3006-060501000Z

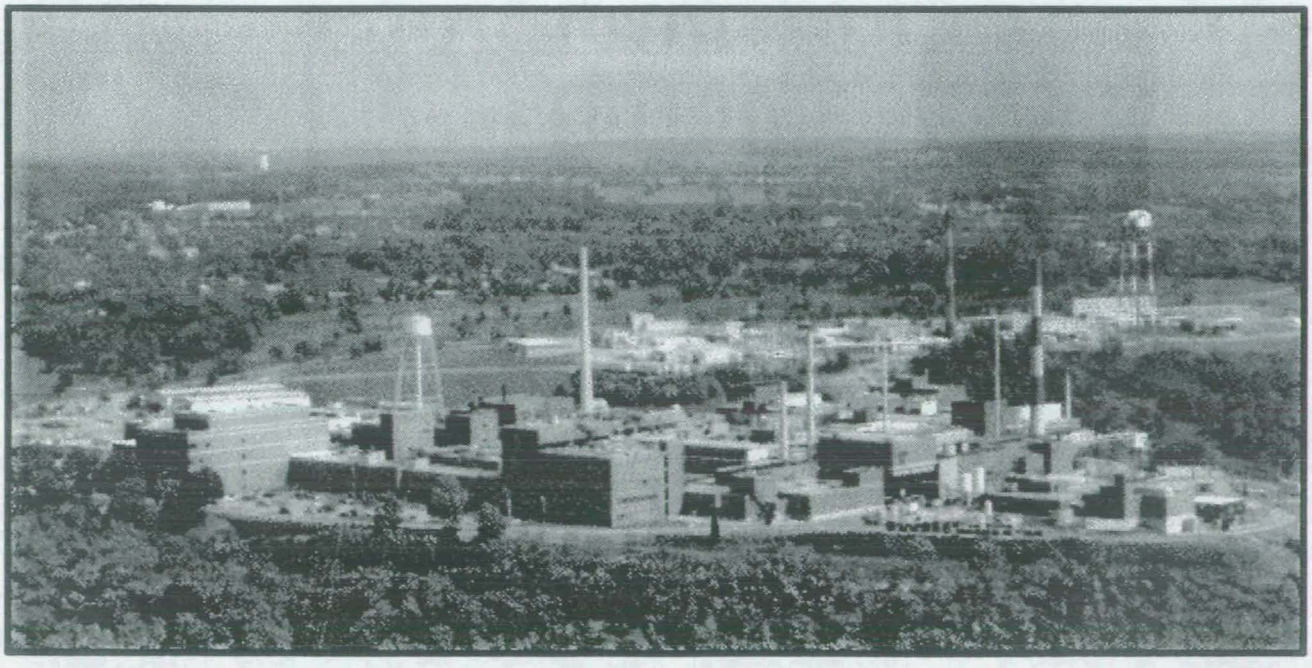
Environmental
Restoration
Program

OhioEPA

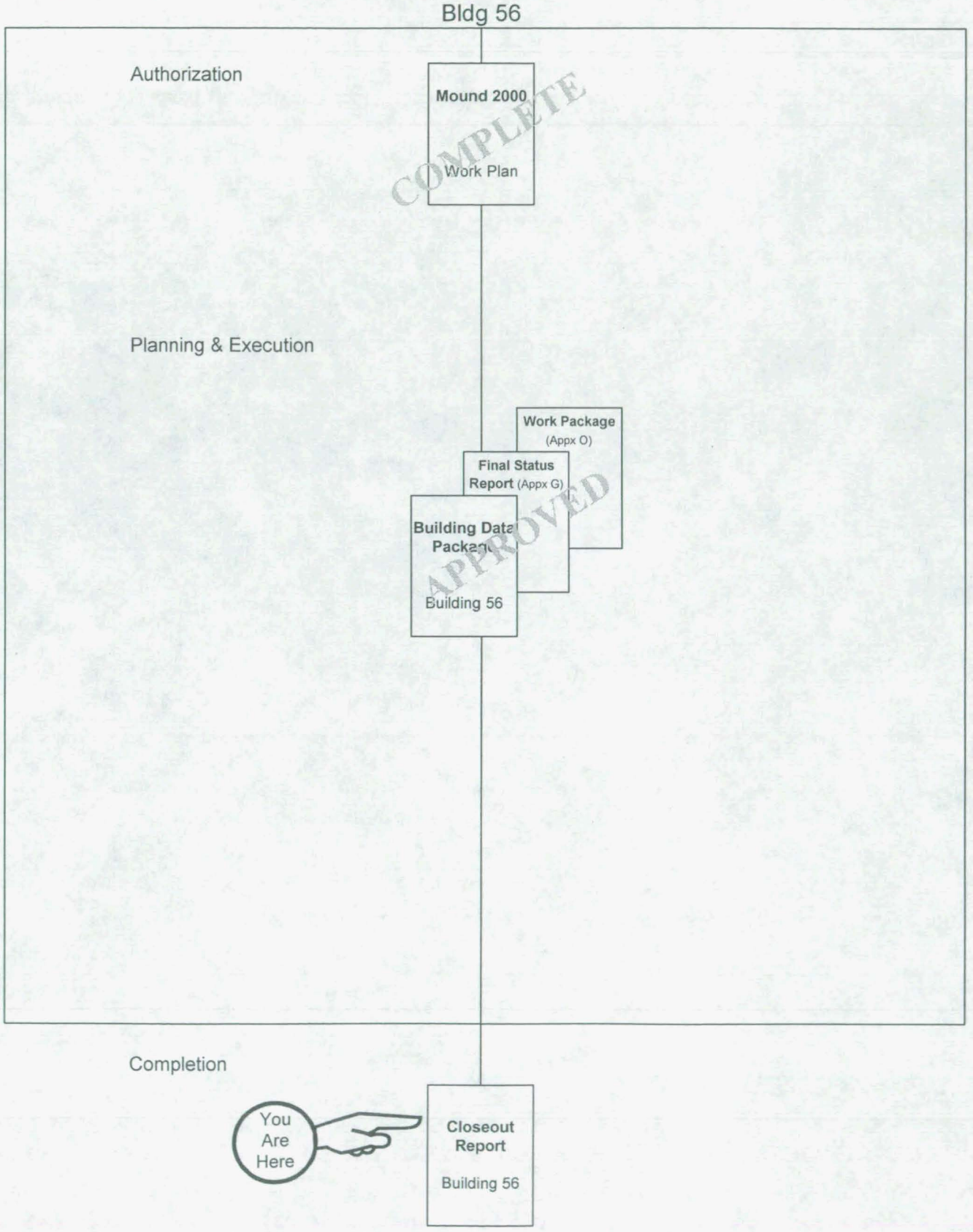
Miamisburg Closure Project
CLOSEOUT REPORT

