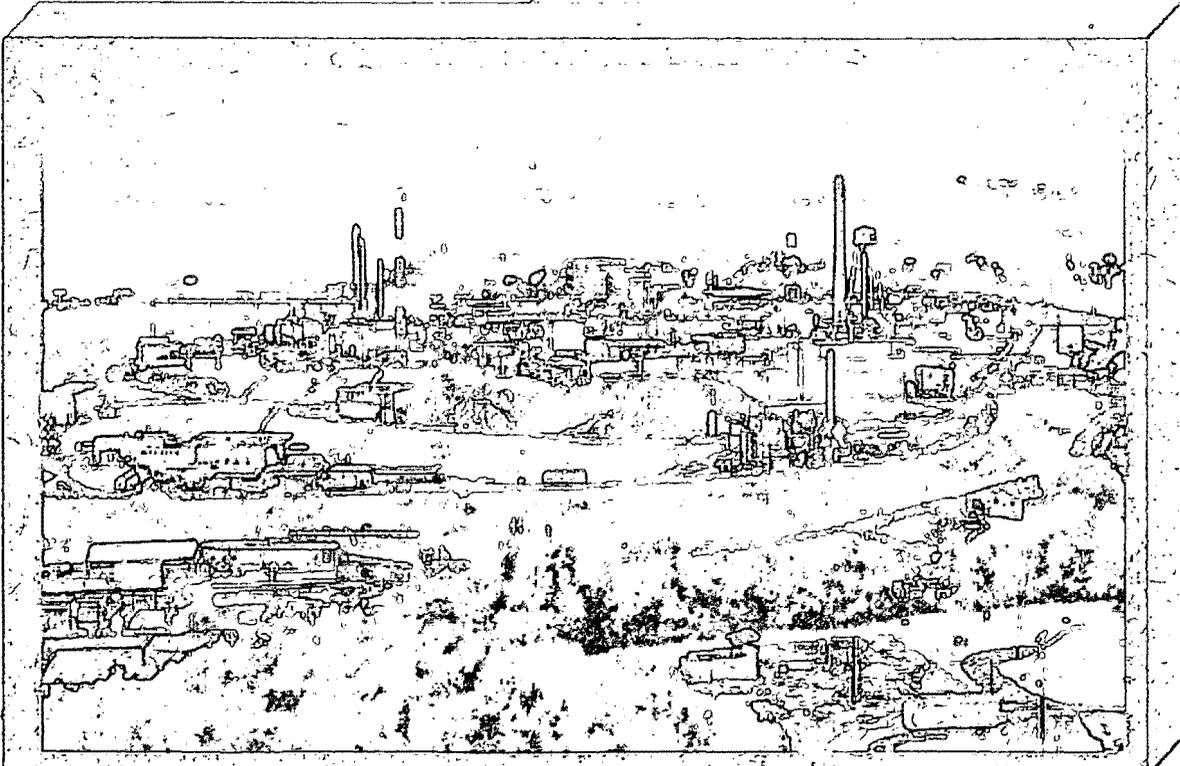


MOUND PLANT Building Data Package Magazines 80-84

Public Review Draft
March 2002



BDP Magazines 80-84

REV	DESCRIPTION	DATE
WORKING DRAFT (to DOE)		December 2001
DRAFT (to Core Team)	Neither USEPA nor OEPA had comments. Prompt Core Team binning and go directly to Public Review Draft. OEPA comment during binning prompted addition of RSDSs for inside of each magazine. Text adjusted to reflect the additional radiological surveys.	December 2001
DRAFT PROPOSED FINAL (confirm CT comments incorporated)	NA	NA
PUBLIC REVIEW DRAFT	Includes signed binning recommendation from Core Team.	March 2002
FINAL		

MOUND PLANT RECOMMENDATION

Magazines 80-84

Background:

Magazines 80-84 were built to serve as storage bunkers for energetic materials. Magazines 80-84 are currently leased and similar operations are being performed.

Recommendation:

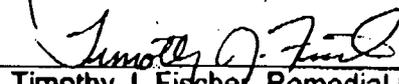
After thorough review of the environmental data and the Building Data Package, the Core Team agrees that all existing environmental issues associated with Magazines 80-84 have been resolved. Future use of Magazines 80-84 will be restricted to commercial/industrial use. The Core Team hereby recommends that the U.S. Department of Energy submit a letter to the Administrator of the U.S. EPA for final approval of the lease or sale of this property, as required by Section 120(h) of CERCLA.

DOE/MEMP:



Robert S. Rothman, Remedial Project Manager

USEPA:



Timothy J. Fischer, Remedial Project Manager

OEPA:



Brian K. Nickel, Project Manager

BUILDING DATA PACKAGE (BDP)

Magazines 80-84

(Transition)

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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1.0 General Overview

1.1 Introduction

The purpose of this Building Data Package (BDP) is to prepare for the transfer of Magazines 80-84 to the Miamisburg Mound Community Improvement Corporation (MMCIC) and to identify, if possible, any recognized environmental conditions (defined below) that may affect the subject property and structures.

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

1.2 Scope

This document has been prepared in accordance with the agreements and requirements as specified in the *Work Plan for Environmental Restoration of the DOE Mound Site, The Mound 2000 Approach*. This document is a BDP for Magazines 80-84 located at the Department of Energy (DOE) Mound Plant in Miamisburg, Ohio. This investigation was performed to support procedures as found in American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments; Phase I Environmental Site Assessment Process (Designation E 1527-97).

The scope of the investigation included the magazines, the soil beneath, and a 15-foot wide perimeter border around the magazines. This perimeter includes roadways, pavement, and grass covered areas. The investigation of Magazines 80-84 included the following:

- 1) A structure 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, releases, and chemical inventories
 - B) Past sampling data (see appendices)
 - Radiological survey
 - Soil sampling
 - Lead paint
 - Asbestos
 - Radon

Building investigations were conducted by BWXT of Ohio (BWXTO) personnel.

Information used to compile BDPs includes the following:

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

2.0 Building Specific Overview

Mound Plant is located in the southern portion of the corporation limits of Miamisburg, Ohio. The subject property consists of Mound Plant Magazines 80-84, the soil beneath, and a 15-foot wide perimeter around the magazines. Magazines 80-84 each contain 120 square feet of floor space (see floor plans in Appendix D). They were constructed in 1985.

2.1 Current Uses of Magazines 80-84

Magazines 80-84 are currently leased to MMCIC who subsequently leases it to Perkin-Elmer. Safe Shutdown was concluded in 1995 at which time the lease agreement was signed. Perkin-Elmer fabricates components containing energetic materials. Magazines 80-84 are used for the storage of energetic materials. Waste, if any, are handled by the lessee. This is similar to operations performed when DOE used the facilities.

2.2 Past Uses of Magazines 80-84

Magazines 80-84 were built to serve as storage bunkers for energetic materials.

2.3 Summary of Environmental Concerns and Findings - Magazines 80-84

DESCRIPTION	COMMENT	RESOLUTION
Lead Paint	N/A	
Chemicals	N/A	
Fluorescent Lamps and PCBs	N/A	
Asbestos	N/A	
Drainage Sumps	N/A	
Lead	N/A	
HVAC	N/A	
Mercury	N/A	
Radiological	N/A	
Septic System	N/A	
Waste Water	N/A	
Stains & Corrosion	N/A	
Space	N/A	
Storage Tanks	N/A	
Solid Waste Disposal	N/A	
Migratory Hazards	N/A	
Radon	N/A	
Energetic Material*	Magazines were used to store energetic materials.	Lessee is using the magazines for the same purpose.

N/A: Not a contaminant of concern during 1995 Safe Shutdown.

PCB: polychlorinated biphenyl

* PETN pentaerythritol; TATB triamino-trinitrobenzene; HMX cyclotetramethylenetetranitramine
RDX cyclotrimethylenetrinitramine; HNS hexanitrostibene

2.4 Radiological Characterization Summary for Magazines 80-84

An assessment of Magazines 80-84 was performed reviewing operational history and radiological survey data. There is no history of having processed, handled, or stored radioactive materials in the magazines and it is unlikely that it ever occurred due to the nature and design of the structures. Surveys performed within each magazine indicate no elevated readings.

In accordance with "Generic Process for the Disposition of Buildings That Have Potential or Actual Radiological Contamination", the review team concluded that the building was radiologically non-impacted and no further radiological surveys were required. Supporting documentation is contained in Appendix G.

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm ²)	SURFACE CONTAMINATION GUIDELINES (dpm/100 cm ²) (Note 1)	COMMENTS
Highest Alpha Smearable Activity	97-GA-209	Horizontal Surfaces & Equipment	3.74	20	
Highest Alpha Fixed Activity	Note 2	N/A	< 100	100	
Highest Beta Smearable Activity	97-GA-193	Horizontal Surfaces & Equipment	5.97	1,000	
Highest Beta Fixed Activity	Note 2	N/A	< 5000	5,000	
Highest Tritium Smearable Activity	97-GA-209	Horizontal Surfaces & Equipment	11.26	10,000	

Note 1: Per DOE Order 5400.5

Note 2: All radiological surveys indicated < 100 dpm/100cm² alpha and < 5000 dpm/100cm² beta.

RSDS: radiological survey data sheet

2.5 Associated PRS Table for Magazines 80-84

There are no PRSs directly associated with Magazines 80-84. PRSs closest to the magazines and their current status are identified on Figure 2 and in the following table. Additional information is included in Section 4.2.3 and Appendix N.

PRS #	CERCLA or BLDG. RELATED	BINNING STATUS	COMMENTS
PRS 282	CERCLA	Further Assessment (FA)	Spoils disposal area
PRS 311	CERCLA	No Further Assessment (NFA) 3/4/96	Potential hot spot location S0706
PRS 346	CERCLA	NFA 11/20/96	Soil Contamination – next to landfill
PRS 347	CERCLA	NFA 11/20/96	Soil Contamination
PRS 350	CERCLA	NFA 9/12/95	Soil Contamination – Area West of Bd. 21
PRS 414	CERCLA	FA	South area groundwater and soil evaluation
PRS 418	CERCLA	NFA 6/21/00	Overflow pond south inlet

3.0 Site Description

3.1 Site/Vicinity Location and Characteristics

Magazines 80-84 are located at the DOE facility known as Mound Plant. Mound Plant is situated in the City of Miamisburg, Miami Township, Montgomery County, State of Ohio as shown in Appendix B.

The Mound facility was at one time situated on 306 acres of land and contained approximately 130 buildings with a total of approximately 1.4 million square feet of floor space (the number of buildings is constantly diminishing as buildings are decommissioned and either sold or demolished). The original 182-acre site, purchased by the Manhattan Engineer District in 1946, consisted of two hills and an intervening valley that runs approximately east and west. Magazines 80-84 are located in the lower valley of the plant site. The 124-acre tract acquired in 1981 is an undeveloped mixture of fields and woods that undulates and slopes downward to the west, away from the main site. This area was acquired to serve as a buffer and has been used as a staging area and parking area for contractors working on-site. See figures in Appendix C.

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

3.2 Description of Structures, Roads, Other Improvements Related to Magazines 80-84

The subject property consists of the Mound Plant Magazines 80-84 footprint, the soil beneath, and a 15-foot wide perimeter around the magazines. Magazines 80-84 are each one-story, 120 square foot structures. They are reinforced concrete structures covered by soil on all but one side. They were constructed in 1985.

3.3 Current and Past Uses of Buildings In Proximity To Magazines 80-84

Magazines 80-84 were built to support the former Test Fire complex, which includes Buildings 2, 3, 63E, and 63W. Magazines 80-84 were used for storage of energetic materials. Buildings closest to Magazines 80-84 are identified in the table below. The location of these structures relevant to Magazines 80-84 are shown in graphics located in Appendix F.

Building	Building Area (square feet)	Past Use	Current Use
85	3,160	Powder processing facility (never used)	Demolished
Magazine 10	66	Storage of energetic materials	Demolished
Magazine 20	303	Storage of energetic materials	Demolished

4.0 Records Review

4.1 General/Historical CERCLA Information

In compliance with permit requirements under the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), and the Clean Air Act (CAA), Mound Plant has applied for or has received permits for its surface water discharges, air emissions, and hazardous waste program. Mound Plant is currently operating a hazardous waste storage facility under a RCRA Part B Permit dated October 18, 1996. Mound Plant also maintains a National Pollutant Discharge Elimination System (NPDES) surface water discharge permit with Facility I.D. number OH 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 Ohio Environmental Protection Agency (OEPA), pursuant to Superfund Amendments and Reauthorization Act (SARA), Title III, the Emergency Planning and Community Right-to-Know Act. The 2000 version of this report indicated that no chemicals are stored in Building 3 in quantities above the regulatory thresholds.

The Mound Plant was identified as a contaminated site on the National Priority List under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (Superfund) in 1989. The Mound Plant site was originally listed as a consequence of volatile organic compound (VOC) contamination in the western end of the lower valley area. The cleanup of the Mound Site was originally to be accomplished under the CERCLA mandated procedures for regulating Superfund Sites using the operable unit (OU) system to define and characterize cleanup areas. As the cleanup effort went forward, it became apparent that the Mound Site did not fit the profile for a cleanup strategy based on the operable units. The DOE, the United States Environmental Protection Agency (USEPA), and the OEPA designed a new decision making process for the cleanup of Mound. The new process is known formally as a "removal site evaluation process" and informally as the "Mound 2000 Process." The Mound 2000 Process system divided Mound into geographical parcels containing over 400 PRSs with approximately 200 concerned with potentially contaminated soils, and the balance with potential contamination in or associated primarily with building operations. For a more detailed description, refer to the *Work Plan for Environmental*

Restoration of the DOE Mound Site, the Mound 2000 Approach.

4.2 Specific Record Sources

4.2.1 Occurrence Reports

None.

4.2.2 Spills and Releases

None.

4.2.3 Associated PRS Overview

As a result of the investigations and documentation accomplished to comply with the CERCLA cleanup process via the Federal Facilities Agreement (FFA)/DOE Environmental Restoration (ER) Program, DOE and BWXTO have tabulated all the PRSs identified under the various regulatory programs in effect at the site. Of these 440 PRSs, PRS 282, 311, 346, 347, 350, 418, and 414 are related to Magazines 80-84 due to proximity of location. Recommendations for associated PRSs are included in Appendix N.

4.2.4 Sampling Data

4.2.4.1 Radiological Surveys

Survey data indicated no elevated radiological readings in the magazines. Supporting documentation is contained in Appendix G.

4.2.4.2 Soil Sampling Data

Previous soil sampling results show no samples exceeding 10⁻⁶ risk-based guideline values. See Appendix L for a listing of soil sample results.

4.2.4.3 Chemical History/Removal

The structures were used to store energetic materials. The lessee may be using them in a similar manner.

4.2.4.4 Lead Paint

No objective data could be found or was generated during the walk-through assessment of Magazines 80 - 84 to indicate the presence of lead-based paint. See Appendix J for documentation of the walk-through. Therefore, all such coatings were assumed to be potentially lead-containing. The observed paint coatings were found to be intact.

4.2.4.5 Asbestos

No previous survey information on asbestos was available. A walk-through assessment of readily accessible areas of Magazines 80 - 84 identified floor tiles which were assumed to contain asbestos. All observed floor tile was seen to be intact. See Appendix I for documentation of the walk-through.

4.2.4.6 Radon

The 1989-90 Mound Indoor Radon study did not include an assessment for Magazines 80-84.

4.3 Review of Building Prints

Building prints were reviewed and are included in Appendix D.

4.4 Aerial Photographs

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

4.5 Interviews

Due to the building being leased, no interviews were conducted. The current Building Manager is Gary Weidenbach. No significant items other than the energetic materials storage in the building are known to exist.

