aRc Accelerated Remediation Company
A Portage-Shaw Joint Venture
1075 South Utah Avenue, Suite 200
Idaho Falls, Idaho 83402

September 28, 2011

Derrick Franklin, Contracting Officer
EM Consolidated Business Center
Department of Energy
250 East 5th Street, Suite 500
Cincinnati, OH 45202

Subject: CONTRACT DE-AM-09-05SR22399 - Task Order No. DE-AT30-6CC00009/OH08, SUBMITTAL OF THE SIGNED AMENDMENT OF THE OPERABLE UNIT 1 RECORD OF DECISION
Letter No. ARC-050-11

Dear Mr. Franklin:

Attached is the signed version of the Amendment of the Operable Unit 1 Record of Decision for the Miamisburg Closure Project, dated August 2011. This paper copy is for your record file. By copy of this letter, a paper copy is also being provided to Mr. Paul Lucas (DOE – Mound), and two paper copies and an electronic copy are being provided to Stoller for inclusion in the administrative record. Additionally, an electronic file of this document was transmitted to Mr. Lucas, as well as to Ohio EPA (Brian Nickel) and USEPA (Tim Fisher), by ARC, on September 28, 2011.

If you require additional information, please contact Dennis Dalga at 513-508-7383.

Sincerely,

Enid C. Anderson, Contract Administrator
Accelerated Remediation Company

cc: Dennis Dalga, ARC
Paul Lucas, DOE w/ Attachment
Stoller, w/ Attachment

Attachment: As Stated

AMENDMENT OF THE
OPERABLE UNIT 1 RECORD OF DECISION

U.S. DEPARTMENT OF ENERGY
MOUND CLOSURE PROJECT
FINAL
AUGUST 2011

TABLE OF CONTENTS

Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COPCs	Contaminants of potential concern
cy	cubic yards
DOE	Department of Energy
ER	Environmental Restoration
FFA	Federal Facilities Agreement
HI	Hazard Index
IC	Institutional Control
MDC	Miamisburg Development Corporation (formerly MMCIC)
MMCIC	Miamisburg Mound Community Improvement Corporation
NCP	National Oil & Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
ODH	Ohio Department of Health
Ohio EPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
OU	Operable Unit
PRAP	Proposed Response Action Plan
ROD	Record of Decision
RRE	Residual Risk Evaluation
SARA	Superfund Amendments and Reauthorization Act
VOCs	volatile organic compounds
USEPA	United States Environmental Protection Agency

1 INTRODUCTION

1.1 Site Name and Location

U.S. Department of Energy

Mound Closure Project, Operable Unit 1

Montgomery County, Ohio

Miamisburg, OH

1.2 Statement of Basis and Purpose

This decision document amends the selected remedial action for the Mound Closure Project – Operable Unit (OU) - 1 in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) (hereinafter jointly referred to as CERCLA), 42 USC §9617(c), and 40 CFR §300.435(c)(2)(ii). This Amendment has been prepared to amend the selected remedy identified in the June 1995 Operable Unit 1 Record of Decision (ROD).

This amendment to the Record of Decision (ROD Amendment) follows "A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents" (USEPA, *July 1999*). The ROD Amendment documents the geographic area expansion of OU-1 within Parcel 9 and the institutional controls in the form of an environmental covenant to be implemented at OU-1 in accordance with Ohio Revised Code (ORC) §§ 5301.80 to 5301.92 . This amendment has been prepared to amend the selected remedy identified in the June 1995 OU-1 ROD. The 1995 ROD remains in effect with the amendments described in this document. The ROD Amendment will be incorporated into the Mound Closure Project Administrative Record which is available at 955 Mound Road, Miamisburg, OH 45342.

1.3 Assessment of the Site

Actual or threatened releases of hazardous substances from this operable unit, if not addressed by implementing the response action selected in the Operable Unit 1 ROD and this ROD Amendment, may present an imminent and substantial endangerment to the public health, welfare, and/or the environment.

1.4 Description of the Operable Unit 1 ROD Remedy

In 1989, the Mound site was placed on the USEPA's National Priorities List (NPL) as a result of the volatile organic compounds (VOCs) in groundwater beneath the OU-1 landfill area. Pursuant to this NPL designation, a Federal Facilities Agreement (FFA) was executed between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (USEPA) in October 1990. The Ohio Environmental Protection Agency (Ohio EPA) became a party to this agreement in 1993. Subsequent to the signing of this agreement, a CERCLA Record of Decision (ROD) for OU-1 was signed in June 1995. The 1995 ROD selected a groundwater pump and treat system to collect, treat and dispose of groundwater contaminated with VOCs which represented the principal risk concern. The Operable Unit 1 remedy described in the 1995 ROD is the collection and treatment of contaminated groundwater and disposal of treated water. The major components of the selected remedy include:

1. Installing two groundwater extraction wells within OU-1, using standard equipment and procedures.

2. Treating the extracted groundwater to remove VOCs and other constituents, as required, using cascade aeration, ultraviolet oxidation, conventional air stripping, or other suitable treatment units.

3. Discharging the treated groundwater to the Great Miami River through the existing plant National Pollutant Discharge Elimination System outfall or a new outfall.

The remedy addressed the principal threats posed by Operable Unit 1 by controlling groundwater contamination (dilute VOCs), preventing migration of contamination toward the Mound Plant production wells and minimizing exposure to potential receptors. The pathways of concern consist of leaching of contaminants from OU-1 soils or disposed waste; entrainment in the groundwater flow; and withdrawal by the Mound Plant production wells or by other, future wells.

1.5 Explanation of Amendment

The contents of this ROD Amendment include:

1. Documenting the geographic expansion of land area to be included in this ROD Amendment.
2. Identifying Institutional Controls to be implemented for OU-1 in an environmental covenant in accordance with ORC §§ 5301.80 to 5301.92 .

1.6 Statutory Determinations

This ROD Amendment is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost effective. This remedy amendment documents the use of a permanent solution to the maximum extent practicable and the statutory preference for a remedy that reduces contaminant volume.

In accordance with CERCLA 121(c) and the Federal Facilities Agreement among the USEPA, DOE, and Ohio EPA, USEPA will review this remedial action, from a site-wide perspective, no less often than each five years after the implementation of final remedial actions to assure that human health and the environment are being protected by the remedial actions.

1.7 Authorizing Signatures and Support Agency Acceptance

This Amendment of the Operable Unit 1 Record of Decision of the Mound Site has been prepared by DOE. Approval of the USEPA and Ohio EPA is required and has been secured as documented below.

This Amendment is authorized for implementation.

9/9/2011

Jack R. Craig — Date

Director, EM Consolidated Business Center

U. S. Department of Energy

9/16/2011

Richard C. Karl, Director — Date

for

Superfund Division

U. S. Environmental Protection Agency, Region 5

9/9/11

Scott J. Nally, Director — Date

Ohio Environmental Protection Agency

2 DECISION SUMMARY

Site Name: **Mound Closure Project, Operable Unit 1**

Site Location: Montgomery County

Lead Agency: U.S. Environmental Protection Agency, Region 5 (USEPA)

Support Agency: Ohio Environmental Protection Agency (Ohio EPA)

2.1 Background

A Record of Decision (ROD) for the Mound Closure Project, Operable Unit (OU) 1 was signed by the U.S. Department of Energy (DOE) on June 2, 1995 and on June 12, 1995 by the U.S. Environmental Protection Agency (USEPA) (Reference 1). The Ohio Environmental Protection Agency (Ohio EPA) concurred with the remedy described in the ROD on May 22, 1995. This ROD Amendment documents the geographic area expansion of OU-1 within Parcel 9, and the institutional controls to be implemented at OU-1 in an environmental covenant in accordance with ORC §§ 5301.80 to 5301.92. All other components of the 1995 ROD remain unchanged and in effect. The Amendment is issued in accordance with Section 117 (c) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986 (herein jointly referred to as CERCLA), 42 USC §9617(c), and 40 CFR§300.435(c)(2)(ii).

This ROD Amendment will describe the activities conducted at OU-1 since the signing of the ROD in 1995, and document the implementation of new institutional controls (ICs) and the geographic expansion of the area. This ROD Amendment will be incorporated into the Mound Closure Project Administrative Record which is available at 955 Mound Road, Miamisburg, OH 45342.

2.2 Site History, Contamination and Selected Remedy

The Mound site is located in Miamisburg, Ohio, approximately 10 miles southwest of Dayton. Construction of the Mound facility began in 1946 and served to support the early atomic weapons programs. The site later grew into an integrated research, development, and production facility performing work in support of DOE weapons and energy programs, with an emphasis on explosives and nuclear technology.

The plant which was operational from 1948 to 1995 was originally situated on 182 acres. In 1981, DOE purchased an additional 124 acres south of the original property; however, the additional property remained undeveloped.

