Bromoform	4.30E+03	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	124-48-1	Dibromochloromethane	4.30E+03	MG/KG
6	75-09-2	Dichloromethane	1.00E+03	MG/KG
6	100-41-4	Ethylbenzene	4.80E-01	MG/KG
6	110-54-3	Hexane	9.10E+01	MG/KG
6	127-18-4	Tetrachloroethene	2.10E+03	MG/KG
6	108-88-3	Toluene	2.50E+02	MG/KG
6	75-69-4	Trichlorofluoromethane	7.30E+02	MG/KG
6	1330-20-7	Xylenes, Total	4.30E+05	MG/KG
6	78-93-3	2-Butanone	9.30E+03	MG/KG

1 Value is 10-6 Risk-Based Guide Value
2 Value is OU9 Soil Background Value
3 Value is other criteria, I.e. 5 pCi/g for certain radionuclides
25 pCi/g plutonium
5 Value is MCL
6 Value is the Guide Value based on the hazard index

Appendix M

Occurrence Reports

OH-MB-EGGM-EGGMAT03-1994-0017 Off-Normal Final 11/13/94 12/01/9
Explosive Facilities 1
TITLE: Actuation of a Safety System - Sprinkler

Description of Occurrence (1st 10 Lines):
On Sunday, November 13, 1994, at approximately 1437 hours (ETZ), a sprinkler head in Building 1 (Explosives Packaging Facility) actuated. The Mound Fire Department responded to the water flow alarm and found water coming out around the door to Room 102. With the assistance of Security, the Fire Department entered the room finding high levels of heat and steam. One 165 degrees fahrenheit sprinkler head had gone off just inside the door. No evidence of fire was found.

This Occurrence Report was reviewed by an Authorized

Description of Cause (1st 10 Lines):
The direct and root causes of this occurrence was the stuck thermostat which allowed the temperature at ceiling level to reach a point where a sprinkler head actuated. The sprinkler which actuated was located approximmately two feet from the output vent of the Air Handling Unit.

Appendix N

Work Plan

FINAL

WORK PLAN

FOR

REMOVAL OF BUILDINGS 1 and 43

TEST FIRE VALLEY PROJECT

August 19, 1998

Work Plan Sign-off Sheet
(signature & date required)

The following Test Fire Valley Project team members have reviewed this Work Plan for use in the field:

Gary L. Coons/Proj Engr	Gary L. Coons	8/20/98
Larry Lamsa/Proj Engr	L. Lamsa	08/20/98
Dave Adkins/Waste Coord	David J. Adkins	8/20/98
Bob Johnson/Rad Engr	R. Johnson	8/20/98
John Schneider/IS&H	John M Schneider	8/20/98
Chet Smith/Field Super	Chet Smith	8/20/98
Bob Ward/Bldg Coord	Bob Ward	8/20/98
Ron Paulick/Env Comp	Ron Paulick/DSA	8/20/98
Joe Bartee/Project Mgr	Joe Bartee	8-20-98

1. OBJECTIVE

The objective of this effort is to demolish Buildings 1 and 43, the associated concrete pads, and three other concrete pads remaining in the area The pads remaining in the area are those associated with Building 74, 106 and a small Plexiglas structure to the west of Building 43. All subsurface activities will remain to be performed by BWO's Soils Project group during the remediation activities for PRS #75. The inactive concrete settling basin (PRS #22) located west of Building 1 and the Building 1 Leach Pit (PRS #21) will be left in place. The RCRA/CERCLA closure of PRS #21 and PRS #22 will be addressed during the restoration of PRS #75. The underground tank located on the west side of Building 43 was never used. It will be left in place and addressed during the restoration of PRS #75.

2. GENERAL SCOPE OF WORK

The scope of work for this effort is to demolish Building 1 and 43. Once both buildings are down and the debris removed, the concrete pads for Buildings 1 and 43, along with the three other concrete pads in the area, will be broken up and the debris removed. The pad footprints will be backfilled with soil from the earthen bunker of Building 1 and clean backfill material. No subsurface work will be performed under this work plan. Energetic materials decontamination has been completed except for process lines and some exhaust ducts. The process lines and exhaust ducts that have not been decontaminated will be identified with orange paint and picked out of the building rubble with heavy equipment. All scrap metal will be sent to Franklin Iron & Metal for smelting. The asbestos abatement will be completed prior to this work beginning.

Building 1, is a one-story, 986-square-foot concrete block structure, with a sheet metal addition on one side. The roof is of built-up membrane coal tar and asphalt. The building has electrical service of 240V and central steam (Mound Facility Physical Characterization, 12-1-93). Building 1 was constructed in 1958 (MD-10391, Asbestos Program Manual, 9-14-95). It consists of four heavy-walled rooms, plus a small office area. The facility has been used to support the same program since construction. Research and testing activities involving energetic materials have been conducted in the building. In the past, the building was used for processing and blending of explosive powders. More recently, it was used for packaging of energetic materials (Mound Facility Physical Characterization, 12-1-93).

Building 43 is a one-story, 1516-square-foot, reinforced concrete structure. The roof is a built-up membrane (asphalt). The building is serviced with electrical service of 240V, and central steam and chilled water (Mound Facility Physical Characterization, 12-1-93).

Building 43 was constructed in 1971 (MD-10391, Asbestos Program Manual, 9-14-95). The facility has been used for the same purpose since construction. Research and development activities involving thermite have been conducted in the building.

Safe Shutdown has been completed on Building 74 and the building was sold at auction. Only the concrete pad remains.

A small Plexiglas prefabricated structure sits to the west of Building 43. This structure contains a vacuum system that was to be used for processes in Building 43, however, the system was never placed in service. This structure will be removed and sold at auction. Only the concrete pad will remain for demolition.

An additional concrete pad is located within the demolition area. This pad remains from Building 106.

3. SITE INFORMATION

Building 1 was constructed in 1958 in the lower valley area to process explosives and to accommodate final packaging of explosives for shipment. It is located to the west of Building 43 and to the north of the Building 74 concrete pad. There is no history of radioactive or chemical contamination associated with the building or the related concrete pad.

Building 43 was constructed in 1971 in the area known as the lower valley to enlarge the explosive processing facility in Building 1. Building 43 acted as a laboratory for the development of energetic thermite materials and devices. There is no history of radioactive or chemical contamination associated with the building or the related concrete pad.

Building 74, a metal frame building, was located in an area known as the lower valley adjacent and to the south of Building 1. The building was used for processing explosive materials that were in sealed containers. The building was not exposed to opened explosive materials. All that remains is the concrete pad. There is no history of radioactive or chemical contamination associated with remaining pad of Building 74.

A small Plexiglas prefabricated structure sits to the west of Building 43. This structure contains a vacuum system that was to be used for processes in Building 43, however, the system was never placed in service. This structure will be removed and sold at auction. Only the concrete pad will remain for demolition. There is no history of radioactive or chemical contamination associated with this structure or the related concrete pad.

An additional concrete pad is located within the demolition area. This pad remains from Building 106. Building 106 was used for storage of sealed containers. It was not exposed to opened explosive materials. There is no history of radioactive or chemical contamination associated with this concrete pad.