Building 56
(Demolition)

Final
January 2005



Building 56



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1.0 PURPOSE

This is the final report documenting completion of the demolition of Building 56 located at the Department of Energy (DOE) Miamisburg Closure Project (MCP) Site, as shown in the figures provided in Appendix A. The building demolition, including the slab and footer, was accomplished per the Work Package for Building 56 Demolition BOSS-38208. A copy of the Work Package was included in Appendix O of the Building Data Package (BDP) for Building 56. The scope of work relating to this building is considered complete. Final site restoration has been completed.

2.0 BACKGROUND

2.1 Building 56

Constructed in 1973, Building 56 was located on the west central portion of the site (Figure 1). The facility was a single-story, reinforced concrete slab-on-grade structure with masonry block walls and a built-up membrane (asphalt) roof. Exterior walls were constructed of 8-inch hollow-core cement block. The cores of the block were filled with concrete and reinforced with #4 reinforcing steel. Building 56 contained 613 square feet of floor space and was set on footers that extend 4'–10" below grade. The building served as a pumping station for fire protection water and contained a 1,500 gallon per minute diesel powered centrifugal pump, a 250 gallon fuel tank, a jockey pump, and associated piping and control valves. An at-grade 350,000-gallon metal groundwater storage tank, adjacent to the building on the northeast side, was also demolished. The building and the contained equipment were adjoined to the adjacent water tank by a breezeway that was constructed in a similar manner to the building. There were no room additions to Building 56 altering the original footprint.

The building used central steam for heating but did not have a cooling system (the building was normally unoccupied). Electric service was 480 volts. The building had service water, a fire sprinkler system, and storm drains. Building 56 did not have sanitary services and was not serviced by a sanitary line.

Building 56 and associated structures had been used as the pumping station for fire protection water since its initial construction.

2.2 Potential Release Sites (PRSs)

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 the site contractor tabulated all the PRSs identified under the various regulatory programs in effect at the site. Three PRSs are at or near Building 56, as identified in Table 1. The PRS locations are shown on Figure 2, and recommendation sheets are provided in Appendix C.

Table 1 - PRSs in Proximity to Building 56

PRS	CERCLA or Bldg. Related	Binning Status	Comments
84*	CERCLA	NFA	**Building 56 Diesel Fuel Storage Tank (Tank 123)**
159**	Building	RA	**Area 4A, Sewage Sludge Drying Pits**
413**	CERCLA	RA	**Soil Contamination - Creosote**

* *PRS 84 was the location of a former 825-gallon diesel fuel tank located south of Building 56; it was removed in 1989 and binned NFA in 1996.*

** *PRSs 159 and 413 are included in the UGL Action Memo.*

3.0 ACTIONS TAKEN

The Building 56 BDP was submitted for simultaneous Core Team and public review on 25 August 2004, and the 30-day public review period concluded on 26 September 2004.

The demolition of Building 56 commenced on 2 October 2004 and the site restoration was completed on 18 December 2004. Photographs taken before, during, and after demolition are provided in Appendix A.

During the demolition of the water tank base, an odor of a petroleum product was noted. Work in that area was stopped and soil samples were taken. Upon review of construction drawings for the water tank, it was noted that oil was to have been added to the base of the metal tank as a preservative. No visible sheen was observed and the odor dissipated within 24 hours. All results from these samples were below the Cleanup Objective and are shown in Table 2. As a result of sample analysis no further action was required concerning this matter.

Table 2 – Analytical Tank Support Data

□	Ohio Reg (*)	BD56 Tank Sample A	BD56 Tank Sample B	Cleanup Objective	Hazard Index + Background
Analyte	ppb	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthlene		< 177	< 166	n/a	1.28E+07
Acenaphthylene		< 177	< 166	n/a	n/a
Anthracene		< 177	< 166	n/a	6.39E+07
Benzo(a)anthracene	5,500	< 177	< 166	4.08E+04	n/a
Benzo(a)pyrene	550	< 177	< 166	4.08E+03	n/a
Benzo(b)fluoranthene	5,500	< 177	< 166	4.08E+04	n/a
Benzo(ghi)perylene		< 177	< 166	n/a	n/a
Benzo(k)fluoranthene	55,000	< 177	< 166	4.08E+05	n/a
Chrysene	550,000	< 177	< 166	4.08E+06	n/a
Dibenzo(a,h)anthracene	550	< 177	< 166	4.08E+03	n/a
Fluoranthene		< 177	< 166	n/a	8.52E+06
Fluorene		< 177	1,160	n/a	8.52E+06
Indeno(1,2,3-cd)pyrene	5,500	< 177	< 166	4.08E+04	n/a
2-Methylnaphthalene		< 177	1,450	n/a	8.52E+05
Naphthalene	1,800,00	< 177	898	n/a	4.26E+06
Phenanthrene		< 177	2,180	n/a	n/a
Pyrene		< 177	< 166	n/a	6.39E+06
System Monitoring Cmpds	(% recovery)				
2-Fluorobiphenyl	20-115	78	95		
Nitrobenzene-d5	28-120	76	76		
p-Terphenyl-d14	18-137	92	94		

