3004-0604060012

CH2M HILL
Mound, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, OH
45343-3030

CH2MHILL

SMO-052-05
April 20, 2005

Ms. Margaret L. Marks, Director
Miamisburg Closure Project
U. S. Department of Energy
1075 Mound Road
Miamisburg, OH 45342

ATTENTION: Paul Lucas

SUBJECT: Contract No. DE-AC24-03OH20152
Contract Clause C.2.3.1.3
Contract Deliverable #39
PRS 237, OSC REPORT, FINAL

Dear Ms. Marks:

Attached is the following final document:

- PRS 237, OSC Report, Final

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Dave Rakel at 937-865-4203.

Sincerely,

John Lehew
Site Manager

JL/ms
Enclosures

cc: T. Fischer, USEPA, (1) w/attachments
B. Nickel, OEPA, (1) w/attachments
R. Vandegrift, ODH, (1) w/attachments
M. Wojciechowski, Tetra Tech, (1) w/attach
S. Smiley, DOE/MCP, (1) w/attachments
L. Rawls, DOE/MCP, w/o attachments
R. Tormey, DOE/OH, (1) w/attachments
G. Desai, DOE/HQ, (1) w/attachments
K. Arthur, (1) w/attachments
G. Morris, (1) w/attachments
F. Bullock, MMCIC (2) w/attachments
Public Reading Room (4) w/attachments
ER Records, (1) w/attachments
DCC (1) w/attachments
Admin Record (2) w/attachments
J. Lehew, w/o attachments
D. Rakel, w/o attachments
V. Darnell, w/o attachments
J. Fontaine, w/o attachments
W. Webb, w/o attachments
M. McDougal, w/o attachments
MOAT Coordinator, w/o attachments
File

