

300302-0604270014



**CH2MHILL**

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ER/MM-079/05  
February 22, 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  
Statement of Work Requirement 055 - Regulator Reports  
**PRS 11 FACT SHEET, PRD**

Dear Ms. Marks:

Paul Lucas of your office has authorized the release of the following document for public review:

- PRS 11 Fact Sheet, Public Review Draft, February 2005

Public comment will be accepted through March 22, 2005.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "David A. Rakel".

David A. Rakel  
CERCLA Lead

DAR/ms

Enclosures

cc: Tim Fischer, USEPA, (1) w/attachments  
Brian Nickel, OEPA, (4) w/attachments  
Ruth Vandegrift, ODH, (1) w/attachments  
Mary Wojciechowski, Tetra Tech, (1) w/attach  
Sue Smiley, DOE/MCP, (1) w/attachments  
Lisa Rawls, MCP, w/o attachments  
Randy Tormey, DOE/OH, (1) w/attachments  
Frank Bullock, MMCIC, (3) w/attachments  
Rick Hersemann, Tetra Tech, (1) w/attachs

Public Reading Room, (4) w/attachments  
Jim Fontaine, CH2M Hill, (1) w/attachs  
Dave Rakel, CH2M Hill, (1) w/attachs  
Val Darnell, CH2M Hill, w/o attachments  
ER Records, CH2M Hill, (1) w/attachs  
DCC (1) w/attachments  
John Lehew, CH2M Hill, w/o attachments  
file

# PUBLIC FACT SHEET

## PRS 11: Thorium and Polonium – Contaminated Waste Area

This Fact Sheet satisfies the Public Notification requirement set forth in the Contingent Removal Action Memorandum<sup>1</sup>. This Fact Sheet replaces the version<sup>4</sup> released in December 2003 and allows a partial removal.

**Background.** Potential Release Site (PRS) 11, also known as Area 2 and the Crushed Drum Area, is located in the southwest portion of the site (within the boundary of CERCLA Operable Unit 1) as shown on Figure 1. Approximately 2,500 empty drums were crushed in place and covered with soil. These drums had previously contained thorium process materials used for thorium projects in the 1960s. This location also contains buried wood ash and debris from a fire that had consumed the polonium-contaminated flooring from the Dayton units (Area 13). Since Polonium-210 has a half-life of 138 days, it is no longer detectable. However, Lead-210 (half-life of 22 years) and Bismuth-210m (half-life of  $3.04 \times 10^6$  years) may be present due to processes that produced Polonium-210. Therefore, Lead-210 and Bismuth-210m are listed in the table below.

**Characterization.** Thorium-232 was found during installation of drainage features and wells in support of the Operable Unit 1 Record of Decision remedy and subsequent augmentations. The maximum concentration found is included in the following table (unit = pCi/g).

Analyte	Bkgd**	Maximum Concentration	Cleanup Objective*
Lead-210 + D	1.2	see note	7.4
Bismuth-210m	ND	see note	8.3
Thorium-232	1.4	561.7	2.1

note: Pb-210 and Bi-210m, as a COCs, are only associated with Dayton debris, if found. No samples above C.O. have been reported.  
ND = Not Detectable \* risk criteria \*\*background soil concentration

Based on the above, the Department of Energy (and the Core Team, see Recommendation Page on page 2) determined that a **Removal Action (RA)** was appropriate per the Contingent Removal Action Memo<sup>1</sup>. The RA Contaminants of Concern (COC) are listed in the table above.