Blanks cells are non-detects (i.e., < PQL)
Bold results are outside QC criteria
(*) Ohio Code of Regulation - Soil Reuse Levels
Tank Sample A approximately 7 o'clock facing north
Tank Sample B approximately 2 o'clock facing north
µg/kg = ppb

A Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) study of Building 56 was performed prior to demolition. The study reports (provided in Appendix G of the Final BDP) provide details of the survey design and results and indicate that Building 56 met applicable surface release criteria.

Following demolition, the ground-contact surfaces of the slab were surveyed. All results met surface release criteria. Radiological Survey Data Sheets (RSDSs) for post-demolition surveys are provided in Appendix B.

Building debris was loaded into haulers and taken to a local sanitary landfill. The metal from the water tank was recycled.

This Closeout Report documents the completion of the demolition and removal of Building 56. All preparation and demolition activities were performed in accordance with the detailed work plan.

Table 3 - Materials Disposition

Building 56 Material	Quantity	Disposal Method	Destination
Asbestos Abatement (Debris)	3.2 cubic yards	Landfill	Stoney Hollow
Construction Debris (concrete and rebar)	120 cubic yards	Landfill	Stoney Hollow
Clean Hard Fill Debris (concrete)	11.4 cubic yards	Reused onsite	Concrete Crusher
Light Ballast	0.05 cubic yards	Treatment	Clean Harbors
Scrap Metal	270 cubic yards	Recycle	Metal Shredders

4.0 PROBLEMS ENCOUNTERED

Building 56 was successfully demolished per the Work Package. No problems were encountered.

5.0 RESOURCES COMMITTED

5.1 Personnel Organization

Table 4 lists the personnel organization for the demolition.

Table 4 - Personnel Organization for the Demolition

Agency or Party Involved	Contact	Description of Participation
US EPA (SR-6J) 77 W. Jackson Chicago, IL 60604 312-886-7058	Tim Fischer	Federal agency responsible for MCP oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian Nickel	State agency responsible for MCP oversight.
DOE/ MCP P.O. Box 66 1 Mound Road Miamisburg, OH 45343-0066 847-8350, ext. 304	Frank Schmaltz	DOE/ MCP Project Manager responsible for project oversight and success.
CH2M Hill Mound, Inc. SMPP-TFV Project P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-608-8007	Chris Watson	Provided the DOE/ MCP Project Manager with technical assistance, administrative support, sampling, decontamination, photo and site documentation, site safety, and report preparation. Provided the equipment necessary for the demolition and performed the building demolition and site restoration.

