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CH2MHILL

CH2M HILL

Mound, Inc.

1 Mound Road

P.O. Box 3030

Miamisburg, OH

45343-3030

ER-094/03

August 25, 2003

Mr. Richard B. Provencher, Director
Miamisburg Closure Project
U. S. Department of Energy
500 Capstone Circle
Miamisburg, OH 45342

SUBJECT: Contract No. DE-AC24-03OH20152
Contract Deliverable 039 – PRS Documents
PUBLIC FACT SHEETS: PRSs 75, 237, 240 and 154/238

Dear Mr. Provencher:

Danny Punch from your office has approved the release of the following document to the public reading room:

- PRS 75 Public Fact Sheet
- PRS 237 Public Fact Sheet
- PRS 240 Public Fact Sheet
- PRS 154/238 Public Fact Sheet

The public review period will be August 25, 2003 through September 24, 2003. CH2M HILL will resolve any questions or comments from public review. If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Dave Rakel at extension 4203.

Sincerely,

A handwritten signature in black ink, appearing to read "Monte A. Williams".

Monte A. Williams
Deputy Project Manager, Environmental Restoration

MAW/KMA:jdg

Enclosures

cc: David Seely, USEPA, (1) w/attachments
Mary C. Wojciechowski, Tetra Tech EM Inc, (1) w/attachments
Brian Nickel, OEPA, (4) w/attachments
Ruth Vandegrift, ODH, (1) w/attachments
Paul Lucas, DOE/MCP, (1) w/attachments
Danny Punch, DOE/MCP, (1) w/attachments
Lisa Rawls, DOE/MCP, w/o attachments
Dave Rakel, CH2M HILL, (1) w/attachments
Karen Arthur, CH2M HILL, (1) w/attachments
Monte Williams, CH2M HILL, (2) w/attachment
Public Reading Room, (4) w/attachments
DCC

PUBLIC FACT SHEET

PRS 75: Historic Railroad Siding

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum¹.

Background. Potential Release Site (PRS) 75, also known as the Historic Railroad Siding, is located on the central portion of the site as shown on Figure 1. Process history of the PRS indicated the potential for the presence radioactive material from drum storage, loading, and repackaging operations at the former location of Warehouse 9 at the east end of the siding. The siding was once used for loading and unloading materials and wastes for the polonium, thorium, and plutonium projects in the 1950s, 60s, & 70s. Between 1982 and 1986 a long section of track leading to the former location of Warehouse 9 was removed as a part of another project.

Characterization. Various sampling events revealed elevated results of thorium-232, plutonium-238, radium-226, and uranium-238. The maximum concentrations are included in the following table (unit = pCi/g).

Analyte	Maximum Concentration	Cleanup Objective
Thorium-232	107	2.1
Plutonium-238	573	55
Radium-226	14	2.9
Uranium-238	13.5	2.2

Based on the above results, the Core Team recommended a **Removal Action** (RA) per the Contingent Action Memo¹. RA COCs are those listed in the table above.

The **Work Plan** for Contingent Removal Actions², supplemented by the Unique Work Package, includes procedures, instructions, and applicable permits and notifications required to safely conduct the work. Erosion and runoff/runoff controls will be managed per the SWP³.