Appendix A
General Listing of Acronyms

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

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

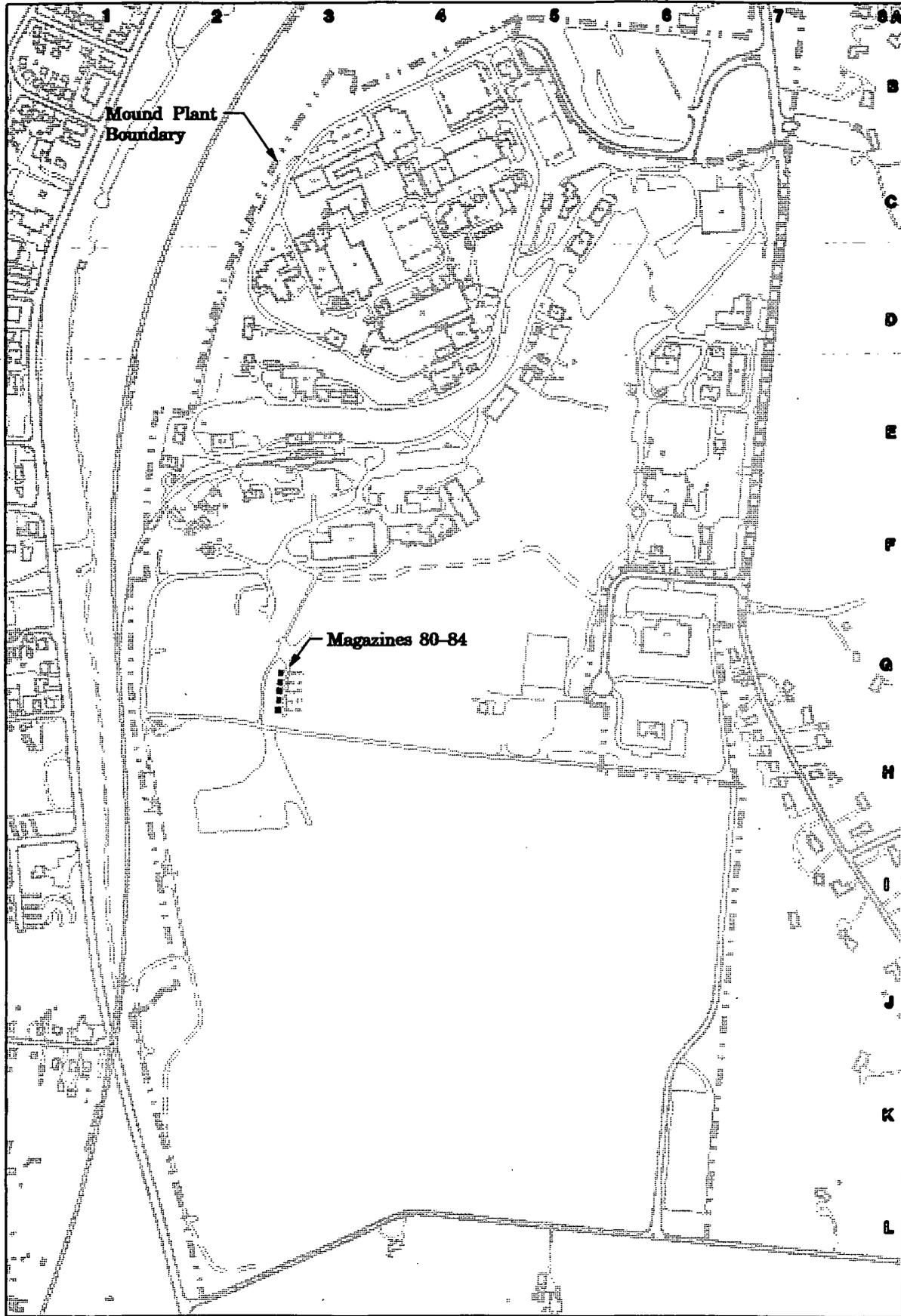
REC	Recognized Environmental Condition
RI	Remedial Investigation
RSDS	Radiological Survey Data Sheet
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SQG	Small Quantity Generator
SWMU	Solid Waste Management Unit
TRIS	Toxic Chemical Release Inventory System
TSD	Treatment,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

Appendix B

Map of Montgomery County

Appendix C

Figures



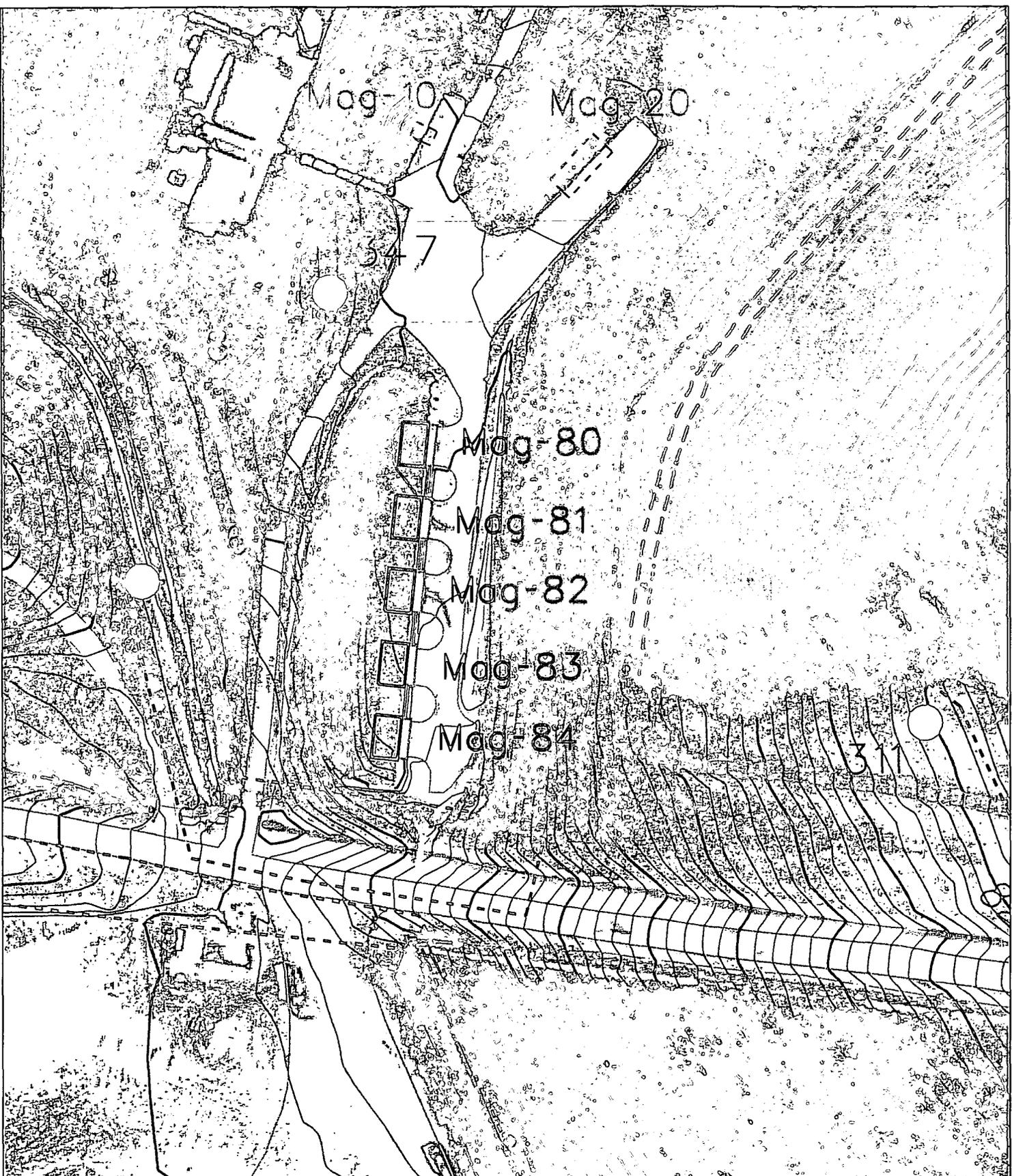
Legend

- Structure
- Paved roadway
- Unpaved roadway
- Retroad
- Water course
- Fence
- Mound Plant boundary
- Contour line



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	A																					
PART CLASSIFICATION																						
ISSUE CLASSIFICATION																SCALE	GRAPHIC					
UNCLASSIFIED																SCALE	GRAPHIC					
DATE	12/10/01															ISSUE FOR GENERAL USE						
DATE																ISSUE FOR GENERAL USE						
DATE																ISSUE FOR GENERAL USE						

Figure 1
Location of
Magazines 80-84



- PRS Point
- ⌈ ⌋ PRS Area
- ~ Contour Line



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	01																				
PART CLASSIFICATION																					
UNCLASSIFIED															vicinity.dgn			ADD FACTOR			
DCG TYPE	STE	FIG	ER-GIS	CAGE	SCALE	SHEET 1 OF															
STATUS MD-REL - 03/03/03															ORGN MSTATION / J						

12/06/01	SSP							
ISS	DATE	REVISION	BY	CHKD	ENG	LS/EC	APPD	U

MOUND SITE MAP

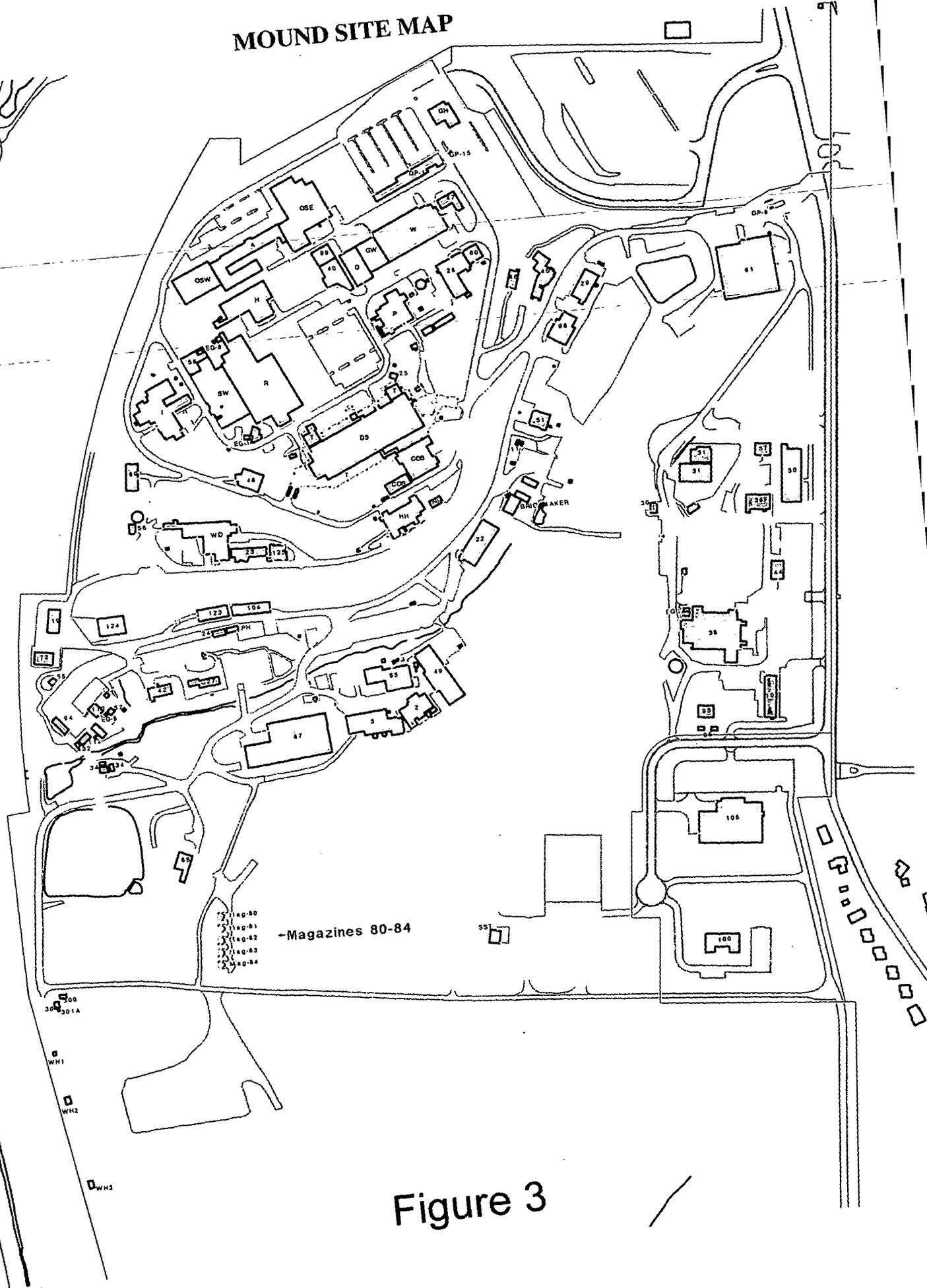


Figure 3



Figure 4



Figure 5



Figure 6



Figure 7

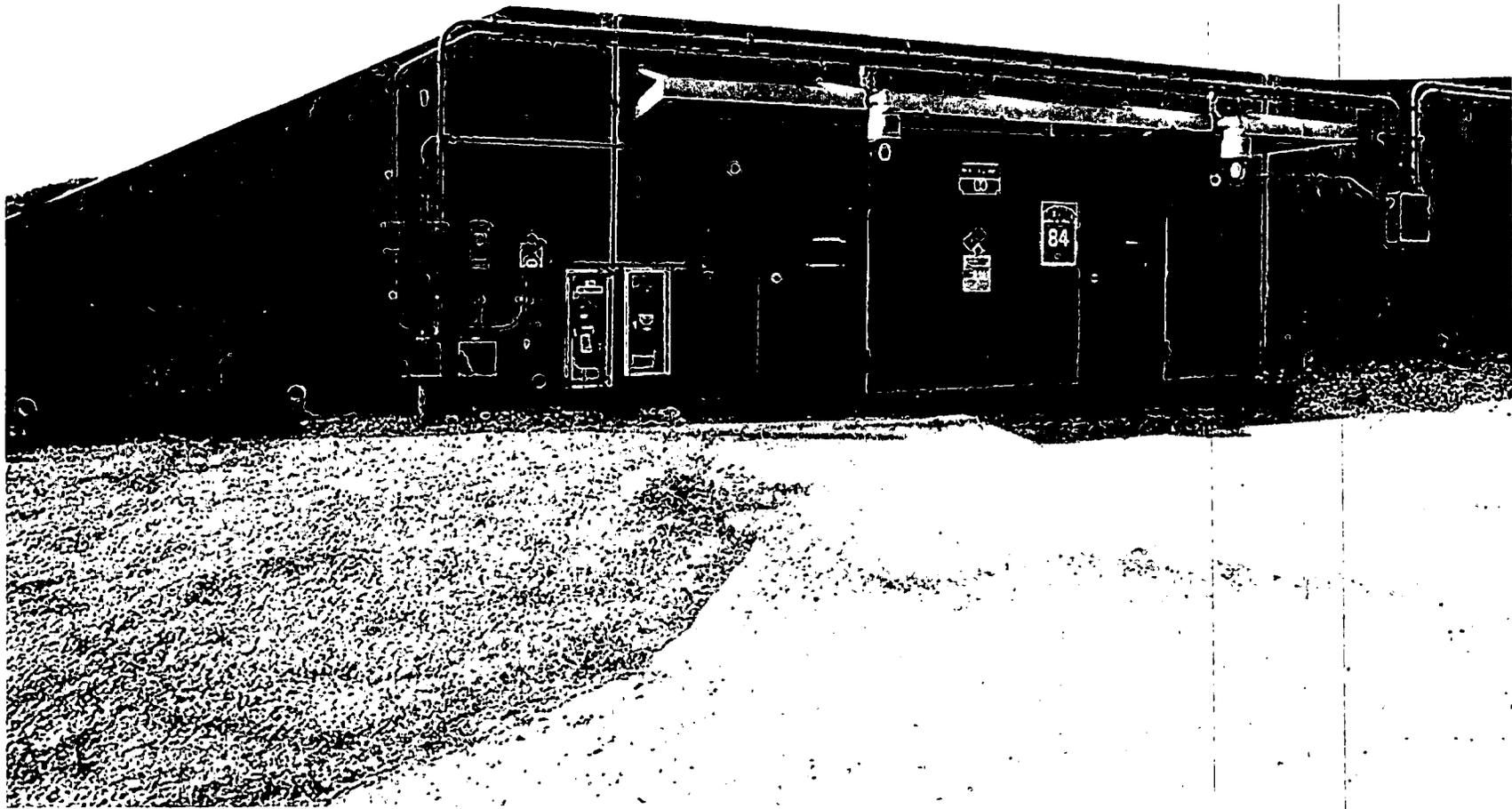


Figure 8

1973

-Mag. 80-84 not yet built



1983

←Mag. 80-84 not yet built



1994

-Mag. 80-84



Appendix F

Environmental Appraisal Report of the Mound Plant (Excerpt)

Environmental Appraisal of the Mound Plant

9.128 MAGAZINE 80

9.128.1 Scope of Magazine 80 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 prepared to perform a walk-through of Magazine 80 on the morning of January 29, 1996; however, it was confirmed by the building manager that the magazine had been leased to the City of Miamisburg. Therefore, an environmental appraisal was not conducted. No Building Manager's Questionnaire (BMQ) was available and the Environmental Appraisal Checklist (EAC) was not completed since the magazine was leased.

9.128.2 Description of Magazine 80

Magazine 80 is a two-unit compartment, reinforced concrete box structure classified as a nonstandard, earth-covered magazine. Each compartment contains 120 square feet. Magazines 80 - 84 are side-by-side and share the same headwall. Its location is shown in Attachment 1 (Section 9.128.4.1). The Magazine is southeast of Building 85 in the south-central area of the Mound site adjacent to the Test Fire Area. The magazine has electrical service for outside electrical lighting and the alarm system. Magazine 80 also has electrical service to power remote freezer condensing units located outside the magazine (*Mound Facility Physical Characterization*, 12-1-93).