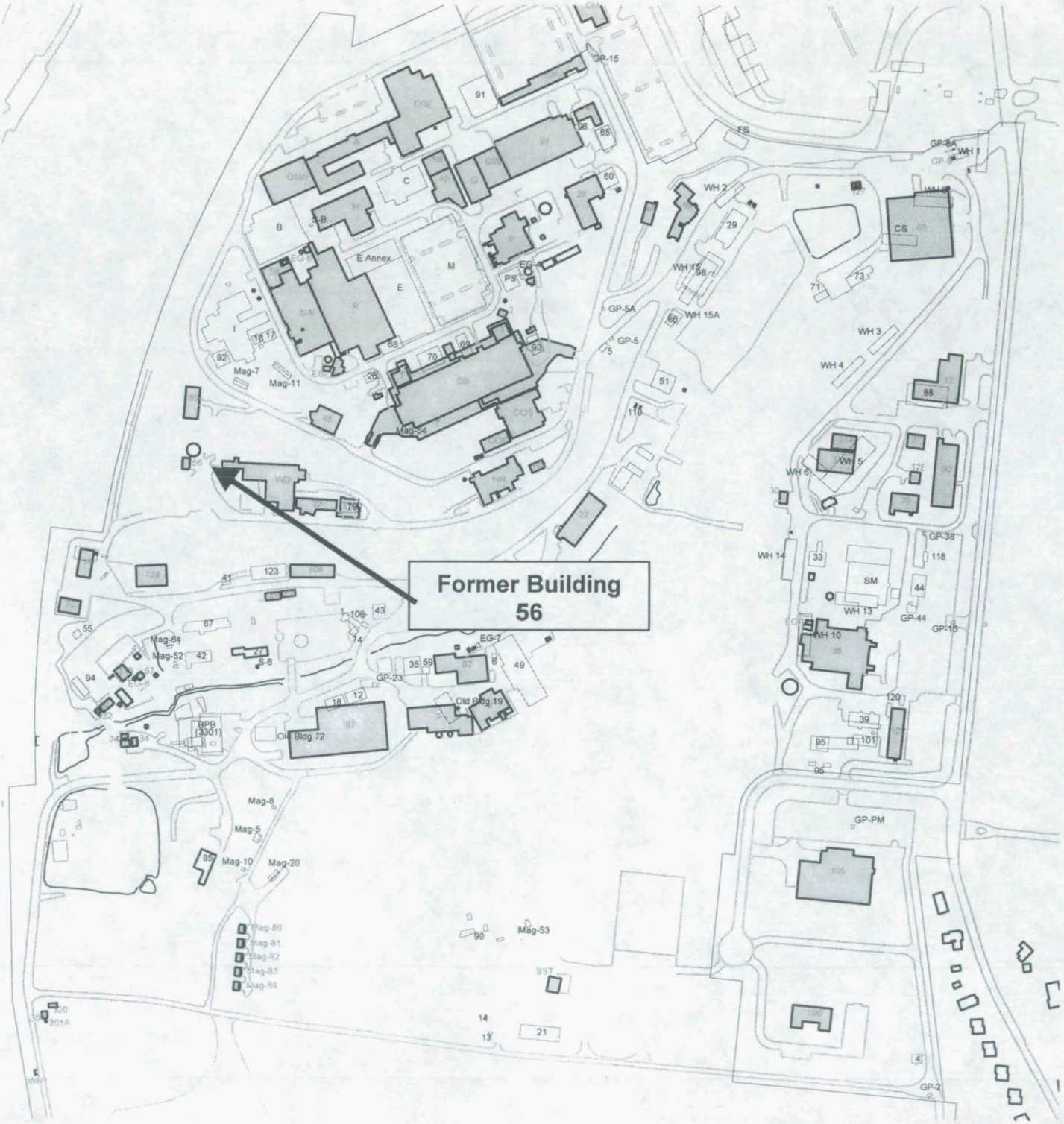
5.2 Demolition Cost

Under the site contract, CH2M Hill, Inc. has elected to cluster financial data for multiple buildings together. Cluster P includes buildings 24, 56, 57, 112, 113, 415, 432, EG-8, P, PH, WH-1, WH-2, and WH-3. As a result, cost data for individual building demolitions are not available. When Cluster P is completed, the total cost for the cluster will be reported in the final Closeout Report for the cluster. At this time the final Closeout Report for Cluster P is expected to be Well Houses 1, 2, and 3.