This demolition effort will be considered a standard industrial demolition action and will not be designated as a HAZWOPER site.

All related electrical /utility/building drawings will be located at the office of the Project Superintendent in the project trailer.

4. INDUSTRIAL SAFETY AND HEALTH REQUIREMENTS

A Job Specific Hazards Analysis (JSHA) is required for this demolition using a hoe mounted hydraulic hammer, shears, bucket and grapple. The work zone, as defined in the JSHA, will identify construction boundaries, evacuation routes, and staging areas. Debris will be cleared from the immediate demolition zone as required to provide safe equipment activity. The debris will be disposed of in accordance with Waste Management. Water shall be used as needed for dust control during activities which have the potential for generating dust.

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

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

Monitoring for Crystalline Silica (concrete dust) will be performed as determined by previous monitoring results and IS&H staff.

Whole body vibration will be administratively controlled using April 13, 1998 letter from Test Fire Valley Team and by reviewing topic at Pre-job meeting..

Monitoring of noise levels will be performed as determined by previous monitoring results and the IS&H staff.

Removal of EM contaminated process lines and ducts, for safety purposes, will be performed by heavy duty equipment. These items will be identified with orange paint prior to demolition in order to allow the heavy duty operators to pick them out of the rubble and place them in the recycle roll-off.

5. RADIOLOGICAL PROTECTION REQUIREMENTS

No radiological controls will be required during work associated with the demolition of Buildings 1, 43 and the area pads. An excavation/soil disturbance permit which requires Health Physics approval is required. Soil will not be removed from the site under this work package. Prior to disposition of concrete at a local landfill or to the on-site concrete crusher, removable and fixed contamination surveys will be performed as required in Section 9.

6. ENVIRONMENTAL COMPLIANCE REQUIREMENTS

The demolition of buildings 1 and 43 are considered standard industrial demolition actions. Building 43 is a CERCLA response action due to concerns within the building. An Action Memorandum was issued on July 16, 1998. As stated in Table 3.1 of that memorandum, the concerns that made Building 43 a CERCLA action were the possible thermite contamination and an oil spot on the floor. Since the issuance of that memorandum, the areas of the building that may have been contaminated with thermite have gone through the standard wash down process used to remove such concerns. The oil spot on the floor is localized and is on the top of a welded steel plate flooring system that is on top of a concrete pad. No oil has leaked through the steel plate.

Building 43 is located within PRS 75. This project addresses only the demolition of the building and the related concrete pad. No soils work will be performed. Any soils work will be addressed during the PRS 75 project. Since all of the CERCLA related concerns raised in the action memorandum have been mitigated by either actions or limiting the scope of the project, Building 43, along with Building 1, is considered a standard industrial demolition action.

A NEPA checklist is required for this demolition project. The categorical exclusion for building demolition projects was approved by DOE/MEMP on March 23, 1998.

Permit to Install/Permits to Operated (PTI/PTO) are not required for temporary projects (project duration < 18 months). Dust mitigation techniques will be employed for diffuse dust sources (e.g., soil excavation, dumping, storage piles, concrete demolition).

Based on the best available radiological data and removal assumptions for this demolition project, the estimated NESHAP radiological dose calculation from air emissions was calculated to be less than the 0.1 mrem dose threshold for EPA approval.

A "Notification of Demolition" form will be filed with the Regional Air Pollution Control Agency (RAPCA) two weeks prior to the beginning of demolition.

BWO has determined that Buildings 1 and 43 have no historical significance and do not qualify for inclusion in the National Register of Historic Places (NRHP).

7. STORMWATER RUNOFF MANAGEMENT

Stormwater runoff control will be provided by the natural topography of the project and surrounding area. Refer to Figure 1 for the Project Site and Figure 1A for the discussion on stormwater runoff. The only soil disturbance planned for the project is the removal of the earthen bunker over part of Building 1 and the minor soil disturbance from removing the concrete pads of the buildings. All building footprints will be backfilled with a mixture of the soil from the earthen bunker and clean 304 compactable gravel.

The drainage pattern for the project area provides natural flow of runoff into the collection basin just southwest of the project site. The elevation to the north of the project is 750 feet above sea level. To the east and west of the project the elevation is 740 feet. Directly south of the project the elevation is 740 feet. Between the project site and the plant stormwater drainage ditch the elevation falls from 740 feet to 730 feet. This area is just southwest of the project and in the path of the elevation decline is the collection basin. The topography of the area is such that runoff from the project site will flow into the collection basin southwest of the project. This basin is lined with large gravel. The runoff from the hill north of Spine Road is collected via a drainage ditch on the north side of the road. Therefore, run-on to the project will be kept to a minimal level.

The collection basin to the southwest of the project will serve as a filtering mechanism for any runoff from the project. It is scheduled for remediation as part of PRS#75 in the year 2003.

Any project debris that is on the roadway at the end of each day will be swept back within the project boundary. Additional run-off controls (silt fencing) will be employed if project run-off is observed that is not being collected in the collection basin.

8. WASTE MANAGEMENT REQUIREMENTS

Demolition debris which is scrap metal will be sent to Franklin Iron & Metal for recycle. All scrap metal from this project will be smelted as part of the recycling process. A letter verifying the smelting of the scrap metal from this project will be supplied by Franklin Iron & Metal. All concrete will be size reduced at the work zone and transported either to the Mound spoils area where it will be staged for future processing at the concrete crushing unit or it will be disposed of at a local landfill as construction debris. All soil from the project will remain on the project site and will be used as backfill. Movement of debris will be performed using hoe mounted shear, grapple or bucket and heavy duty equipment haulers.

Any refrigerant material present in the air units at Buildings 1 or 43 will be recycled. All asbestos material requiring abatement will be completed prior to the beginning of this project.
The data below represents the waste volume estimate for this project. It includes waste generated during safe shutdown activities (EM contaminated water/rags and asbestos) that are not included as part of this work plan. The destination is currently planned as shown, however, alternate destinations may be chosen at a later date based on best professional judgment.

Waste Type	Volume (ft3)	Destination
EM contaminated H2O	8	Laidlaw Environmental
EM contaminated rags	4	Laidlaw Environmental
Asbestos	225	Koogler, Stony Hollow
Light Ballasts	8	Laidlaw Environmental
Glycol	2	Laidlaw Environmental
Scrap metal for recycle	5400	Franklin Iron & Metal
Construction debris	3500	Koogler, Stony Hollow
Concrete debris	6480	Spoils area at Mound
Total	15,627	

9. SECURITY REQUIREMENTS

The work zone for this scope of work does not cause a concern with the plant outer security fence. No special security requirements are necessary. Construction barricades will be used to control pedestrian and vehicle traffic. All barricading activities will be coordinated with the Fire Department and Security Protective Force. A plantwide notification will be distributed and announced. All security systems in Buildings 1 and 43 will be disconnected prior to demolition of the buildings.

Coordination of access to the Test Fire Area will be conducted with EG&G Optoelectronics, Global Manufacturing Solutions and MMCIC to ensure occupants of leased buildings in the area are aware of barricaded roads and possible alternatives to accessing their businesses.

