

0205

0406020010

**CH2MHILL**

CH2M HILL

Mound, Inc.

1 Mound Road

P.O. Box 3030

Miamisburg, OH

45343-3030

ER-107/03

October 9, 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, FINAL FOR PRSs 75, 154/238, 237 and 240**

Dear Mr. Provencher:

The attached Public Fact Sheets (Public Review Draft version) were approved for distribution by Danny Punch of your staff. The documents have been reviewed by the public, and the public comments required neither document changes nor a response, but are included on the reverse side of the Final documents. The document distribution is in accordance with the Federal Facility Agreement and is provided to these agencies and organizations for their files.

If you or members of our staff have any questions regarding the attached documents, or if additional support is needed, please contact me at (X4543).

Sincerely,

Monte A. Williams  
 Deputy Project Manager, Environmental Restoration

MAW/KMA:jdjg

Enclosures

cc: David Seely, USEPA, (1) w/attachments  
 Mary C. Wojciechowski, Tetra Tech EM Inc., (1) w/attachments  
 Brian Nickel, OEPA, (1) 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  
 Randy Tormey, DOE/OH, (1) w/attachments  
 Terrence Tracy, DOE/HQ, (1) w/attachments  
 J. D. Bonfiglio, MESH, (1) w/attachments  
 Monte Williams, CH2M HILL, w/o attachments  
 John Fulton, CH2M HILL, w/o attachments  
 Gene Valett, CH2M HILL, w/o attachments  
 Public Reading Room, (4) w/attachments  
 Admin Records, (2) w/attachments  
 DCC, (1) w/attachments  
 File

# PUBLIC FACT SHEET

## PRS 75: Historic Railroad Siding

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum<sup>1</sup>.

**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 of 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	Bkgd**	Maximum Concentration	Cleanup Objective*
Thorium-232	1.4	107	2.1
Plutonium-238	0.13	573	55
Radium-226	2.0	14	2.9
Uranium-238	1.2	13.5	2.2

\* risk criteria

\*\*background soil concentration

Based on the above results, the Core Team recommended a **Removal Action (RA)** per the Contingent Action Memo<sup>1</sup>. RA COCs are those listed in the table above.

The **Work Plan** for Contingent Removal Actions<sup>2</sup>, 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 SWP<sup>3</sup>.

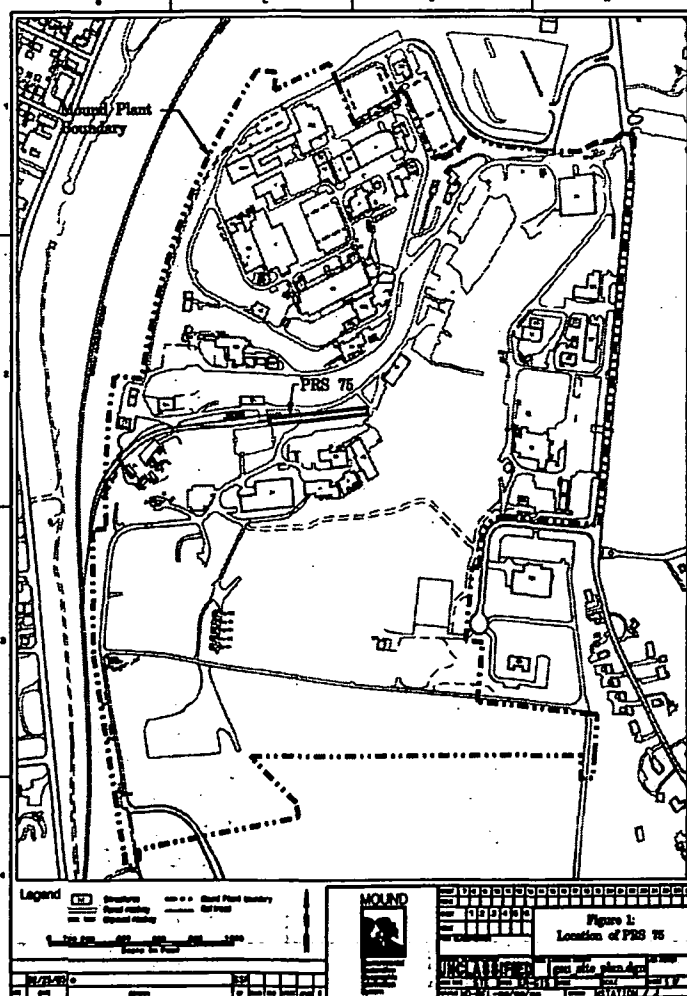
The RA will consist of excavation of contaminated soils in the area of the historic railroad siding indicated by sample results above the cleanup objectives and shipping of these soils to an approved disposal facility. Post-excavation sampling will be performed within the excavations