APPENDIX A

Figures

Figure 1 – Location of Building 56



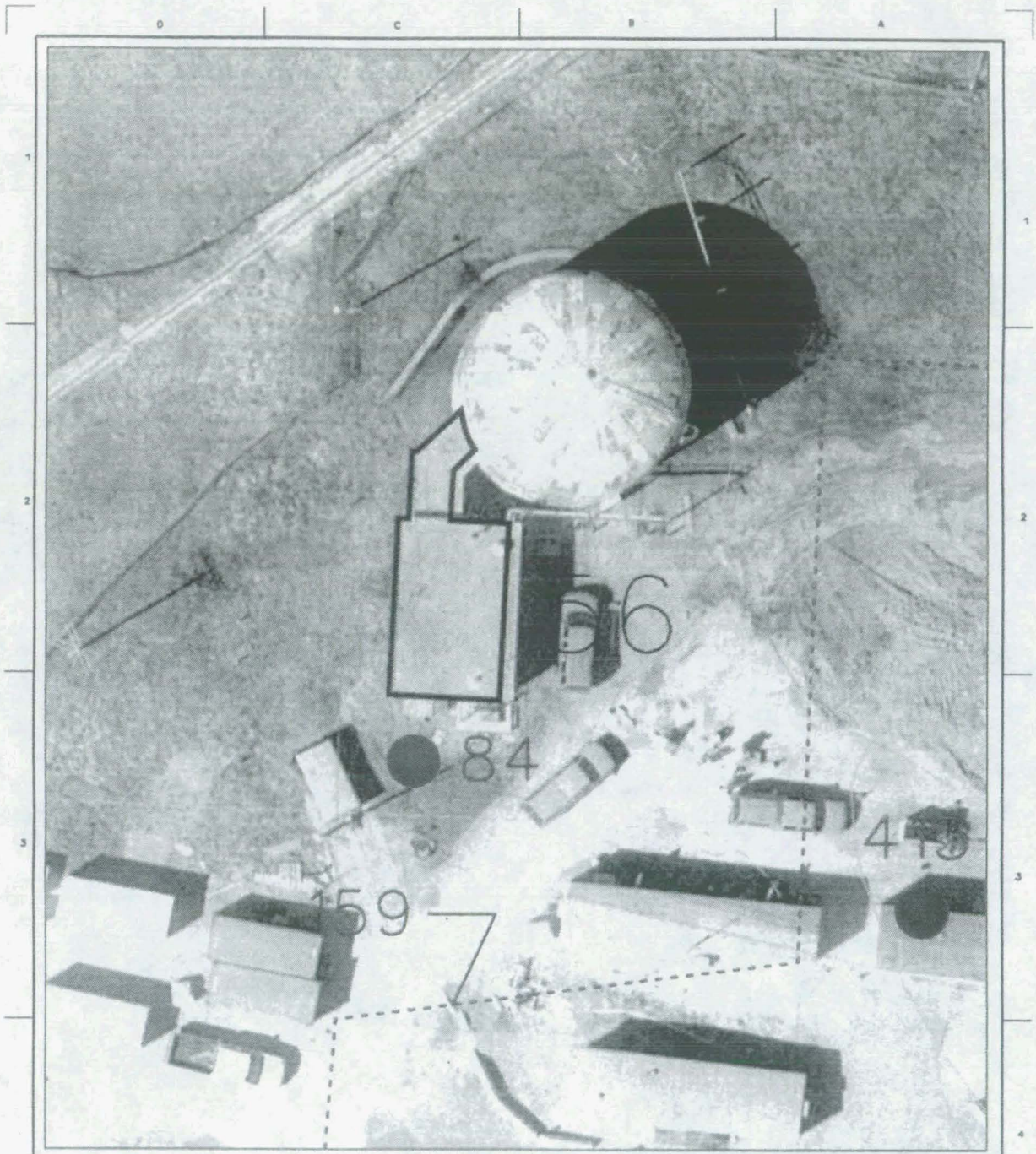
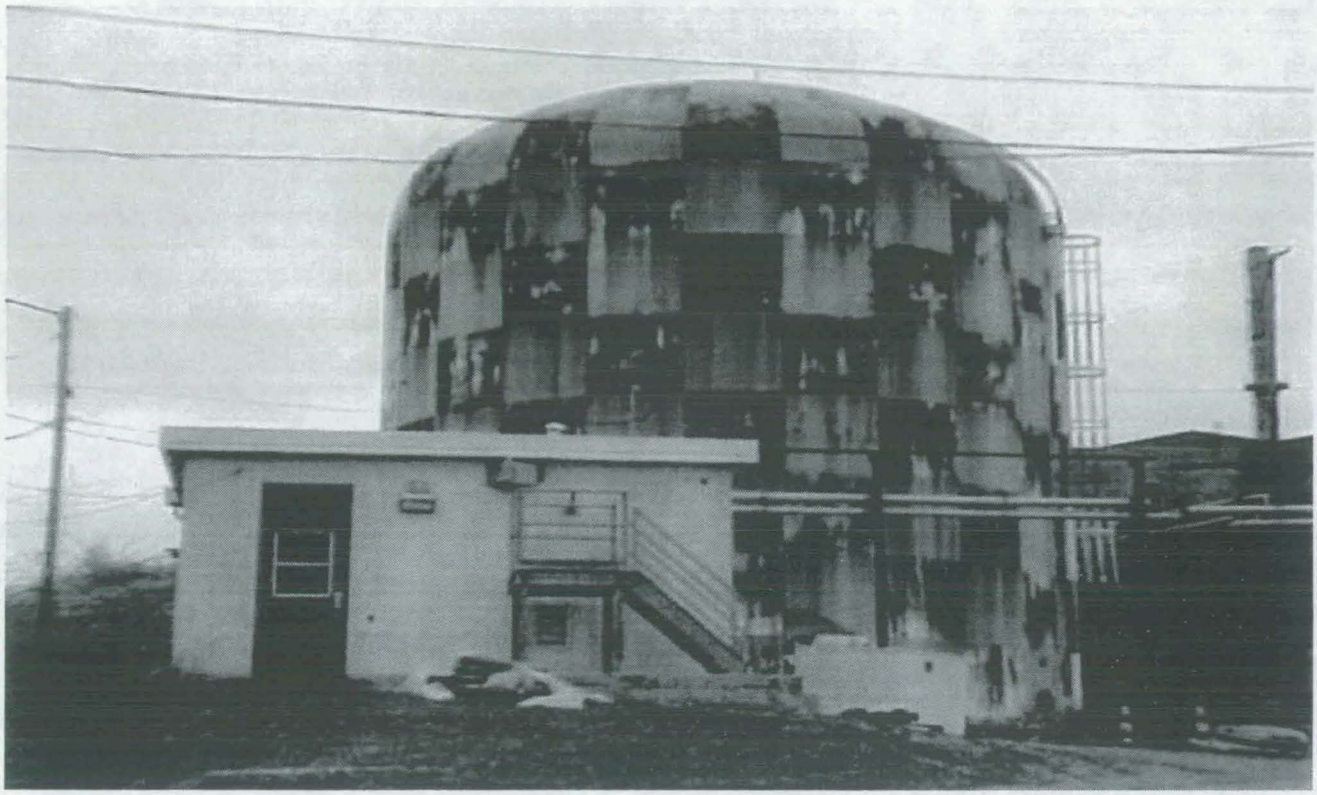
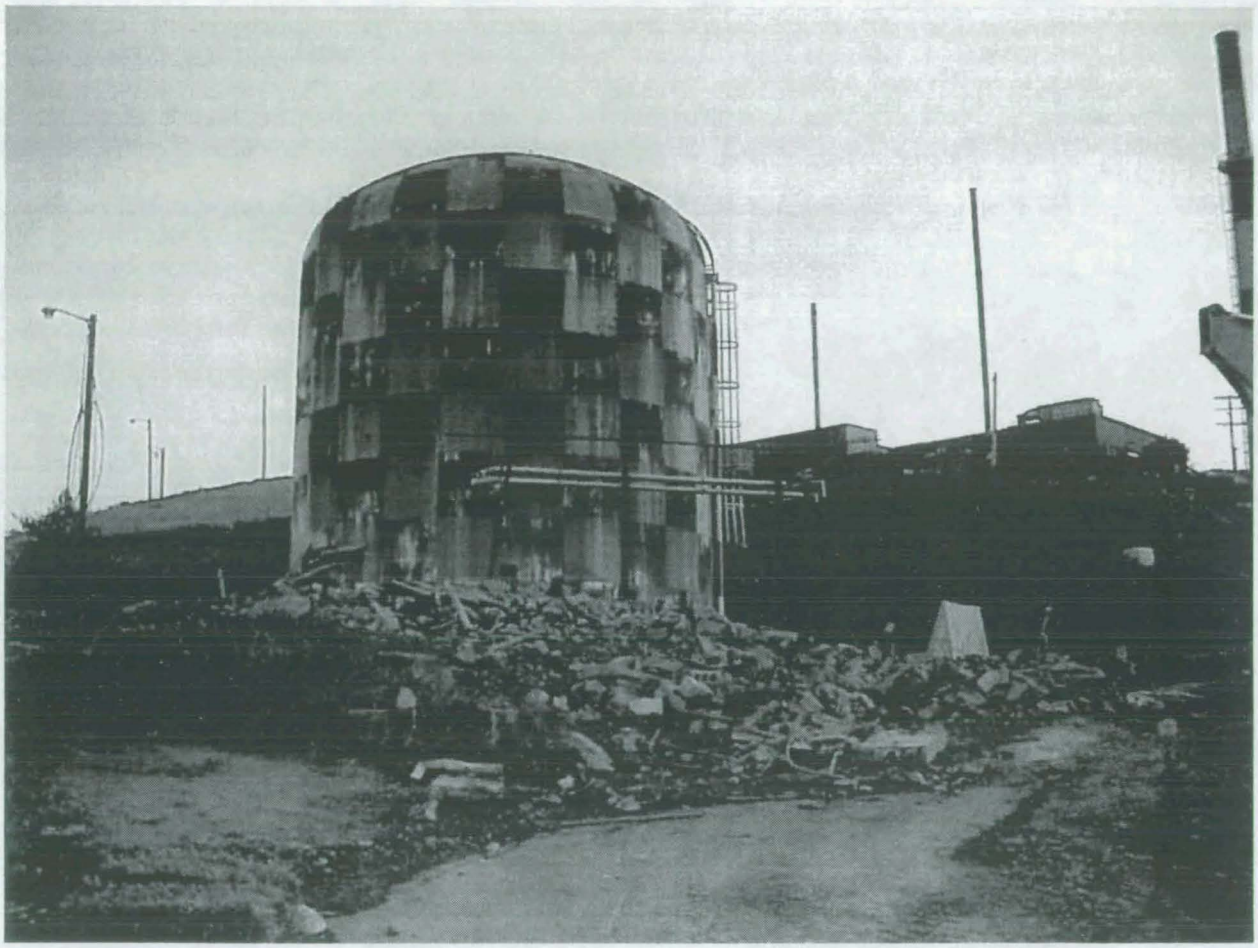