10. FIELD SAMPLING AND VERIFICATION

Debris from the demolition of the building structures (Buildings 1 and 43) will be processed as non-radiological. Historical and sampling data have already been obtained and/or binned which identify these buildings as non-radiological. Concrete from all of the area concrete pads will be surveyed and analyzed using field instruments at the demolition site. All concrete meeting release criteria (Identified in MD-80043 Operation

Manual) will be taken to the Mound spoils area for processing at the concrete crusher or released to a local landfill as construction debris.

Field verification of the final graded soil for contaminants will not be performed. However, characterization of the building footprints will be performed and the data will be provided to the Mound Soils Project for use in the remediation of PRS 75, PRS 21 and PRS 22.

11. QUALITY ASSURANCE

The purpose of Quality Assurance for this project is to ensure that activities associated with this work plan are performed in accordance with the applicable regulations and requirements, and to ensure that the project objectives stated are accomplished in an orderly and verifiable manner with the highest level of quality assurance possible. This plan will meet the requirements of MD-10043, Environmental Restoration Quality Assurance Plan and the applicable requirements of DOE Order 5700.6c, Quality Assurance. Quality control shall be established and maintained with an effective quality control system.

The quality control system consists of plans, procedures, and organization necessary to produce an end product that complies with the project requirements. The requirements of this plan are applicable to the individuals, functions, and operations within or directed by the Test Fire Valley Project Team and are to be applied to all phases of this project work plan. This quality assurance effort is consistent with and in support of MD-10334, Mound Quality Policy and Responsibilities.

This Project does not meet the definition of a nuclear facility. Therefore, the requirements of 10 CFR 830.120, Quality Assurance Requirements do not apply.

12. EMERGENCY PREPAREDNESS

12.1 Emergency Numbers

Use the 911 site emergency number. If using a cell phone, dial 865-4040. This number will ring into the plant 911.

12.1.1 Site Notification Procedures

All emergencies shall be reported via the 911 site emergency number to ensure rapid response. The 911 number can be dialed from any site phone. If a phone is not available, alternative communication methods are as follows:
Two-way radio

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

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

12.2 Evacuation Routes/Accountability

12.2.1 Assembly Areas

Should a situation require an emergency evacuation of a work area, all equipment shall be placed in a safe condition. Personnel shall immediately proceed to the designated area. See Figure 1 for the project site, assembly area, project trailer and take shelter route. Building 87 is the emergency take shelter area. The front door entrance will be unlocked during all project hours. A tornado warning or a take shelter drill are examples when the emergency shelter area would be used. East of Building 43 in the Test Fire parking lot is the assembly area for an emergency, such as a fire, causing the evacuation of the work zone. The purpose of an assembly area is to get personnel in a safe area that allows for a head count to be taken and for the personnel to be available to answer questions that may arise during the response. The arriving first responders will assume command and control of the situation. The project work trailer is also in the Test Fire parking lot.

13. SEQUENCE OF WORK/SCHEDULE

The following is the current planned execution of the work. The sequence may vary depending on availability of equipment and the economics of utilizing equipment attachments (i.e. grapple, shear, bucket) during each operation.

Phase I - SITE PREPARATION

1. Meet with Mound's Fire Department/Security to review site access/traffic control.
2. Project Engineer will meet with EG&G Optoelectronics', Global Manufacturing Solutions and MMCIC representatives to communicate site access plan & project schedule.
3. Project superintendent will obtain Excavation/Soil Disturbance permit
4. Project superintendent will hold pre-job briefing and complete the pre-job checklist.
5. Project superintendent will set-up barricades and post signs
6. The area will be scanned by trades to identify all underground utilities.

7. Project superintendent will verify that a supply of water is available and ready.
8. Project superintendent will verify that all heavy duty equipment is available and ready.
9. Project superintendent will arrange, with HVAC maintenance, the recovery of refrigerant (using pump down methods) from the units associated with Buildings 1 and 43.
10. Project superintendent will verify that controls are in place to control water runoff from the demolition site.
11. Project superintendent will verify project communication devices (phone, intercom,radios,etc.) are working properly.

PHASE II-BUILDING PREPARATION

1. Disconnect telephone and Molan service after confirming other buildings will not be affected.
2. Disconnect security wiring after approval by security.
3. Remove remaining items, that are easily removable, from Buildings 1 and 43. Items are to be excessed or disposed of per the Project Superintendent's and Waste Coordinator's direction.
4. Remove florescent light ballasts from both buildings and dispose of per the Waste Coordinator's direction.
5. Scan the project area and identify all underground utilities, ACP pipe and firelines. Use spray paint to mark all underground items.
6. Terminate potable and fire protection water (coordinate with Fire Department) and isolate the supply line outside Buildings 1 and 43 by closing and blanking off any supply lines.
7. Terminate connection to sanitary sewer.
8. Disconnect power to fire alarms for Buildings 1 and 43.
9. Electricians shall disconnect and cut electrical feeds to the buildings and isolate them outside the buildings. All electrical feeds to the buildings shall be identified by reviewing Mound electrical drawings, verified in the field, and de-energized according to Mound's Lockout/Tagout Procedural Manual MD-10444, prior to being disconnected and cut.
10. Isolate all steam and condensate lines supplying Buildings 1 and 43.
11. The inactive concrete settling basin (PRS #22) located west of Building 1 and the Building 1 Leach Pit (PRS #21) will be left in place. Using orange paint, paint lines from the settling basin to the leach pit to identify the area. Refer to Figure 2 for example of where to mark with paint. Place heavy gauge steel sheet over the two existing covers. Paint "COVER" on top of steel sheets.
12. The underground tank on the west side of Building 43 will be left in place. Using orange paint, paint around the top of the tank area. Refer

to Figure 6 for example of where to mark with paint. Place heavy gauge steel sheet over the existing cover. Paint "COVER" on top of steel sheet.

13. Per guidance from the Test Fire Valley Project Safety Engineer, all process lines and duct work that have not been decontaminated will be identified by painting with orange paint.
14. Relocate the white Plexiglas structure (west of Building 43) to the Test Fire parking lot. The structure is held in place with four bolts connected to the pad. Remove bolts and use heavy equipment to relocate structure.
15. Remove fencing along top of retaining wall on far west side of Building 1.

PHASE III- BUILDING DEMOLITION

During demolition, continuing inspections by the Project Superintendent will be made as the work progresses to detect hazards resulting from the progressing demolition. Heavy duty equipment such as the ram, shear, grapple and bucket will be used for this demolition project.

Note

During demolition and size reduction, water mist thoroughly for dust control.

During the use of the shear and ram, provide a 75-foot exclusion zone to protect against personnel injury that may be caused by flying debris. No one will be permitted within a 75-foot distance if the shear or ram are in operation except the Heavy Duty Operators who will remain in the equipment cab.

The sequence of events during building demolition will ultimately be determined in the field.

Remove building rubble as necessary to facilitate access to new areas for demolition.