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

**Schedule.** This Fact Sheet will be in public review for 30 days, ending October 8, 2003. The RA is planned for Summer 2004. 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 yd<sup>3</sup> (1,274 m<sup>3</sup>) & 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

## MMCIC Comments

Subject	Fact Sheets; PRSs 75, 237, 240 and 154/238
Version	Public Review Draft September 2003

## Substantive Comments

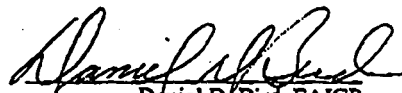
1. It is our understanding from the review of the Public Fact Sheets for PRSs 75, 237, 240 and 154/238 that each of these PRSs are small areas of potentially contaminated soils. Although previous sampling and analysis showed elevated levels of contamination, the sampling results may or may not be accurate. However, the Core Team has determined that it is more cost effective to remove the soils than perform additional sampling and analysis. These PRS are appropriate for removal under the Contingent Action Memorandum dated November 2001.


While most of the PRS listed in these Fact Sheets were associated with a potential source of contamination, there were two PRS, specifically PRS 237 and PRS 240, which cannot be associated with a source of contamination. It is MMCIC's understanding that these two PRS were discovered during a site wide sampling activity. All areas of the site were sampled on a grid, and these two PRS were hot spots. The Core Team determined that instead of additional sampling to determine the validity of the hot spots, it is more cost effective to remove the soils under the Contingent Removal Action. MMCIC concurs with this decision.

2. MMCIC requests that after the completion of the removal action, the sites are returned to a condition consistent with the Mound Reuse Plan.
3. If MMCIC's understandings are correct, no specific response to the above comment is necessary, and MMCIC further understands these comments will be included in the OSC report.

## Errata

1. No Comments.

  
Daniel D. Bird, FAICP  
Planning Manager  
MMCIC

  
October 7, 2003  
Date

# 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 Memorandum<sup>1</sup>.

**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 (risk criteria) are summarized in the following table (unit = pCi/g). None of the plutonium-238 results were greater than the cleanup objective.

Analyte	Bkgd*	Maximum Concentration	Cleanup Objective
Thorium-230	1.9	1,020	2.8
Radium-226	2.0	19.1	2.9
Uranium-238	1.2	4.12	2.2
Actinium-227	0.11	104	4.7
Thorium-232	1.4	2.44	2.1

\*background soil concentration

Based on the above results, the Core Team recommended a **Removal Action (RA)** per the Contingent Action Memo<sup>1</sup>. RA COCs are those listed in the above table.

The **Work Plan** for Contingent Removal Actions<sup>2</sup>, 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 SWP<sup>3</sup>.