In 1984, the Environmental Restoration (ER) Program at the Mound site was established to collect and assess environmental data in order to evaluate both the nature and extent of radiological and chemical contamination from facility operations. The ER Program also identified potential exposure pathways and potential human and environmental receptors (i.e., develop a conceptual site model).

The Mound site was placed on the National Priorities List (NPL) in November 1989 because of chemical contamination present in the site's groundwater and proximity to a sole source aquifer.

A FFA between DOE and USEPA was signed in October 1990. In July 1993, the FFA became a tripartite agreement through the addition of Ohio EPA (Reference 2).

In June 1995, DOE finalized the Operable Unit 1 Record of Decision (DOE 1995) to address contaminated groundwater in this discrete portion of the Mound site. The OU-1 landfill area occupies four acres of land in the southwestern portion of the original Mound Plant property. The OU-1 area includes the "historic landfill" that was used to dispose of general trash and liquid

wastes from 1948 to 1974. During the mid-1950s, potentially contaminated Dayton Unit salvage materials consisting of steel and metal debris, polonium (Po)-210 contaminated sand from research and production activities, and approximately 2,500 empty, crushed drums (55 gallon) that had been used to store thorium wastes were buried in the southwest corner of OU-1. An overflow pond was constructed in the OU-1 area during 1977 and 1978 that partially covered the historic landfill. The portion of the historic landfill wastes excavated during the construction of the pond, principally trenches that had been used to dispose of non-hazardous wastes, was relocated and encapsulated in a sanitary landfill over the top of a portion of the historic landfill area. No site wastes were disposed of in OU-1 after 1974. OU-1 also originally included the three plant production wells that were located along the southern plant boundary. Detailed and historical information on OU-1 is provided in the ROD document signed in 1995.

The goal of the remedy in the 1995 ROD was to control and reduce (to drinking water standards) the contaminant concentrations in groundwater beneath OU-1 and prevent contaminant movement into the Buried Valley Aquifer which serves as a drinking water source for some area residents. The agencies determined the soils within the OU-1 area would not pose an unacceptable risk to a future outdoor industrial worker with appropriate institutional controls in place. At the time the ROD was signed, excavation and treatment of the residual subsurface contaminants within the OU-1 area was not considered practicable given the diffuse nature of contamination and lack of any identifiable contamination "hot spots." Lastly, the ROD required a CERCLA five-year review of the remedy as long as contaminants above health-based levels remained within the OU-1 area.

Beginning in late 1995, DOE, USEPA and Ohio EPA began to develop an approach to making decisions about the environmental restoration of the Mound site and its facilities. This approach is known as the Mound 2000 process (agreement signed in 1998) and meets the requirements of

CERCLA Section 120(h)-*Property Transfer of Federal Agencies* (Reference 3). The Mound 2000 process is used to address the environmental issues associated with the restoration of the site, completion of work at the site, and deletion of the site from the NPL. As a result, the site is in the process of being transferred and converted into an industrial/commercial site.

A groundwater pump and treat system was installed in 1996 following the signing of the ROD. Shortly thereafter, DOE installed a soil vapor extraction system to treat residual VOCs in soils and accelerate remediation of the site. Based on the results of the first CERCLA five-year review completed in 2001, which found a continuing decline in the VOCs concentrations within the OU-1 compliance boundary, the agencies concluded the OU-1 remedy was functioning as intended and designed, and was protective of human health and the environment.

In 2005, data collected during the installation of drainage features and wells in support of the OU-1 remedy resulted in the need to perform a removal action located within the footprint of the OU-1 landfill area. During the summer of 2005, a significant portion of the crushed thorium drums, known as potential release site (PRS) -11, was removed within the southwest corner of the OU-1 landfill area. This removal action was conducted under the CERCLA process at the Mound site to address Thorium (Th) -232 contamination found. The removal action resulted in the excavation of approximately 14,978 cubic yards (cy) of radioactively contaminated soil. The excavated area was subsequently backfilled with clean soil. The contaminated soil was transported via railcars for disposal at a low-level radioactive waste facility located in Clive, Utah.

Although the CERCLA five-year reviews conducted in 2001 and 2006 found the OU-1 remedy to be functioning as intended and designed, and was protective of human health and the environment, the Miamisburg Mound Community Improvement Corporation (MMCIC), the entity responsible for the development and management of the Mound property as part of a 1998

sales agreement, and the City of Miamisburg remained concerned over the potential impact of the OU-1 landfill area on the plan to expand an adjacent road and future plans to construct a building in the OU-1 area. In response to these community concerns, Congress directed the DOE to take additional remedial actions at OU-1 and appropriated $30,000,000.00 to execute this work. The DOE and MMCIC worked collaboratively to develop and evaluate response options, and the DOE issued a Proposed Response Action Plan (PRAP) for public comment in April 2006. Other than minor editorial recommendations submitted by MMCIC, no formal comments on the PRAP were received during the April 20, 2006 to May 18, 2006 public comment period.

Consistent with Congressional direction regarding further cleanup of OU-1, the primary response objective was to remove as much of the remaining waste and debris as possible given the $30,000,000.00 made available to conduct this work. Because of the uncertainties that existed with respect to the volumes and types of waste materials present, the actual cost to exhume and properly dispose of the wastes could not be fully ascertained at the time. Therefore, in recognition of the uncertainty with how much of these wastes will ultimately be removed from the site, the DOE in coordination with MMCIC established the following waste removal priorities: 1) thorium drum (PRS-11) area; 2) VOC hot spot area; 3) historic landfill area; 4) Dayton unit trench; and 5) site sanitary landfill.

In 2007 and 2008, approximately 65,000 cy of wastes associated with the PRS-11 area, VOC hot spot area, historic landfill area and the Dayton unit trench were excavated and transported by rail to a low-level radioactive waste disposal facility in Clive, Utah. In June 2007, two extraction wells associated with the groundwater pump and treat system were abandoned due to their location in the excavation footprint of the OU-1 landfill area. Two new extraction wells outside the OU-1 excavation footprint were installed in July 2007 as replacements for the abandoned

wells. The pump and treat system continued to operate during the excavation activities in OU-1 with the exception of when the two new extraction wells were installed.

In 2009 and 2010, additional excavation occurred in the OU-1 historic landfill area. Approximately 34,500 cy of this waste were transported by rail and disposed at the Clive, Utah facility. The remaining soils in the OU-1 area meet the site's cleanup objective criteria for future industrial/commercial use.

2.3 Basis for Amending the 1995 ROD

Since 1995 there have been changes to the OU-1 landfill area resulting from excavation activities and waste removals conducted in 2005, 2007-2008, and 2009-2010. The Mound site is now divided into parcels which are designated for eventual land transfer for future industrial/commercial use. The OU-1 area (for the purpose of this action) is now included in Parcel 9. Parcel 9 also includes the former OU-1 pond area, OU-1 spoils area, the former production well area, the haul road from the OU-1 area and the site's former rail loadout area. Parcel 9 is shown on Figure 1. The OU-1 landfill area which was the basis for the original ROD covered only a portion of land which is now Parcel 9. A Residual Risk Evaluation (RRE) was performed on Parcel 9 to determine acceptability for commercial/industrial use before land transfer occurs (Reference 4). Parcel 9 Contaminants of Potential Concern (COPCs) were revised to reflect the additional land area and updated information from OU-1. Exposure to groundwater in the RRE was not assessed because of ICs implemented for OU-1 that prohibit the use of groundwater from the site.

Controls implemented with the 1995 OU-1 ROD continued in effect during the excavations. These initial controls were designed to control land use. Such controls included access restrictions and fencing around the site to minimize contact with soils. The purpose of this ROD Amendment is to describe new ICs to be implemented in an environmental covenant in

accordance with ORC §§ 5301.80 to 5301.92 . The final ROD Amendment will also contain a copy of the environmental covenant, which includes the deed restrictions for Parcel 9 and the CERCLA 120(h) Summary Notice of Hazardous Substances for Parcel 9.

2.4 Description of ROD Amendment

This ROD Amendment includes information:

1. Documenting the geographic expansion of land area to be included in this ROD Amendment.

2. Documenting new ICs for the OU-1 area to be implemented in an environmental covenant in accordance with ORC §§ 5301.80 to 5301.92.

2.5 Documenting the Expansion of the Affected Land Area

The Mound site is now divided into parcels which are designated for eventual land transfer for future industrial/commercial use. Geographically, the OU-1 landfill area falls within Parcel 9 as shown on Figure 1. Through this ROD Amendment, the area to be covered is expanded to include all of Parcel 9. Parcel 9 also includes the former OU-1 pond area, OU-1 spoils area, the former production well area, the haul road from the OU-1 area and the site's former rail load out area. Because this action effectively matches the OU-1 geographical boundary to all the Parcel 9 boundary, OU-1 and Parcel 9 references are synonymous for the purpose of this document.