1. Demolish Building 1 beginning on the east side of the building (Figure 3).
2. When the section of Building 1 with the earthen bunker is reached, remove the soil from the top and rear of the building. Stage soil in the work area to use as fill at end of project. Demolish the remainder of Building 1 including the retaining wall that faces the Rail Spur (Figure 4).
3. **Disconnect steel cable that wraps around the stanchion on west side of Building 43 (Figure 6).**
4. Remove air handling equipment and ductwork from the top of Building 43 (Figure 5).
5. Demolish the first floor of Building 43 on the east side (Figure 5).

This will leave the two story structure for demolition.

6. Demolish the remainder of Building 43 ending with the steel blow out panels on the west side of the building(Figure 6).
7. Break up and remove all of the concrete pads in the area.

Note

Leave the sections marked with orange paint (the Building 1 settling basin/ leach pit and the Building 43 Underground Tank) in place for the Soils Project team to address in a future project.

PHASE IV- SITE RESTORATION/DEMOBILIZATION

1. Characterize the soils in the building footprints by collecting one surface soil sample per 100 ft^2. Have these samples analyzed at Mound using the standard radiological soil screen. This data will be supplied to the Mound Soils group for reference data for the future remediation of PRS 75, PRS 21 and PRS 22.
2. Remove all equipment, materials, and waste containers from the site. Remove boundaries and site entry requirements.
3. Backfill, compact, and grade to original elevation using the soil from the earthen bunker and 304 compactable gravel.
4. Place stakes and rope around the basin and underground tank left in place. Place sign on rope stating "ENTRY BY AUTHORIZED PERSONNEL ONLY".

PHASE V- CLOSE OUT

1. Prepare close out report and submit to DOE.

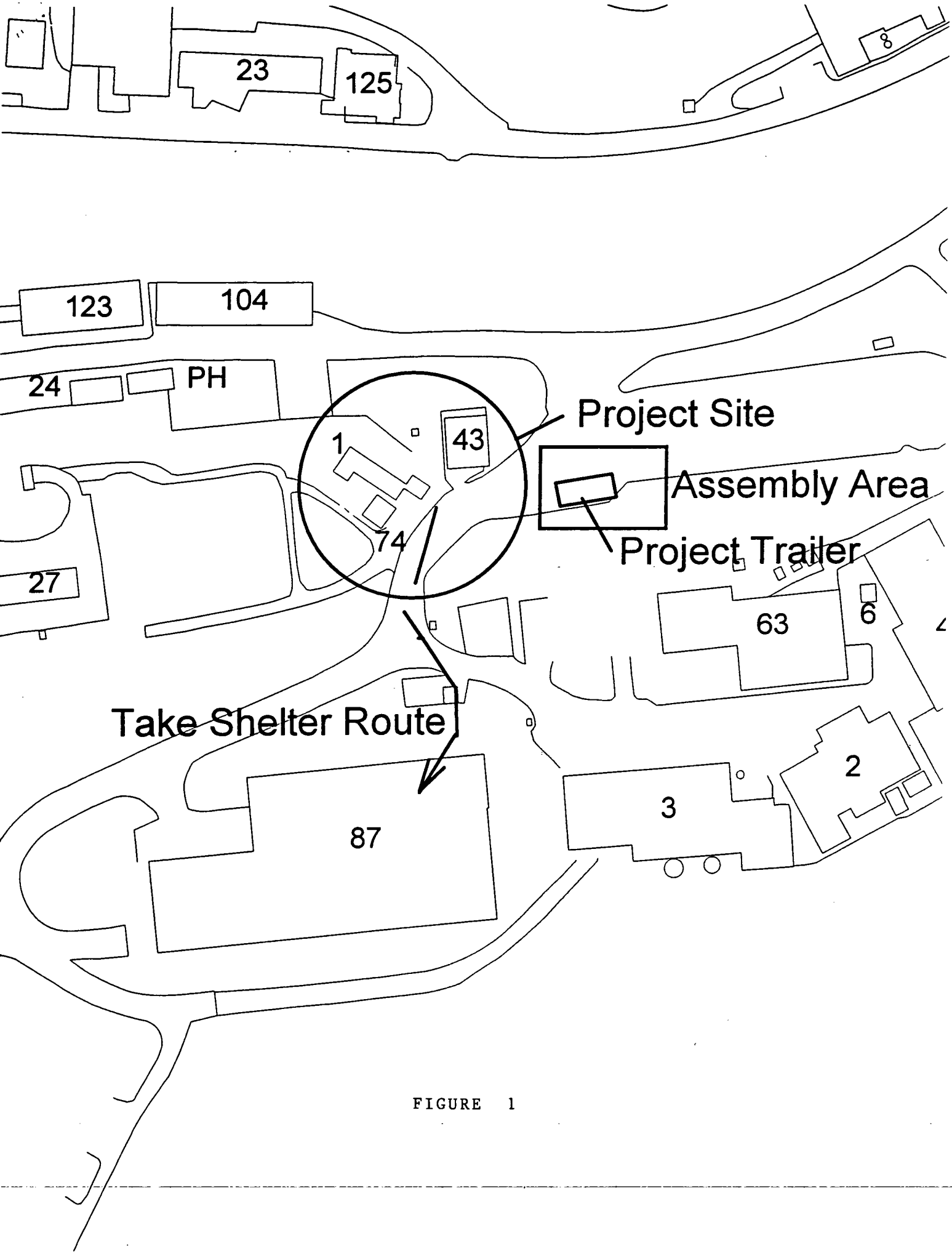

23
125
8
123
104
24
PH
1
43
74
Project Site
Assembly Area
Project Trailer
27
63
6
Take Shelter Route
87
3
2