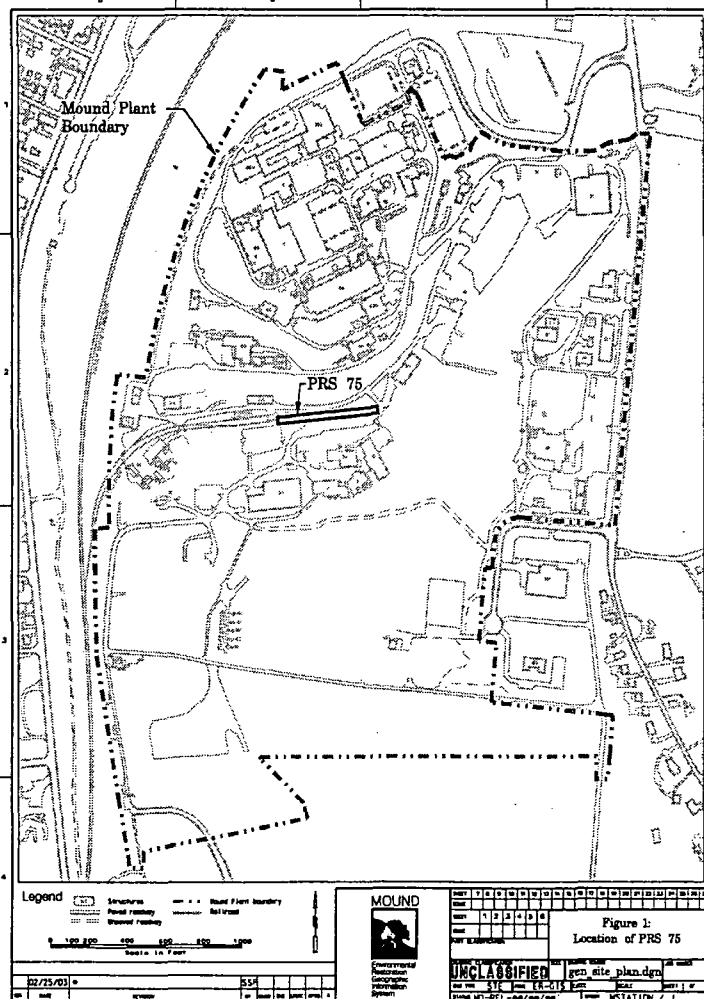
The RA will consist of excavation of contaminated soils in the area of the historic railroad siding indicated by sample results above the cleanup objectives and shipping of these soils to an approved disposal facility. Post-excavation sampling will be performed within the excavations

per the Core Team-approved **Verification Sampling & Analysis Plan (VSAP)**.

Schedule. This Fact Sheet will be in public review for 30 days, ending August 22, 2003. The RA may be ongoing during the review time. A summary of the RA & the verification data will be included in the On-Scene Coordinator (OSC) Report. The OSC Report will be placed in the public reading room after the conclusion of the verification sampling and approval by the Core Team.

Excavation of approximately 1,667 yd³ (1,274 m³) & verification are expected to cost less than \$200,000.

Additional information can be found in the public reading room, or by contacting Danny Punch at 847-8350 ext. 301.



1: Action Memorandum/Engineering Evaluation/Cost Analysis, Contingent Removal Action for Contaminated Soil, June 2002, Final

2: Standard Work Package for Contingent Removal Actions, November 2001, Final

3: Storm Water Pollution Prevention Plan

PUBLIC FACT SHEET

PRS 154 & 238: Area 23 & Potential Hot Spot S1092

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum¹.

Background. Potential Release Site (PRS) 154, also known as the Area 23 Thorium Contaminated Soil, is located on a hillside in the central portion of the site as shown on Figure 1. PRS 238 is an historic elevated thorium-230 result located adjacent to PRS 154. An historic rad waste line that traversed the area is a potential source of the contamination.

Further Assessment (FA) sampling was performed during the later months of 2002 per the Core Team-approved Sampling & Analysis Plan (SAP). Contaminants of concern (COCs) were thorium-232, actinium-227, thorium-230, radium-226, uranium-238, and plutonium-238 based on historic sample results in the area.

49 samples from the PRS 154/238 area were analyzed for the COCs. Maximum sample results above cleanup objectives are summarized in the following table (unit = pCi/g). None of the plutonium-238 results were greater than the cleanup objective.

Analyte	Maximum Concentration	Cleanup Objective
Thorium-230	1,020	2.8
Radium-226	19.1	2.9
Uranium-238	4.12	2.2
Actinium-227	104	4.7
Thorium-232	2.44	2.1

Based on the above results, the Core Team recommended a **Removal Action (RA)** per the Contingent Action Memo¹. RA COCs are those listed in the above table.

The **Work Plan** for Contingent Removal Actions², supplemented by the Unique Work Package, includes procedures, instructions, and applicable permits and notifications required to safely conduct the work. Erosion and runoff/runoff controls will be managed per the SWP3³.