3004-0604060012

PRS 237
REMOVAL ACTION

OSC REPORT

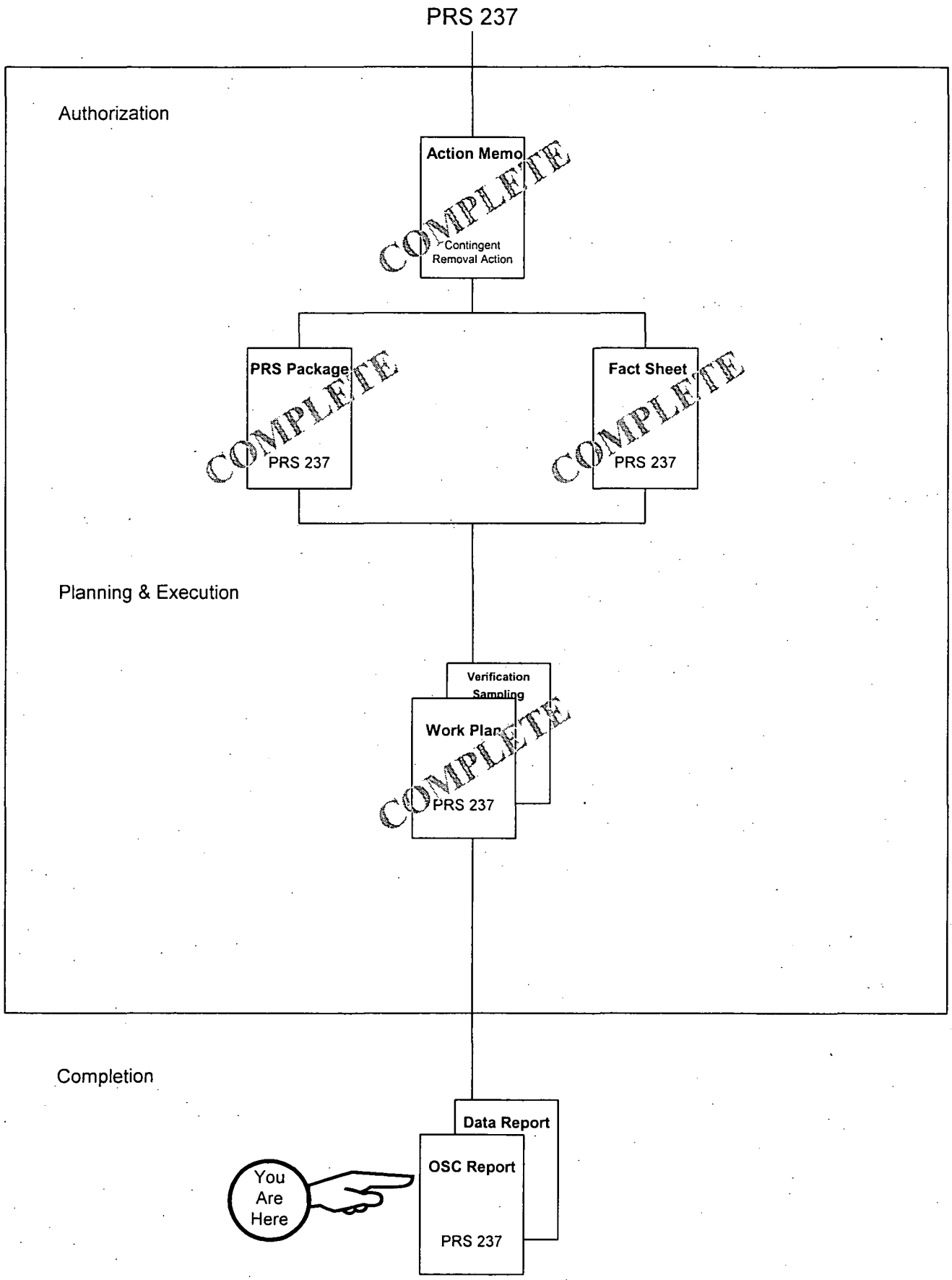
April 2005

Final

Department of Energy
Miamisburg Closure Project

CH2MHILL

PRS 237



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Appendix B	General Media Information
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Acronyms

CO	cleanup objective
COC	contaminant of concern
DOE	Department of Energy
MCP	Miamisburg Closure Project
NFA	No Further Assessment
OEPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
PRS	Potential Release Site
RA	Removal Action
RBGV	Risk-Based Guideline Value
UCL	upper confidence limit
USEPA	United States Environmental Protection Agency

RECOMMENDATION

Potential Release Site (PRS) 237, also known as the Potential Hot Spot Location S0175, was assigned based on a 1980s isolated sample location with cesium-137 and cobalt-60 results above cleanup objectives.

Per the associated Action Memorandum (Contingent Removal Action for Contaminated Soil, Final, June 2002) and Fact Sheet (September 2003), the historic sample location was excavated. Excavation of contaminated soil, and verification sampling were performed in accordance with the PRS 237 Removal Plan (ER/ST-04-006, September 2004). The RA was successfully completed and resulted in the excavation and disposal of less than one cubic yard of soil. The material was shipped via railcar to Envirocare disposal facility. The contaminants of concern (COCs) for PRS 237 were Cs-137 and Co-60, with cleanup objectives (COs) of 3.8 pCi/g and 0.7 pCi/g, respectively. All verification results for PRS 237 were below the COs.

After a thorough review of the PRS 237 On-Scene Coordinator (OSC) Report, the Core Team agrees that the PRS 237 Removal Action is complete, and that all previously existing environmental issues associated with PRS 237 have been resolved.

Paul Lucas 4/19/05

Paul Lucas, OSC
U.S. Department of Energy
Miamisburg, Ohio

Timothy J. Fischer 4/19/05

Timothy J. Fischer, Remedial Project Manager
USEPA
Chicago, Illinois

Brian K. Nickel 4/19/05

Brian K. Nickel, Project Manager
OEPA
Dayton, Ohio

1.0 SUMMARY OF EVENTS

This section describes the site background and events leading up to the RA, parties involved in responding to the RA, COC determination, chronological narrative of the RA, and resources committed to complete the project.

1.1 Site Conditions and Background

Background. PRS 237, also known as Potential Hot Spot Location S0175, is located as shown on Figure 1 of Appendix A to this OSC Report (page A9/19).

There is no known source of contamination.

The PRS 237 Removal Action (RA) was authorized by the Core Team in September 2003, as documented in the associated Fact Sheet, issued in accordance with the Contingent Action Memo (Contingent Removal Action for Contaminated Soil, Final, June 2002).

The level of radiological soil contamination present warranted a RA under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act). This OSC Report documents the completion of all aspects of the Removal Action activities authorized via the Action Memo and Fact Sheet, including removal of soil contaminated above the cleanup objective (CO) and verification sampling and analysis to demonstrate that the remaining soil meets the Cleanup Criteria. The remaining soil meets COs.

Removal Action. PRS 237 consisted of one small (approximately four foot by four foot) area of soil contamination. Based on previous characterization, a formal VSAP (Verification Sampling and Analysis Plan) was not warranted and verification sampling instructions were provided in the Removal Plan. Per the Removal Plan, five verification samples were collected and analyzed via onsite gamma spec.

1.2 Organization of the Removal Actions

Table 1 lists the parties responding to the removal action, and their responsibilities.

1.3 Objectives

Documentation Objective. The objectives of this On-Scene Coordinator (OSC) Report are to describe the RA fieldwork and document successful completion of the project. Material quantities and disposition locations are presented in Table 2. The cost breakdown of the RA is presented in Table 3.

Cleanup Objective. Contaminants and COs identified in the Fact Sheet are as follows:

Analyte	CO
Co-60	0.7 pCi/g
Cs-137	3.8 pCi/g

All soil sample results included in Appendix A were below their respective COs.

Removal Action Objectives: The objectives of the removal action included:

- Project Planning,
- Public Notification,
- Site Preparation,
- Excavation,
- Verification,
- Site Restoration, and
- Documentation of Completion.