A RRE is performed on each parcel to determine acceptability for commercial/industrial use before land transfer occurs. The RRE for Parcel 9 includes COPCs that reflect the additional land area and updated information from OU-1. Exposure to the groundwater pathway was not assessed because of the ICs implemented in Parcel 9 prohibiting the use of groundwater from the site.

The RRE for Parcel 9 is based on industrial (construction) and site worker, baseline exposure pathways and exposure scenarios assessed for the rest of the Mound site. Because the scope of the RRE was limited to industrial/commercial use, the soils within Parcel 9 have not been evaluated for unrestricted release (e.g., residential use). Disposition of Parcel 9 soils without proper handling, sampling, and management could create an unacceptable risk to human health and the environment.

The anticipated future use of Parcel 9 is industrial; therefore, the total, background, and incremental risks are calculated in the RRE for current exposure scenarios for a construction worker and site worker working within the Parcel 9 boundary. These risks have been compared to the National Oil & Hazardous Substances Pollution Contingency Plan (NCP) acceptable risk range of 1×10^{-4} to 1×10^{-6} for carcinogenic risk (corresponding to an increased cancer risk of 1 in 10,000 to 1 in 1 million) as well as the Ohio EPA's target risk of 1×10^{-5}. Non-carcinogenic hazards were also compared to the USEPA and the Ohio EPA target hazard goal of 1.0. Total risk for both the construction worker and site worker scenarios slightly exceed the Ohio EPA target risk goal, supporting the use and enforcement of the institutional controls as part of the final remedy.

For the construction worker scenario in Parcel 9, the calculated incremental risk and total residual risk are both 1.3×10^{-5}. The calculated Hazard Index (HI) is 0.49 for the construction worker scenario. For the site worker scenario, the calculated incremental risk is 1.6×10^{-5} and the total residual risk is 1.7×10^{-5}. The calculated HI for the site worker scenario is 0.039. Because the scope of the RRE was limited to industrial/commercial use, the soils within Parcel 9 have not been evaluated for unrestricted release (e.g., residential use). Disposition of Parcel 9 soils without proper handling, sampling, and management could create an unacceptable risk to human health and the environment.

2.6 Documenting New Institutional Controls with the Remedy

Controls described in the 1995 OU-1 ROD continued in effect during the excavations. These controls included fencing around the site/OU-1 Landfill Area and access controls to minimize contact with soils. At the time the 1995 ROD was written, there was not much guidance on what specific restrictions should be required or how deed restrictions should be implemented at Superfund sites. Since 1995, many Superfund sites have relied on deed restrictions as part of the final remedy. This ROD Amendment contains language to be included in an environmental covenant for Parcel 9 that meets the requirements of ORC §§ 5301.80 to 5301.92 and the CERCLA 120(h) Summary Notice of Hazardous Substances for Parcel 9.

The ICs in the environmental covenant will include the following:

- Prohibit the removal of soil from the original 306 acres DOE Mound Site Property boundaries, unless prior written approval from Ohio EPA and Ohio Department of Health has been obtained.
- Prohibit the extraction or consumption of, exposure to, or the use in any way of the groundwater underlying the premises, unless prior written approval from USEPA and Ohio EPA has been obtained.
- Limit land use to industrial/commercial only. Parcel 9 may not be used for any residential or farming activities, or any activities that could result in the chronic exposure of children less than 18 years of age to soil or groundwater from the premises. Restricted uses include, but are not limited to:
    - Single or multi-family dwellings or rental units.
    - Daycare facilities.
    - Schools or other educational facilities for children less than 18 years of age.
- Allow site access for federal and state agencies for sampling and monitoring.

DOE or its successors or assigns, as the lead agency for this ROD Amendment, has the responsibility to implement, report on, monitor, maintain, and enforce these institutional controls both before and after transfer. This responsibility includes the duty to conduct annual assessments of compliance with the restrictions and the duty to enforce the restrictions if any non-compliance is detected. The assessment and enforcement processes are part of the O&M Plan and are outlined in the Site-wide Operations and Maintenance Plan, which is intended to serve as a framework for implementation of operation and maintenance activities for the OU-1 Remedy.

2.7 Comparative Analysis

This amendment addresses threats to the public health, safety, welfare and the environment by contamination at and around the OU-1 area. A comparative evaluation of the change described in this amendment with the 1995 Operable Unit 1 ROD was conducted employing the nine criteria defined in the National Contingency Plan as the framework for identifying technical and administrative differences for consideration.

The first two evaluation criteria – overall protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs) – are considered threshold criteria that must be attained by the selected remedial action.

The next five criteria include short-term protectiveness, long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, implementability and cost.

These criteria are considered primary balancing criteria, which are looked at collectively to arrive at the best overall solution that offers the best balance of tradeoffs among the criteria.

The final two criteria, state and community acceptance, are evaluated following receipt of comments, if any, during the formal public comment period. Table 1 provides a summary of the

comparative evaluations for the amendment using the nine CERCLA National Contingency Plan criteria as the guiding framework.

Table 1. CERCLA Nine Criteria Summaries for the ROD Amendment Change

National Contingency Plan Criteria and Original Mound Operable Unit 1 Decision	2011 Amended Remedy
1. Overall protection of human health and the environment. The selected remedy in O U- 1 was considered health protective by controlling groundwater contamination.	The amended remedy will achieve overall protectiveness over a larger geographic area and will provide more specific restrictions on protective land use.
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs). The OU-1 remedy achieved compliance with all ARARs.	No change.
3. Long-Term Effectiveness and Permanence. The OU-1 remedy reduced the residual risks associated with contaminated groundwater by preventing migration of contamination toward Mound Plant production wells and minimized exposure to potential receptors.	The amended remedy will achieve greater effectiveness and permanence by memorializing the land use restrictions in an environmental covenant in accordance with ORC §§ 5301.80 to 5301.92 and the CERCLA 120(h) Summary Notice of Hazardous Substances for Parcel 9. It is anticipated that this will result in a higher degree of enforceability of the restrictions identified in the ROD Amendment.
4. Reduction of Contaminant Toxicity, Mobility or Volume Through Treatment. The Operable Unit 1 ROD remedy employs treatment as a principal element to further reduce contaminant toxicity, mobility, or volume. The statutory preference for treatment was considered adequately satisfied by the selected actions considering the waste types, contaminant types, and disposal options.	The additional institutional controls implemented continue to support the remedy by ensuring the public does not come in contact with the OU-1 soil or groundwater.

National Contingency Plan Criteria and Original Mound Operable Unit 1 Decision	2011 Amended Remedy
5. Short-Term Effectiveness. The selected remedy in the OU-1 ROD considered the short-term risks associated with remedy implementation during the original analyses.	No change.
6. Implementability. The selected remedy in the OU-1 ROD was considered implementable at the time of the original decision. More than 10 years of history has been gained for the remedy to prove its overall implementability and effectiveness.	No change.
7. *Cost.* The original OU-1 ROD remedy was found to have costs that were proportionate to the effectiveness achieved.	No change.
8. State Acceptance. The Ohio EPA had an opportunity to review and participate in the original OU-1 ROD decision and concurred with the original remedy that was selected.	Ohio EPA concurs with the amended remedy.
9. *Community Acceptance.* As prescribed under CERCLA, the original OU-1 ROD provided formal opportunities for gaining community acceptance. Community concerns were addressed in the formal Responsiveness Summaries attached to the ROD.	No comments were received from the public on the proposed amended remedy. It is therefore determined that the community accepts the amended remedy.

Table 1. (continued) CERCLA Nine Criteria Summaries for the ROD Amendment Change

2.8 ARARs Identified for the Remedy

The changes documented in this ROD Amendment meet all applicable or relevant and appropriate requirements (ARARs) as identified in the Operable Unit 1 ROD and federal and state statutes pursuant to CERCLA Section 121 (d)(1), except where waivers of federal or state law are necessary. The amended changes identified in this ROD Amendment will not require waivers of federal or state statutes. Implementation of the changes will meet the ARARs as described in the original Operable Unit 1 ROD and is not affected by new ARARs.

2.9 Summary of Support Agency Comments on the ROD Amendment

The Director of Ohio EPA is provided with the ROD Amendment for review and signature.

2.10 Statutory Determinations

In accordance with Section 121 of CERCLA, 42 U.S.C. § 9621, the modified amendment will satisfy statutory requirements, listed as follows:

- Protection of human health and the environment;
- Compliance with ARARs;
- Cost Effectiveness; and
- Utilizes permanent solutions to the maximum extent practicable.

The first five-year review for OU-1 was issued in 2001. The second five-year review for OU-1 was issued in 2006. The next five-year review for OU-1 will be conducted in 2011.