56
84
159
PRS Point
PRS Area
PRS Line
MOUND
Environmental Restoration Geographic Information System
12/14/04
MR
UNCLASSIFIED
56_vicinity.dgn
Figure 2
Building 56
and Vicinity
MSTATION V8

Figure 3 - Building Photos



Building 56
and water tank



Building 56
Demolished

**Building 56 final restoration,
grass mats rolled over area**

APPENDIX B

Post-Final Status Survey Report
Radiological Surveys

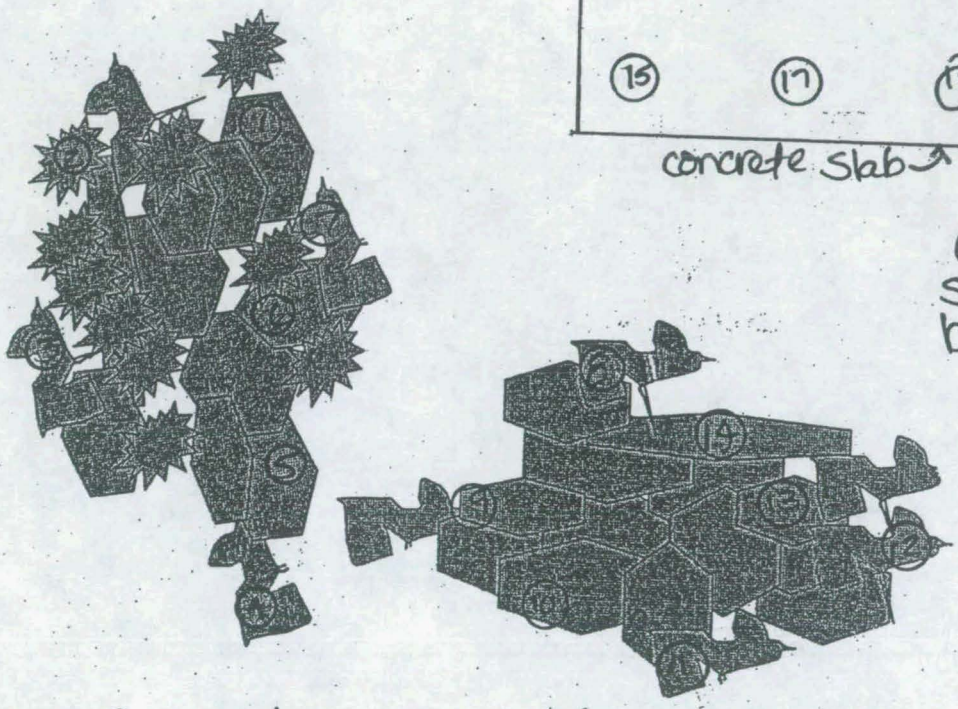
This appendix includes copies of the RSDSs from the post-demolition surveys of the ground-contact surfaces of the slab. All results met surface release criteria.

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 56 L07	SURVEY NO. 04TF-0370
PURPOSE: Survey of concrete rubble prior to going to crusher	RWP NO. N/A
	DATE: 11.3.04
	TIME: 1500

MAP / DRAWING

COPY



Background: α 1 cpm DI: α 1.4 cpm
β 170 cpm β 30 cpm

Scan: Pause survey conducted at various locations on rubble : slab. No audible clicks detected in required time therefore no integrated survey was required.