1.4 Chronological Narrative of the Removal Actions

The following is a chronological narrative of events surrounding the PRS 237 RA:

Timeframe	Activity
1950-1960s	I Building (Isolated Laboratory) was the location of explosive research, testing, and manufacturing. No additional contamination generating processes or activities are known to have occurred in this area.
1983-1984	The Radiological Site Survey investigated soils for radionuclides. As part of this investigation, one surface sample was taken at PRS 237 with the maximum Cesium and Cobalt results as described in the Fact Sheet. No records can be found indicating if a clean up of PRS 237 ever took place.
1995	The Other Soils Characterization project sampled the area surrounding PRS 237 at six locations approximately five to fifteen feet from PRS 237 with no radioactive contamination detected, no organics detected above background levels, and no metal contamination detected above the 10^{-6} Risk Based Guideline Values.
September 1997	The Core Team after originally recommending Further Assessment recommends a Response Action.
October 2003	Public Fact Sheet issued.
September 2004	Removal action carried out.
February 2005	PRS 237 OSC Report prepared.

2.0 EFFECTIVENESS OF THE REMOVAL ACTION

Verification sample results for PRS 237 are presented in Appendix A. All results are below their respective COs.

2.1 Actions Taken by Site Contractor

CH2M Hill Mound, Inc. personnel planned, performed oversight, and performed the excavation, monitoring, sampling and analyses, documentation, and transportation of contaminated soil and debris to the designated onsite soil staging area. Photographic documentation is presented in Appendix C.

The project met the removal action objectives (Section 1.3), as outlined in the Fact Sheet (dated September 2002). CH2M Hill Mound, Inc. personnel prepared this OSC Report, which shows that the Removal Action objectives were achieved.

2.2 Actions Taken by Local, State, and Federal Agencies

The Department of Energy (DOE)/MCP, the United States Environmental Protection Agency (USEPA), and Ohio EPA (OEPA) had oversight responsibility for the removal action. The DOE/MCP was the lead agency for the RA and provided the funding and oversight for the RA. The USEPA and OEPA had oversight responsibility for the RA and review of the Action Memorandum/Fact Sheet and OSC Report to ensure that the objectives were met.

2.3 Actions Taken by Subcontractors

Subcontractors involved in the project included the following:

- Envirocare (disposal facility) received waste via rail transport.

3.0 DIFFICULTIES ENCOUNTERED

3.1 Items that Affect the Removal Actions

No difficulties were encountered during the removal.

3.2 Issues of Intergovernmental Coordination

All DOE/USEPA/OEPA interactions were good. The agencies were updated informally on a regular basis, and formally at monthly Core Team meetings. The Mound 2000 Process worked well. Splitting of samples with OEPA went well.

4.0 RECOMMENDATIONS

4.1 Means to Prevent a Recurrence

The contaminated soil was removed and therefore spread of contamination is prevented. This area will be transferred from federal to private ownership. All State and Federal disposal rules will apply.

Table 1: Organization of the Removal Action

US Environmental Protection Agency SFR-5J 77 W. Jackson Street Chicago, IL 60604 312-353-2000	Timothy J. Fischer	Federal agency responsible for oversight
Ohio Environmental Protection Agency 401 E. Fifth Street Dayton, OH 45402-2911 937-285-6357	Brian K. Nickel	State agency responsible for oversight
Department of Energy, Miamisburg Closure Project 1075 Mound Road Miamisburg, OH 45343 937-847-8350 x-314	Paul Lucas	On-scene Coordinator (OSC) responsible for oversight and success
CH2M HILL Environmental Restoration Project 1 Mound Road Miamisburg, OH 45343-3030 937-608-8220	Jim Fontaine	Provide OSC with technical assistance, administrative support, field oversight, sample management, site safety, photo, site documentation, and preparation of the OSC Report

Table 2: Materials and Disposition

Type of Material (both locations)	**Quantity**	**Disposal Method**	**Disposal Location**
Contaminated soil	<1 yd^3	Rail transport	Envirocare

Table 3: Removal Cost

Cost Category	**Cost**
Fieldwork	$350
Transportation of Contaminated Material	$100
Disposal of Contaminated Material	$300
Sample Plan, Verification Sampling & Analyses, and Data Validation	$5,000
Restoration	$100
Estimated Total Project Cost	**$ 5,850**

APPENDIX A

DATA REPORT

DATA REPORT

PRS 237

February 2005

Rev. 0

Department of Energy

Miamisburg Closure Project

CH2MHILL

A 1/19

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Figure 1: Location of PRS 237

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Table 1: Sample Coordinates

Table 2: Sample and QC Summary

Table 3: Onsite Gamma Spec Results

Appendices

Appendix A Excerpt Removal Plan

Appendix B Figures

Appendix C Tables

Appendix D Onsite Gamma Spec Sheets & Walkover Survey

Acronyms

MDA minimum detectable activity

PRS Potential Release Site

VSAP Verification Sampling and Analysis Plan

A 2/19

1.0 PURPOSE

This Data Report documents the verification activities of Potential Release Site (PRS) 237 (location shown on Figure 1).