2.11 Public Participation Compliance

In compliance with Section 117 of CERCLA and NCP Section 300.435(c)(2)(ii), a notice of public review and public meeting on the Proposed Plan highlighting the modified remedy was published twice in The Miamisburg News during July 2011. The notice issued stated that a

public meeting would be held on July 26, 2011 to explain the Proposed Plan and receive comments (Reference 5). The public comment period on the Proposed Plan begin on July 11, 2011 and closed on August 10, 2011. Members of the public could attend the public meeting and would be involved in discussions of the changes identified in the Proposed Plan. Comments received from the public would be included in the responsiveness summary that is included in the ROD Amendment documentation.

3 RESPONSIVENESS SUMMARY

This section of the ROD Amendment presents stakeholder potential concerns about Parcel 9 and explains how those concerns were addressed prior to issuance of the ROD Amendment. No formal comments were received during the public meeting held on July 26, 2011 or during the public review period (July 11, 2011 - August 10, 2011) for the Proposed Plan. Therefore, no response is required.

4 REFERENCES

Reference 1 Operable Unit 1 Record of Decision, 1995

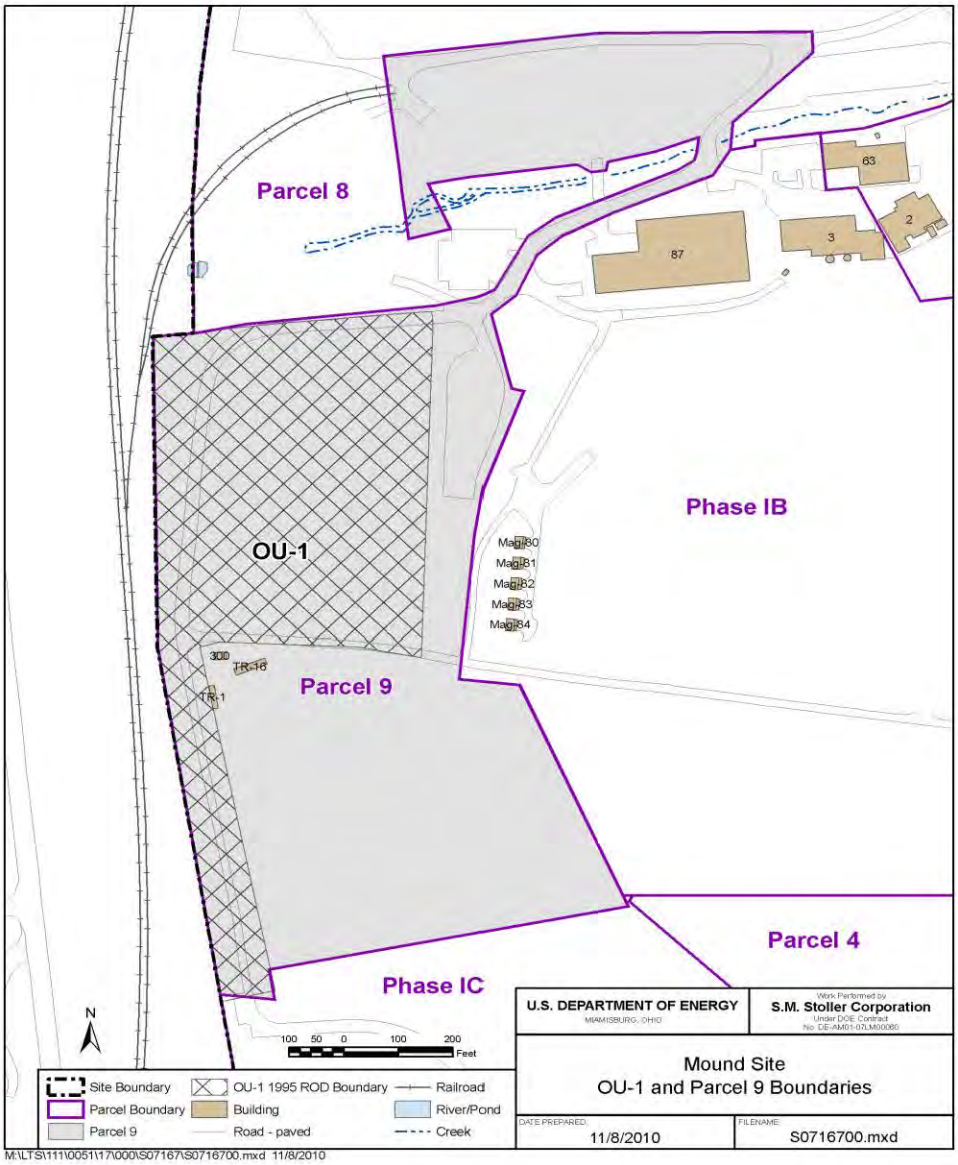
Reference 2 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Section 120, Federal Facility Agreement, July 1993

Reference 3 Work Plan for Environmental Restoration of the DOE Mound Site, The Mound 2000 Approach, Final, Revision 0, February 1999