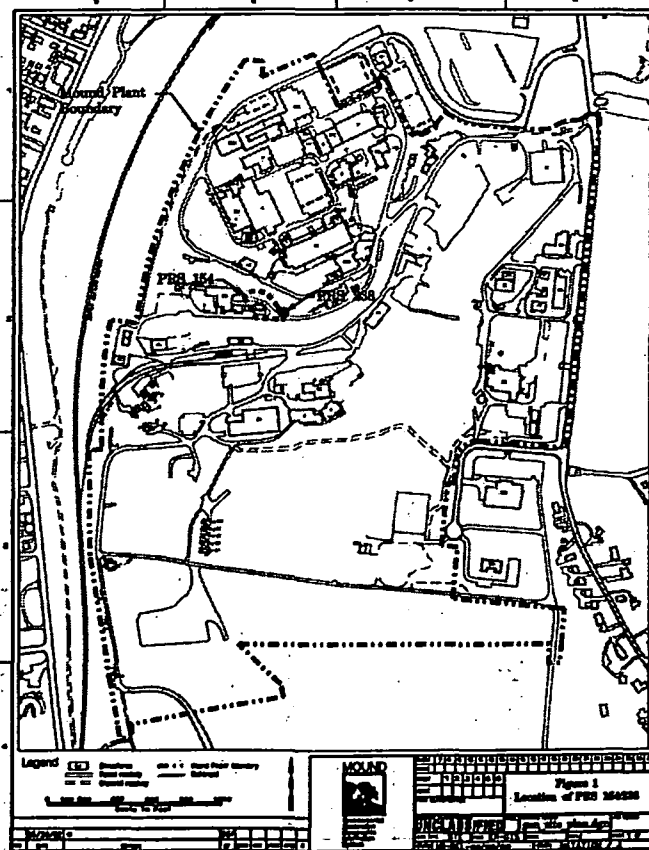
The RA will consist of excavation of contaminated soils identified by the sample results above the

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 October 8, 2003. The RA is planned to begin in Fall 2003. 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 yd<sup>3</sup> (9,912 m<sup>3</sup>) & 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

## MMCIC Comments

Subject	Fact Sheets; PRSs 75, 237, 240 and 154/238
Version	Public Review Draft September 2003

## Substantive Comments

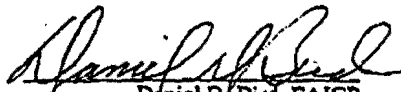
1. It is our understanding from the review of the Public Fact Sheets for PRSs 75, 237, 240 and 154/238 that each of these PRSs are small areas of potentially contaminated soils. Although previous sampling and analysis showed elevated levels of contamination, the sampling results may or may not be accurate. However, the Core Team has determined that it is more cost effective to remove the soils than perform additional sampling and analysis. These PRS are appropriate for removal under the Contingent Action Memorandum dated November 2001.


While most of the PRS listed in these Fact Sheets were associated with a potential source of contamination, there were two PRS, specifically PRS 237 and PRS 240, which cannot be associated with a source of contamination. It is MMCIC's understanding that these two PRS were discovered during a site wide sampling activity. All areas of the site were sampled on a grid, and these two PRS were hot spots. The Core Team determined that instead of additional sampling to determine the validity of the hot spots, it is more cost effective to remove the soils under the Contingent Removal Action. MMCIC concurs with this decision.

2. MMCIC requests that after the completion of the removal action, the sites are returned to a condition consistent with the Mound Reuse Plan.
3. If MMCIC's understandings are correct, no specific response to the above comment is necessary, and MMCIC further understands these comments will be included in the OSC report.

## Errata

1. No Comments.

  
Daniel D. Bird, FAICP  
Planning Manager  
MMCIC

  
October 7, 2003  
Date

# PUBLIC FACT SHEET

## PRS 237: Potential Hot Spot S0175

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum<sup>1</sup>.

**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 (risk criteria) as identified in the table below (unit = pCi/g).

Analyte	Bkgd**	Maximum Concentration	Cleanup Objective
Cesium-137	0.42	10	3.8
Cobalt-60	NC	82	0.7