The purposes of this Data Report are to:

- document the verification of PRS 237,
- describe any variances to the required sampling, and
- present the analytical results.

2.0 FIELD ACTIVITIES / VARIANCES

Verification sampling activities occurred in September of 2004 in accordance with Paragraph 4.0, Verification Sampling, of Section 7, Detailed Work Steps of the PRS 237 Removal Plan. Due to the small size of the removal, the Core Team approved including required sampling detail in the Removal Plan rather than generating a separate Verification Sampling and Analysis Plan (VSAP). The relevant portion of the Removal Plan is included as Appendix A.

2.1 SAMPLE LOCATIONS

Per the above referenced Paragraph 4.0, five soil samples and one duplicate were collected. Coordinates are presented in Table 1.

2.2 SAMPLE SUMMARY

Table 2 documents the total number of verification and quality control samples collected during the investigation for each target analysis. The required quality control collection frequencies were met.

The Radiological Survey Data Sheet documenting the walkover survey of the area is provided in Appendix D (page A19/19).

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2.3 VARIANCES

There were no variances to the sampling plan.

3.0 RESULTS

Samples for final verification of this PRS were processed onsite.

Per the Removal Plan, verification samples were processed at the onsite gamma spec lab and received long-count gamma spec analysis. All results are below cleanup objectives (see Table 3).

3.1 DATA REVIEW

All onsite data were reviewed and no anomalies were identified that would impact the usability of the data.

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APPENDIX A

Removal Plan Excerpt

Note Waste Management Characterization text below:
"Based on a review of the work to be performed, the Waste Generator and Waste Coordinator determine types (sanitary, hazardou LLW, LLMW, TRU) and estimated amounts of waste prior to generation. An evaluation of the physical, radiological, and chemic properties is made to determine a disposal path for each type of waste. The proposed disposal facility, waste profile, and knowledge o the waste generating process will determine the characterization methodology required for each waste type.

Process knowledge will generally be sufficient to characterize sanitary and hazardous waste for disposal. Sampling and analysis fo radiological characterization of radioactive waste will be determined based on process knowledge of the source of the waste. Analytic methods employed include surface contamination measurements, air concentration measurements and calorimetry (tritium), alph spectroscopy and gamma spectroscopy. All characterization determinations are documented and peer reviewed prior to waste shipmen Material Safety Data Sheets (MSDS) are used to supplement process knowledge of chemical properties of the waste. Where proces knowledge is not sufficient to provide a RCRA determination, analysis of waste will be accomplished through the Toxicit Characteristic Leaching Procedure (TCLP) performed by an offsite laboratory.

Procedures controlling waste characterization are contained in Mound Technical Manuals MD-10167, Radioactive Waste Procedure Operations 420: Waste Stream Characterization and 428: Waste Radionuclide Identification and Quantification, and MD-70523 Management of Hazardous Waste, Trash, and Recyclable Materials, Operation 001: Waste Verification Sampling and Analysi Additional direction is contained in these manuals in operations specific to the waste type and container being used."

3.1.3 Scan the area with a FIDLER (or equivalent meter) to identify areas above clean up standards. (MD-80036, Operations 30005, 30007 30040 as appropriate for the CRC.)

3.1.4 Remove any additional contaminated areas found during the FIDLER scan.

3.1.5 Repeat steps 3.1.3 and 3.1.4 until the area is below clean-up standards.

3.2 Equipment Decontamination

3.2.1 Survey equipment if needed to allow for its release.

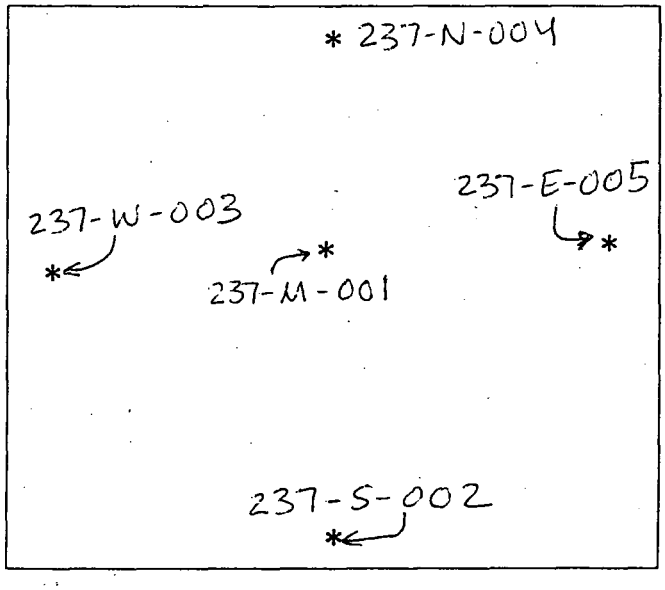
4.0 Verification Sampling

SAMPLING PLAN FOR PRS 237

4.1 PRS 237 Final Field Verification Sampling Plan

NOTE: Based on previous characterization (six borings installed 1995 with no results above cleanup objectives - Reference Public Fact She dated September 2003), no formal VSAP is warranted. (Reviewed with the Core Team March 4, 2004)