Reference 4 Parcel 9 Residual Risk Evaluation, Public Review Draft, June 2011

Reference 5 Notice of Public Meeting, July 2011

Figure of Parcel 9



APPENDIX A

Figures

Figure 1Regional Context of the Mound Plant

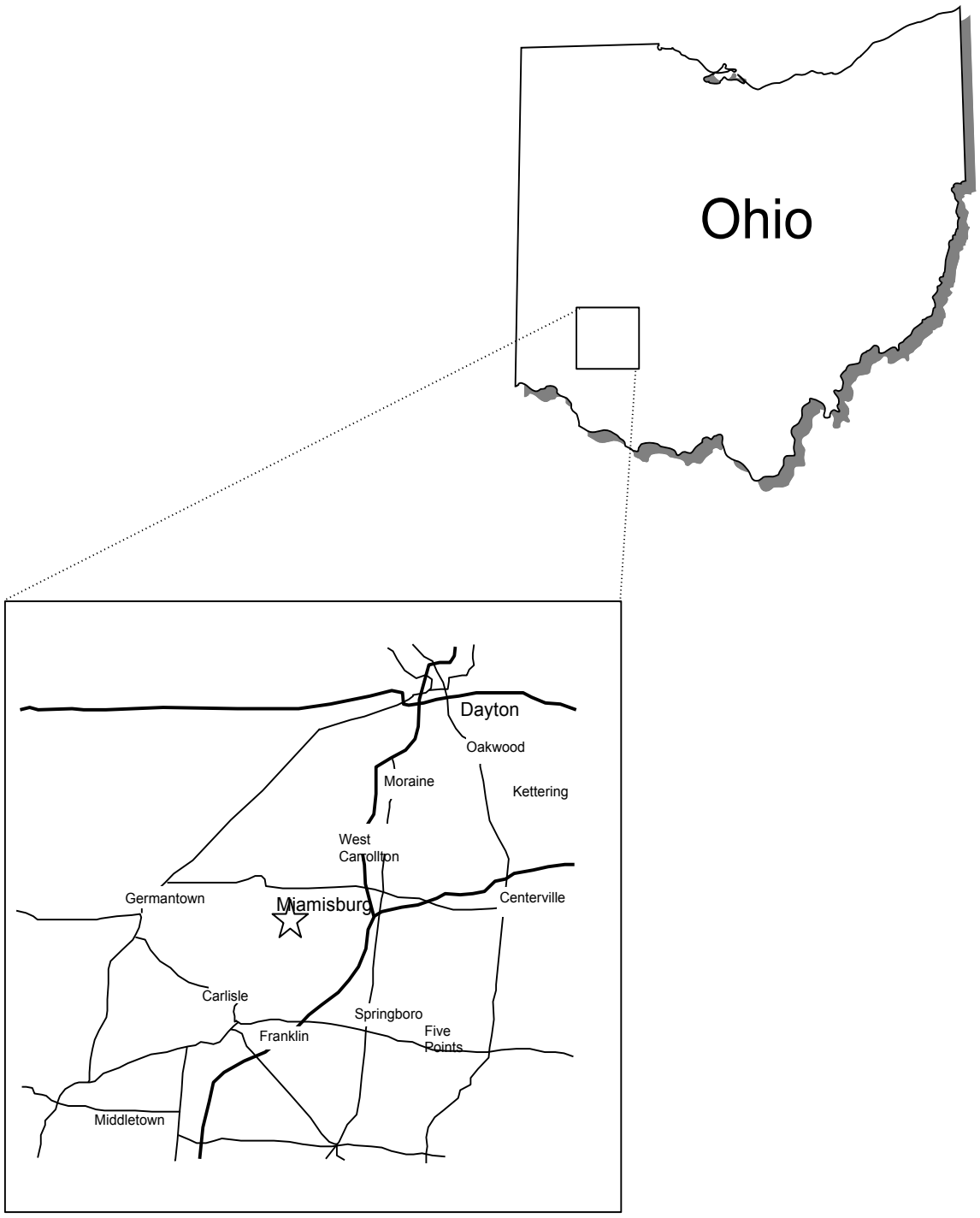


Figure 2 Location of Parcel 9

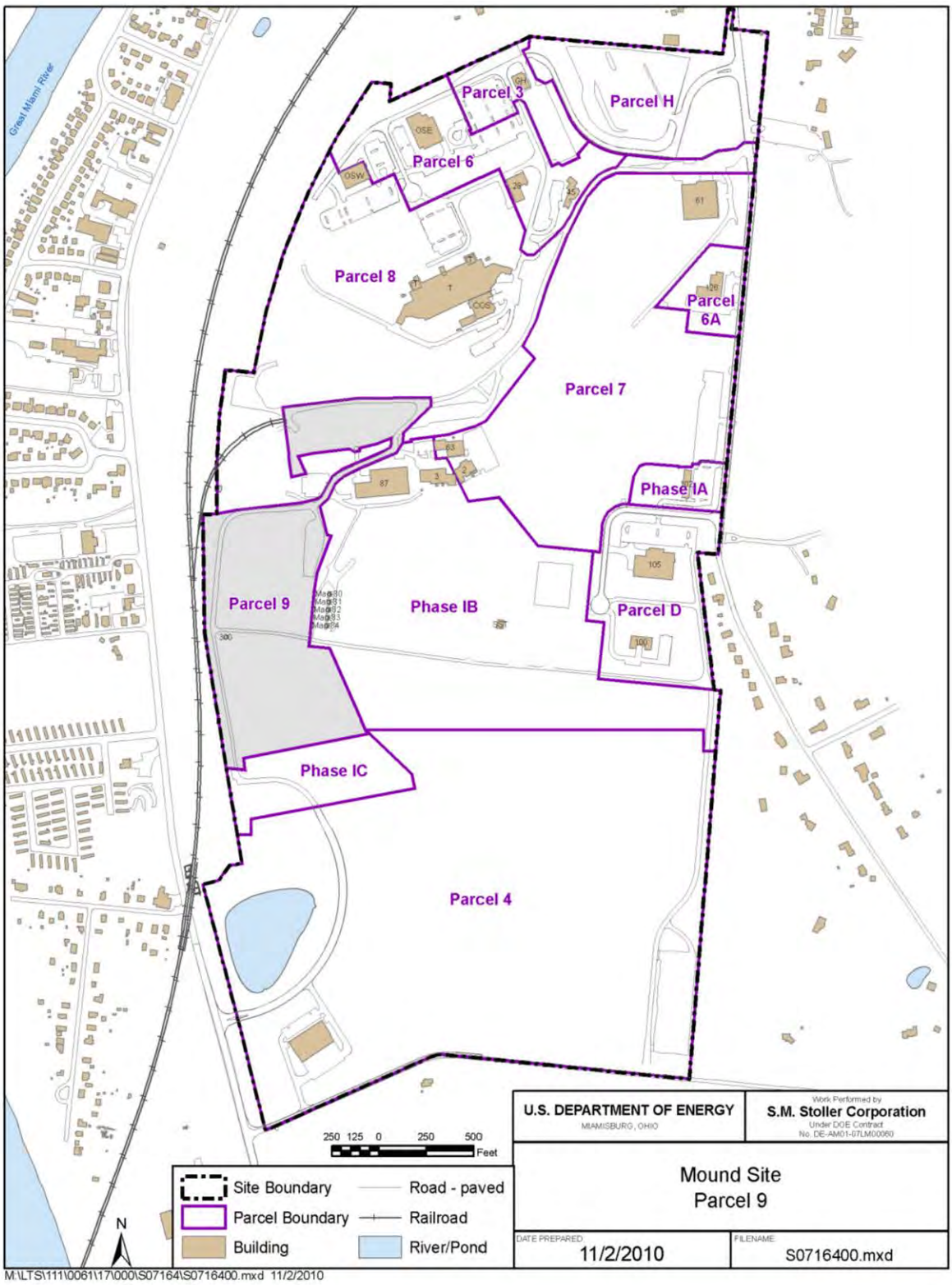


Figure 3 Parcel 9 Buildings

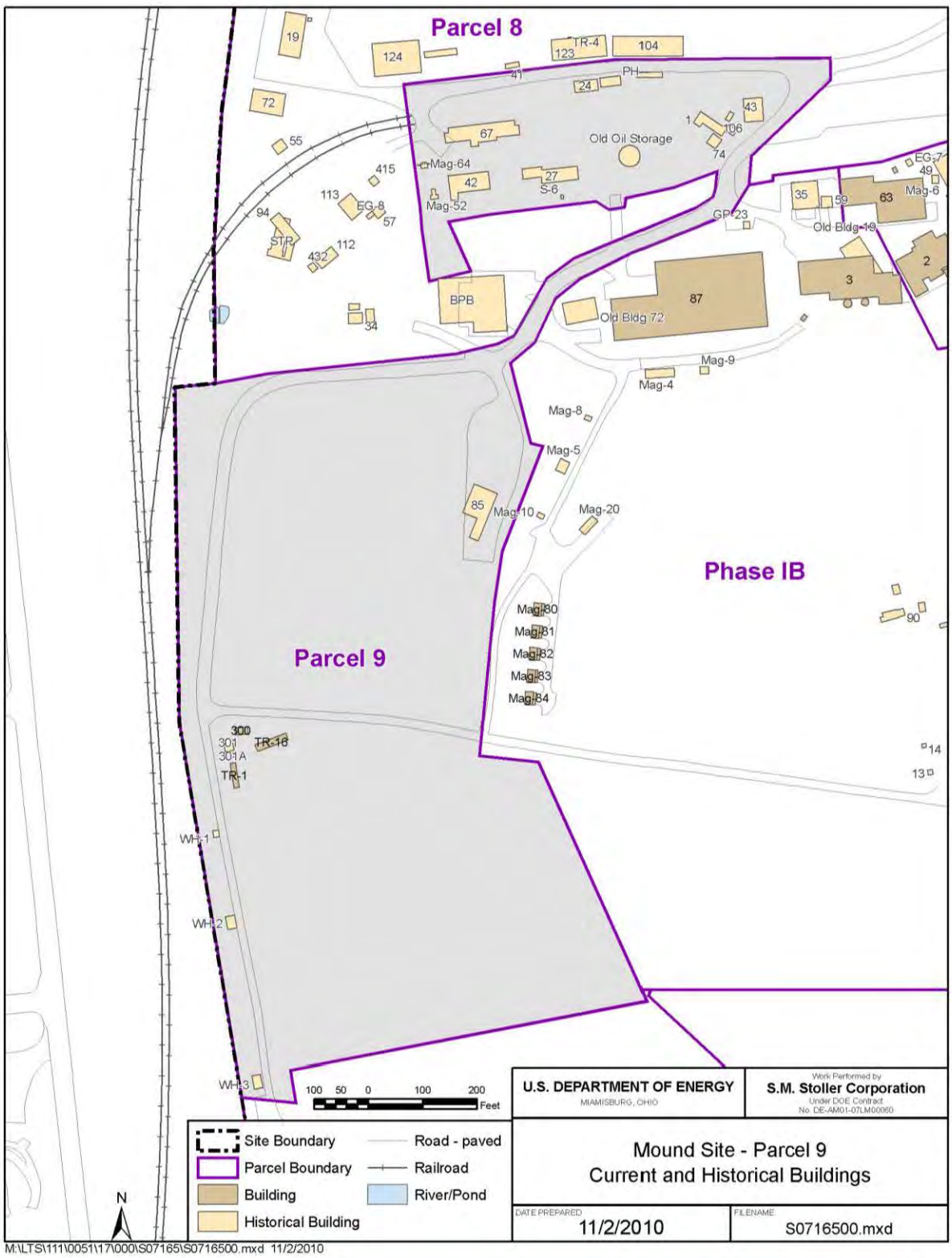
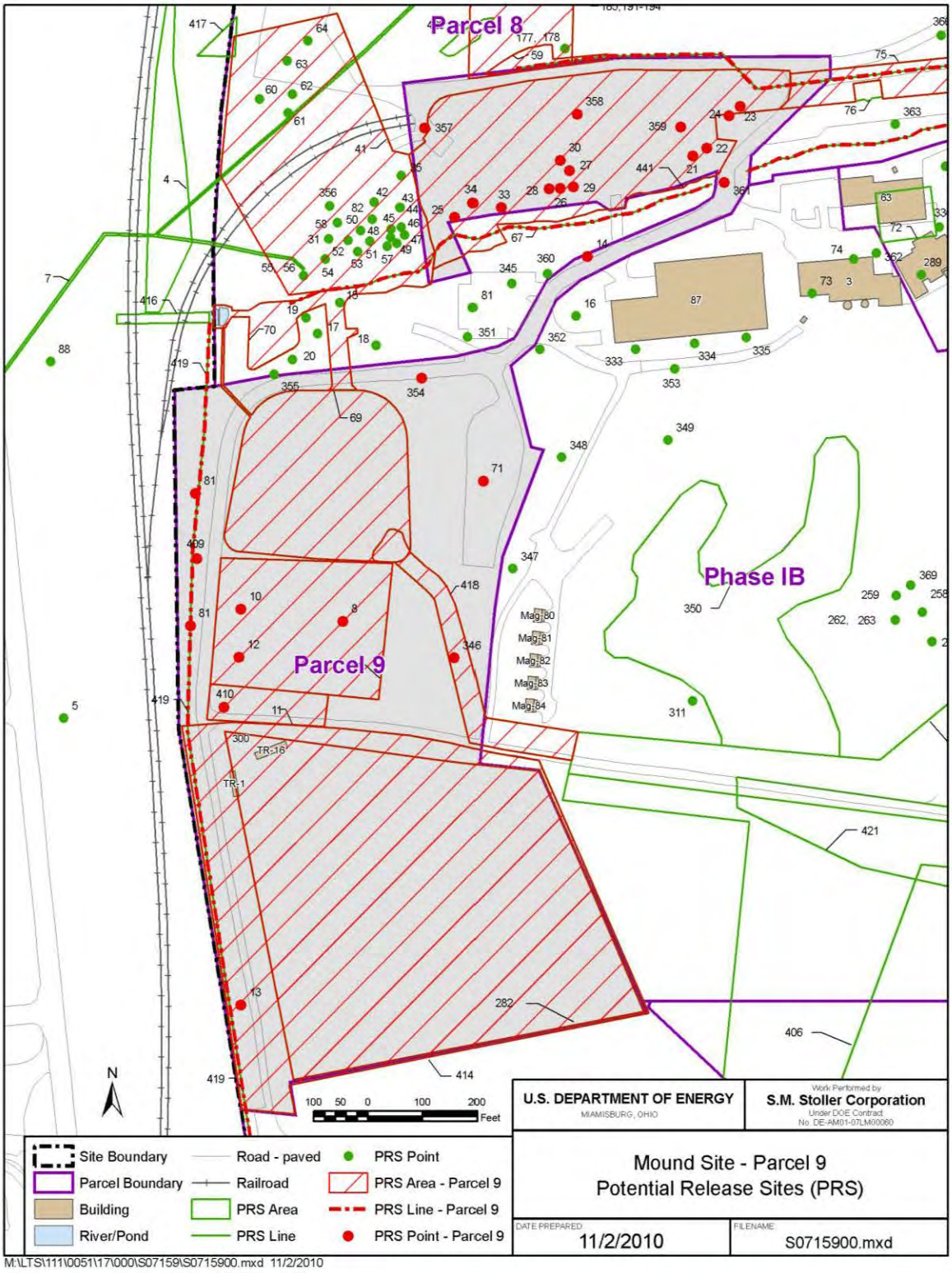