FIGURE 1

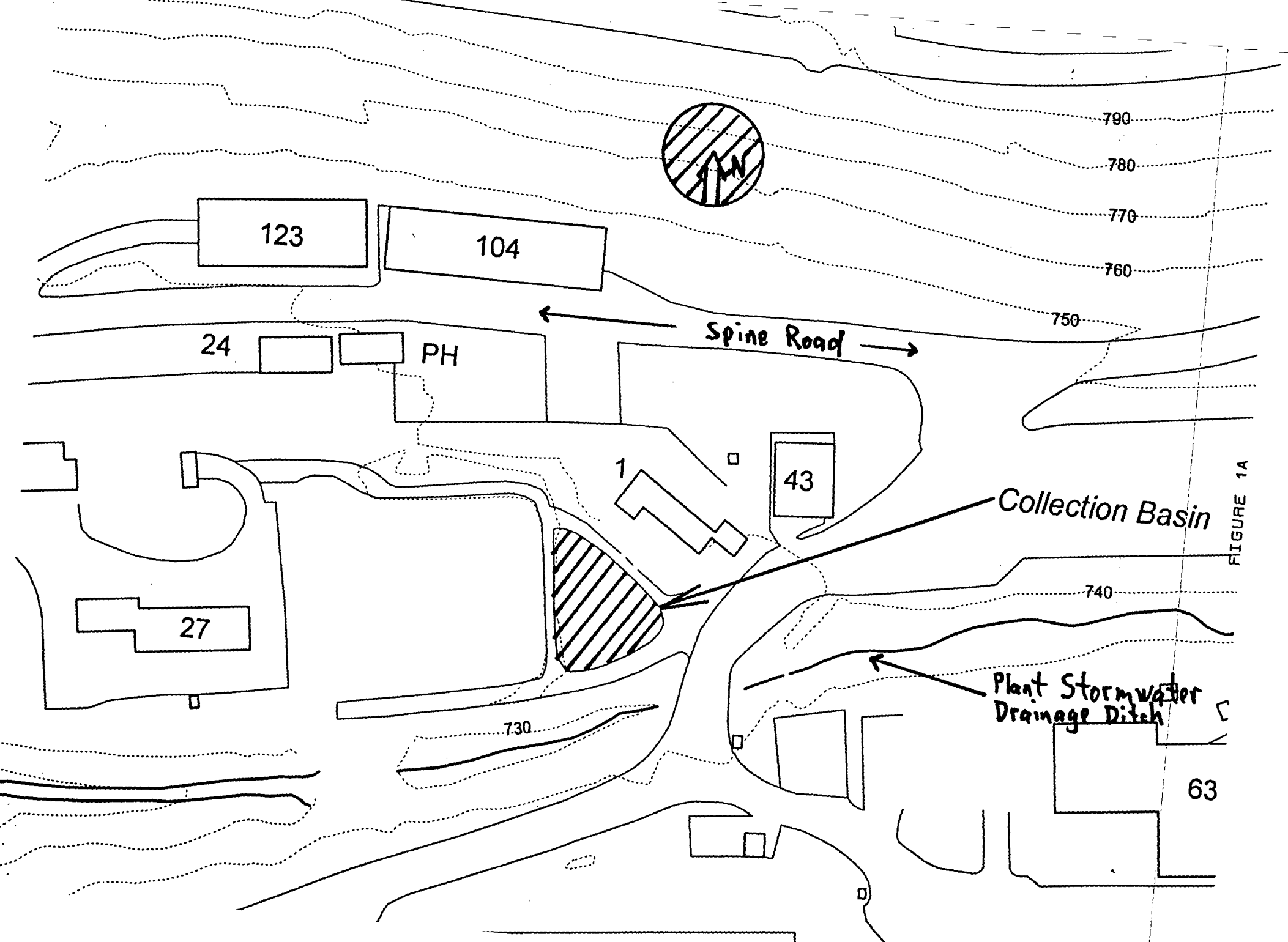

790
780
770
760
750
740
730
123
104
24
PH
Spine Road
1
43
27
63
Collection Basin
Plant Stormwater
Drainage Ditch