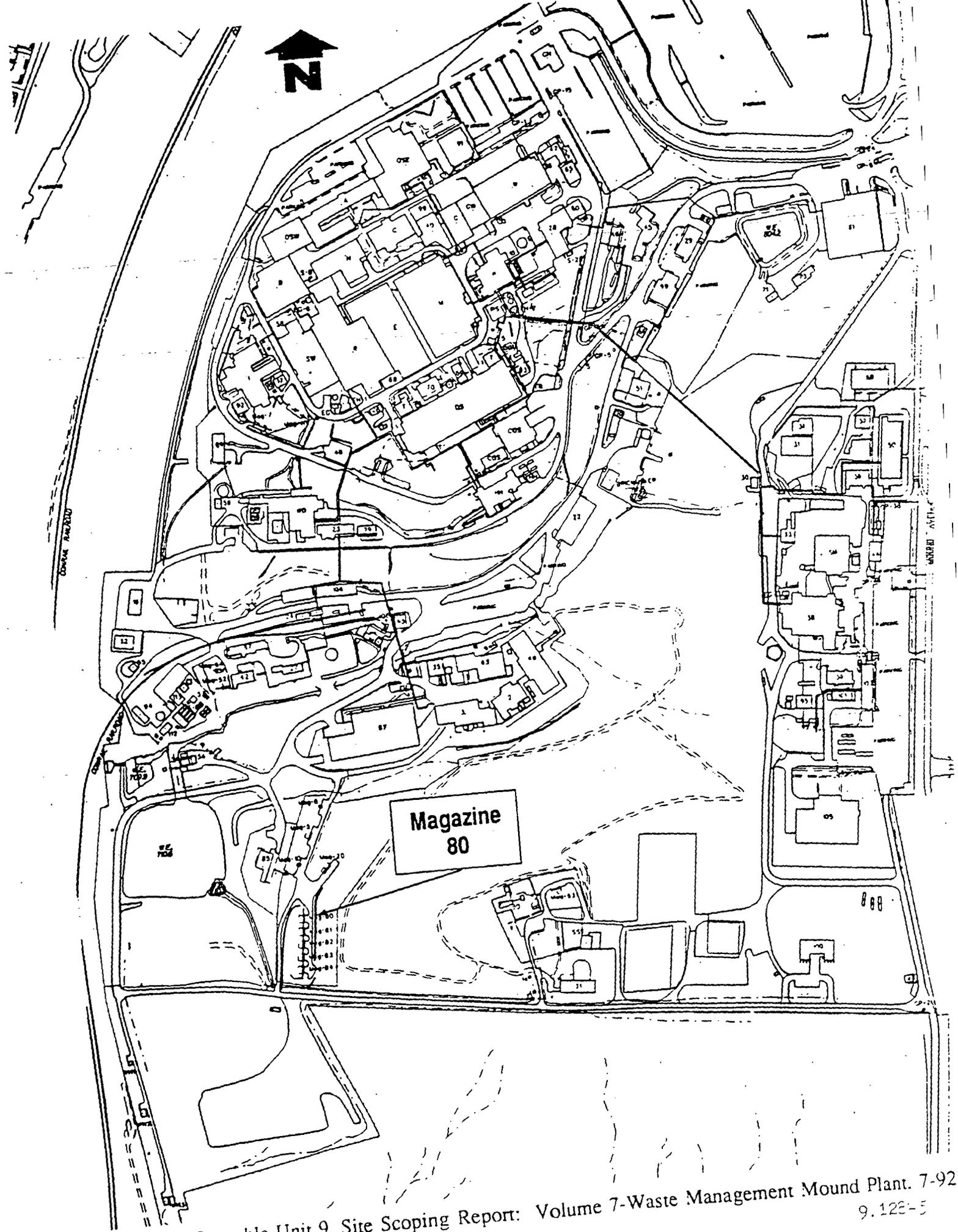
Magazine 80 was constructed in 1985 (*Capital Assets Management Process, CAMP Report, FY96*). The magazine had been used for the same purpose since construction. No research, development, or production activities using radioactive or energetic materials have occurred in the magazine. The magazine was used for the storage of energetic materials. (*Mound Facility Physical Characterization*, 12-1-93).

9.128.3 Summary of Findings

Magazine 80 has undergone Safe Shutdown which includes removal of wastes and other materials plus equipment which cannot be released. A health physics safety determination and a liabilities assessment were made. An Environmental Site Assessment (ASTM E 1527-94 or ASTM E 1528-93) was not conducted. The building has been leased by the Department of Energy (DOE) to the City of Miamisburg which accepted the liabilities assessment. The General Purpose Lease between the DOE and the City of Miamisburg requires the sub-lessee to obtain and comply with regulatory agency permits.

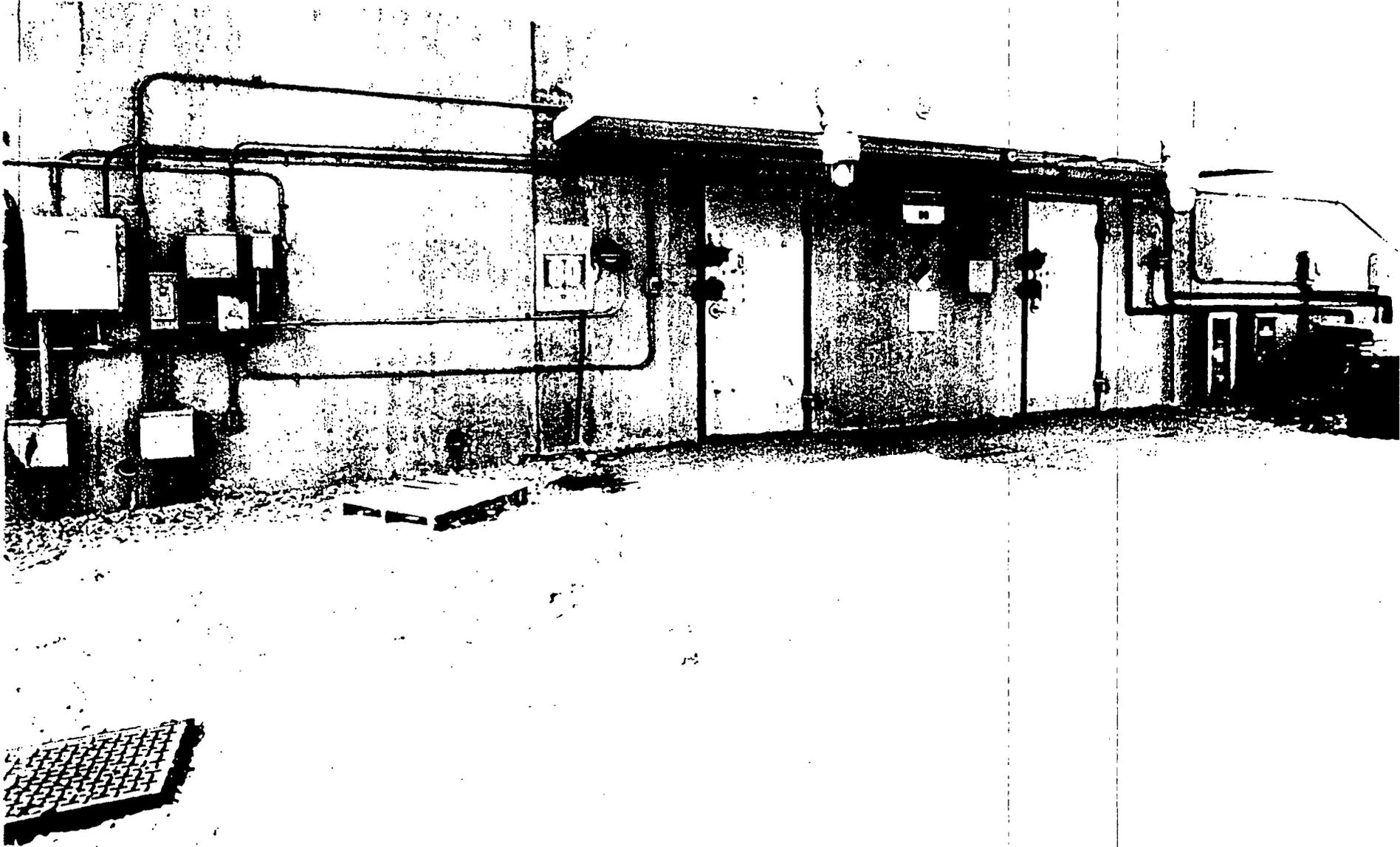
Environmental Appraisal of the Mound Plant

Photographs were taken to document the building. They are included as Attachment 2 (Section 9.128.4.2). Since the magazine has been leased, an EAC was not prepared and no further action was taken concerning this building.



SOURCE: Operable Unit 9, Site Scoping Report: Volume 7-Waste Management Mound Plant. 7-92
9.128-5

World Plant Magazine 83



4-128-3

Environmental Appraisal of the Mound Plant

9.129 MAGAZINE 81

9.129.1 Scope of Magazine 81 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 prepared to perform a walk-through of Magazine 81 on the morning of January 29, 1996; however, it was confirmed by the building manager that the magazine had been leased to the City of Miamisburg. Therefore, an environmental appraisal was not conducted. No Building Manager's Questionnaire (BMQ) was available and the Environmental Appraisal Checklist (EAC) was not completed since the magazine was leased.

9.129.2 Description of Magazine 81

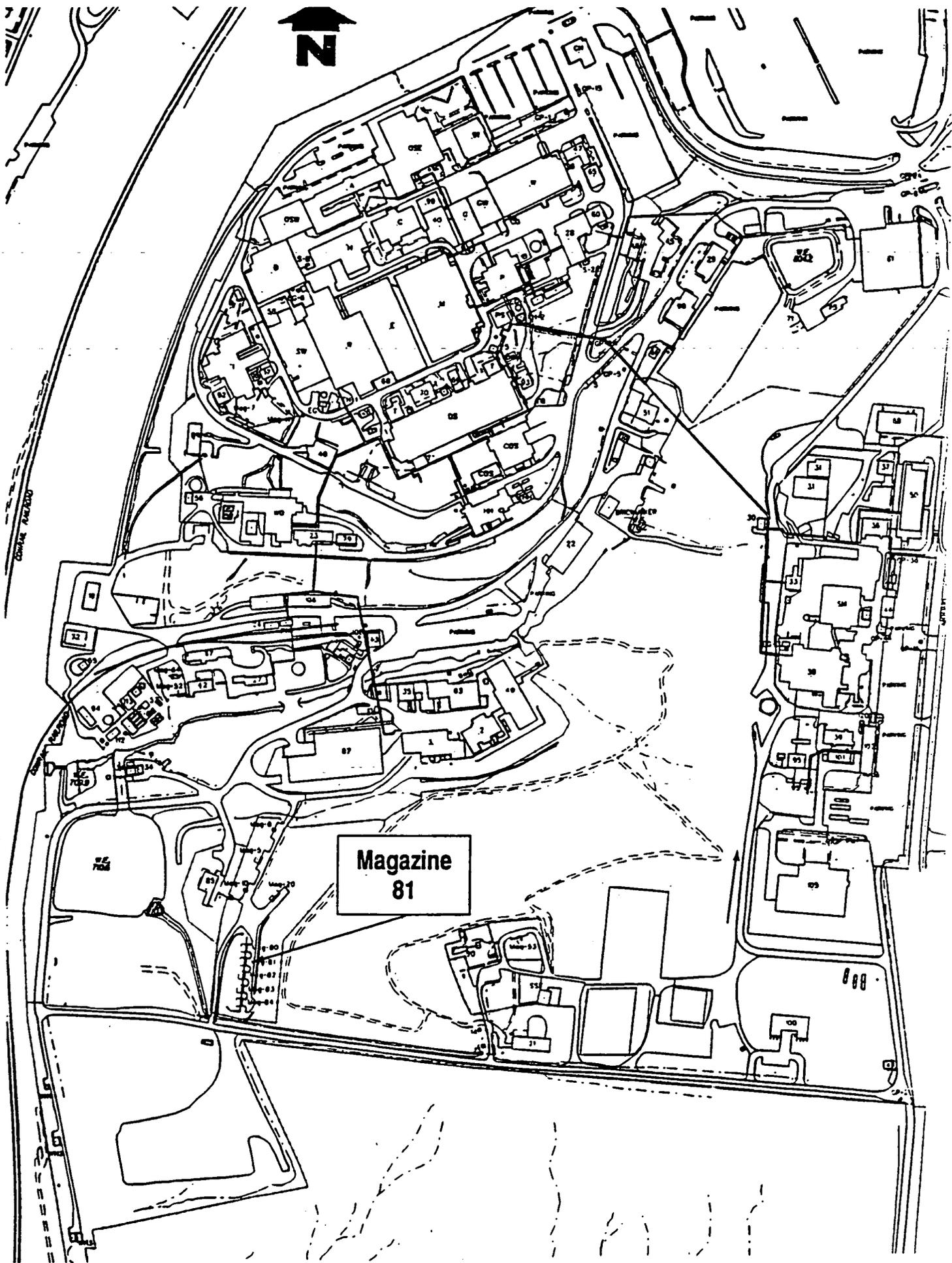
Magazine 81 is a two-unit compartment, reinforced concrete box structure classified as a nonstandard, earth-covered magazine. Each compartment contains 120 square feet. Magazines 80 - 84 are side-by-side and share the same headwall. Its location is shown in Attachment 1 (Section 9.129.4.1). The Magazine is southeast of Building 85 in the south-central area of the Mound site adjacent to the Test Fire Area. The magazine has electrical service for outside electrical lighting and the alarm system (*Mound Facility Physical Characterization*, 12-1-93).

Magazine 81 was constructed in 1985 (*Capital Assets Management Process, CAMP Report, FY96*). The magazine had been used for the same purpose since construction. No research, development, or production activities using radioactive or energetic materials have occurred in the magazine. The magazine was used for the storage of energetic materials. (*Mound Facility Physical Characterization*, 12-1-93).

9.129.3 Summary of Findings

Magazine 81 has undergone Safe Shutdown which includes removal of wastes and other materials plus equipment which cannot be released. A health physics safety determination and a liabilities assessment were made. An Environmental Site Assessment (ASTM E 1527-94 or ASTM E 1528-93) was not conducted. The building has been leased by Department of Energy (DOE) to the City of Miamisburg which accepted the liabilities assessment. The General Purpose Lease between the DOE and the City of Miamisburg requires the sub-lessee to obtain and comply with regulatory agency permits.

Photographs were taken to document the building. They are included as Attachment 2 (Section 9.129.4.2). Since the magazine has been leased, an EAC was not prepared and no further action was taken concerning this building.



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

Sound Plant Magazine 81



S. 129-9

Environmental Appraisal of the Mound Plant

9.130 MAGAZINE 82

9.130.1 Scope of Magazine 82 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 prepared to perform a walk-through of Magazine 82 on the morning of January 29, 1996; however, it was confirmed by the building manager that the magazine had been leased to the City of Miamisburg. Therefore, an environmental appraisal was not conducted. No Building Manager's Questionnaire (BMQ) was available and the Environmental Appraisal Checklist (EAC) was not completed since the magazine was leased.

9.130.2 Description of Magazine 82

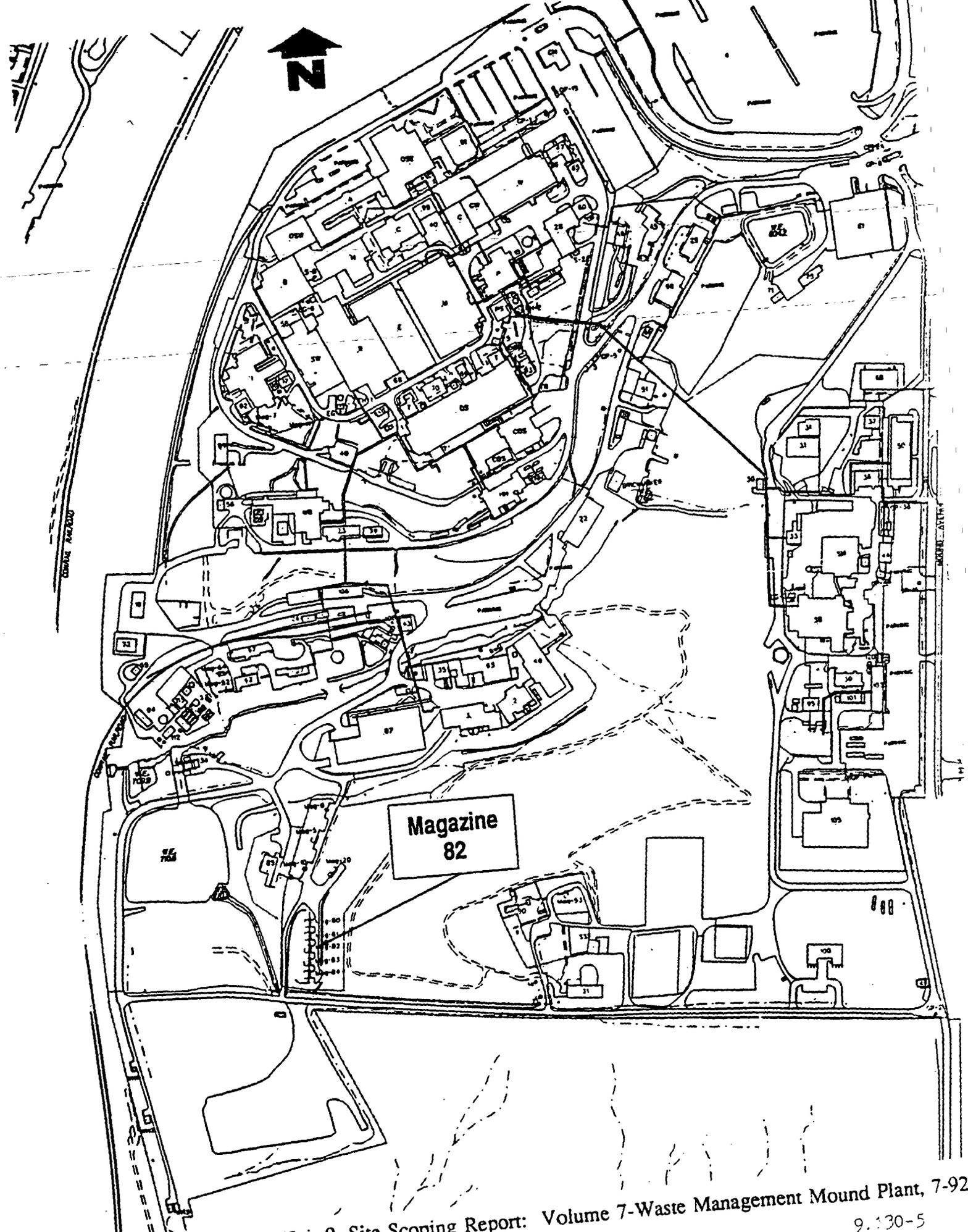
Magazine 82 is a two-unit compartment, reinforced concrete box structure classified as a nonstandard, earth-covered magazine. Each compartment contains 120 square feet. Magazines 80 - 84 are side-by-side and share the same headwall. Its location is shown in Attachment 1 (Section 9.130.4.1). The Magazine is southeast of Building 85 in the south-central area of the Mound site adjacent to the Test Fire Area. The magazine has electrical service for outside electrical lighting and the alarm system (*Mound Facility Physical Characterization*, 12-1-93).