Figure 4 Parcel 9 PRSs



APPENDIX B

BUILDING INFORMATION

Building 1 & Building 106 Building 1 was a one-story, 986-square-foot concrete block structure, with a sheet metal addition (Building 106) on one side. The roof was of built-up membrane coal tar and asphalt. The building had electrical service of 240V and central steam. Building 1 was constructed in 1958. It consisted of four heavy-walled rooms, plus a small office area with a window air conditioner. The facility had been used to support the same program since construction. Research and testing activities involving energetic materials were conducted in the building. In the past, the building was used for processing and blending of explosive powders. More recently, it was used for packaging of energetic materials.

Building 24 The facility was constructed for the purpose of treating raw well water and had been used for the same purpose since construction. The facility was a concrete block structure built with slab-on-grade floor with built up membrane roof. The facility contained two large-capacity (100,000 gallon) zeolite-softening beds plus the chemicals and injection equipment for chlorination and rust inhibition. The building also contained two high-capacity booster pumps to distribute the treated water.

Building 27 and S-6 The explosive materials laboratory and testing, was a two-story, 5,300-square-foot, reinforced concrete, slab-on-grade structure with a built-up membrane (asphalt) roof. The south wall had frangible panels. The first floor contained laboratories, an office, storage, and explosive bays. The second floor contained a lavatory and a locker room. The building was serviced by sanitary and storm water service lines, a fire sprinkler water main, and electric service. Building 27 was constructed in 1969. The building had been used for the same purpose since construction. Research and testing activities using energetic materials have occurred in the building. Research, development and testing activities using radioactive materials have not occurred in Shed 6 (S-6) which occupied 35 square-foot and was removed in 2002.

Building 42 Pyrotechnics and Thermite Production facility was a two-story, 2,892-square-foot combination reinforced concrete and concrete block slab-on-grade structure. It had a built-up membrane (coal tar) roof. A gravel area was on there on the remaining side. On the first floor of the structure (approximately 2,000 square feet) are the assembly cells, an electronic equipment room, lavatory, laboratory, office, storage, and a janitor„s closet. The second floor (approximately 200 square feet) was the penthouse containing mechanical equipment. It had an outside access stairway. The building was serviced by central steam for heat and chilled water, and electrical service of 240V Building 42 was constructed in 1970. The building had been used for the same purpose since construction. Component testing and assembly of pyrotechnics and energetic materials

have occurred in the building. The assembly rooms had steel blast shields or steel blast cells. The interior assembly rooms contain distribution systems for nitrogen, argon, and high-pressure air.

Building 43 was a one-story, 1516 square-foot, reinforced concrete structure. The roof was of built-up membrane (asphalt). The building had been serviced with electrical service of 240V, and central steam and chilled water. Building 43 was constructed in 1971. The facility had been used for the same purpose since construction. Research and development activities involving thermite had been conducted in the building.

Building 67 was a one-story, 3,787-square-foot structure. Built slab-on-grade, it was a concrete-covered, polystyrene foam building with a metal roof. The building previously served as office space for energetic materials support staff. The building contains open office space with relocatable partitions, a lavatory, storage closets for office supplies and records, and a mechanical room with exterior entrance. There was interstitial space between the ceiling and the roof for utility duct work. The building was serviced by central steam for heat and chilled water, and electrical service of 240V. Building 67 was constructed in 1983. Mound personnel familiar with its construction indicated that approximately 15 feet of the site was removed and replaced with select fill prior to construction because of possible contamination involving a classified hazardous material. Records were not available to indicate whether or not all of the contamination had been removed. The building had been used for the same purpose since construction. The building was not contaminated with any radioactive, energetic, or asbestos-containing building materials.

Building 74 was a one-story, 400-square-foot, slab-on-grade structure. The facility was a manufactured Butler Building with metal arched walls and roof. The building was serviced by central steam for heat, an exhaust fan, and electrical service of 120V. Building 74 was constructed in 1984. The building was used for the same purpose since construction until activities were discontinued.

Building 85 was constructed in 1989. The building was built as a Class I powder processing facility, with a high bay area, three-foot thick reinforced concrete wall and ceiling, and an explosion-proof electrical system. The building had never been used.

Building 300 The building housed the OU-I pump and treat system using an air stripper for VOCs. It had been used for the same purpose since construction. The building was a

prefabricated metal structure built with slab-on-grade. The facility was not supplied with utilities other than 480V, three-phase power to run the system and provide electric space heat.

Building 301: The building housed the OU-1 air sparging/soil vapor extraction process. It had been used for the same purpose since construction. The facility was a prefabricated metal structure on skids. The facility was not supplied with utilities other than 480V, three-phase power to run the system and provide electric heat.

Building 301A: The facility housed a gas chromatograph to analyze gases removed in the air sparging/soil vapor extraction process in Building 300. Building 301A was a converted prefabricated guard post building with electrical service.

Magazines 52 was a single compartment unit. This magazine was a reinforced concrete box structure classified as a non-standard, earth-covered magazine. The compartment area was less than 200 sq. ft. Magazine 52 was constructed in 1970, and demolished in 1999. The magazine had been used for the same purpose since construction. The magazine was used for the storage of energetic materials.

Magazine 64 was constructed in 1974. The building had been used for the same purpose since construction. Storage of energetic materials and components had occurred.

Building PH It originally housed fuel oil pumps to supply the power house with fuel from a nearby tank (now demolished). It now houses a steam condensate pump and was used for storage. The facility no longer served its original design intent and the pumps have been removed. It then housed a steam line condensate pump and was used for miscellaneous storage of powerhouse supplies and some contractor supplies. No research, development, or production activities using radioactive or energetic materials have occurred in the building. The environmental appraisal showed that the building contained asbestos. The building was a concrete block structure with built-up membrane roof and slab-on-grade flooring. The facility had central steam heat, a window unit air conditioner, and 480V three-phase power. The brine line for the Building 24 zeolite softening bed recharge passed through Building PH.