FIGURE 1A

FIGURE 2

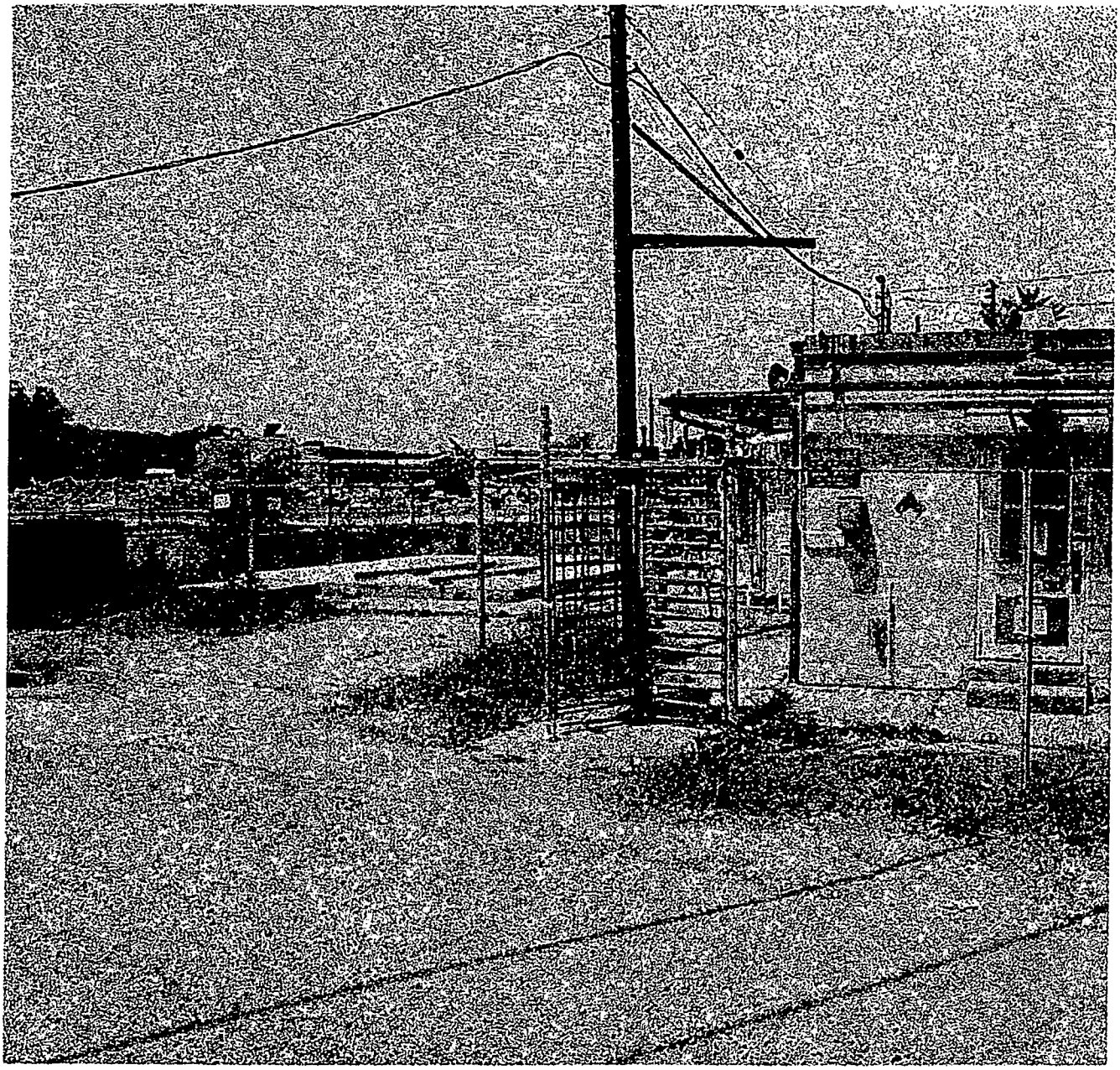


FIGURE 3

FIGURE 4

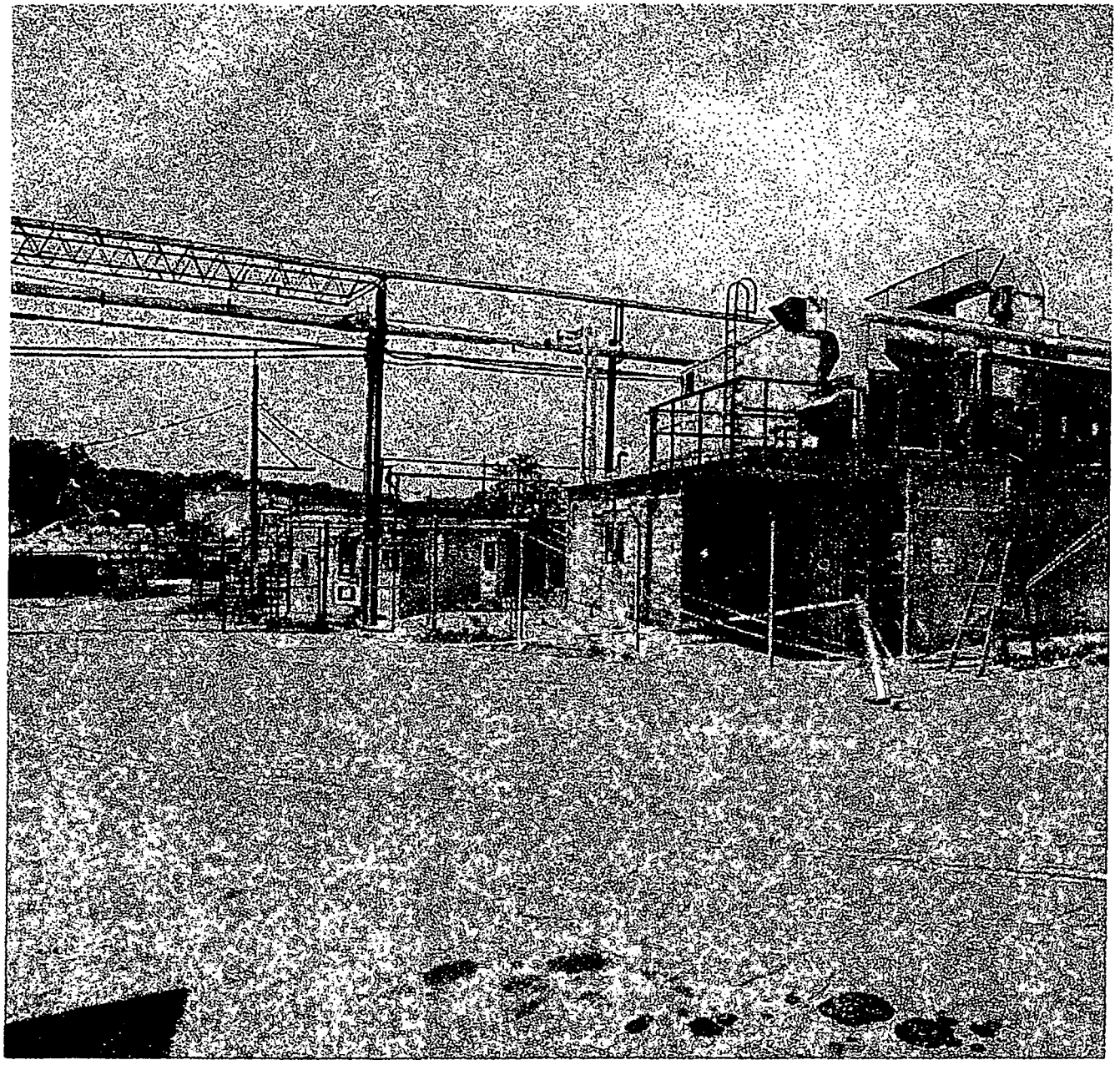


FIGURE 5

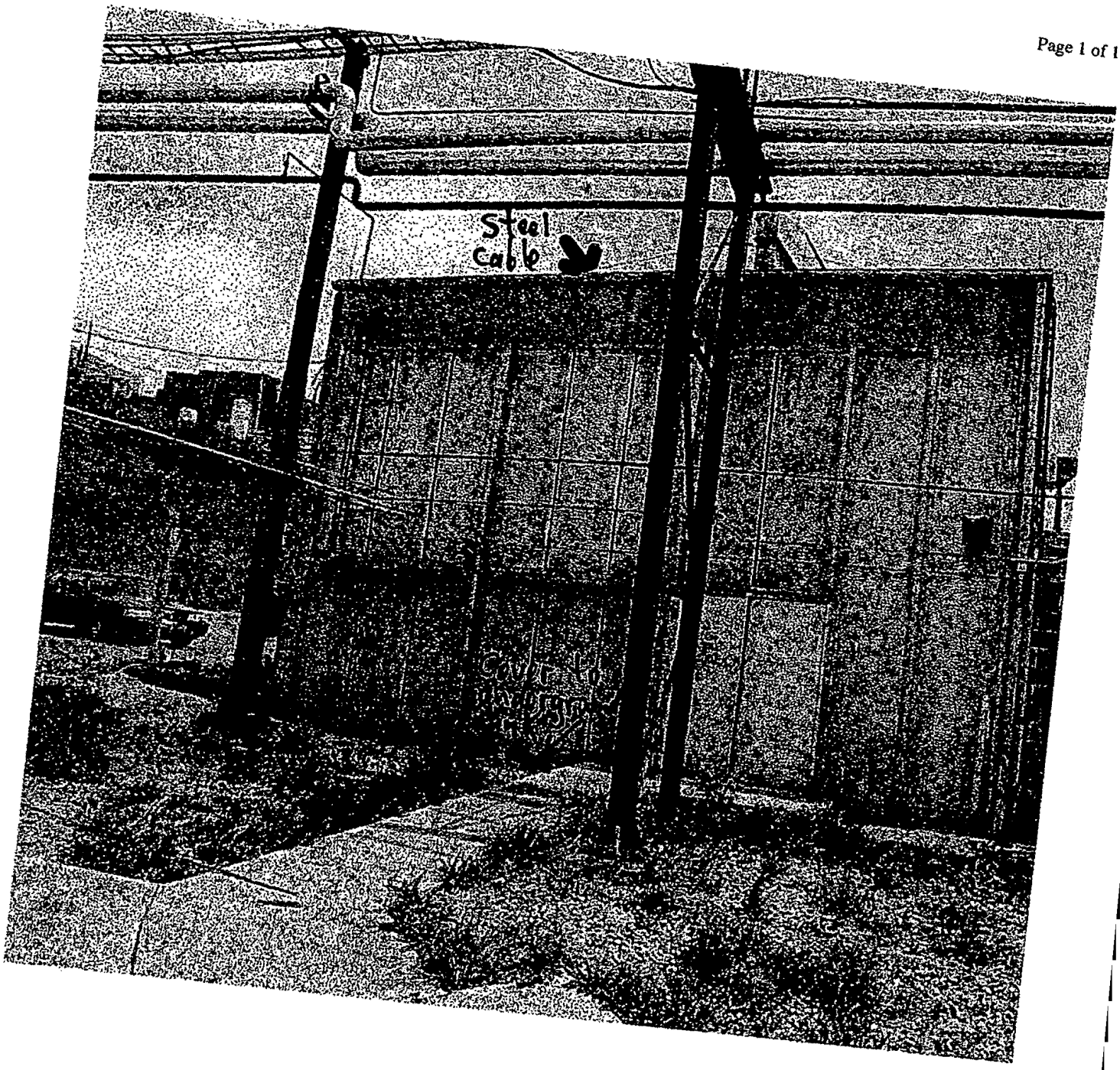


FIGURE 6

TEST FIRE VALLEY PROJECT SITE
SPECIFIC WORK PLAN
DOCUMENT HIERARCHY

LEVEL 1
LAWS/REGULATIONS
(Imposed by Outside Authority)