Magazine 82 was constructed in 1985 (*Capital Assets Management Process, CAMP Report, FY96*). The magazine had been used for the same purpose since construction. No research, development, or production activities using radioactive or energetic materials have occurred in the magazine. The magazine was used for the storage of energetic materials. (*Mound Facility Physical Characterization*, 12-1-93).

9.130.3 Summary of Findings

Magazine 82 has undergone Safe Shutdown which includes removal of wastes and other materials plus equipment which cannot be released. A health physics safety determination and a liabilities assessment was made. An Environmental Site Assessment (ASTM E 1527-94 or ASTM E 1528-93) was not conducted. The building has been leased by the Department of Energy (DOE) to the City of Miamisburg which accepted the liabilities assessment. The General Purpose Lease between the DOE and the City of Miamisburg requires the sub-lessee to obtain and comply with regulatory agency permits.

Photographs were taken to document the building. They are included as Attachment 2 (Section 9.130.4.2). Since the magazine has been leased, an EAC was not prepared and no further action was taken concerning this building.



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

Mound Plant Magazine 82



9.130-9

Environmental Appraisal of the Mound Plant

9.131 MAGAZINE 83

9.131.1 Scope of Magazine 83 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 prepared to perform a walk-through of Magazine 83 on the morning of January 29, 1996; however, it was confirmed by the building manager that the magazine had been leased to the City of Miamisburg. Therefore, an environmental appraisal was not conducted. No Building Manager's Questionnaire (BMQ) was available and the Environmental Appraisal Checklist (EAC) was not completed since the magazine was leased.

9.131.2 Description of Magazine 83

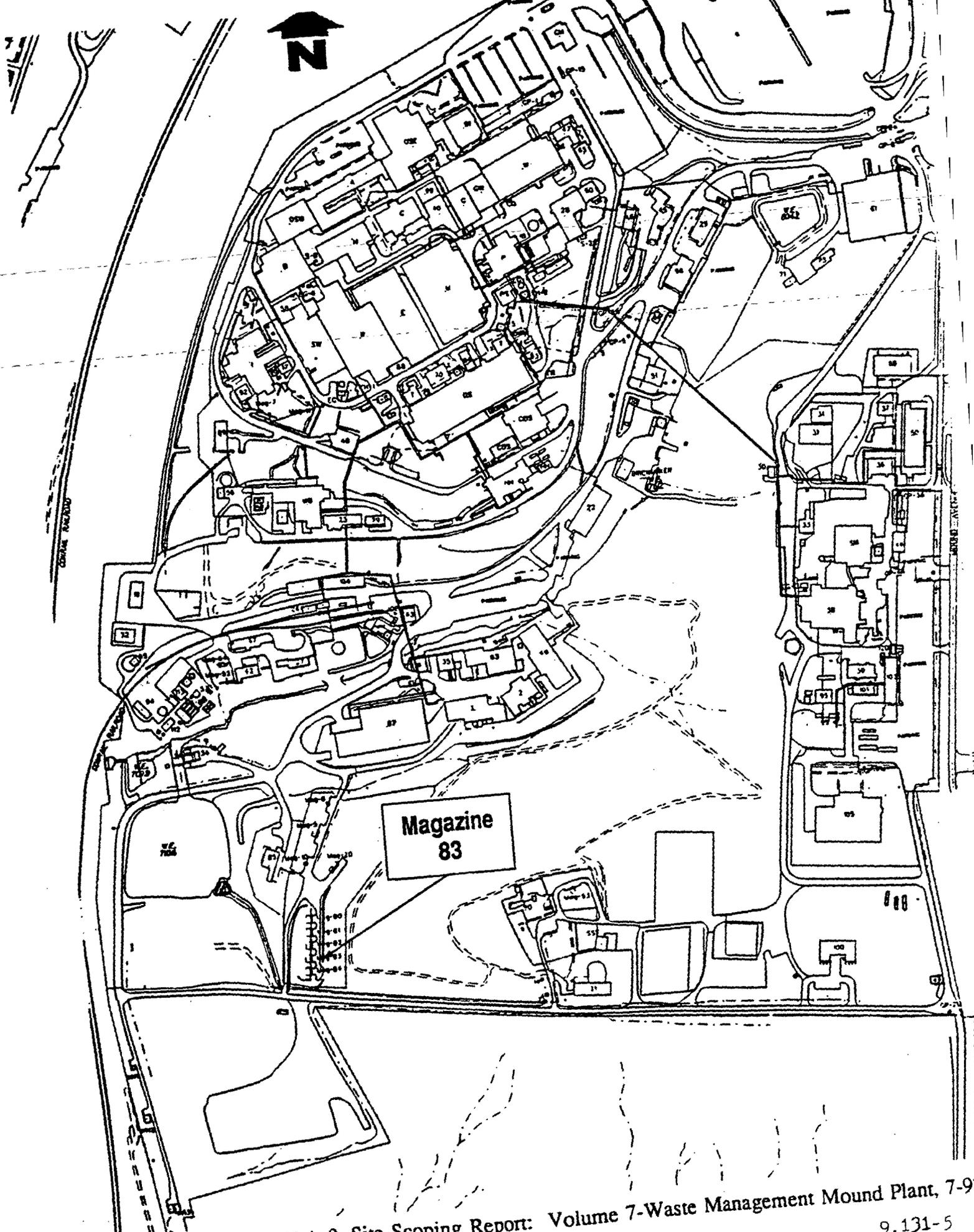
Magazine 83 is a two-unit compartment, reinforced concrete box structure classified as a nonstandard, earth-covered magazine. Each compartment contains 120 square feet. Magazines 80 - 84 are side-by-side and share the same headwall. Its location is shown in Attachment 1 (Section 9.131.4.1). The Magazine is southeast of Building 85 in the south-central area of the Mound site adjacent to the Test Fire Area. The magazine has electrical service for outside electrical lighting and the alarm system (*Mound Facility Physical Characterization*, 12-1-93).

Magazine 83 was constructed in 1985 (*Capital Assets Management Process, CAMP Report, FY96*). The magazine had been used for the same purpose since construction. No research, development, or production activities using radioactive or energetic materials have occurred in the magazine. The magazine was used for the storage of energetic materials. (*Mound Facility Physical Characterization*, 12-1-93).

9.131.3 Summary of Findings

Magazine 83 has undergone Safe Shutdown which includes removal of wastes and other materials plus equipment which cannot be released. A health physics safety determination and a liabilities assessment were made. An Environmental Site Assessment (ASTM E 1527-94 or ASTM E 1528-93) was not conducted. The building has been leased by Department of Energy (DOE) to the City of Miamisburg which accepted the liabilities assessment. The General Purpose Lease between the DOE and the City of Miamisburg requires the sub-lessee to obtain and comply with regulatory agency permits.

Photographs were taken to document the building. They are included as Attachment 2 (Section 9.131.4.2). Since the magazine has been leased, an EAC was not prepared and no further action was taken concerning this building.



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

Mound Plant Magazine 83



9.131-9

Environmental Appraisal of the Mound Plant

9.132 MAGAZINE 84

9.132.1 Scope of Magazine 84 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 prepared to perform a walk-through of Magazine 84 on the morning of January 29, 1996; however, it was confirmed by the building manager that the magazine had been leased to the City of Miamisburg. Therefore, an environmental appraisal was not conducted. No Building Manager's Questionnaire (BMQ) was available and the Environmental Appraisal Checklist (EAC) was not completed since the magazine was leased.

9.132.2 Description of Magazine 84

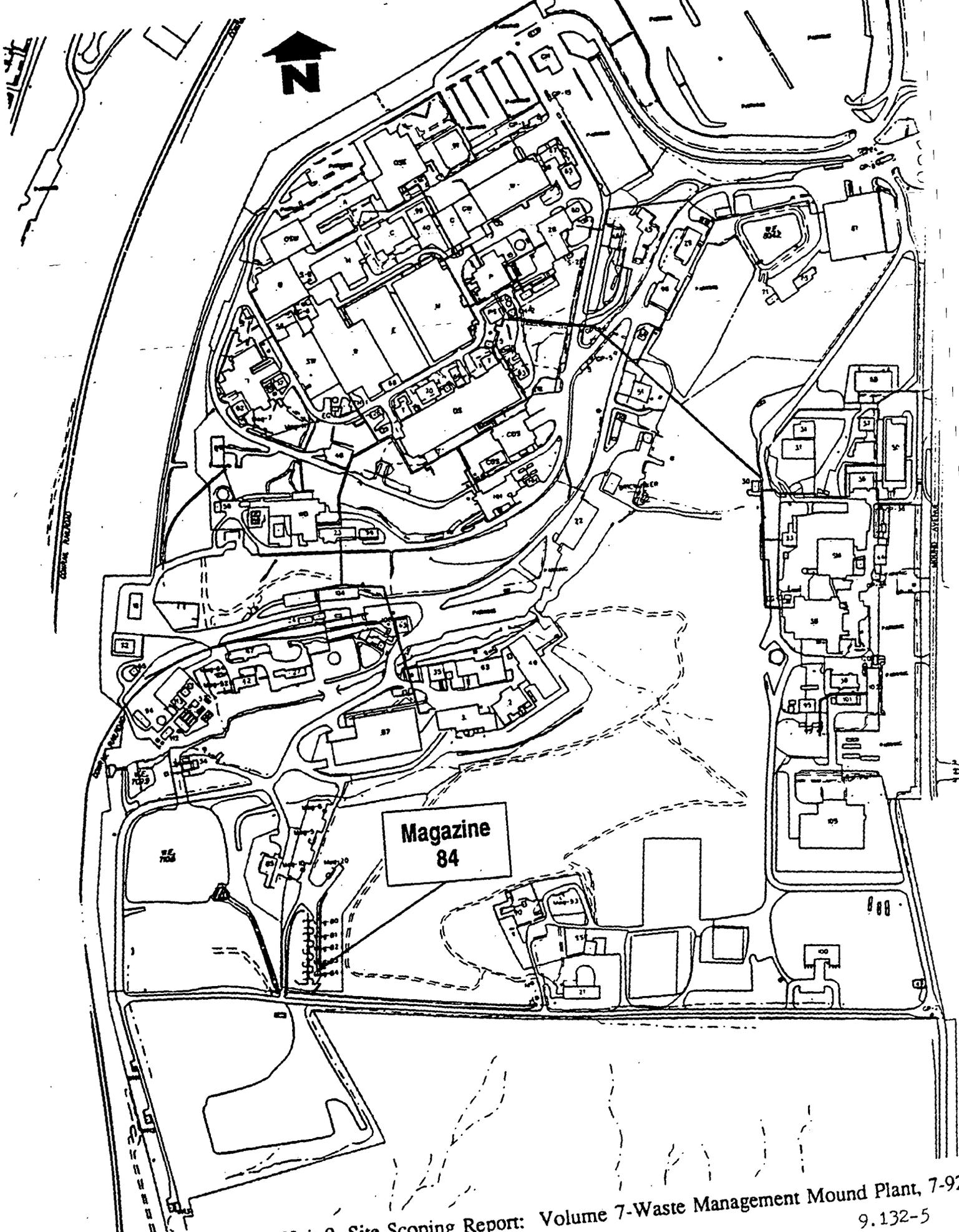
Magazine 84 is a two-unit compartment, reinforced concrete box structure classified as nonstandard, earth-covered magazine. Each compartment contains 120 square feet. Magazines 80 - 84 are side-by-side and share the same headwall. Its location is shown in Attachment 1 (Section 9.132.4.1). The Magazine is southeast of Building 85 in the south-central area of the Mound site adjacent to the Test Fire Area. The magazine has electrical service for outside electrical lighting and the alarm system (*Mound Facility Physical Characterization*, 12-1-93).

Magazine 84 was constructed in 1985 (*Capital Assets Management Process, CAMP Report, FY96*). The magazine had been used for the same purpose since construction. No research, development, or production activities using radioactive or energetic materials have occurred in the magazine. The magazine was used for the storage of energetic materials. (*Mound Facility Physical Characterization*, 12-1-93).

9.132.3 Summary of Findings

Magazine 84 has undergone Safe Shutdown which includes removal of wastes and other materials plus equipment which cannot be released. A health physics safety determination and a liabilities assessment were made. An Environmental Site Assessment (ASTM E 1527-94 or ASTM E 1528-93) was not conducted. The building has been leased by the Department of Energy (DOE) to the City of Miamisburg which accepted the liabilities assessment. The General Purpose Lease between the DOE and the City of Miamisburg requires the sub-lessee to obtain and comply with regulatory agency permits.

Photographs were taken to document the building. They are included as Attachment 2 (Section 9.132.4.2). Since the magazine has been leased, an EAC was not prepared and no further action was taken concerning this building.



SOURCE: Operable Unit 9, Site Scoping Report: Volume 7-Waste Management Mound Plant, 7-92
9.132-5



Appendix G

Radiological Summary/Information

RADIOLOGICAL SURVEY DATA SHEET

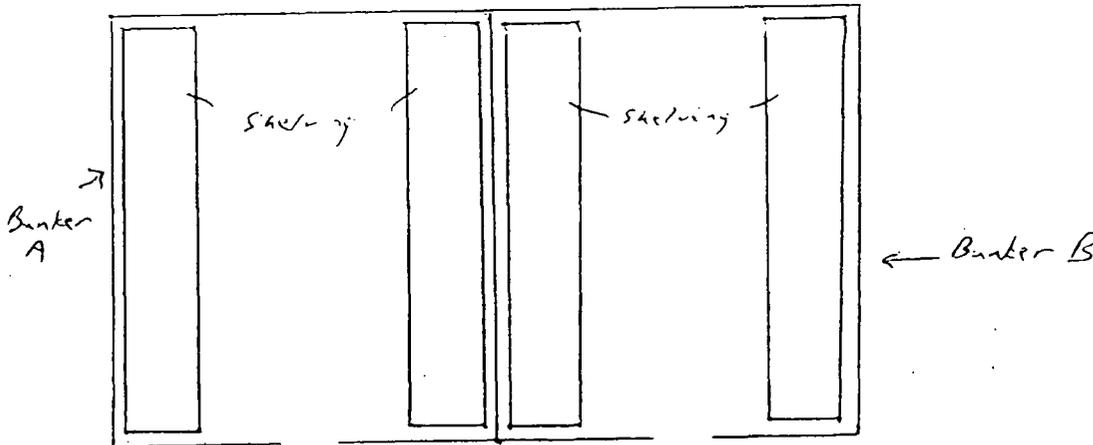
LOCATION: (BLDG/AREA/ROOM) Explosive Bunkers	SURVEY NO. 00- W70 2575-00
PURPOSE: Continuation Survey	RWP NO. N/A
	DATE: 2-22-00
	TIME: 1100

MAP/DRAWING

- Direct Surveys were not performed in the Bunkers. All Surveys Counted $< 1 \mu\text{Ci}$ $100 \mu\text{Ci}$ $2 \mu\text{Ci}$ and $< 20 \mu\text{Ci}/100 \text{cm}^2$. 9 Bunkers were Surveyed and the Bunkers are 80B, 80A, 81B, 81A, 82B, 82A, 83B, 83A, 84A.

- The Direct Surveys were not performed due to Static Protection needed in the Explosive Areas.