Old Oil Storage Tank 5 Above ground, 315,000 gallon Fuel Oil Tank

Well Houses (WH)-1. The building, since its initial construction, had covered the well and housed a pump to help supply water to the Mound facility. WH-1, a well house, was a slab-on-grade floor with concrete block wells and a metal roof. The facility was not supplied with utilities other than 480V, three-phase power to run the water well pump and an electric space heater.

WH 2. The building covered a well and pump that helped furnish water to the Mound facility. It had been used for the same purpose since construction. WH-2, a well house, was a concrete slab-on-grade with masonry exterior walls and a built-up membrane roof. The facility had no utilities other than 480V, three-phase power to run the water well pump and an electric space heater. A propane-fueled standby, direct-drive engine was hooked to the pump to provide power during electrical power outages.

WH-3. This building covered a well and pump that provides plant water supply to the Mound facility. It had been used for the same purpose since construction. WH-3, a well house, was a concrete slab-on-grade floor with masonry exterior walls and a built-up membrane roof. The facility had no utilities other than 480V, three-phase power to run the water well pump and an electric space heater. There was a propane-fueled, direct-drive engine to provide standby power during electrical power outages.

APPENDIX C

PRS Information

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
PRS-8: Site Sanitary Landfill (Waste Storage and Disposal Sites Release Block I) Potential Release Sites (PRSs) 8, 9, 10, 11, 12 include the historical landfill site and historical disposal site of plant waste materials, including general trash and liquid waste in an area of the site commonly referred to as Area B.		NFA	Recommendation signed 3/4/96	3/18/96 – 4/1/96
PRS-9: Area 18, Site Sanitary Landfill Cover (Waste Storage and Disposal Sites Release Block I). Potential Release Sites(PRSs) 8, 9, IO, 11 , 12 included the historical landfill site and historical disposal site of plant waste materials, including general trash and liquid waste in an area of the site commonly referred to as Area B.		NFA	Recommendation signed 3/4/96	3/18/96 – 4/1/96
PRS-10: Site Sanitary Landfill (Waste Storage and Disposal Sites Release Block I). Potential Release Sites(PRSs) 8, 9, 10, 11, 12 included the historical landfill site and historical disposal site of plant waste materials, including general trash and liquid waste in an area of the site commonly referred to as Area B.		NFA	Recommendation signed 3/4/96	3/18/96 – 4/1/96
PRS-11: Site Sanitary Landfill (Waste Storage and Disposal Sites Release Block I). Potential Release Sites(PRSs) 8, 9, 10, 11 , 12 included the historical landfill site and historical disposal site of plant waste materials, including general trash and liquid waste in an area of the site commonly referred to as Area B. Based on the discovery of thorium contamination commingled with drum remnants at PRS 11.		NFA	OSC signed 11/26/03	12/5/03 – 1/4/04
PRS-12: Site Sanitary Landfill (Waste Storage and Disposal Sites Release Block I). Potential Release Sites(PRSs) 8, 9, 10, 11, 12 included the historical landfill site and historical disposal site of plant waste materials, including general trash and liquid waste in an area of the site commonly referred to as Area B.		NFA	Recommendation signed 3/4/96	3/18/96 – 4/1/96
PRS-13: Trash Incinerator (Former Treatment Site). Potential Release Site (PRS) 13 was identified as a trash incinerator was part of an overall open burning process employed from 1948-1970 in the old burn area, which was part of OU 1.		NFA	Recommendation signed 12/18/96	2/22/97 – 4/3/97
PRS-14: Area C, Waste Storage Area (AKA Drum Staging Area and Chemical Waste Storage). Historical use as a drum storage area for staging chemical waste prior to off-site		NFA	Recommendation signed 5/8/96	6/19/96 – 7/17/96

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
disposal.				
PRS-21: Building 1, Leach Pit (Area 1). The RCRA PRSs 21, 22, 25, 26, 27, and 29, otherwise known as wastewater transfer structures, were identified as Potential Release Sites because of the concern that residual volatile organic compounds from past operations associated with Buildings 1 & 27 remained in/on the structures.		NFA	Recommendation signed 11/16/00	5/10/01 – 6/10/01
PRS-22: Building 1 Explosives, Waste Water Settling Basin (Tank 200). The RCRA PRSs 21, 22, 25, 26, 27, and 29, otherwise known as wastewater transfer structures, were identified as Potential Release Sites because of the concern that residual volatile organic compounds from past operations associated with Buildings1 & 27 remained in/on the structures.		NFA	Recommendation signed 11/16/00	5/10/01 – 6/10/01
PRS-23: Building 43 Explosives Waste Water Settling Basin (Tank 201). PRS 23 was identified as a concrete tank (Tank 201) that was installed in 1969 to filter and settle-out explosive elements from a planned explosive, production process slated to be housed in Building 43.		NFA	Recommendation signed 12/18/96	2/27/97 – 4/3/97
PRS-24: Building 43 Solvent Storage Tank (Tank 221) was identified as a solvent storage tank (Tank 221) that was constructed to store acetone or alcohol solvents for use in Building 43. The proposed use of Building 43, to purify explosive materials, never took place. The tank was never used and was removed in 1990.		NFA	Recommendation signed 12/18/96	2/27/97 – 4/3/97
PRS-25: Building 27 (unlined) Leach Pit (Area 1) was taken out of service in 1985. The RCRA PRSs 21, 22, 25, 26, 27, and 29, otherwise known as wastewater transfer structures, were identified as Potential Release Sites because of the concern that residual volatile organic compounds from past operations associated with Buildings 1 & 27 remained in/on the structures.		NFA	Recommendation signed 11/16/00	5/10/01 – 6/10/01
PRS-26: Building 27 Concrete Flume (Tank 217), use was discontinued in 1991. The RCRA PRSs 21, 22, 25, 26, 27, and 29, otherwise known as wastewater transfer structures, were identified as Potential Release Sites because of the concern that		NFA	Recommendation signed 11/16/00	5/10/01 – 6/10/01

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
residual volatile organic compounds from past operations associated with Buildings 1 & 27 remained in/on the structures.				
PRS-27: Building 27 Settling Sump (Tank 218). The RCRA PRSs 21, 22, 25, 26, 27, and 29, otherwise known as wastewater transfer structures, were identified as Potential Release Sites because of the concern that residual volatile organic compounds from past operations associated with Buildings 1 & 27 remained in/on the structures.		NFA	Recommendation signed 11/16/00	5/10/01 – 6/10/01
PRS-28: Building 27 Solvent/Drum Storage Area (Pad). It was an asphalt pad used for the temporary storage of past process solvent waste, and was presently used for storage of acetone.		NFA	Recommendation signed 6/19/01	5/8/02 – 6/8/02
PRS-29: Building 27 Filtration System. The RCRA PRSs 21, 22, 25, 26, 27, and 29, otherwise known as wastewater transfer structures, were identified as Potential Release Sites because of the concern that residual volatile organic compounds from past operations associated with Buildings 1 & 27 remained in/on the structures.		NFA	Recommendation signed 11/16/00	5/10/01 – 6/10/01
PRS-30: Building 27 Diesel Fuel Storage Tank (Tank 213) (AKA Bldg. 27 Propane Tank). Potential Release Site (PRS) 30 was the site north of Building 27 where a propane tank was located. This tank was mistakenly listed as a PRS because it was incorrectly listed as an underground fuel oil tank by Mound Plant UST Plan.		NFA	Recommendation signed 3/18/97	6/17/97 – 7/18/97
PRS-33: Underground Sanitary Sewer Line GI4 EAST. Potential Release Sites (PRSs) 31-36, 125 and 270 were identified as PRSs as a result of breaks and/or separations in Mound"s sanitary sewer lines, identified during 1982 video survey of the lines.		NFA	Recommendation signed 11/26/02	12/4/02 – 1/3/03
PRS-34: Underground Sanitary Sewer Line GI4 WEST. Potential Release Sites (PRSs) 31-36, 125 and 270 were identified as PRSs as a result of breaks and/or PRS-41: Area 3, Thorium Drum Storage and Redrumming Area. Potential Release Site (PRS) 41 was located on the western portion of the site (Figure I).		NFA	Recommendation signed 11/26/02	12/4/02 – 1/3/03
PRS-59: Contaminated Soil Box Storage Area. PRS 59 was identified as a storage area for		NFA	Recommendation signed	7/15/97 – 8/17/97