Federal, State, and Local Laws and Regulations

10CFR835
10CFR830.120
CAA
40CFR61, NESHAPS
40CFR763
40CFR302
29CFR1910
29CFR1926
49CFR, Parts 171-177
ORC3710
OAC3701-34
ORC3704
OAC3745

DOE Orders

5700.6C Quality Assurance
430.1A Life Cycle Asset Mgmt.
STD 1120-98
450.4 Integrated Safety Management System
STD-5502-94, Hazard Baseline Documentation
STD-1027-92 Hazard Categorization and Accident Analysis

Industry Standards

NFPA
National Electric Code
Ohio Basic Building Code

LEVEL 2
AGREEMENTS

BWO Contract DE-AC24-970H20044

LEVEL 3
MOUND SITE-WIDE DOCUMENTS
(Policy & Guidance from BWO)

Mound Executive Directive

LEVEL 4
ORGANIZATIONAL/ OPERATIONS DOCUMENTS

MD-10502
General Work Plan for Building Decontamination and Demolition or Decontamination and Transition at the Mound Site, Miamisburg, Ohio

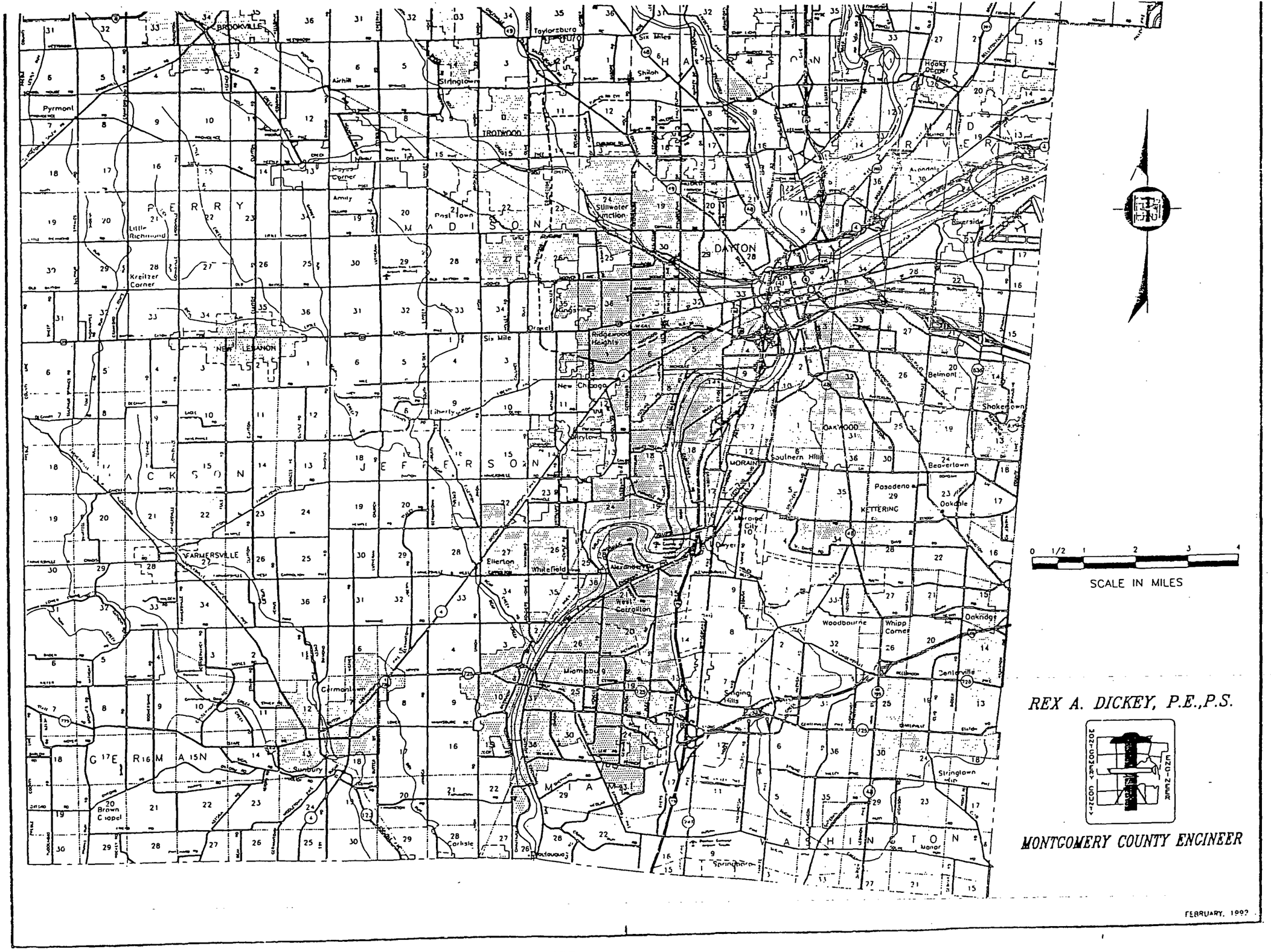
LEVEL 5
PROCEDURAL/ INSTRUCTIONAL DOCUMENTS