Typical Bunker Arrangement



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact

\triangle # = mrem/hr neutron
 \square # = air sample number

\bigcirc # = swipe number
 \bigcirc #/ α or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE ELECTRA	5431/5343	5-17-00
	A	
	N	

Completed by: (Signature)



HP# 82399	Date: 2-22-00
HP# 5681	Date: 2/23/00
HP# 7737	Date: 2-25-00

010-00 0100-10
 010-010-250
 3-15-00

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dprn/100cm ²)				Comments
Sample #	Beta	Alpha	Tritium	
1	SEE ATTACHED	SEE ATTACHED		80B Floor
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				↓
14				Cooker
15				↓
16				shelf
17				↓
18				80A Floor
19				
20				
21				
22				↓
23				Locker
24				shelf
25				81B Floor
26				↓
27				
28				↓
29				shelf
30				↓
31				Cart
32				81A Floor
33				↓
34				
35	✓	✓	✓	✓

Removable Contamination				
Swipes (dprn/100cm ²)				Comments
Sample #	Beta	Alpha	Tritium	
36	SEE ATTACHED	SEE ATTACHED		Shelving
37				↓
38				82B Floor
39				
40				
41				
42				Explosive Cont.
43				↓
44				Shelving
45				82A Floor
46				
47				
48				↓
49				Shelving
50				↓
51				83B Floor
52				
53				↓
54				
55				Cart
56				↓
57				Shelving
58				84B Floor
59				
60				
61				↓
62				Shelving
63				↓
64				84A Floor
65				
66				
67				
68				Shelving
69				↓
70	✓	✓	✓	Cart

COMMENTS:

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

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Blue
 Data file name: SMEAR024
 Batch Ended: 2/23/2000 13:50
 Cal. Due Date: 8/24/2000
 Serial Number: 26966-3

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

Batch ID: ~~00-WD-252~~ WHITE (70) CYR
 00-TF-116
 3-15-00

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	2.78	2.86	<AL	0.61	2.59	<MDA
A2	2	0.00	2.21	<MDA	0.00	1.54	<MDA
A3	3	0.00	1.95	<MDA	2.79	2.39	<AL
A4	4	1.49	2.14	<MDA	0.00	1.56	<MDA
B1	5	1.46	2.05	<MDA	0.00	1.56	<MDA
B2	6	0.00	1.89	<MDA	0.00	1.41	<MDA
B3	7	0.00	2.02	<MDA	3.38	2.90	<AL
B4	8	0.00	1.94	<MDA	1.96	2.36	<MDA
C1	9	0.00	2.03	<MDA	1.31	2.32	<MDA
C2	10	0.00	2.05	<MDA	0.41	1.92	<MDA
C3	11	0.00	1.93	<MDA	0.00	1.35	<MDA
C4	12	0.00	1.92	<MDA	0.58	2.76	<MDA
D1	13	0.00	2.01	<MDA	0.00	1.50	<MDA
D2	14	0.00	2.03	<MDA	0.00	1.31	<MDA
D3	15	1.55	2.12	<MDA	0.19	2.09	<MDA
D4	16	0.00	1.99	<MDA	0.00	1.33	<MDA
A1	17	0.00	2.06	<MDA	0.00	2.28	<MDA
A2	18	0.00	2.21	<MDA	0.00	1.54	<MDA
A3	19	1.59	1.96	<AL	4.98	2.89	<AL
A4	20	0.00	2.16	<MDA	1.81	2.46	<MDA
B1	21	0.00	2.05	<MDA	0.00	1.56	<MDA
B2	22	0.00	1.90	<MDA	1.73	2.30	<MDA
B3	23	0.00	2.01	<MDA	0.00	1.54	<MDA
B4	24	0.00	1.93	<MDA	0.00	1.46	<MDA
C1	25	0.00	2.01	<MDA	0.00	1.48	<MDA
C2	26	0.00	2.06	<MDA	1.70	2.31	<MDA
C3	27	1.64	1.93	<AL	0.00	1.35	<MDA

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Blue
 Data file name: SMEAR024
 Batch Ended: 2/23/2000 13:50
 Cal. Due Date: 8/24/2000
 Serial Number: 26966-3

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

00-TF-116
 Batch ID: ~~00-WD-252~~ WHITE (70) CYR
 3-15-00

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	1.91	<MDA	0.00	2.51	<MDA
D1	29	0.00	2.06	<MDA	2.81	2.72	<MDA
D2	30	0.00	2.04	<MDA	0.16	1.74	<MDA
D3	31	0.00	2.11	<MDA	0.00	1.57	<MDA
D4	32	0.00	2.02	<MDA	3.80	2.71	<AL
A1	33	0.81	2.07	<MDA	0.72	2.59	<MDA
A2	34	0.00	2.25	<MDA	3.31	2.88	<AL
A3	35	0.00	1.93	<MDA	0.48	1.74	<MDA
A4	36	0.00	2.14	<MDA	0.00	1.56	<MDA
B1	37	1.28	2.05	<MDA	0.48	2.10	<MDA
B2	38	0.00	1.90	<MDA	1.73	2.30	<MDA
B3	39	0.00	2.02	<MDA	1.96	2.53	<MDA
B4	40	1.35	1.93	<MDA	0.55	1.96	<MDA
C1	41	1.71	2.01	<AL	0.00	1.48	<MDA
C2	42	1.70	2.04	<AL	0.00	1.42	<MDA
C3	43	0.00	1.94	<MDA	0.20	1.79	<MDA
C4	44	0.00	1.88	<MDA	0.00	1.50	<MDA
D1	45	0.00	2.03	<MDA	0.20	1.99	<MDA
D2	46	1.73	2.03	<AL	0.00	1.31	<MDA
D3	47	0.00	2.11	<MDA	0.00	1.57	<MDA
D4	48	0.00	2.00	<MDA	0.27	1.77	<MDA
A1	49	0.00	2.08	<MDA	2.05	2.86	<MDA
A2	50	0.00	2.23	<MDA	1.91	2.51	<MDA
A3	51	0.00	1.92	<MDA	0.00	1.31	<MDA
A4	52	0.00	2.14	<MDA	0.00	1.56	<MDA
B1	53	0.00	2.05	<MDA	0.00	1.56	<MDA
B2	54	1.22	1.90	<MDA	2.91	2.63	<MDA
B3	55	1.48	2.01	<MDA	0.00	1.54	<MDA
B4	56	1.41	1.93	<MDA	0.00	1.46	<MDA

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Blue
 Data file name: SMEAR024
 Batch Ended: 2/23/2000 13:50
 Cal. Due Date: 8/24/2000
 Serial Number: 26966-3

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

Batch ID: ~~00-WD-252~~ WHITE (70) CYR
 00-TE-114
 3-15-00

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C1	57	0.00	2.05	<MDA	3.84	2.93	<AL
C2	58	0.00	2.06	<MDA	1.70	2.31	<MDA
C3	59	0.00	1.93	<MDA	0.00	1.35	<MDA
C4	60	0.00	1.91	<MDA	0.00	2.51	<MDA
D1	61	0.00	2.04	<MDA	1.51	2.38	<MDA
D2	62	0.00	2.05	<MDA	1.31	2.09	<MDA
D3	63	0.00	2.14	<MDA	3.10	2.86	<MDA
D4	64	0.00	2.01	<MDA	1.44	2.13	<MDA
A1	65	0.82	2.06	<MDA	0.00	1.93	<MDA
A2	66	1.69	2.22	<MDA	0.35	2.08	<MDA
A3	67	0.00	1.93	<MDA	0.48	1.74	<MDA
A4	68	0.00	2.19	<MDA	5.86	3.39	<AL
B1	69	1.28	2.05	<MDA	0.48	2.10	<MDA
B2	70	0.00	1.89	<MDA	0.00	1.41	<MDA

Protocol #: 4

PW 5CC H3 #403727

User : 56

Time: 2.00

Data Mode: DPM

Nuclide: SMVIAL2

Quench Set: SMVIAL2

Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 - 18.6		0	0.0	6.01
Region B:	2.0 - 18.6		0	0.0	5.97
Region C:	40.0 - 2000		0	0.0	11.10

Quench Indicator: tSIE/AEC

Ext Std Terminator: Count

00 WD-252 WHITE (30-18 W1-W70) CYR ✓ CO-TF-116

Luminescence Correction Co

Coincidence Time(ns): 18

Delay Before Burst(ns): Normal

Protocol Data Filename: C:\DATA\PROT4.DAT

Count Data Filename: C:\DATA\SDATA4.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.01	5.97	11.10	582.43	9	B		0.00
0	2.00	997.93	991.78	0.00	553.47	0		2245.31	193.06
1	2.00	0.00	0.00	0.00	512.91	0		0.00	0.00
2	2.00	1.49	0.95	0.00	497.28	0		3.54	9.97
3	2.00	0.50	0.30	0.00	579.64	0		1.09	8.66
4	2.00	2.49	2.53	1.40	493.78	0		5.94	10.57
5	2.00	1.49	1.53	1.40	479.58	0		3.62	10.20
6	2.00	0.70	0.39	0.00	530.43	0		1.61	9.20
7	2.00	0.00	0.00	0.00	514.02	0		0.00	0.00
8	2.00	0.00	0.00	3.90	483.18	0		0.00	0.00
9	2.00	1.49	1.48	0.00	476.97	0		3.64	10.24
10	2.00	0.00	0.00	0.00	508.62	0		0.00	0.00
11	2.00	0.00	0.00	0.90	484.78	0		0.00	0.00
12	2.00	0.99	0.54	0.00	447.43	0		2.52	10.36
13	2.00	0.00	0.00	0.00	519.02	0		0.00	0.00
14	2.00	0.61	0.56	0.00	496.67	0		1.44	9.46
15	2.00	0.05	0.00	0.00	596.07	0		0.12	8.29
16	2.00	0.49	0.33	0.00	561.53	0		1.09	8.81
17	2.00	2.66	2.71	0.00	522.93	0		6.17	10.35
18	2.00	3.51	3.55	0.40	580.33	0		7.70	10.21
19	2.00	1.49	1.53	0.00	517.48	0		3.47	9.77
20	2.00	0.00	0.00	0.00	469.73	0		0.00	0.00
21	2.00	0.00	0.00	0.00	502.44	0		0.00	0.00
22	2.00	0.00	0.00	0.00	489.27	0		0.00	0.00
23	2.00	0.99	1.03	0.00	374.05	0		2.85	11.74
24	2.00	0.00	0.00	0.00	569.29	0		0.00	0.00
25	2.00	1.14	0.69	0.00	494.29	0		2.73	9.80
26	2.00	0.00	0.00	0.00	560.55	0		0.00	0.00
27	2.00	0.00	0.00	0.00	507.34	0		0.00	0.00
28	2.00	0.00	0.03	0.00	500.73	0		0.00	0.00
29	2.00	0.49	0.33	0.00	560.56	0		1.09	8.82
30	2.00	0.49	0.42	0.00	512.01	0		1.15	9.24
31	2.00	0.00	0.00	0.00	468.63	0		0.00	0.00
32	2.00	0.49	0.51	0.90	462.76	0		1.22	9.83
33	2.00	0.00	0.00	0.00	524.24	0		0.00	0.00
34	2.00	0.00	0.00	0.00	448.40	0		0.00	0.00
35	2.00	0.49	0.43	0.00	467.33	0		1.21	9.77

A. C. 7

✓

S#	TIME	CPMA	CPMB	CPMC	tsIE	LUM	FLAG	DPM1	2SIGMA
36	2.00	1.99	1.53	0.00	552.57	0		4.48	9.71
37	2.00	0.00	0.00	1.40	466.59	0		0.00	0.00
38	2.00	1.49	1.48	0.00	481.06	0		3.62	10.18
39	2.00	0.49	0.45	2.40	497.41	0		1.16	9.38
40	2.00	0.00	0.00	0.00	427.12	0		0.00	0.00
41	2.00	0.00	0.00	0.00	452.99	0		0.00	0.00
42	2.00	0.00	0.00	0.90	644.69	0		0.00	0.00
43	2.00	3.20	2.49	0.00	592.03	0		6.95	9.96
44	2.00	0.00	0.00	0.00	496.03	0		0.00	0.00
45	2.00	0.10	0.15	0.00	463.52	0		0.26	9.57
46	2.00	0.00	0.00	0.00	483.79	0		0.00	0.00
47	2.00	0.00	0.00	0.00	464.97	0		0.00	0.00
48	2.00	0.00	0.03	0.00	430.41	0		0.00	0.00
49	2.00	0.99	1.03	0.00	410.99	0		2.66	10.93
50	2.00	0.00	0.00	0.00	431.84	0		0.00	0.00
51	2.00	0.00	0.00	0.00	502.78	0		0.00	0.00
52	2.00	0.00	0.00	0.00	507.42	0		0.00	0.00
53	2.00	0.49	0.00	1.40	500.25	0		1.16	9.35
54	2.00	0.00	0.00	0.91	489.15	0		0.00	0.00
55	2.00	0.35	0.00	0.40	511.12	0		0.82	9.17
56	2.00	0.49	0.53	0.00	514.31	0		1.14	9.22
57	2.00	0.33	0.38	0.00	332.62	0		1.05	12.38
58	2.00	2.24	1.87	0.00	504.30	0		5.28	10.31
59	2.00	0.99	1.03	0.00	501.12	0		2.34	9.64
60	2.00	0.00	0.00	0.00	481.84	0		0.00	0.00
61	2.00	0.00	0.00	0.00	500.53	0		0.00	0.00
62	2.00	0.00	0.03	0.00	518.06	0		0.00	0.00
63	2.00	0.00	0.00	0.00	476.40	0		0.00	0.00
64	2.00	1.11	1.16	0.00	508.21	0		2.62	9.64
65	2.00	0.32	0.00	0.40	509.20	0		0.75	9.17
66	2.00	0.00	0.00	0.00	459.93	0		0.00	0.00
67	2.00	0.00	0.00	0.00	477.31	0		0.00	0.00
68	2.00	0.00	0.00	0.00	371.55	0		0.00	0.00
69	2.00	0.00	0.00	0.00	406.09	0		0.00	0.00
70	2.00	0.00	0.00	0.40	499.25	0		0.00	0.00

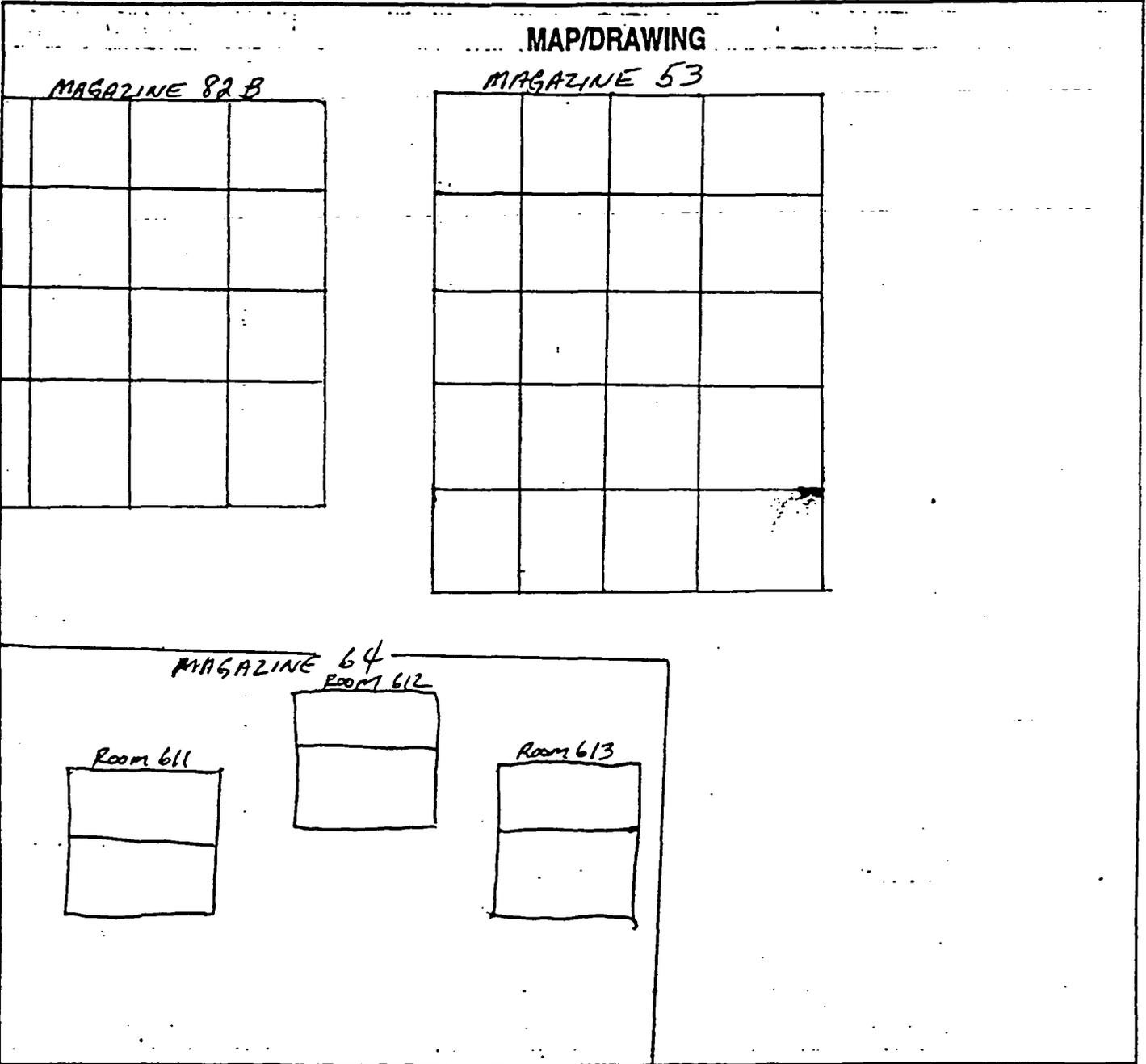
✓
C9W

00-TF-116

~~00-WD-252~~

00-757

LOCATION: (BLDG, AREA, ROOM) MAGAZINE 82B, 53 + 64	SURVEY NO. 97-GA-209
PURPOSE: SURVEY MAGAZINE 82B, 53, 64 Room 611, 612 AND 613. PURE 040897-80-10 For Release	RWP NO. NA
	DATE: 4-15-97
	TIME: PM
PURE 040897-53-07 AND PURE 040897-6-09	



LEGEND:

- # = mrem/hr (γ) whole body
- # E = mrem/hr ($\beta + \eta + \gamma$) 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
MICRA R	3858	10-8-97
ELECTRA	5382/5283	9-11-97
NA	NA	NA

Completed by: (Signature/HP#)	Date:
2347	4-15-97
Reviewed/Approved by: (Signature/HP#)	Date:
5268	4/15/97

RADIOLOGICAL SURVEY DATA SHEET (CONT.)