4.1.1 At the base of excavation, collect five samples per the sketch below per MD-80036, Mound Radiological Operations Procedure Sample will be analyzed per MD-80030, Mound Environmental Analytical Procedures.



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A6/19

* - Sampling Locations
Note: The samples are from the sidewalls and base of excavation.

SAMPLE IDs ADDED FOR REFERENCE TO DATA
8Feb05

4.1.2 Process sample on-site (gamma spec long count).

4.1.3 If results are greater than Cleanup Objectives, additional soil will need to be removed and the excavation re-sampled.

4.1.4 Results will be retained for inclusion in the On-Scene Coordinator (OSC) report.

5.0 Site Restoration

5.1 Backfill Excavated Area

5.1.1 Backfill and compact PRS 237 excavated area based upon favorable results.

5.2 Road Repair/Restoration

5.2.1 Patch roadway section as necessary

5.3 Top Soil and Seeding

5.3.1 Restore area to original condition.

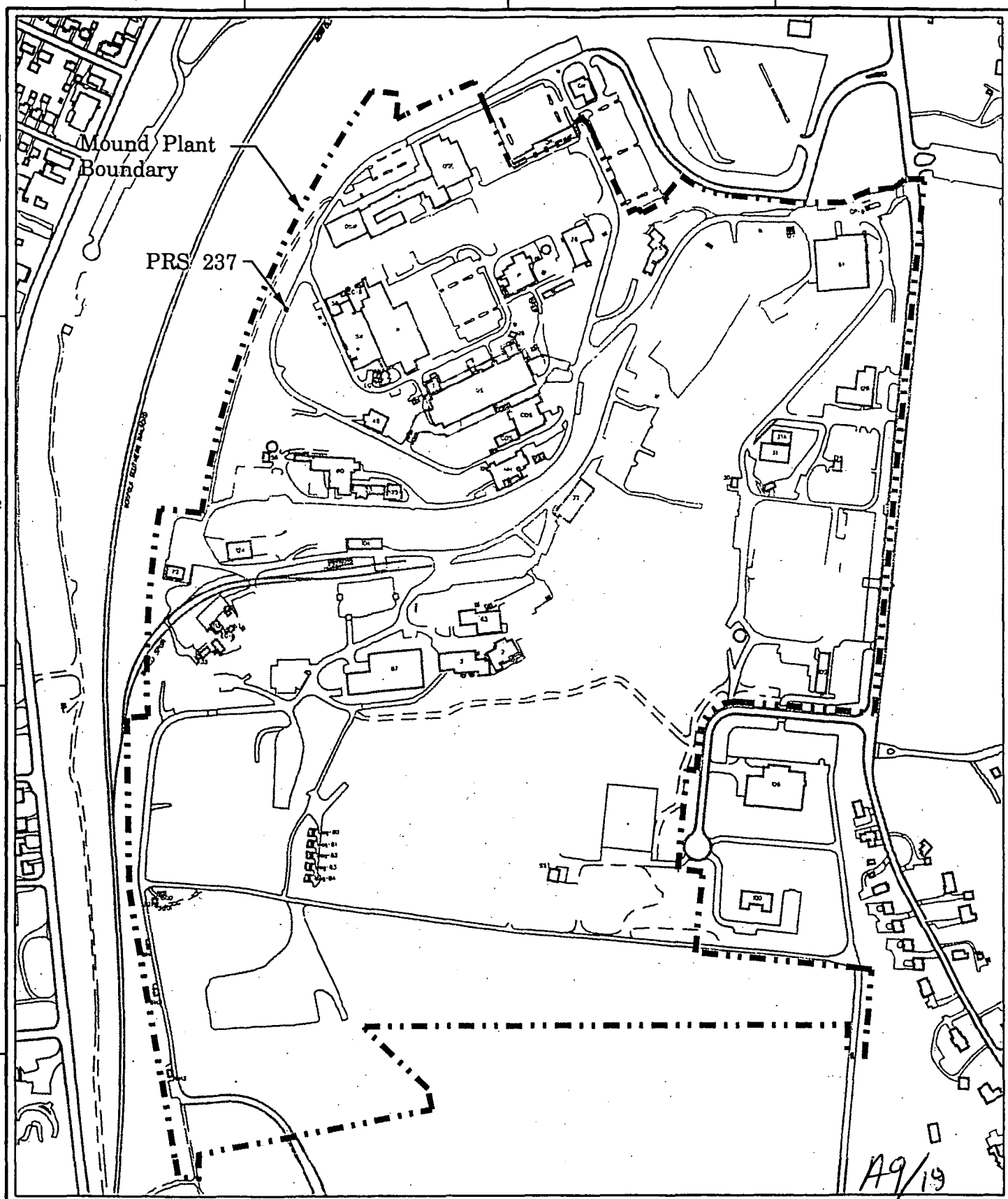
6.0 Post-Job Conference

Conduct a Post-Job Conference at the conclusion of the project, documenting what went right and what went wrong during the course of the project. Lessons Learned will be captured and documented for future projects.

APPENDIX B

Figures

A8/19



Legend

Structures
Paved roadway
Unpaved roadway
Mound Plant boundary
Railroad

0 100 200 400 600 800 1000
Scale in Feet

MOUND
Environmental Restoration Geographic Information System

02/25/03		SSF	
DATE	REVISION	BY	CHKR

SHEET 1 2 3 4 5 6

PART CLASSIFICATION

UNCLASSIFIED

gen_site_plan.dgn

DWG TYPE STE FILE ER-GIS SCALE SHEET 1 OF

STATUS MD-REL-00/00/00 ORIGIN MSTATION / J

Figure 1
Location of PRS 237

APPENDIX C

Tables

A 10/19

Table 1: Sample Coordinates

sample location	X coordinate	Y coordinate
237-M-001	1464416.682	599022.405
237-S-002	1464416.092	599021.021
237-W-003	1464415.349	599022.970
237-N-004	1464417.348	599023.739
237-E-005	1464418.092	599021.739

Table 2: Sample and QC Summary

Analysis	verification samples (soil)	field duplicates (soil)	samples identified for MS/MSD (soil)	equipment rinsates (water)	trip blanks
onsite gamma spec	5	1	na	na	na