Work Plan For Removal Bldgs. 1, 43

LEVEL 6
REPORTS AND PERFORMANCE INDICATORS

Page Redacted

Contains Proprietary Information



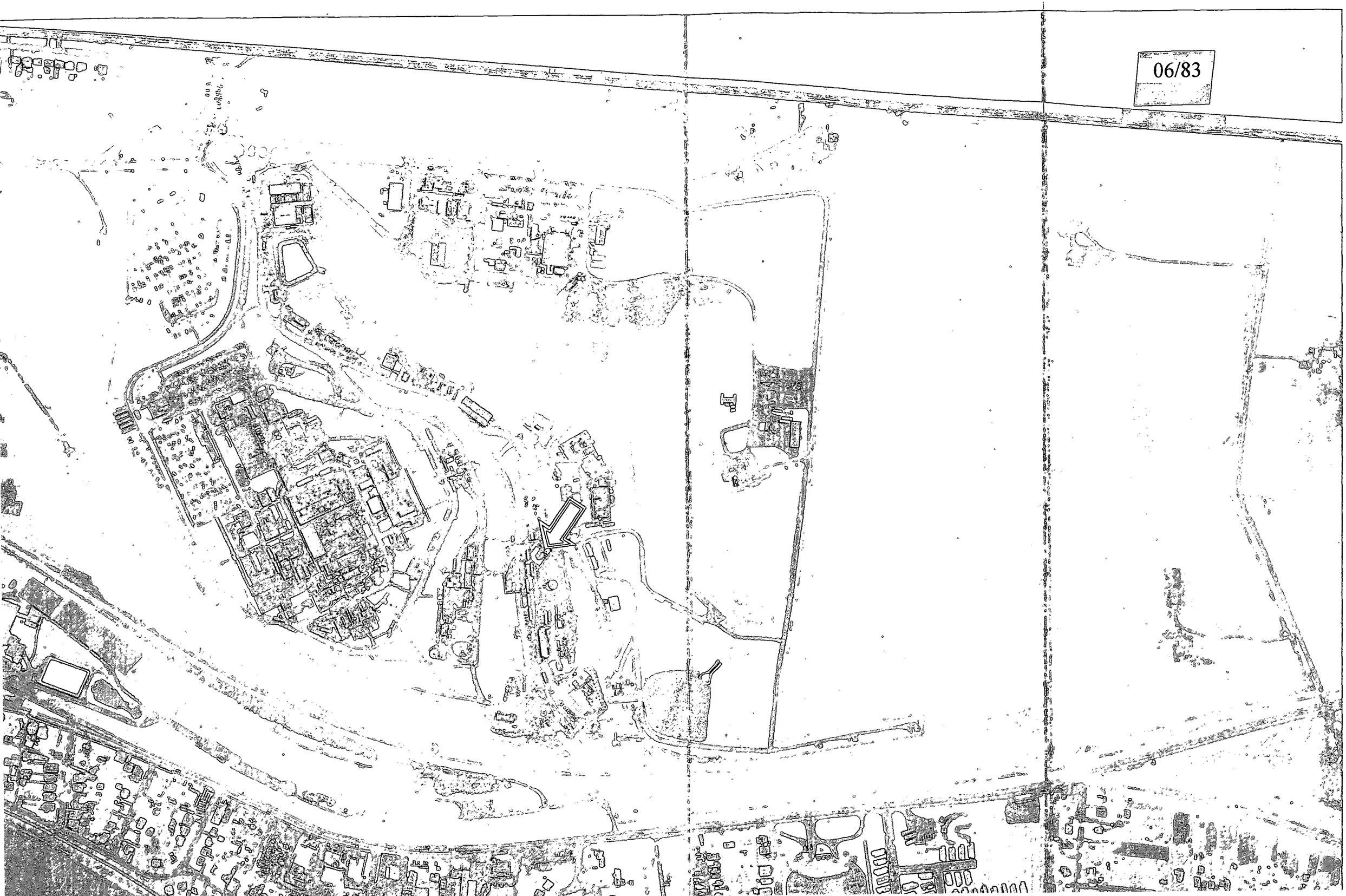
REX A. DICKEY, P.E.,P.S.

MONTGOMERY COUNTY ENGINEER

FEBRUARY, 1992

Legend
PROJECTS
Test Fire Valley
SM/PP Hill
Main Hill Non-RAD
Waste Management
Main Hill Tritium
Main Hill RAD
Isotope Power
PRS STATUS
D & D PRS's
NFA PRS's
NFAPS PRS's
RA,FA,UB PRS's
0 100 200 400 600 800 1000
Scale in Feet
TN
GN
MN
MOUND
Environmental Restoration Geographic Information System
SHEET 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
ISSUE
SHEET 1 2 3 4 5 6
ISSUE
PART CLASSIFICATION
(U) TITLE CLASSIFICATION
Building Ownership with PRS's
06/25/98
DRAWING CLASSIFICATION
UNCLASSIFIED
SIZE D
DRAWING NUMBER
bwproj_prs.dgn
JOB NUMBER
DWG TYPE
PRMG
CAGEC
SCALE
SHEET 1 OF
06/23/98
DCW
ISS
DATE
REVISION
BY
CHKR
ENG
M

04/04/94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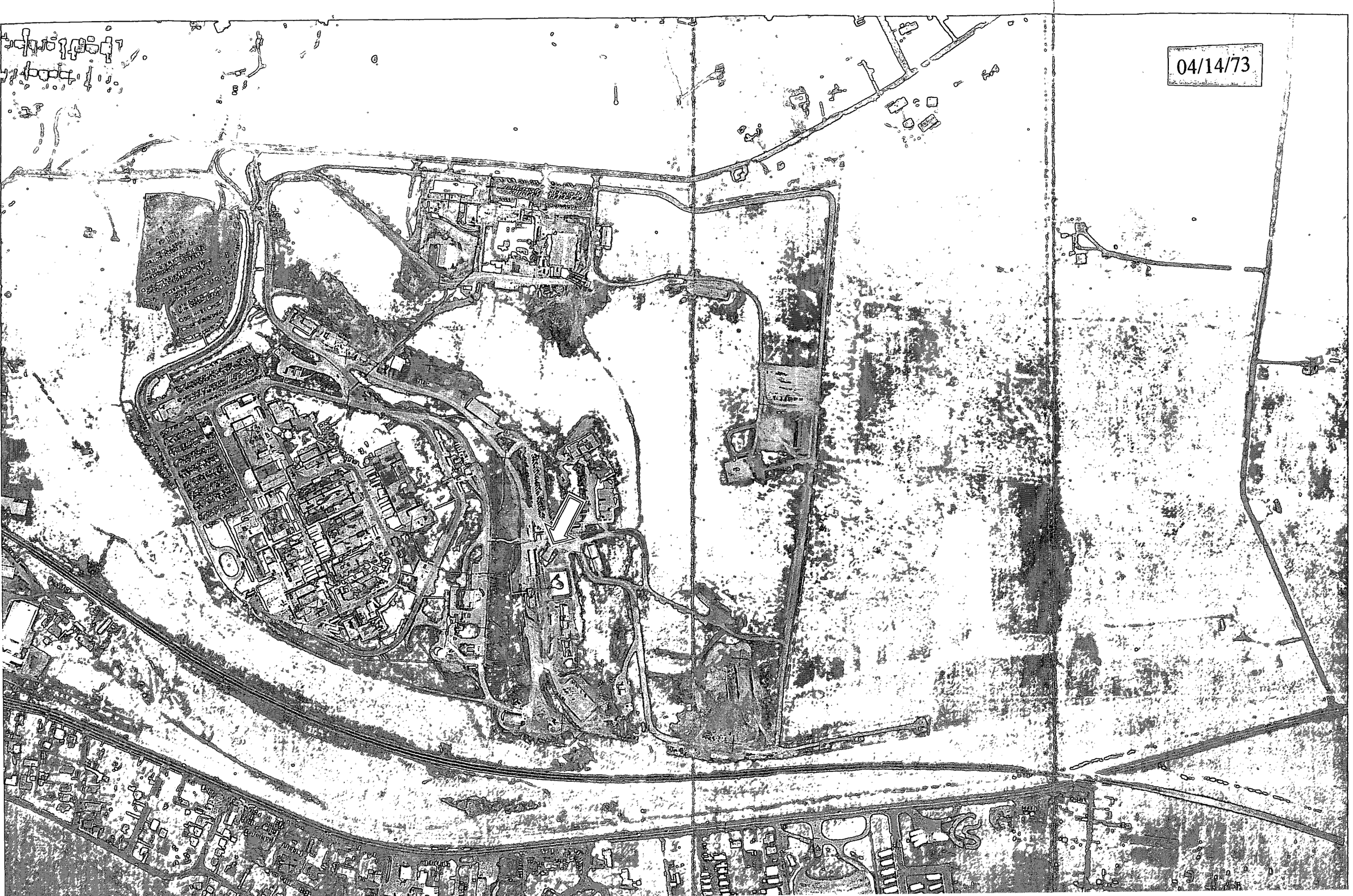
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03/30/68

04/07/65

11/19/59
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11/08/49