Charge Authorization No. _____

<input checked="" type="checkbox"/> Removable Contamination <input type="checkbox"/> Airborne Activity (check one)				
Swipes (dpm/100cm ²) or Airborne (μCi/cc)				
Sample #	βγ	Alpha	Tritium	Comments
1				MAGAZINE 82B
2				82B
3				82B
4				82B
5				82B
6				82B
7				82B
8				82B
9				82B
10				82B
11				82B
12				82B
13				MAGAZINE 53
14				53
15				53
16				53
17				53
18				53
19				53
20				53
21				53
22				53
23				53
24				53
25				53
26				53
27				53
28				53
29				53
30				53

<input checked="" type="checkbox"/> Removable Contamination <input type="checkbox"/> Airborne Activity (check one)				
Swipes (dpm/100cm ²) or Airborne (μCi/cc)				
Sample #	βγ	Alpha	Tritium	Comments
31				53
32				53
33				MAGAZINE 84-611
34				64-611
35				84-611
36				64-611
37				64-612
38				64-612
39				64-612
40				64-612
41				64-613
42				64-613
43				64-613
44				64-613
NO FURTHER ENTRY				

COMMENTS: TOOK DIRECT READINGS WITH ELECTRA, α < 100 dpm/100cm², β < 5000 dpm/100cm²
 TOOK DOSE RATE READINGS, ALL READINGS WERE NON DETECTABLE AT 30 CM
 WIPE RESULTS ATTACHED

Max. Activity on Large Area Wipe (dpm)	Tritium Airborne Activity (μCi/m ³)
NA	NA

- NOTES:
- LSC results #3 corresponds to Sample #1 on this RSDS.
 - See MD-80036 10002 for calculations of WB, extremity and skin dose rates
 - To request RO Count Room analysis for βγ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Illuc
 Data file name: SME:AR035
 Batch Ended: 4/15/97 15:04
 Cal. Exp Data: 3/3/98
 Serial Number: 26966-1

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

Batch ID: T97-GA-209 ROBINSON

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	Flags	DPM	σ	Flags
A1	1	0.00	2.05	<MDA	0.37	1.85	<MDA
A2	2	1.68	2.04	<AL	0.00	1.32	<MDA
A3	3	0.00	1.92	<MDA	0.00	1.25	<MDA
A4	4	0.00	2.02	<MDA	0.47	1.76	<MDA
B1	5	3.74	2.86	<AL	0.00	1.82	<MDA
B2	6	0.00	2.02	<MDA	0.21	1.84	<MDA
B3	7	0.00	1.92	<MDA	0.00	1.23	<MDA
B4	8	0.00	1.95	<MDA	0.00	1.24	<MDA
C1	9	0.00	2.01	<MDA	1.25	2.15	<MDA
C2	10	0.00	1.99	<MDA	0.19	1.75	<MDA
C3	11	0.00	1.83	<MDA	0.00	1.16	<MDA
C4	12	0.00	1.85	<MDA	0.27	1.62	<MDA
D1	13	0.00	2.05	<MDA	0.32	1.91	<MDA
D2	14	0.00	2.11	<MDA	1.79	2.35	<MDA
D3	15	0.00	1.95	<MDA	1.70	2.21	<MDA
D4	16	0.00	1.93	<MDA	0.35	1.83	<MDA
A1	17	0.00	2.05	<MDA	0.37	1.85	<MDA
A2	18	0.00	2.05	<MDA	1.75	2.25	<MDA
A3	19	0.00	1.92	<MDA	0.00	1.25	<MDA
A4	20	0.00	2.04	<MDA	2.96	2.49	<AL
B1	21	0.00	2.03	<MDA	0.11	1.82	<MDA
B2	22	0.00	2.01	<MDA	0.00	1.30	<MDA
B3	23	0.00	1.94	<MDA	2.57	2.45	<MDA
B4	24	0.00	1.96	<MDA	0.36	1.75	<MDA
C1	25	0.00	1.99	<MDA	0.00	1.26	<MDA
C2	26	1.64	1.95	<AL	0.00	1.26	<MDA
C3	27	0.00	1.83	<MDA	0.00	1.64	<MDA
C4	28	0.00	1.85	<MDA	0.27	1.62	<MDA
D1	29	0.00	2.05	<MDA	0.32	1.91	<MDA
D2	30	1.57	2.10	<MDA	0.00	1.35	<MDA
D3	31	0.00	1.96	<MDA	2.98	2.55	<AL
D4	32	0.00	1.92	<MDA	0.00	1.30	<MDA
A1	33	0.00	2.04	<MDA	0.00	1.31	<MDA
A2	34	0.00	2.04	<MDA	0.44	1.86	<MDA
A3	35	0.00	1.92	<MDA	0.00	1.25	<MDA
A4	36	0.00	2.01	<MDA	0.00	1.24	<MDA
B1	37	0.00	2.05	<MDA	3.98	2.85	<AL
B2	38	1.67	2.02	<AL	0.07	1.84	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Hlue
Data file name: SMF:AR035
Batch Ended: 4/15/97 15:04
Cal. Due Date: 3/3/98
Serial Number: 26966-3

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

Batch ID: T 97-GA-209 ROBINSON

Detector ID	Sample ID
B1	39
B4	40
C1	41
C2	42
C3	43
C4	44

Alpha Activity		
DPM	σ	Flags
0.00	1.92	<MDA
0.00	1.95	<MDA
0.00	1.95	<MDA
0.00	1.98	<MDA
0.00	1.83	<MDA
0.00	1.85	<MDA

Beta Activity		
DPM	σ	Flags
0.00	1.23	<MDA
0.00	1.24	<MDA
0.00	1.26	<MDA
0.00	1.26	<MDA
0.00	1.64	<MDA
0.27	1.62	<MDA

e: 2.00
a Mode: DPM Nuclide: SM-PW-UG Quench Set: SM-PW-UG
Background Subtract: 1st Vial

	LL	UL	LCR	2SZ	BKG
ion A:	0.5 - 18.6		0	0.0	7.30
ion B:	2.0 - 18.6		0	0.0	6.60
ion C:	20.0 - 2000		0	0.0	12.20

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
6A-209 ROBINSON 4-16-97 (A1-A44) 30-7 CYR
Coincidence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT7.DAT
Count Data Filename: c:\data\SDATA7.DAT
Counter Data Drive & Path: c:\data

S#	TIME	CFMA	CFMB	LUM	FLAG	tSIE	DFM1	2Sigma	CFMC
-1	10.00	7.30	6.60	3	B	647.38		0.00	12.20
0	2.00	469.20	435.40	0		611.38	938.57	94.41	3.30
1	2.00	1.70	1.90	6		600.49	3.42	9.20	0.00
2	2.00	0.70	0.00	6		555.41	1.43	8.86	13.30
3	2.00	0.00	0.00	8		463.36	0.00	0.00	4.30
4	2.00	0.00	0.00	0		458.31	0.00	0.00	0.00
5	2.00	0.20	0.90	6		503.56	0.44	9.38	1.30
6	2.00	0.20	0.00	0		505.04	0.44	9.37	0.00
7	2.00	0.00	0.00	0		514.31	0.00	0.00	2.50
8	2.00	1.70	1.40	6		560.54	3.46	9.30	0.30
9	2.00	0.00	0.00	0		543.00	0.00	0.00	0.00
10	2.00	0.20	0.90	0		507.35	0.44	9.35	0.00
11	2.00	0.00	0.00	0		537.19	0.00	0.00	0.00
12	2.00	0.00	0.00	0		509.42	0.00	0.00	0.00
13	2.00	1.20	1.90	0		575.28	2.43	9.04	0.00
14	2.00	0.00	0.00	0		590.08	0.00	0.00	0.30
15	2.00	0.00	0.00	0		563.93	0.00	0.00	4.30
16	2.00	0.00	0.00	0		560.10	0.00	0.00	1.80
17	2.00	0.00	0.00	0		593.58	0.00	0.00	0.00
18	2.00	5.70	5.90	0		627.33	11.26	10.66	0.00
19	2.00	0.00	0.00	0		586.41	0.00	0.00	2.30
20	2.00	2.20	2.90	0		591.88	4.43	9.44	0.30
21	2.00	2.20	2.40	0		541.19	4.60	9.80	0.00
22	2.00	0.00	0.00	0		595.78	0.00	0.00	1.30
23	2.00	0.00	0.00	0		558.82	0.00	0.00	0.30
24	2.00	0.00	0.00	0		597.25	0.00	0.00	0.00
25	2.00	0.20	0.40	7		574.48	0.41	8.57	0.00
26	2.00	0.70	1.40	0		571.75	1.42	8.82	0.00
27	2.00	0.00	0.00	0		542.08	0.00	0.00	0.00
28	2.00	0.00	0.00	0		588.08	0.00	0.00	0.00
29	2.00	0.20	0.90	0		589.81	0.40	8.54	0.00
30	2.00	0.00	0.40	0		584.50	0.00	0.00	0.30
31	2.00	1.20	1.90	0		580.52	2.43	9.03	0.00
32	2.00	0.70	0.90	0		575.44	1.42	8.81	3.80
33	2.00	1.70	1.40	0		625.29	3.36	9.06	2.30
34	2.00	0.00	0.00	0		560.42	0.00	0.00	0.00

53
32
33
34

total #: 7

Pw H3 20cc #405828

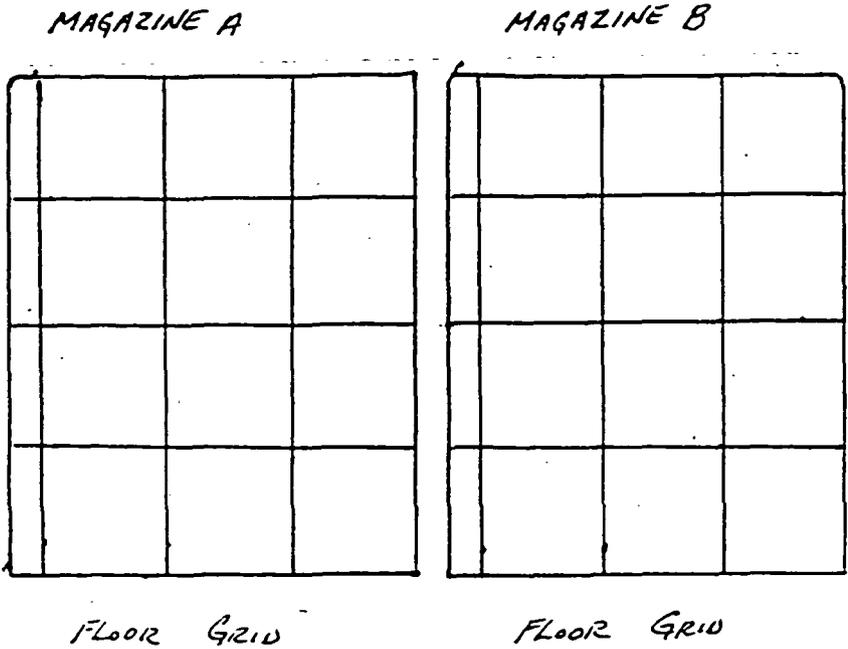
User : 5681

S#	TIME	CFMA	CPMB	LUM	FLAG	tsIE	DFM1	2Sigma	CFMC
35	2.00	0.00	0.00	0		593.36	0.00	0.00	0.00
36	2.00	0.00	0.00	0		571.78	0.00	0.00	0.00
37	2.00	3.70	3.90	0		598.28	7.44	10.06	0.30
38	2.00	0.20	0.40	0		592.89	0.40	8.53	0.00
39	2.00	1.20	0.40	0		607.48	2.41	8.96	0.00
40	2.00	0.70	0.90	0		574.26	1.42	8.81	3.80
41	2.00	0.00	0.00	0		549.03	0.00	0.00	0.00
42	2.00	0.00	0.00	0		580.06	0.00	0.00	0.00
43	2.00	0.70	0.90	0		595.39	1.41	8.76	2.30
44	2.00	0.70	0.90	0		591.26	1.41	8.77	0.00

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG NAME/ROOM)	MAGAZINE 82A, 83, 84	SURVEY NO.	97-GA-208
PURPOSE:	SURVEY MAGAZINE # 82A, 83A+B 84 A+B	RWP NO.	NA
FOR RELEASE	PURE # 040897-90-10	DATE:	4-15-97
		TIME:	AM

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact

\triangle # = mrem/hr neutron
 \square # = air sample number

\odot # = swipe number
 $\#/\alpha$ or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
MICRO R	3858	10-8-97
ELECTRA	5382/5383	9-11-97

Completed by: (Signature/HP#)	Date:
2347	4-15-97
5268	Date: 4/15/97
Signature/HP#	Date:

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Charge Authorization No. _____

<input checked="" type="checkbox"/> Removable Contamination <input type="checkbox"/> Airborne Activity (check one)				
Swipes (dpm/100cm ²) or Airborne (μCi/cc)				
Sample #	βγ	Alpha	Tritium	Comments
1				MAGAZINE 83A
2				83A
3				83A
4				83A
5				83A
6				83A
7				83A
8				83A
9				83A
10				83A
11				83A
12				83A
13				MAGAZINE 83B
14				83B
15				83B
16				83B
17				83B
18				83B
19				83B
20				83B
21				83B
22				83B
23				83B
24				83B
25				MAGAZINE 84A
26				84A
27				84A
28				84A
29				84A
30				84A

<input checked="" type="checkbox"/> Removable Contamination <input type="checkbox"/> Airborne Activity (check one)				
Swipes (dpm/100cm ²) or Airborne (μCi/cc)				
Sample #	βγ	Alpha	Tritium	Comments
31				84A
32				84A
33				84A
34				84A
35				84A
36				84A
37				MAGAZINE 84B
38				84B
39				84B
40				84B
41				84B
42				84B
43				84B
44				84B
45				84B
46				84B
47				84B
48				84B
49				MAGAZINE 82A
50				82A
51				82A
52				82A
53				82A
54				82A
55				82A
56				82A
57				82A
58				82A
59				82A
60				82A

COMMENTS: TOOK DIRECT READINGS WITH ELECTRA, α < 100 dpm/100cm², β < 5000 dpm/100cm²
 TOOK DOSE RATE READINGS, ALL READINGS WERE NON-DETECTABLE AT 30 CM
 WIPE RESULTS ATTACHED.

Max. Activity on Large Area Wipe (dpm)	Tritium Airborne Activity (μCi/m ³)
NA	NA

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

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Blue
 Data file name: SMF:AR034
 Batch Ended: 4/15/97 14:47
 Cal. Exp Date: 3/3/98
 Serial Number: 26966-3

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

Batch ID: T 97-GA-208 ROBINSON

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	Flags	DPM	σ	Flags
A1	1	0.00	2.04	<MDA	0.00	1.31	<MDA
A2	2	0.00	2.04	<MDA	0.00	1.32	<MDA
A3	3	0.00	1.93	<MDA	1.63	2.16	<MDA
A4	4	0.00	2.02	<MDA	0.47	1.76	<MDA
B1	5	1.74	2.02	<AL	0.00	1.25	<MDA
B2	6	0.00	2.01	<MDA	0.00	1.30	<MDA
B3	7	0.00	1.93	<MDA	0.12	1.73	<MDA
B4	8	1.67	1.95	<AL	1.45	2.15	<MDA
C1	9	0.00	1.95	<MDA	0.00	1.26	<MDA
C2	10	0.00	2.01	<MDA	2.70	2.51	<MDA
C3	11	0.00	1.83	<MDA	0.00	1.64	<MDA
C4	12	0.00	1.85	<MDA	0.27	1.62	<MDA
D1	13	0.00	2.05	<MDA	0.32	1.91	<MDA
D2	14	0.00	2.12	<MDA	3.17	2.75	<AL
D3	15	0.00	1.94	<MDA	0.00	1.28	<MDA
D4	16	1.51	1.92	<AL	0.00	1.30	<MDA
A1	17	1.71	2.04	<AL	0.00	1.31	<MDA
A2	18	0.00	2.04	<MDA	0.44	1.86	<MDA
A3	19	0.00	1.92	<MDA	0.00	1.25	<MDA
A4	20	1.68	2.02	<AL	0.32	1.76	<MDA
B1	21	0.00	2.02	<MDA	0.00	1.25	<MDA
B2	22	0.00	2.02	<MDA	0.21	1.84	<MDA
B3	23	0.00	1.92	<MDA	0.00	1.23	<MDA
B4	24	0.00	1.95	<MDA	0.00	1.24	<MDA
C1	25	0.00	2.03	<MDA	3.75	2.81	<AL
C2	26	0.00	1.98	<MDA	0.00	1.26	<MDA
C3	27	0.00	1.83	<MDA	0.00	1.64	<MDA
C4	28	0.00	1.86	<MDA	1.41	1.96	<MDA
D1	29	1.29	2.05	<MDA	0.20	1.91	<MDA
D2	30	0.00	2.10	<MDA	0.00	1.38	<MDA
D3	31	1.45	1.95	<MDA	1.59	2.21	<MDA
D4	32	0.00	1.91	<MDA	0.00	1.30	<MDA
A1	33	1.71	2.04	<AL	0.00	1.31	<MDA
A2	34	0.00	2.04	<MDA	0.44	1.86	<MDA
A3	35	0.00	1.93	<MDA	1.63	2.16	<MDA
A4	36	0.00	2.02	<MDA	0.47	1.76	<MDA
B1	37	0.00	2.02	<MDA	0.00	1.25	<MDA
B2	38	0.00	2.01	<MDA	0.00	1.30	<MDA

Page 3 of 6

Smear Analysis

Unit Type: LB4100AV
 Counting Unit ID: Blue
 Data file name: SMEAR034
 Batch End: 4/15/97 14:47
 Cal. Exp. Date: 3/3/98
 Serial Number: 26966-3

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

Batch ID: T-97-01A-208 FORTKONON

Detector ID	Sample ID
B1	39
B1	40
C1	41
C2	42
C3	43
C4	44
D1	45
D2	46
D3	47
D4	48
A1	49
A2	50
A3	51
A4	52
B1	53
B2	54
B3	55
B4	56
C1	57
C2	58
C3	59
C4	60