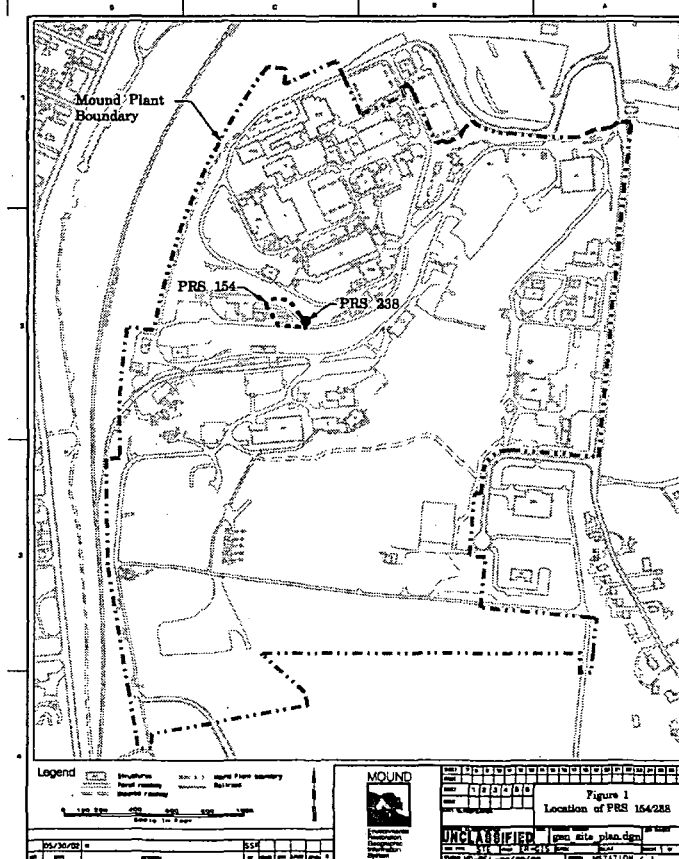
The RA will consist of excavation of contaminated soils identified by the sample results above the

cleanup objectives. Post-excavation sampling will be performed within the excavations per the Core Team-approved **Verification Sampling & Analysis Plan (VSAP)**.

Schedule. This Fact Sheet will be in public review for 30 days, ending August 22, 2003. The RA may be ongoing during the review time. A summary of the RA & the verification data will be included in the On-Scene Coordinator (OSC) Report. The OSC Report will be placed in the public reading room after the conclusion of the verification sampling and approval by the Core Team.

Excavation of approximately 12,963 yd³ (9,912 m³) & verification are expected to cost less than \$650,000.

More information can be found in the public reading room, or by contacting Danny Punch at 847-8350 extension 301.



1: Action Memorandum/Engineering Evaluation/Cost Analysis, Contingent Removal Action for Contaminated Soil, June 2002, Final

2: Standard Work Package for Contingent Removal Actions, November 2001, Final

3: Storm Water Pollution Prevention Plan

PUBLIC FACT SHEET

PRS 237: Potential Hot Spot S0175

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum¹.

Background. Potential Release Site (PRS) 237, also known as the Potential Hot Spot Location S0175, is located on the northwestern portion of the site as shown on Figure 1. The PRS was assigned based on a 1980s isolated sample location with cesium-137 and cobalt-60 results above cleanup objectives as identified in the table below (unit = pCi/g).

Analyte	Maximum Concentration	Cleanup Objective
Cesium-137	10	3.8
Cobalt-60	82	0.7

Characterization. There is no known source of contamination. In 1995, six borings were installed around location S0175. None of the results were above cleanup objectives. Based on the results, the Core Team originally recommended Further Assessment (FA) for PRS 237, but subsequently determined that the cost of FA versus the cost of removing the potentially contaminated soil were not significantly different. Based on this the Core Team recommended a **Removal Action** (RA) per the Contingent Action Memo¹. RA COCs are those listed in the table above.