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360	5708	8.17.05
3030	5826	10.25.05
	N/A	

Completed by: (Signature)	HP# [redacted]	Date: 11.3.04
Completed by: (Print Name) Jill Quick		
Counted by: (Signature)	HP# [redacted]	Date: 11.3.04
Counted by: (Print Name) Jquick		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 11/11/04
Reviewed/Approved by: (Print Name) RM Coblentz		

Survey No. 04-TF-0370

RADIOLOGICAL SURVEY DATA SHEET

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	0	2	N/A	concrete rubble
2	0	0		
3	2	2		
4	5	0		
5	5	2		
6	0	0		
7	15	4		
8	10	2		
9	0	2		
10	0	0		
11	0	0		
12	10	4		
13	10	2		
14	15	2		
15	5	0		concrete slab
16	0	2		
17	10	2		
18	5	2		
19	0	0		
20	0	4		
21	0	0		
22	10	0		
23	10	2		
24	5	4		
25	0	4		
26	0	0		

N/A

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

N/A

COMMENTS: N/A

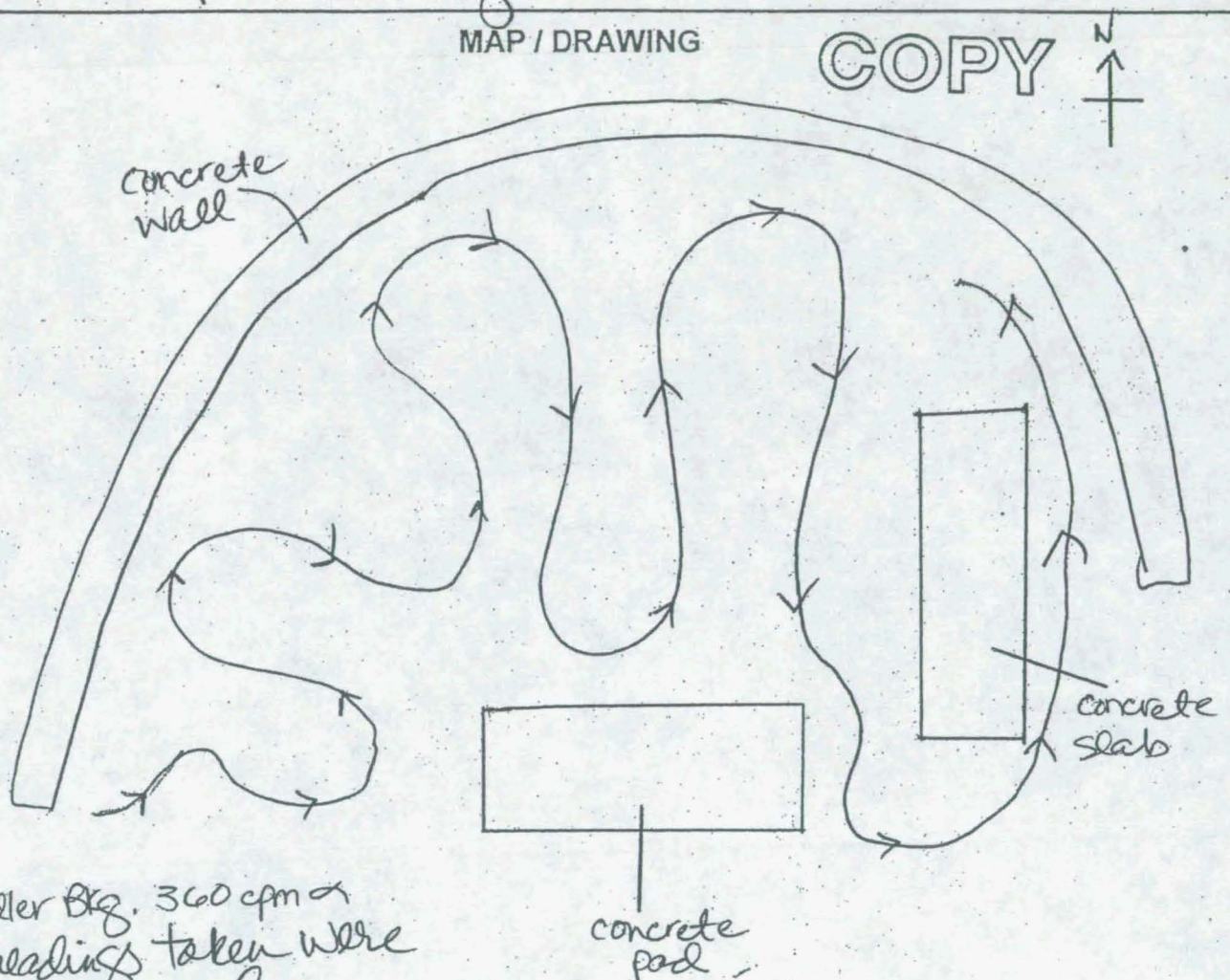
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample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

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 56 807	SURVEY NO. 04-TF-0371
PURPOSE: Survey of soil prior to excavation *for indication purposes only*	RWP NO. N/A
	DATE: 11.3.04
	TIME: 1400

MAP / DRAWING

COPY



Fidler Brg. 360 cpm ∝
All readings taken were ≤ background.