Alpha Activity		
DPM	σ	Flags
0.00	.93	<MDA
0.00	.97	<MDA
0.00	2.00	<MDA
1.64	.95	<AL
0.00	1.84	<MDA
0.00	1.85	<MDA
0.00	2.05	<MDA
0.00	2.10	<MDA
0.00	1.95	<MDA
0.00	1.92	<MDA
0.00	2.04	<MDA
0.00	2.04	<MDA
0.00	1.93	<MDA
1.68	2.02	<AL
0.00	2.04	<MDA
0.00	2.01	<MDA
1.57	1.93	<AL
0.00	1.97	<MDA
0.00	2.00	<MDA
1.63	2.00	<AL
0.00	1.84	<MDA
0.00	1.86	<MDA

Beta Activity		
DPM	σ	Flags
0.12	1.73	<MDA
1.60	2.15	<MDA
0.00	1.76	<MDA
0.05	1.76	<MDA
1.15	2.01	<MDA
4.85	2.81	<AL
0.32	1.91	<MDA
0.00	1.36	<MDA
1.70	2.21	<MDA
0.00	1.30	<MDA
0.00	1.31	<MDA
0.44	1.86	<MDA
0.39	1.76	<MDA
0.32	1.76	<MDA
1.40	2.23	<MDA
0.00	1.31	<MDA
0.01	1.73	<MDA
1.60	2.15	<MDA
0.00	1.76	<MDA
1.32	2.18	<MDA
1.15	2.01	<MDA
1.41	1.96	<MDA

Page 4 of 6

Protocol #: 1

Pw H3 20cc #407906

Time: 2.00

Data Mode: DPM

Nuclide: SM-PW-U6

Quench Set: SM-PW-U6

Background Subtract: 1st Vial

	LL	UL	LCR	2SZ	BKG
Region A:	0.5 - 18.6		0	0.0	7.47
Region B:	2.0 - 18.6		0	0.0	7.36
Region C:	20.0 - 2000		0	0.0	11.88

Quench Indicator: tSIE/AEC

Est Std Terminator: Count

97-9A-202 ROBINSON 4-16-97 20-7 (31-860) CYR

Luminescence Correction On

Coincidence Time(s): 18

Delay Before Burstin(s): Normal

Protocol Data Filename: C:\DATA\PROT1.DAT

Count Data Filename: C:\DATA\SDATA1.DAT

Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	7.47	7.36	1	B	648.53		0.000	11.88
0	2.00	488.62	448.88	0		591.18	967.71	80.222	6.38
1	2.00	0.00	0.00	0		560.10	0.00	0.000	0.00
2	2.00	0.00	0.00	0		548.79	0.00	0.000	1.62
3	2.00	0.00	0.00	0		544.76	0.00	0.000	0.00
4	2.00	0.00	0.00	0		520.13	0.12	8.861	0.00
5	2.00	0.00	0.00	0		499.13	0.00	0.000	0.12
6	2.00	0.00	0.00	0		548.70	0.00	0.000	0.00
7	2.00	0.00	0.00	0		523.56	0.00	0.000	0.00
8	2.00	1.03	0.91	0		572.78	2.07	8.962	3.12
9	2.00	0.00	0.00	0		490.07	0.00	0.000	1.12
10	2.00	0.00	0.00	0		485.09	0.00	0.000	1.62
11	2.00	0.00	0.00	0		525.10	0.07	8.813	3.12
12	2.00	0.00	0.00	0		516.90	0.00	0.000	0.00
13	2.00	0.00	0.00	0		546.55	0.00	0.000	0.00
14	2.00	0.53	0.14	0		508.04	1.13	9.186	0.00
15	2.00	0.00	0.00	0		563.41	0.00	0.000	0.00
16	2.00	0.00	0.00	0		578.33	0.00	0.000	0.00
17	2.00	0.03	0.00	0		548.50	0.07	8.646	0.00
18	2.00	0.00	0.00	0		544.30	0.00	0.000	6.62
19	2.00	0.00	0.00	0		527.22	0.00	0.000	0.00
20	2.00	1.73	1.22	0		563.19	3.49	9.330	0.00
21	2.00	0.00	0.00	0		540.75	0.00	0.000	0.00
22	2.00	2.41	2.02	0		512.13	5.07	10.021	1.12
23	2.00	0.03	0.00	0		531.10	0.07	8.770	1.62
24	2.00	0.00	0.00	0		515.97	0.00	0.000	0.12
25	2.00	0.00	0.00	0		566.03	0.00	0.000	0.00
26	2.00	0.00	0.00	0		580.33	0.00	0.000	0.00
27	2.00	0.03	0.00	0		455.38	0.08	9.530	0.00
28	2.00	1.03	0.94	0		556.46	2.10	9.060	0.62
29	2.00	0.00	0.00	0		533.06	0.00	0.000	2.12
30	2.00	0.00	0.00	0		500.60	0.00	0.000	1.72
31	2.00	0.62	0.73	0		552.01	1.27	8.900	0.00
32	2.00	0.00	0.00	0		534.20	0.00	0.000	2.12
33	2.00	0.00	0.00	0		486.34	0.00	0.000	0.00
34	2.00	0.00	0.00	0		454.99	0.00	0.000	0.00

K#3 30-7 B/60

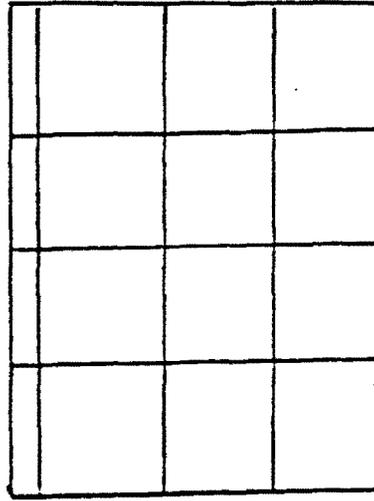
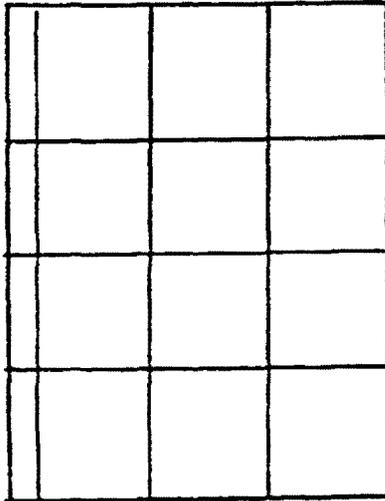
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM)	MAGAZINE 80 + 81	SURVEY NO.	97-GA-193
PURPOSE:	SURVEY MAGAZINE 80A + 80B MAGAZINE 81A + 81B	RWP NO.	N/A
FOR RELEASE	PURE # 040897-80-10	DATE:	4-14-97
		TIME:	PM

MAP/DRAWING

MAGAZINE-A

MAGAZINE-B



FLOOR
GRID

FLOOR
GRID



AIR CONDENSER FAN IN
CEILING

LEGEND: # = mrem/hr (γ) whole body Δ = mrem/hr neutron # = swipe number
 # E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact # = air sample number #/a or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE ELECTRA	5396/5413	7-15-97
MICRO R	3857	10-7-97
NA	NA	NA

Completed by: [Redacted Signature]	2347	Date: 4-14-97
[Redacted Signature]	5268	Date: 4/15/97
[Redacted Signature]	(M/P#)	Date:

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Charge Authorization No. _____

<input checked="" type="checkbox"/> Removable Contamination <input type="checkbox"/> Airborne Activity (check one)				
Swipes (dpm/100cm ²) or Airborne (μCi/cc)				
Sample #	βγ	Alpha	Tritium	Comments
1				MAGAZINE 80A
2				80A
3				80A
4				80A
5				80A
6				80A
7				80A
8				80A
9				80A
10				80A
11				80A
12				80A
13				MAGAZINE 80B
14				80B
15				80B
16				80B
17				80B
18				80B
19				80B
20				80B
21				80B
22				80B
23				80B
24				80B
25				AIR CONDENSER FAN 80B
26				80B
27				80B
28				80B
29				80B
30				80B

<input checked="" type="checkbox"/> Removable Contamination <input type="checkbox"/> Airborne Activity (check one)				
Swipes (dpm/100cm ²) or Airborne (μCi/cc)				
Sample #	βγ	Alpha	Tritium	Comments
31				AIR CONDENSER FAN 80A
32				80A
33				80A
34				80A
35				80A
36				80A
37				MAGAZINE 81A
38				81A
39				81A
40				81A
41				81A
42				81A
43				81A
44				81A
45				81A
46				81A
47				81A
48				81A
49				MAGAZINE 81B
50				81B
51				81B
52				81B
53				81B
54				81B
55				81B
56				81B
57				81B
58				81B
59				81B
60				81B

COMMENTS: TOOK DIRECT READINGS WITH ELECTRA α < 100 dpm/100cm² AND βγ < 5000 dpm/100cm². TOOK DOSE RATE READINGS NOW DETECTABLE AT 30CM W/MICRO-R. WIPE RESULTS ARE ATTACHED.

Max. Activity on Large Area Wipe (dpm)	Tritium Airborne Activity (μCi/m ³)
NA	NA

- NOTES:
- LSC results #3 corresponds to Sample #1 on this RSDS.
 - See MD-80036 10002 for calculations of WB, extremity and skin dose rates
 - To request RO Count Room analysis for βγ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
 - Applicable model sample type (e.g. self-wiping) needed for identification

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Blue
 Data file name: SMEAR032
 Batch Ended: 4/15/97 7:23
 Cal. Due Date: 3/3/98
 Serial Number: 26966-3

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

Batch ID: T 97-QA-193 ROBINSON

Detector ID	Sample ID
A1	1
A2	2
A3	3
A4	4
B1	5
B2	6
B3	7
B4	8
C1	9
C2	10
C3	11
C4	12
D1	13
D2	14
D3	15
D4	16
A1	17
A2	18
A3	19
A4	20
B1	21
B2	22
B3	23
B4	24
C1	25
C2	26
C3	27
C4	28
D1	29
D2	30
D3	31
D4	32
A1	33
A2	34
A3	35
A4	36
B1	37
B2	38

Alpha Activity		
DPM	σ	flag
0.00	2.06	<MDA
0.00	2.04	<MDA
0.00	1.93	<MDA
0.00	2.01	<MDA
0.00	2.04	<MDA
0.00	2.02	<MDA
1.57	1.93	<AL
0.00	1.95	<MDA
0.00	2.00	<MDA
0.00	1.98	<MDA
0.00	1.83	<MDA
0.00	1.86	<MDA
0.00	2.04	<MDA
0.00	2.10	<MDA
1.47	1.94	<MDA
0.00	1.94	<MDA
0.00	2.07	<MDA
0.00	2.04	<MDA
0.00	1.93	<MDA
0.00	2.01	<MDA
0.00	2.04	<MDA
1.67	2.01	<AL
0.00	1.93	<MDA
0.00	1.95	<MDA
0.00	2.02	<MDA
0.00	2.01	<MDA
3.27	2.60	<AL
0.00	1.87	<MDA
0.00	2.05	<MDA
0.00	2.10	<MDA
0.00	1.94	<MDA
1.46	1.94	<MDA
3.73	2.91	<AL
0.00	2.04	<MDA
0.00	1.93	<MDA
0.00	2.01	<MDA
0.00	2.02	<MDA
0.00	2.02	<MDA

Beta Activity		
DPM	σ	flag
1.67	2.26	<MDA
0.00	1.32	<MDA
0.39	1.76	<MDA
0.00	1.24	<MDA
2.69	2.58	<MDA
0.21	1.84	<MDA
1.24	2.12	<MDA
0.00	1.24	<MDA
0.00	1.78	<MDA
0.00	1.26	<MDA
0.00	1.64	<MDA
1.41	1.98	<MDA
0.00	1.35	<MDA
0.00	1.38	<MDA
0.00	1.28	<MDA
2.94	2.59	<AL
2.98	2.61	<AL
0.44	1.86	<MDA
0.39	1.76	<MDA
0.00	1.24	<MDA
1.40	2.23	<MDA
0.00	1.31	<MDA
0.12	1.73	<MDA
0.00	1.24	<MDA
2.51	2.51	<MDA
2.70	2.51	<MDA
3.25	2.60	<AL
2.56	2.29	<AL
0.32	1.91	<MDA
0.00	1.38	<MDA
0.43	1.80	<MDA
2.82	2.59	<MDA
3.99	2.92	<AL
0.44	1.86	<MDA
0.39	1.76	<MDA
1.71	2.15	<MDA
0.00	1.29	<MDA
0.21	1.84	<MDA

Page 2 of 6

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Blue
 Data file name: SME:AR032
 Batch Ended: 4/15/97 7:23
 Cal. Due Date: 3/3/98
 Serial Number: 26966-1

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

Batch ID: T 97-GA-193 ROBINSON

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	Flags	DPM	σ	Flags
B3	39	0.00	1.93	=MDA	0.12	1.73	=MDA
B4	40	0.00	1.97	=MDA	1.60	2.15	=MDA
C1	41	1.51	2.00	=MDA	0.00	1.76	=MDA
C2	42	0.00	1.98	=MDA	0.00	1.26	=MDA
C3	43	3.28	2.55	<AL	0.93	2.01	=MDA
C4	44	0.00	1.87	=MDA	2.56	2.29	<AL
D1	45	0.00	2.04	=MDA	0.00	1.35	=MDA
D2	46	1.57	2.10	=MDA	0.00	1.36	=MDA
D3	47	0.00	1.94	=MDA	0.43	1.80	=MDA
D4	48	3.42	2.71	<AL	0.00	1.30	=MDA
A1	49	0.00	2.04	=MDA	0.00	1.31	=MDA
A2	50	0.00	2.04	<MDA	0.44	1.86	=MDA
A3	51	1.53	1.93	<AL	0.27	1.76	=MDA
A4	52	0.00	2.01	=MDA	0.00	1.24	=MDA
B1	53	0.00	2.02	=MDA	0.00	1.29	=MDA
B2	54	1.67	2.02	<AL	0.07	1.84	=MDA
B3	55	0.00	1.94	=MDA	2.57	2.45	=MDA
B4	56	0.00	1.95	=MDA	0.00	1.24	=MDA
C1	57	0.00	2.01	=MDA	1.25	2.16	=MDA
C2	58	1.63	2.00	<AL	1.32	2.16	=MDA
C3	59	0.00	1.83	=MDA	0.00	1.64	=MDA
C4	60	0.00	1.91	=MDA	5.99	3.03	<AL

Page 4 of 6

Time: 2.00

Count Mode: DPM

Nuclide: SM-PW-UG

Quench Set: SM-PW-UG

Background Subtract: 1st Vial

	LL	UL	LCR	2SX	BKG
Region A:	0.5 - 18.6		0	0.0	8.40
Region B:	2.0 - 18.6		0	0.0	8.10
Region C:	20.0 - 2000		0	0.0	12.70

Quench Indicator: tSIE/AEC

Ext Std Terminator: Count

GA-193 ROBINSON(30-7 G1/60)

Fluorescence Correction On

Incidence Time(ns): 18

Delay Before Burst(ns): Normal

Protocol Data Filename: c:\data\PROT3.DAT

Count Data Filename: c:\data\SDATA3.DAT

Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	8.40	8.10	1	B	660.41		0.00	12.70
0	2.00	487.60	441.40	0		615.02	974.96	97.31	3.80
1	2.00	0.00	0.00	0		571.06	0.00	0.00	1.80
2	2.00	0.00	0.00	0		504.82	0.00	0.00	0.00
3	2.00	0.00	0.00	0		579.03	0.00	0.00	2.80
4	2.00	0.00	0.00	0		602.55	0.00	0.00	0.00
5	2.00	0.00	0.00	0		575.01	0.00	0.00	0.00
6	2.00	0.00	0.00	0		496.92	0.00	0.00	0.00
7	2.00	0.00	0.00	0		550.29	0.00	0.00	0.80
8	2.00	0.00	0.00	0		600.94	0.00	0.00	0.00
9	2.00	0.60	0.40	0		522.68	1.31	10.09	0.00
10	2.00	0.00	0.00	0		499.94	0.00	0.00	1.80
11	2.00	0.00	0.00	0		577.70	0.00	0.00	1.30
12	2.00	0.00	0.00	0		499.31	0.00	0.00	0.00
13	2.00	0.00	0.00	0		537.73	0.00	0.00	0.00
14	2.00	0.00	0.00	0		604.89	0.00	0.00	2.30
15	2.00	0.00	0.00	0		612.11	0.00	0.00	0.80
16	2.00	0.00	0.00	0		579.47	0.00	0.00	0.00
17	2.00	0.00	0.00	0		589.93	0.00	0.00	1.80
18	2.00	0.00	0.00	0		461.56	0.00	0.00	0.00
19	2.00	0.00	0.00	0		574.62	0.00	0.00	0.00
20	2.00	0.00	0.00	0		603.70	0.00	0.00	0.00
21	2.00	0.00	0.00	0		551.68	0.00	0.00	0.00
22	2.00	1.10	0.90	0		573.71	2.23	9.60	0.00
23	2.00	0.00	0.00	0		556.70	0.00	0.00	0.00
24	2.00	0.00	0.00	0		502.03	0.00	0.00	0.00
25	2.00	0.00	0.00	0		335.70	0.00	0.00	4.80
26	2.00	1.60	1.90	0		447.51	3.75	11.32	4.80
27	2.00	0.00	0.00	0		407.94	0.00	0.00	2.30
28	2.00	0.00	0.00	0		620.11	0.00	0.00	3.30
29	2.00	0.00	0.00	0		572.98	0.00	0.00	0.00
30	2.00	2.10	1.90	0		592.84	4.24	9.97	0.00
31	2.00	0.00	0.00	0		390.30	0.00	0.00	0.30
32	2.00	0.00	0.00	0		290.80	0.00	0.00	2.30
33	2.00	0.00	0.00	0		357.61	0.00	0.00	0.00
34	2.00	0.10	0.00	0		625.10	0.20	8.95	0.00