The **Work Plan** for Contingent Removal Actions², supplemented by the Unique Work Package, includes procedures, instructions, and applicable permits and notifications required to safely conduct the work. Erosion and runoff/runoff controls will be managed per the SWP³.

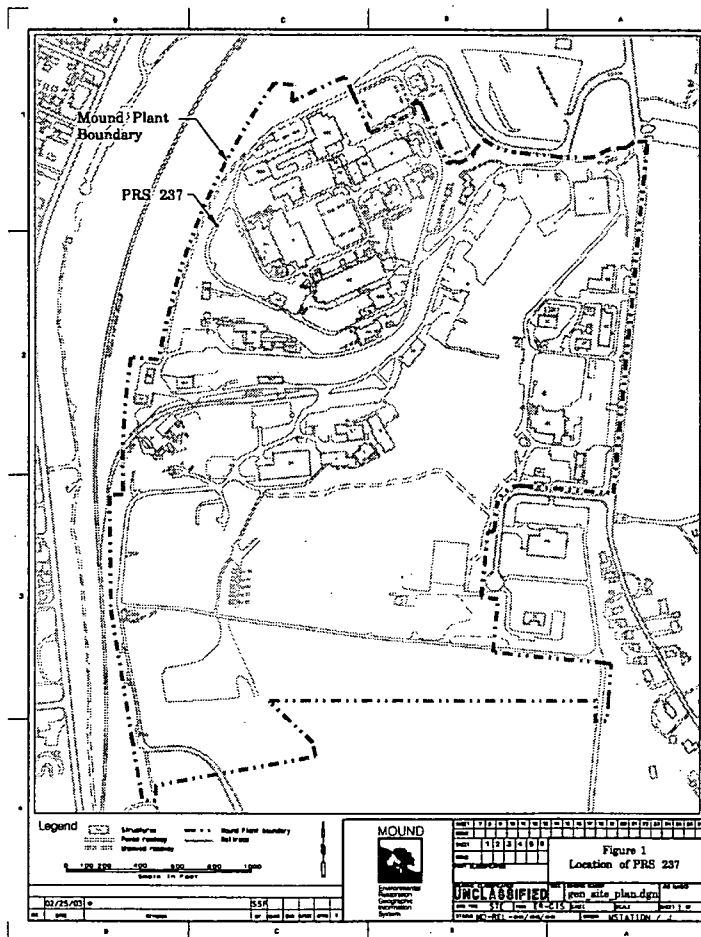
The RA will consist of excavation of the historic sample location to remove the potentially contaminated soil and shipping the soil to an approved disposal facility. Post-excavation sampling will be performed within the excavation per the Core Team-approved **Verification Sampling & Analysis Plan (VSAP)** to confirm that the COs have been met.

Schedule. This Fact Sheet will be in public review for 30 days, ending August 22, 2003. The RA may

be ongoing during the review time. A summary of the RA & the verification data will be included in the **On-Scene Coordinator (OSC) Report**. The OSC Report will be placed in the public reading room after the conclusion of the verification sampling and approval by the Core Team.

Excavation of approximately 250 yd³ (191 m³) & verification are expected to cost less than \$20,000.

More information can be found in the public reading room, or by contacting Danny Punch at 865-8350 ext. 301.



1: Action Memorandum/Engineering Evaluation/Cost Analysis, Contingent Removal Action for Contaminated Soil, June 2002, Final

2: Standard Work Package for Contingent Removal Actions, November 2001, Final

3: Storm Water Pollution Prevention Plan

PUBLIC FACT SHEET

PRS 240: Potential Hot Spot Location S0472

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum¹.

Background. Potential Release Site (PRS) 240, also known as Potential Hot Spot Location S0472, is located in the West central portion of the site (Figure 1). Location S0472 was made a PRS due to an isolated total thorium result of 7.5 pCi/g. There is no known source of contamination.

Characterization. As a part of the Other Soils Characterization in 1995, twenty-eight samples were collected at and around PRS 240 and analyzed for organics, metals, and radionuclides. Maximum sample result detections above current cleanup objectives are indicated in the following table (unit = pCi/g).