= Survey Path w/fidler

LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
K = factor of 1000
— · — · — = radiological boundary

(#) = mrem/hr neutron
(#) = swipe number
[#] = air sample number
(#/α) or /β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Fidler/236	5874/3944	1.13.05
	N/A	

Completed by: (Signature)	[redacted]		Date: 11-3-04
Completed by: (Print Name)			
Counted by: (Signature)	N/A	HP#	Date:
Counted by: (Print Name)			
Reviewed/Approved by: (Signature)		HP# [redacted]	Date: 11/17/04
Reviewed/Approved by: (Print Name)	RMGblentz		

Survey No. 04-TF-0371

RADIOLOGICAL SURVEY DATA SHEET

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

N/A

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

N/A

COMMENTS:

N/A

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

ML-9620A (4-98)

APPENDIX C

PRS Recommendation Sheets

MOUND PLANT RECOMMENDATION
PRS 413
Soil Contamination - Creosote

Background:

PRS 413 is a chemically contaminated soil location situated in the vicinity of the old Sanitary Disposal (SD) facility. The SD facility, now removed, was located on the southwest side of the Mound Plant Main Hill, approximately northwest of, and on terrain elevated above, the Plant Waste Disposal (WD) Building. Soil sampling of the subject area resulted in the discovery of chemical constituents in exceedence of guideline criteria. The subject area was subsequently excavated.

Recommendation:

The Core Team originally recommended Further Assessment (FA) for PRS 413. In realization that PRS 413 also lies in close proximity to WD Building and numerous WD Building PRSs, the Core Team believes it is both technically and administratively prudent to address PRS 413 with the removal action at WD Building and the associated PRSs. In accordance with the Mound 2000 Plan processes associated with the Core Team acceptance and signing of the WD Building Action Memorandum, these WD Building PRSs are designated for Response (Removal) Actions. Consistent with the Action Memorandum, the Core Team recommends a RESPONSE ACTION for PRS 413.

Concurrence:

DOE/MEMP: Art Kleinrath — 4/13/2000
Art Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fisher — 4/13/00
Timothy J. Fisher, Remedial Project Manager (date)

OEPA: Brian K. Nickel — 4/13/00
Brian K. Nickel, Project Manager (date)

MOUND PLANT
PRS 84
FORMER TANK SITE
BUILDING 56 DIESEL FUEL TANK

RECOMMENDATION:

This former location of a diesel fuel tank was identified as a Potential Release Site (PRS) because of its inclusion in the Mound Plant Underground Storage Tank Program Plan and Regulatory Status Review. Components of diesel fuel are the contaminants of concern associated with this PRS.

Laboratory analysis for Total Petroleum Hydrocarbon (TPH) indicated no contamination above the detection limit of 5 ppm as compared to the Bureau of Underground Storage Tank Regulations (BUSTR) guideline criteria of 105 ppm. Soil sampling conducted during removal indicated no evidence of residual contamination above guideline criteria. Furthermore, quantitative soil gas sampling, radiological soil sampling and groundwater monitoring well sampling also indicated no evidence of contamination above guideline criteria.

Therefore, since no evidence of contamination exists, PRS 84 requires NO FURTHER ASSESSMENT.

CONCURRENCE:

DOE/MB: Arthur K Kleinrath 8/20/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fisher 8/20/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: B K Nickel 8/20/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 9/15/96 9/16/96 to 10/15/96

☒ No comments were received during the comment period.

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

PRSs associated with any of the four building soils or AGLs, but they are listed in Table 3 for completeness. This AM addresses any soil/concrete required to be removed and subsequent sampling within and adjacent to the building footprints.

In 1999, the vitrified clay pipe waste transfer lines (PRSs 427 and 428, and portions of PRSs 429 and 438) from north of WD Building to the top of the adjacent hill were capped and filled with concrete. This includes six manholes (HW-2, HW-4, HW-6, HW-8, HW-12, and HW-16) associated with the lines.

2.1.3 Associated PRSs

A total of 27 PRSs are included in this AM. There are 21 PRSs (Table 1) where removal is expected prior to verification/confirmation. There are six PRSs (Table 2) where removal was previously performed (mostly related to Old SD facility) but verification/confirmation is required and will be performed under this AM.

Table 1 – PRSs with RA & Sampling

PRS	Description
123	Area 5, radioactive waste line break
124	Building 48 hillside
415	Soil contamination – Radiological SCR 307
423	Hot waste line, segment 1A
424	Hot waste line, segment 1B
425	Hot waste line, segment 2
426	Hot waste line, segment 5
427	Hot waste line, segment 6
428	Hot waste line, segment 7
429	Hot waste line, segment 9
430	Hot waste line, segment 9b
431	Hot waste line, segment 10
432	Hot waste line, segment 11
433	Hot waste line, segment 12
434	Hot waste line, segment 13A
435	Hot waste line, segment 13B
436	Hot waste line, segment 14
437	Hot waste line, segment 3
438	Hot waste line, segment 4
439	Hot waste line, segment 4A
440	Hot waste line, segment 8
	Note: This AM includes removal of other waste lines that may be identified during the course of the UGL RAs.

Table 2 – PRSs with Sampling Only (Removal Previously Performed)

PRS	Description/Comment
155	Old sanitary disposal (SD) plant (aka Old Sanitary Wastewater treatment Plant) / Removed 1997
156	Old SD Plant Tank (Tank 205) / Removed 1997
157	Old SD Plant Tank (Tank 206) / Removed 1997
158	Old SD Plant Tank (Tank 207) / Removed 1997
159	Area 4A, Sewage Sludge Drying Pits / Removed 1997
413*	Soil Contamination – Creosote / Removed 1996

*removal of soil occurred previously but verification sampling was incomplete

Table 3 – Non-PRS RA & Sampling

Bldg.	Description
WD	soil only, verification
HH	soil & concrete slab, confirmation
23	soil only, confirmation
125	soil only, confirmation
SW-WD AGLs	Ground level lines (abandoned) (see Figure 1)
R-SW to 23 area AGLs	Overhead line suspended from stanchion to be removed with Bldgs 23/125 demolition activities.