na: not applicable. Not performed for onsite screening.

Table 3: Onsite Gamma Spec Results (pCi/g)
soil analysis reports in Appendix D

	Co-60	Cs-137	Pb-210	Ra-226	Ac-227 (D)	Th-230	Th-232 (D)	Pu-238	Am-241
CO >>	0.7	3.8	7.4	2.9	4.6	2.8	2.1	55	63
237-M-001	< 0.06	< 0.06	< 0.79	1.35	< 0.28	< 7.60	0.5	< 14.1	< 0.08
237-M-001FD	< 0.08	< 0.06	1.33	0.91	< 0.29	< 7.79	0.5	< 14.4	< 0.08
237-S-002	< 0.06	< 0.05	1.31	1.18	< 0.29	< 7.68	0.81	< 14.4	< 0.08
237-W-003	< 0.06	< 0.04	< 0.73	1.73	< 0.25	< 7.72	0.42	< 12.7	< 0.08
237-N-004	< 11	< 0.04	< 0.77	1.04	< 0.27	< 7.34	0.57	< 14.3	< 0.09
237-E-005	< 0.03	< 0.03	1.05	1.58	< 0.34	< 7.98	0.36	< 22.5	< 0.07

< indicates not detected at the detection limit specified
CO: cleanup objective
FD: field duplicate

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APPENDIX D

Onsite Gamma Spec Sheets & Walkover Survey

A12/19

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL02541
File ID: 1SC00414.s0
Priority: Yes

Description\Location
237-M-001
Long Count

Collector: 4488
Date Received: 9/2/04
Date Collected: 9/2/04

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.01	0.06
Cs-137	*	0	0.06
Pb-210	*	0.6	0.79
Ra-226		1.35	0.83
Ac-227 (D)	*	0.14	0.28
Th-230	*	1.52	7.6
Th-232 (D)		0.5	0.15
Pu-238	*	0.02	14.1
Am-241	*	0.01	0.08

LCO 26 Oct 4

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.02 nCi/g

Instrument type: High Purity Germanium

Σ_{DOT} 2nCi/g limit, total activity.

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

• Indicates activity < MDA. MDA used in limits calculation

Comments:

Date: 9/6/04 Counted By: 5288 Analyzed By: 5755 Initials [redacted]

A13/19

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL02542
File ID: 1SC00415.s0
Priority: Yes

Description\Location
237-M-001FD
Long Count

Collector: 4488
Date Received: 9/2/04
Date Collected: 9/2/04

onsite duplicate

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0	0.08
Cs-137	*	0	0.06
Pb-210		1.33	0.7
Ra-226		0.91	0.89
Ac-227 (D)	*	0.12	0.29
Th-230	*	0.35	7.79
Th-232 (D)		0.5	0.23
Pu-238	*	0	14.41
Am-241	*	0	0.08

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.03 nCi/g

Σ_{DOT} 2nCi/g limit, total activity.