Analyte	Maximum Detection	Cleanup Objective
Plutonium-238	124.5	55
Radium-226 +D	3.17	2.9
Uranium-238 +D	12.84	2.2

All Th-230 and Th-232 results were either qualified as not detected or detected but below screening levels. Arsenic was detected in 7 of 33 samples at a maximum level of 84 mg/kg. All detections were above the Hazard Index of 1 (64 mg/kg) but all were below the reported detection limit (100 mg/kg).

Based on the above results, the Core Team originally recommended Further Assessment for PRS 240. Subsequently, the cost of further investigation versus the cost of removing the potentially contaminated soil was evaluated. Cost estimates indicate that the cost of removal is not significantly greater than the cost of further assessment and therefore, a **Removal Action** (RA) per the Contingent Action Memo¹ is recommended. RA COCs are those listed in the table above.

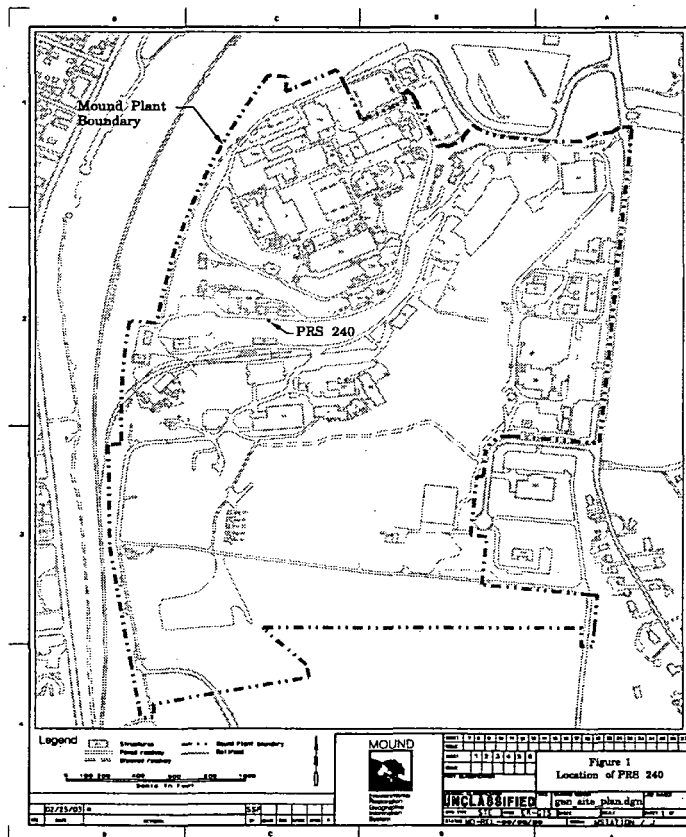
The **Work Plan** for Contingent Removal Actions², supplemented by the Unique Work Package, includes procedures, instructions, and applicable permits and notifications required to safely conduct the work. Erosion and runoff/runoff controls will be managed per the SWP3³.

The RA will consist of excavation of contaminated soils in the area indicated by sample results above the cleanup objectives and shipping of these soils to an approved disposal facility. Post-excavation sampling will be performed within the excavations per the Core Team-approved **Verification Sampling & Analysis Plan (VSAP)**.

Schedule. This Fact Sheet will be in public review for 30 days, ending August 22, 2003. The RA may be ongoing during the review time. A summary of the RA & the verification data will be included in the On-Scene Coordinator (OSC) Report. The OSC Report will be placed in the public reading room after the conclusion of the verification sampling and approval by the Core Team.

Excavation of approximately 37 yd³ (28 m³) & verification are expected to cost less than \$20,000.

More information can be found in the public reading room, or by contacting Danny Punch at 847-8350 ext. 301.



1: Action Memorandum/Engineering Evaluation/Cost Analysis, Contingent Removal Action for Contaminated Soil, June 2002, Final

2: Standard Work Package for Contingent Removal Actions, November 2001, Final

3: Storm Water Pollution Prevention Plan