\*\*background soil concentration  
NC: not calculated

**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 Memo<sup>1</sup>. RA COCs are those listed in the table above.

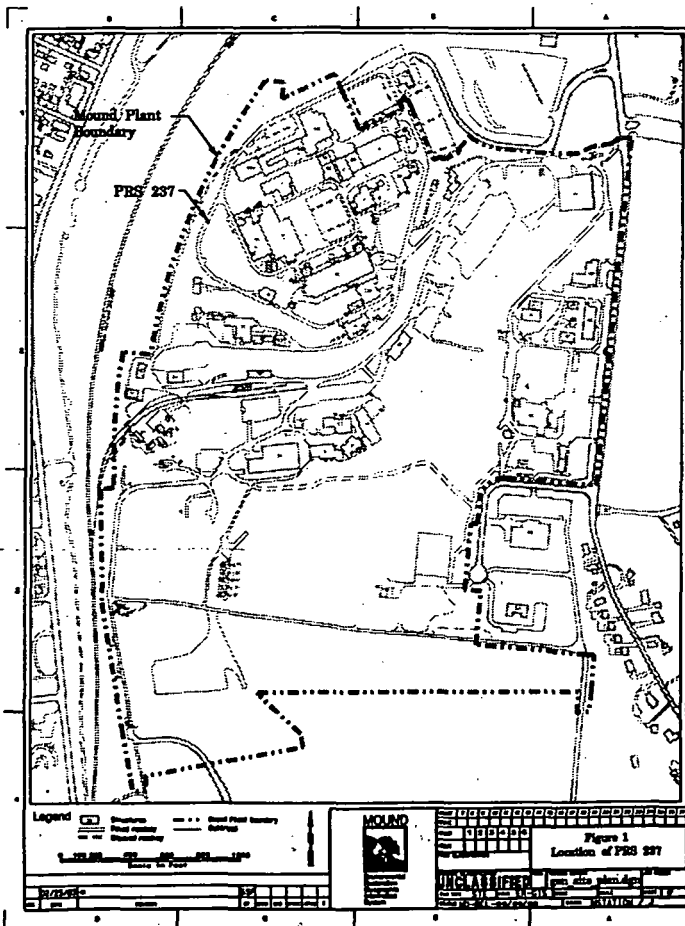
The **Work Plan** for Contingent Removal Actions<sup>2</sup>, supplemented by the Unique Work Package, includes procedures, instructions, and applicable permits and notifications required to safely conduct the work. Erosion and runoff/runoff controls will be managed per the SWP<sup>3</sup>.

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 October 8, 2003. The RA is planned for Fall 2003. 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 yd<sup>3</sup> (191 m<sup>3</sup>) & 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

## MMCIC Comments

Subject	Fact Sheets, PRSs 75, 237, 240 and 154/238
Version	Public Review Draft September 2003

## Substantive Comments

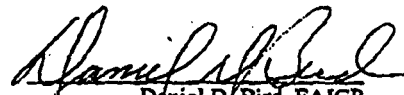
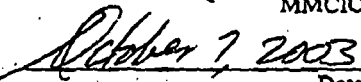
1. It is our understanding from the review of the Public Fact Sheets for PRSs 75, 237, 240 and 154/238 that each of these PRSs are small areas of potentially contaminated soils. Although previous sampling and analysis showed elevated levels of contamination, the sampling results may or may not be accurate. However, the Core Team has determined that it is more cost effective to remove the soils than perform additional sampling and analysis. These PRS are appropriate for removal under the Contingent Action Memorandum dated November 2001.

While most of the PRS listed in these Fact Sheets were associated with a potential source of contamination, there were two PRS, specifically PRS 237 and PRS 240, which cannot be associated with a source of contamination. It is MMCIC's understanding that these two PRS were discovered during a site wide sampling activity. All areas of the site were sampled on a grid, and these two PRS were hot spots. The Core Team determined that instead of additional sampling to determine the validity of the hot spots, it is more cost effective to remove the soils under the Contingent Removal Action. MMCIC concurs with this decision.

2. MMCIC requests that after the completion of the removal action, the sites are returned to a condition consistent with the Mound Reuse Plan.
3. If MMCIC's understandings are correct, no specific response to the above comment is necessary, and MMCIC further understands these comments will be included in the OSC report.

## Errata

1. No Comments.

  
Daniel D. Bird, FAICP  
Planning Manager  
MMCIC  
  
Date

# PUBLIC FACT SHEET

## PRS 240: Potential Hot Spot Location S0472

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Action Memorandum<sup>1</sup>.

**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 (risk criteria) are indicated in the following table (unit = pCi/g).