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	0.00	0.00	0		599.87	0.00	0.00	0.00
36	2.00	0.00	0.00	0	E	641.64	0.00	0.00	0.00
37	2.00	0.00	0.00	0		529.81	0.00	0.00	0.00
38	2.00	0.00	0.00	0		524.65	0.00	0.00	0.00
39	2.00	0.00	0.00	0		611.56	0.00	0.00	0.00
40	2.00	0.00	0.00	0		502.56	0.00	0.00	0.00
41	2.00	0.00	0.00	0		573.94	0.00	0.00	0.00
42	2.00	0.00	0.00	0		541.82	0.00	0.00	0.00
43	2.00	0.00	0.00	0		521.96	0.00	0.00	0.00
44	2.00	0.00	0.00	0		582.90	0.00	0.00	0.80
45	2.00	0.00	0.00	0		609.74	0.00	0.00	0.00
46	2.00	0.00	0.00	0		574.40	0.00	0.00	0.00
47	2.00	0.00	0.00	0		575.36	0.00	0.00	0.00
48	2.00	0.00	0.00	0		534.73	0.00	0.00	0.00
49	2.00	0.10	0.00	0		580.03	0.20	9.15	0.00
50	2.00	0.00	0.00	0		538.45	0.00	0.00	3.80
51	2.00	1.10	0.90	0		568.72	2.24	9.62	0.00
52	2.00	0.00	0.00	0		558.03	0.00	0.00	0.00
53	2.00	0.00	0.00	0		508.44	0.00	0.00	0.00
54	2.00	0.00	0.00	0		537.09	0.00	0.00	0.00
55	2.00	0.00	0.00	0		598.35	0.00	0.00	0.80
56	2.00	0.00	0.00	0		490.95	0.00	0.00	0.00
57	2.00	0.00	0.00	0		541.54	0.00	0.00	0.00
58	2.00	0.00	0.00	0		583.96	0.00	0.00	1.80
59	2.00	0.00	0.00	0		502.69	0.00	0.00	1.80
60	2.00	0.00	0.00	0		541.91	0.00	0.00	0.00

Appendix H

Radon Summary/Information

There is no radon information available for Magazines 80-84.

Appendix I

Asbestos Summary/Information

October 18, 2001

MAGAZINES 80 - 84

Asbestos

No previous survey information on asbestos was available. A walk-through assessment of readily accessible areas of Magazines 80 - 84 indicated the presence of floor tile suspect for containing asbestos.

The walk-through assessment identified floor tiles which were assumed to contain asbestos. All observed floor tiles was seen to be intact.

Lead Paint

No objective data could be found or was generated during the walk-through assessment of Magazines 80 - 84 to indicate the presence of lead in paint coatings which were present. Therefore, all such coatings were assumed to be potentially lead-containing. The observed paint coatings were found to be intact.

Chris Ahlquist
Industrial Hygenist

Appendix J

Lead Summary/Information

October 18, 2001

MAGAZINES 80 - 84

Asbestos

No previous survey information on asbestos was available. A walk-through assessment of readily accessible areas of Magazines 80 - 84 indicated the presence of floor tile suspect for containing asbestos.

The walk-through assessment identified floor tiles which were assumed to contain asbestos. All observed floor tiles was seen to be intact.

Lead Paint

No objective data could be found or was generated during the walk-through assessment of Magazines 80 - 84 to indicate the presence of lead in paint coatings which were present. Therefore, all such coatings were assumed to be potentially lead-containing. The observed paint coatings were found to be intact.

Chris Ahlquist
Industrial Hygenist

Appendix K
Chemical Summary/Information

There is no chemical inventory information available for Magazines 80-84.

Appendix L
Soil Sampling, Vicinity

This Appendix L consists of three elements.

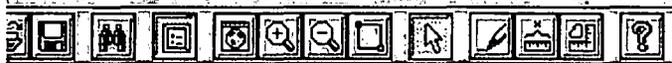
Element one is a graphic depiction of soil sampling in and around the subject property. Triangles signify surface sampling and circles denote boring (at dept) samples. The magenta color denotes a detection. A gray colored triangle or circle indicates a non-detection. Sampling-detections are assigned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

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

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

Comparison Value Comparison Value Basis Definition
Basis Number:

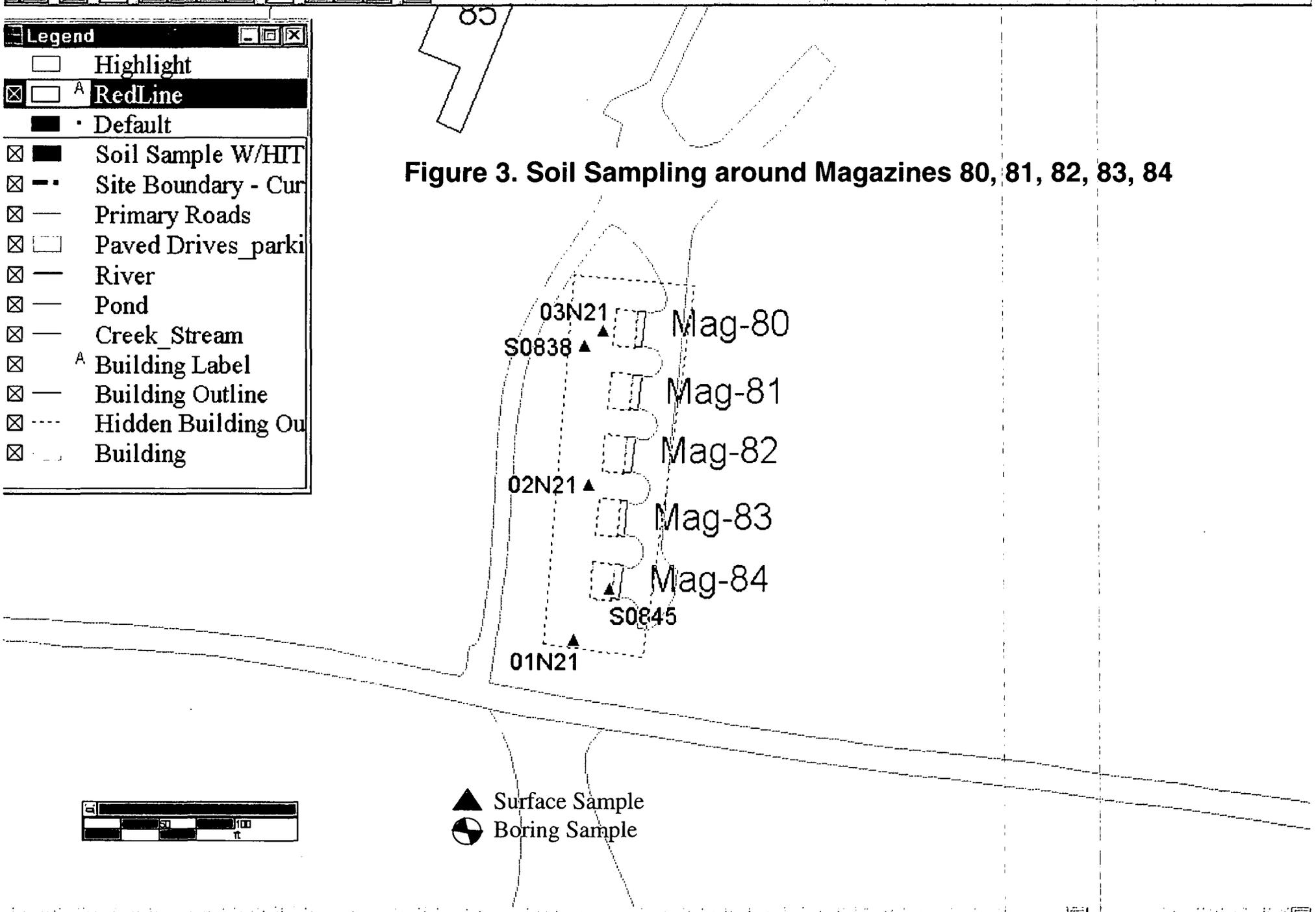
1	10E-6 Risk-Based Guideline Value
2	Soil Background Value (OU9)
3	Other Criteria, Such as Mound Plant Plutonium/Thorium Protocol
5	MCL Value
6	Guideline Value Based on Hazard Index



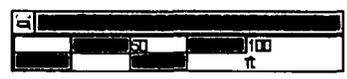
Legend

- Highlight
- A RedLine
- Default
- Soil Sample W/HIT
- Site Boundary - Cur
- Primary Roads
- Paved Drives_parki
- River
- Pond
- Creek_Stream
- A Building Label
- Building Outline
- Hidden Building Ou
- Building

Figure 3. Soil Sampling around Magazines 80, 81, 82, 83, 84



▲ Surface Sample
 ● Boring Sample



Location_name	Sample id	Location_type	Collection date	Media	Value_name	Measured value	Value units	Detection limit	Chem class	Start depth	End depth	Depth unit	Cas_number	Lab qualifier	Project code	Data qualifier	Comments
S0838	5904	Surface location	19840701	Soil	Plutonium-238	0.18	PCV/G	0.01	RAD	0	0	NA	13981-16-3		RSS		2-Exceeds background value.
S0845	5901	Surface location	19840701	Soil	Plutonium-238	0.30	PCV/G	0.01	RAD	0	0	NA	13981-16-3		RSS		2-Exceeds background value.
03N21	03N21	Surface location	19940714	Soil	Total Aromatic Hydrocarbons	45935.00	IC		GENERA	0	2	FT	AHYD		2680		
02N21	02N21	Surface location	19940714	Soil	Total Aromatic Hydrocarbons	97297.00	IC		GENERA	0	2	FT	AHYD		2680		
01N21	01N21	Surface location	19940714	Soil	Total Aromatic Hydrocarbons	336676.00	IC		GENERA	0	2	FT	AHYD		2680		
03N21	03N21	Surface location	19940714	Soil	Total C5 TO C11 Petroleum Hydrocarbons	49369.00	IC		GENERA	0	2	FT	TOGRHY		2680		
02N21	02N21	Surface location	19940714	Soil	Total C5 TO C11 Petroleum Hydrocarbons	187971.00	IC		GENERA	0	2	FT	TOGRHY		2680		
01N21	01N21	Surface location	19940714	Soil	Total C5 TO C11 Petroleum Hydrocarbons	767672.00	IC		GENERA	0	2	FT	TOGRHY		2680		

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

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

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

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

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

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

6 108-95-2	Phenol	1.30E+05 MG/KG
6 129-00-0	Pyrene	6.40E+03 MG/KG
6 7782-49-2	Selenium	1100 MG/KG
6 7440-22-4	Silver	1.10E+03 MG/KG
6 127-18-4	Tetrachloroethene	2.10E+03 MG/KG
6 7440-28-0	Thallium	17 MG/KG
6 7440-31-5	Tin	130000 MG/KG
6 108-88-3	Toluene	2.50E+02 MG/KG
6 75-69-4	Trichlorofluoromethane	7.30E+02 MG/KG
6 7440-62-2	Vanadium	1.50E+03 MG/KG
6 1330-20-7	Xylenes, Total	4.30E+05 MG/KG
6 7440-66-6	Zinc	6.40E+04 MG/KG
6 7440-41-7	1,1,1,2-Tetrachloroethane	2.90E-01 MG/L
6 7440-38-2	1,1,2,2-Tetrachloroethane	2.50E-01 MG/L
6 71-55-6	1,1,1-Trichloroethane	1.80E+00 MG/L
6 76-13-1	1,1,2-Trichloro-1,2,2trifluoroethane	2.50E+03 MG/L
6 7429-90-5	Aluminum	100 MG/L
6 7440-42-8	Boron	9.00E+00 MG/L
6 18540-29-9	Chromium-VI	3.00E-01 MG/L
6 7440-48-4	Cobalt	6 MG/L
6 7440-50-8	Copper	4.00E+00 MG/L
6 7439-98-7	Molybdenum	0.5 MG/L
6 7782-49-2	Selenium	0.5 MG/L
6 7440-28-0	Thallium	0.008 MG/L
6 7440-31-5	Tin	60 MG/L
6 2691-41-0	HMX	1.10E+04 UG/KG
6 121-82-4	RDX	6.40E+04 UG/KG
1 Value is 10-6 Risk-Based Guide Value		
2 Value is OU9 Soil Background Value		
3 Value is screening level		
5 Value is MCL		
6 Value is the Guide Value based on the hazard index		
Note:		
Edited on 10/08/01		
01/29/02 Removed all color		

Appendix M
Occurrence Reports

There are no occurrence reports related to Magazines 80-84.

Appendix N

PRS Information

Note related to PRSs 282 and 414: The Core Team does not generate recommendation sheets for PRSs binned Further Assessment, and the reason why none is included herein for either PRS.

MOUND PLANT
PRS 346/347/348/355/370
SOIL CONTAMINATION

RECOMMENDATION:

PRS 346, 347, 348, 355, and 370 are soil potential release sites (PRSs) located in the southern sector of the original Mound plant. These soil locations were identified as PRSs due to qualitative hydrocarbon detections found during the PETREX soil gas portion of the *OU5, Non Area of Concern* investigation. No radioactive or hazardous waste generating processes or activities are known to have occurred at PRSs 346, 347, 348, 355, or 370.

In 1996, the Soil Gas Confirmation sampling effort sampled the locations with the highest ion counts (confirmation sample locations 15, 16, and 17) in the southern sector and discovered no contamination above the 10⁻⁶ risk range. PRSs 346, 347, 348, 355, and 370 were not sampled as part of the *Soil Gas Confirmation Sampling* but the PRSs had lower ion counts than confirmation sample locations 15, 16, and 17. This implies that PRSs 346, 347, 348, 355, and 370 will have similar or lower health risk.

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

CONCURRENCE:

DOE/MB:

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

USEPA:

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

OEPA:

Brian K. Nickel 11/20/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

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

No comments were received during the comment period.

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

MOUND PLANT
PRS 311/350
SOIL CONTAMINATION AREA
WEST OF BUILDING 21

RECOMMENDATION:

Potential Release Site (PRS) 311 was identified during a 1983 site survey project which discovered an isolated plutonium-238 reading of 29 pCi/g. This value is below the DOE clean-up standard of 100 pCi/g and the OU4 canal clean-up level of 75 pCi/g for plutonium as well as the 10^{-5} risk guideline value of 55 pCi/g. An isolated thorium-232 measurement of 2 pCi/g was below the D&D clean-up level of 5 pCi/g surface and 15 pCi/g subsurface for thorium, therefore, NO FURTHER ASSESSMENT is recommended for PRS 311.

PRS 350 consists of detectable plutonium-238 concentrations (25-50 pCi/g) discovered in the vicinity of PRS 311 during the OU5 Phase I Investigation in 1994. Plutonium concentrations were below the DOE clean-up standard of 100 pCi/g, the OU4 canal clean-up level of 75 pCi/g for plutonium, and the 10^{-5} risk guideline value of 55 pCi/g. No radiological processes are known to have occurred at the location of PRS 350 and the age of the area's vegetation suggests that the area of PRS 350 did not experience any large scale earth moving operations that could have deposited contamination from another area of the plant. Based upon this information, PRS 350 is recommended for NO FURTHER ASSESSMENT.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath 2/29/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 3/4/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 3/4/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 4/15/96^{3/15/96} to 5/15/96^{4/15/96}

- No comments were received during the comment period.
- Comment responses can be found on page _____ of this package.

**MOUND PLANT
PRS 418
Overflow Pond South Inlet
(SM/PP Drainage Flume)**

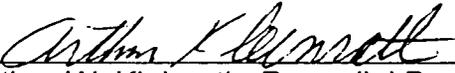
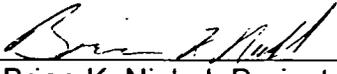
RECOMMENDATION:

Potential Release Site (PRS) 418 identifies the Mound Plant Overflow Pond South Inlet (SM/PP Hill Drainage Flume). PRS 418 is one of several PRSs that comprise the Mound Plant Drainage, Retention, and Outflow Group. PRS 418 was created to address potential contamination attributable to SM/PP Hill drainage, especially that contamination possibly associated with PRS 407 (to include PRSs 281 and 284): ²³⁸Plutonium, ²²⁸Thorium, ²³²Thorium, and ²²⁶Radium. Since the PRS 407 removal action is complete, there are no known potential release sites draining into the PRS 418 drainage flume. The catch basin at the bottom of the drainage flume will continue to trap sediment and will be addressed in the future as part of PRS 69.

Although sample results for benzo(a)pyrene exceed the 10^{-6} guideline value, they are below the 10^{-5} risk level. All other constituents are below guideline criteria.

Therefore NO FURTHER ASSESSMENT is recommended for PRS 418.

CONCURRENCE:

DOE/MEMP:	 Arthur W. Kleinrath, Remedial Project Manager	6/21/2000 (date)
USEPA:	 Timothy J. Fischer, Remedial Project Manager	6/21/00 (date)
OEPA:	 Brian K. Nickel, Project Manager	6/21/00 (date)