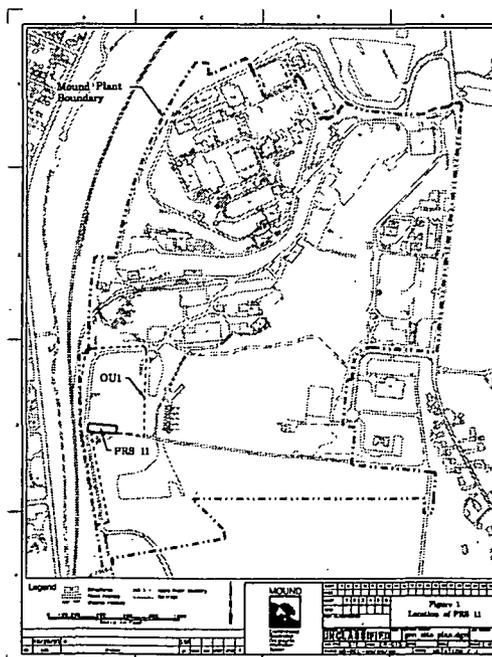
The **Work Plan** for Contingent Removal Actions<sup>2</sup>, supplemented by the Unique Work Package as reviewed by the Core Team<sup>1,2</sup>, includes procedures, instructions, and applicable permits and notifications required to safely conduct the work. Erosion and runoff/runoff controls will be managed per the SWPPP<sup>3</sup>.

The RA will consist of excavation of the crushed drums (and other debris associated with the Dayton Units if discovered), as indicated by sample results above the cleanup objectives (see table) and shipping of debris to an approved disposal facility. Concurrently a professional engineering evaluation will be conducted on the available alternatives to maximize the removal of known radiological contamination while ensuring worker safety and the integrity of the landfill. The soil excavation will continue to the extent possible without endangering the integrity of the adjacent landfill. Post-excavation sampling will be performed within the area per a Core Team approved **Standard Verification Sampling & Analysis Plan (VSAP)**.

**Schedule.** This Fact Sheet will be in public review for 30 days, ending March 22, 2005. The RA is planned to commence at the beginning of March 2005. A summary of the RA and 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 13,000 yd<sup>3</sup> (9,939 m<sup>3</sup>) of material (banked and based upon a 1.5:1 slopeback, including overburden), disposal, and verification are expected to cost less than \$4,115,000.

Additional information can be found in the public reading room, or by contacting Sue Smiley at 847-8350 ext. 318.



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  
4: PRS 11 Fact Sheet, December 2003, Public Review Draft

# PUBLIC FACT SHEET

## PRS 11: Thorium and Polonium – Contaminated Waste Area

### Recommendation for PRS 11

Potential Release Site (PRS) 11, also known as Area 2 and the Crushed Drum Area, is located in the southwest portion of the site (within the boundary of CERCLA Operable Unit 1), see Figure 1 on Fact Sheet. Approximately 2,500 empty drums were crushed in place and covered with soil. These drums had previously contained thorium process materials used for thorium projects in the 1960s. This location also contains buried wood ash and debris from a fire that had consumed the polonium-contaminated flooring from the Dayton units (Area 13).

Thorium-232 was found during installation of drainage features and wells in support of the Operable Unit 1 Record of Decision remedy and subsequent augmentations. The maximum concentration of Th-232 found was 561.7 pCi/g, compared to the cleanup objective of 2.1 pCi/g. Based on the above information, the Department of Energy determined that a **Removal Action (RA)** was warranted and the Core Team agreed to apply the Contingent Removal Action Memorandum. The RA Contaminant of Concern is thorium-232.

The Core Team originally recommended No Further Assessment for PRS 11 based upon data available at that time. However, based upon the above information the Core Team recommends a **Removal Action** for PRS 11.

This Removal Action will be performed under the Action Memorandum for Contingent Removal Actions. Successful completion of the Removal Action will be documented via an On-Scene Coordinator (OSC) Report signed by the Core Team, which will be placed in the Public Reading Room.

A Public Fact Sheet along with this recommendation, signed by the Core Team, will be placed in the Public Reading Room for a 30-day review period. Upon closure of the public review comments, if any, the Fact Sheet will be issued as a final document and made available in the Public Reading Room.

#### CONCURRENCE:

DOE/MCP: Paul Lucas 11/26/03  
Paul Lucas, Remedial Project Manager (date)

USEPA: David P. Seely 11/19/03  
David P. Seely, Remedial Project Manager (date)

OEPA: Brian K. Nickel 11/20/03  
Brian K. Nickel, Project Manager (date)

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