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

• Indicates activity < MDA. MDA used in limits calculation

Instrument type: High Purity Germanium

Comments:

Date: 9/6/04 Counted By: 5288 Analyzed By: 5755 Initials [redacted]

A14/19

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL02543
File ID: 1SC00416.s0
Priority: Yes

Description\Location
237-S-002
Long Count

Collector: 4488
Date Received: 9/2/04
Date Collected: 9/2/04

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0	0.06
Cs-137	*	0.03	0.05
Pb-210		1.31	0.71
Ra-226		1.18	0.89
Ac-227 (D)	*	0.17	0.29
Th-230	*	1.37	7.68
Th-232 (D)		0.81	0.1
Pu-238	*	2.25	14.42
Am-241	*	0	0.08

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.03 nCi/g

Σ_{DOT} 2nCi/g limit, total activity.

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

* Indicates activity < MDA. MDA used in limits calculation

Instrument type: High Purity Germanium

Comments:

Date: 9/6/04 Counted By: 5288 Analyzed By: 5755 Initials [redacted]

A15/19

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL02544
File ID: 1SC00417.s0
Priority: Yes

Description\Location
237-W-003
Long Count

Collector: 4488
Date Received: 9/2/04
Date Collected: 9/2/04

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0	0.06
Cs-137	*	0.02	0.04
Pb-210	*	0.72	0.73
Ra-226		1.73	0.82
Ac-227 (D)	*	0.14	0.25
Th-230	*	0	7.72
Th-232 (D)		0.42	0.18
Pu-238	*	2.86	12.67
Am-241	*	0.01	0.08

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.02 nCi/g

Instrument type: High Purity Germanium

Σ_{DOT} 2nCi/g limit, total activity.

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

* Indicates activity < MDA. MDA used in limits calculation

Comments:

Date: 9/6/04 Counted By: 5288 Analyzed By: 5755 Initials [redacted]

A16/19

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL02545
File ID: 1SC00418.s0
Priority: Yes

Description\Location
237-N-004
Long Count

Collector: 4488
Date Received: 9/2/04
Date Collected: 9/2/04

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0	11
Cs-137	*	0.03	0.04
Pb-210	*	0.76	0.77
Ra-226		1.04	0.95
Ac-227 (D)	*	0.11	0.27
Th-230	*	1.2	7.34
Th-232 (D)		0.57	0.14
Pu-238	*	0	14.27
Am-241	*	0	0.09

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.04 nCi/g

Σ_{DOT} 2nCi/g limit, total activity.

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

* Indicates activity < MDA. MDA used in limits calculation

Instrument type: High Purity Germanium

Comments:

Date: 9/6/04 Counted By: 5288 Analyzed By: 5755 Initials [redacted]

A17/19

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL02546
File ID: 6SC00470.s0
Priority: Yes

Description\Location
237-E-005
Long Count

Collector: 4488
Date Received: 9/2/04
Date Collected: 9/2/04

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.01	0.03
Cs-137	*	0.01	0.03
Pb-210		1.05	0.71
Ra-226		1.58	0.71
Ac-227 (D)	*	0.12	0.34
Th-230	*	0	7.98
Th-232 (D)		0.36	0.09
Pu-238	*	8.43	22.47
Am-241	*	0.03	0.07

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.03 nCi/g

Instrument type: High Purity Germanium

Σ_{DOT} 2nCi/g limit, total activity.

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

• Indicates activity < MDA. MDA used in limits calculation

Comments:

Date: 9/15/04 Counted By: 5268 Analyzed By: 5288 Initials [redacted]

A18/19

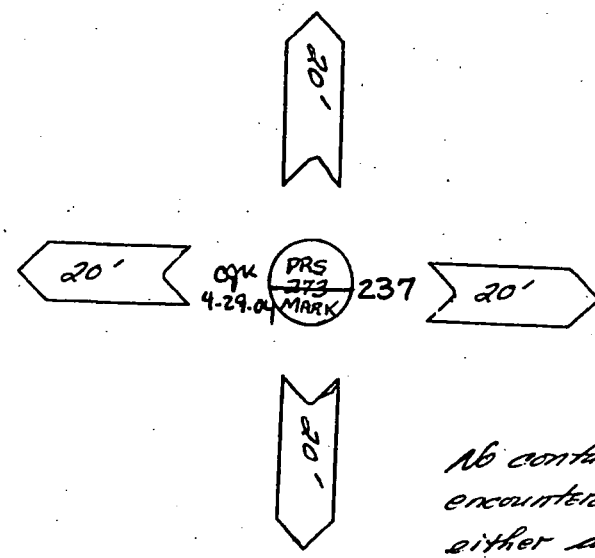
RADIOLOGICAL SURVEY DATA SHEET

cgk 2-14-05

LOCATION: (BLDG. / ROOM / AREA) PRS ~~273~~ 237 cgk 4-29-04	SURVEY NO. 04-ER-2005
PURPOSE: Cursory Survey Fidler Walk-over of Area	RWP NO. n/a
	DATE: 4-29-4
	TIME: 0740

Fidler used as indication only.
Background = 400 to 500 cpm.
Channel 1 utilized for this survey.