Analyte	Bkgd**	Maximum Detection	Cleanup Objective
Plutonium-238	0.13	124.5	55
Radium-226 +D	2.0	3.17	2.9
Uranium-238 +D	1.2	12.84	2.2

\*\*background soil concentration

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 Memo<sup>1</sup> is recommended. RA COCs are those listed in the table above.

The **Work Plan for Contingent Removal Actions**<sup>2</sup>, 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 SWP<sup>3</sup>.

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

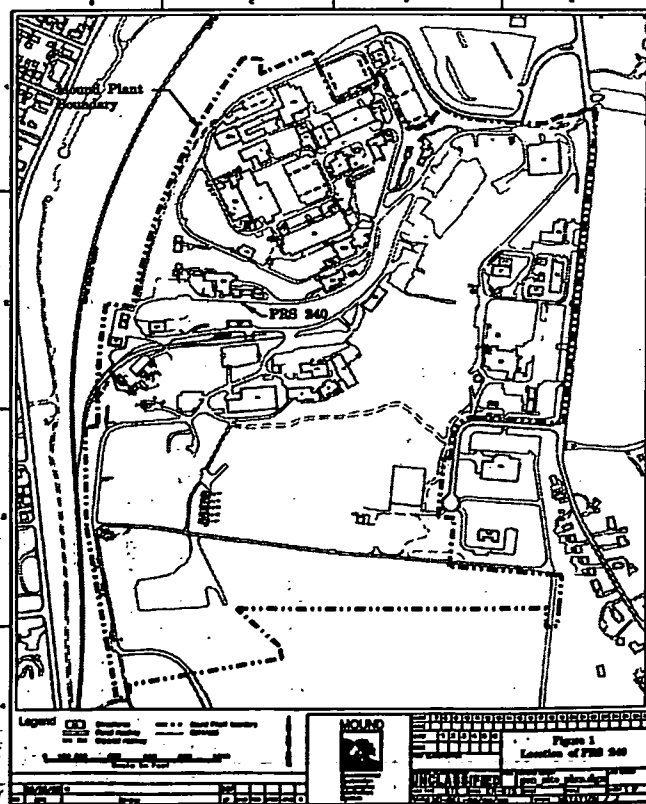
3: Storm Water Pollution Prevention Plan

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 October 8, 2003. The RA is planned to begin Fall 2003. 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 yd<sup>3</sup> (28 m<sup>3</sup>) & 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.





## MMCIC Comments

Subject	Fact Sheets; PRSs 75, 237, 240 and 154/238
Version	Public Review Draft September 2003

## Substantive Comments

1. It is our understanding from the review of the Public Fact Sheets for PRSs 75, 237, 240 and 154/238 that each of these PRSs are small areas of potentially contaminated soils. Although previous sampling and analysis showed elevated levels of contamination, the sampling results may or may not be accurate. However, the Core Team has determined that it is more cost effective to remove the soils than perform additional sampling and analysis. These PRS are appropriate for removal under the Contingent Action Memorandum dated November 2001.

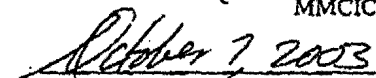
While most of the PRS listed in these Fact Sheets were associated with a potential source of contamination, there were two PRS, specifically PRS 237 and PRS 240, which cannot be associated with a source of contamination. It is MMCIC's understanding that these two PRS were discovered during a site wide sampling activity. All areas of the site were sampled on a grid, and these two PRS were hot spots. The Core Team determined that instead of additional sampling to determine the validity of the hot spots, it is more cost effective to remove the soils under the Contingent Removal Action. MMCIC concurs with this decision.

2. MMCIC requests that after the completion of the removal action, the sites are returned to a condition consistent with the Mound Reuse Plan.
3. If MMCIC's understandings are correct, no specific response to the above comment is necessary, and MMCIC further understands these comments will be included in the OSC report.

## Errata

1. No Comments.

  
Daniel D. Bird, FAICP  
Planning Manager  
MMCIC

  
October 7, 2003  
Date