MAP / DRAWING



No contamination levels encountered above background either audible or scale reflection on fidler through-out walk-over.

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
Fidler	3763-3942	12-8-4
	N A	

[redacted]	HP# 7787	Date: 4-29-4
Counted by: (Signature) N	HP#	Date:
Counted by: (Print Name) A		
Reviewed [redacted]	HP# 7724	Date: 4/29/04
Reviewed [redacted]		

cgk

ML-9620 (2-98) Computer Generated

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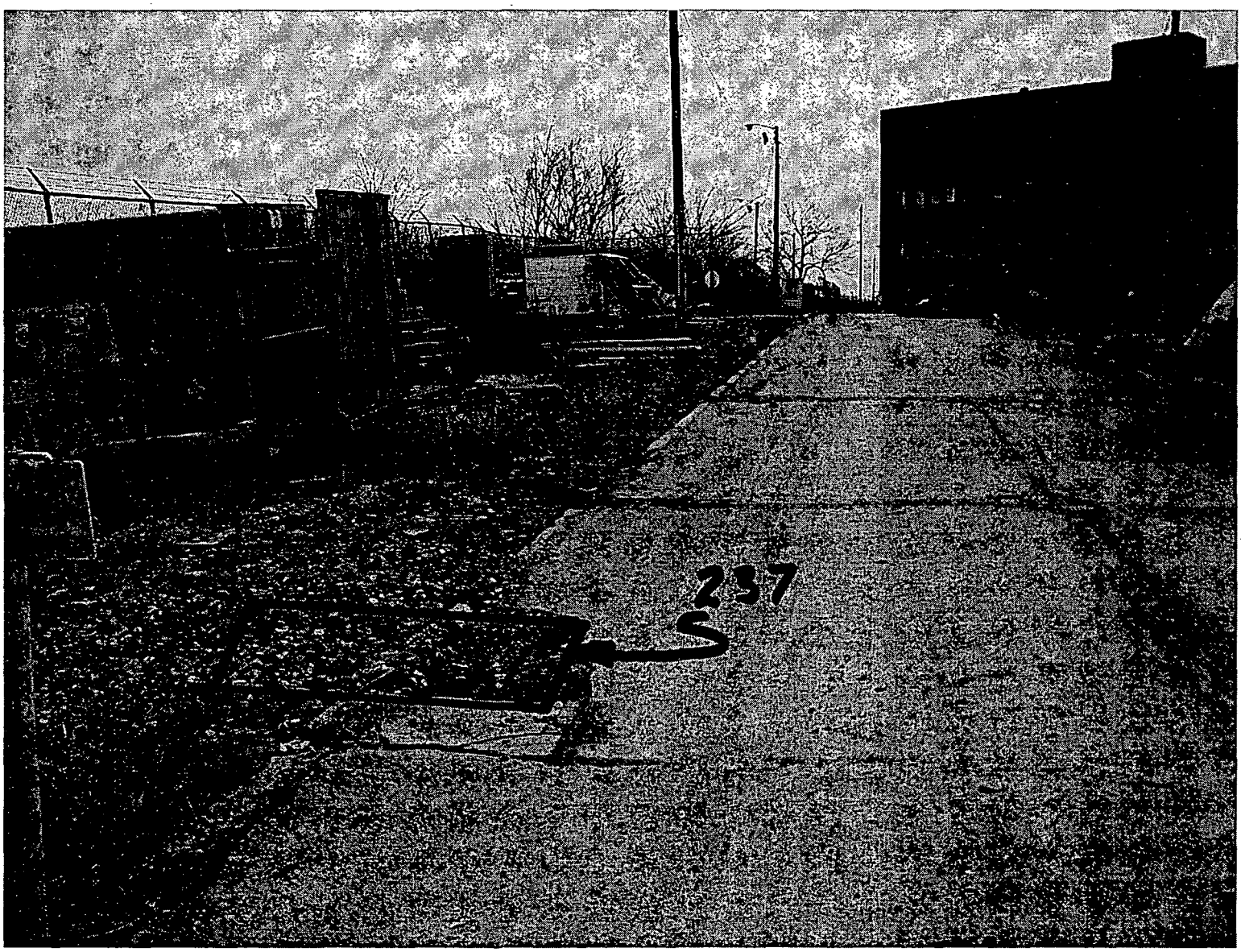
APPENDIX B

GENERAL MEDIA INFORMATION

(There was no information released to the media regarding PRS 237)

APPENDIX C

PHOTOGRAPH DOCUMENTATION



BACKFILL COMPLETE

PRS 237

C1/1