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
boxes containing plutonium contaminated soil during a USEPA 1988 preliminary Review Visual Site Inspection			5/13/97	
PRS-67: Plant Drainage Ditch. PRS 67 was an open, unlined channel that flowed above ground through the central part of the facility from Building 22 to the retention basins on the western plant boundary. Only a portion of this PRS is located within Parcel 9. The ditch carried surface run-off from both the Main Hill and SM/PP Hill areas and the asphalt lined pond (removed) that drained into the ditch through culvert (removed), emerging behind Building 22. From that point the open ditch falls 40 feet over a length of 1800 feet.		NFA	OSC signed 1/10/06	N/A
PRS-69: Overflow Pond and outflow pipe were a PRS due to the presence of plutonium-238 contamination, site sanitary landfill leachate, effluent from the plant drainage system, and storm water runoff. The overflow pond was located near the southwest corner of the original plant property. Operating continuously since 1979, the pond had a capacity of **5** million gallons.		NFA	OSC signed 1/12/06	N/A
PRS-71: Building 85 Waste Solvent Tank (Tank 136). Historical process knowledge indicated that this Potential Release Site (PRS), which was a below grade tank located adjacent to Building 85, was never used.		NFA	Recommendation signed 3/4/96	3/18/96 – 4/1/96
PRS-75: Railroad Siding (Historical Railroad Spur Area) soils area in the vicinity of the railway siding, created due to its use as a radioactive drum storage, loading, unloading, and repackaging area. Multiple soil samples taken from the PRS 75 area had recorded concentrations of thorium-232 and plutonium-238 in excess of guideline criteria.	Th-232 Pu-238 Ra-226 U-238	RA	OSC signed 1/29/05	N/A
PRS 81: Drilling Mud Drum Storage Areas (3 locations, 2 within Parcel 9). These areas were designated a PRS due to suspected barium contamination from borehole cuttings that were stored in drums. The areas were used from 1987-1989.		NFA	Recommendation signed 5/8/96	5/15/96 – 6/17/96
PRS 176: Area 14, Radioactive Waste Line Break. In 1974, the soils associated with the WTS leaks (PRS-176) were remediated. In the mid 1980s, the WTS line, the two holding		NFA	Recommendation signed 12/17/96	1/9/97 - 2/13/97

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
tanks, and Building 43 were removed.				
PRS 282: Spoils Disposal Area Construction Spoils Area		FA	Recommendation signed 1/7/03	1/22/03 – 2/20/03
PRS-300: Area 19, Underground Waste Transfer Line. This PRS was identified based on the fact that a pair of lines (waste transfer system) had been installed to transfer plutonium-238 contaminated waste solutions from SM Building to WD Building. The PRS consisted of the WTS lines and the soil surrounding them from the SM area to the WD Building, a distance of approximately 2,600 feet.		NFA	Recommendation signed 12/17/96	1/9/97 – 2/13/97
PRS 346: Elevated Soil Gas Location was soil Potential Release Site (PRS) located in the southern sector of the original Mound Plant. No radioactive or hazardous waste generating processes or activities were known to have occurred. These soils locations were identified as PRSs due to qualitative hydrocarbon detections found during the PETREX soil gas portion of OU5, Non Area of Concern investigation.		NFA	Recommendation signed 11/20/96	12/19/96 – 1/23/97
PRS 354: Elevated Soil Gas Location was identified due to a single elevated radiological detection of plutonium found during the Mound Soil Screening Analysis performed as part of the June 1994 OU5, Operational Area Phase I Investigation.		NFA	Recommendation signed 2/19/97	5/8/97 – 6/16/97
PRS 357: is a sampling location in the driveway area northwest of Bldg 67, between the main access road and the access roads leading to Bldg 67 and the sewage disposal plant parking lots. This soil location was identified as an PRS due to qualitative hydrocarbon detections found during the PETREX soil gas portion of the OM, Non Area of Concern Investigation. No radioactive or hazardous waste generating processes or activities are known to have occurred at these PRSs.		NFA	Recommendation signed 11/20/96	12/10/96 – 1/23/97
PRS 358: Located along the railroad siding near Bldg 24. Elevated Soil Gas Location was identified due to elevated levels of organic chemicals detected by the qualitative PETREX survey during the OU5, Non-AOC Investigation.		NFA	Recommendation signed 12/18/96	2/27/97 – 4/3/97

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
PRS 359: Elevated Soil Gas Location		NFA	Recommendation signed 11/20/96	12/19/96 – 1/23/97
PRS 361: Elevated Soil Gas Location		NFA	Recommendation signed 11/20/96	12/19/96 – 1/23/97
PRS 409: The site of a former chemical (Stoddard Solvent) concrete pad staging area. This area was encountered and remediated during the installation of a storm water drainage pipe in 1996. Contamination soils area located in Release Block I, OU-1, just west of the site sanitary landfill. This area was identified September 23, 1996 by the contractor installing the OU4 canal re-route drainage pipe.	Stoddard Solvent	RA	Recommendation signed 1/11/05	8/25/05 – 9/24/05
PRS 410: Based on a surface (8" below grade) soil stain and odor (thought to be diesel fuel) encountered during the removal and replacement of a storm water drainage pipe. The stained soil was sampled for total petroleum hydrocarbons (TPH) and found to contain 198 parts per million (ppm) (vs. 105 ppm Bureau of Underground Storage Tank Regulations criteria). All stained soil was removed, the utility project completed, and the area backfilled with clean gravel. The area was subsequently paved with asphalt.	TPH	FA	Recommendation signed 12/1/04	12/9/04 – 1/9/05
PRS 414: South Area Groundwater and Soil Evaluation.		Retired	Recommendation signed 12/2/04	12/9/04 – 1/8/05
PRS 418: Overflow Pond South Inlet.		NFA	Recommendation signed 6/22/01	8/9/00 – 9/14/00
PRS 419: Drainage Outflow Reroute. The reroute extends for a length of approximately 4500 feet proceeding south from its entrance near the concrete sealed "twin 60s" before exiting the Mound Plant property and emptying into the Great Miami River.		NFA	Recommendation signed 11/17/99	1/19/00 – 2/17/00
PRS 441: Soil Staging Area and Expansion the soil staging area and expansion area located near the rail spur, north of the overflow pond. This area had been used for the staging and loading of contaminated soils and debris awaiting shipment offsite. Includes the soil staging area, rail siding (including a segment formerly part of PRS 75), and a segment of the site drainage ditch (formerly part of PRS 67). The siding had been used for loading and unloading packaged materials and packaged	Th-232 Pu-238 Ra-226 U-238	RA	OSC signed 12/1/09	NA

PRS DESCRIPTION	Contaminant	Initial Core Team Decision	Closeout document and decision	Comment period
wastes for the polonium, thorium, and plutonium projects during the 1950s, 60s, and 70s.				

NFA No Further Assessment
FA Further Assessment
RA Removal Action
NA Not Applicable

Parcel 9 Building and PRS Administrative Record Documents and Public Comment Periods

Buiding	Document Description	Comment Period Start	Comment Period End
Building 1	Mound Plant Building Data Package Building 1 Located within Release Block C, December 17, 1998	10/21/98	12/17/98
	Test Fire Valley Project, Closeout Report Demolition of Building 1, EM Test Facility, Release Block	n/a	n/a
Building 24 and pump house (PH)	Miamisburg Closure Project, Building Data Package, Buildings PH, Pump House and Building 24, Water Treatment Plant, (Demolition) Final October 2005	2/24/05	3/27/05
	Miamisburg Closure Project Closeout Report Buildings PH and 24, (Demolition) Final, March 2006	n/a	n/a
Building 27 and S-6	Building Data Package, Building 27, Solvent/Drum Storage Area within Parcel 8 Public Review Draft, October 2002	10/16/02	11/15/02
	Building Closeout Report		
Building 42	Mound Plant, Building Data Package, Building 42, Explosives Component Fabrication Facility Final August 2002	5/29/02	6/28/02
	Mound Plant, Building 42, Explosives Component Fabrication Facility, Closeout Report Final October 2002	n/a	n/a
Building 43	Mound Plant, Building Data Package, Building 43, Devices Development, Located Within Release Block C January 1998 And Change pages March 1998	1/15/98	2/15/98
	Action Memorandum Engineering Evaluation/Cost Analysis (EECA) Removal Action Building 43 Final, Rev 1, January 1999	10/28/98	11/30/98
	On-Scene Coordinator (OSC) Report, Building 43 Removal Action Final Rev 0 September 1999	n/a	n/a
Building 67	Mound Plant, Building Data Package (BDP), Building 67 Final Rev 1 November 1999	9/9/99	10/9/99

Buiding	Document Description	Comment Period Start	Comment Period End
	Test Fire Valley Project, Closeout Report, Demolition of Building 67 Final March 2001	n/a	n/a
Building 74	Test Fire Valley Project, Closeout Report Removal by Auction of Building 74 Final June 1, 1999	n/a	n/a
Building 85	Mound Plant, Building Data Package, (BDP) Building 85, Powder Blend/Process, Located within Parcel 9 Final September 2001	7/30/01	8/30/01
	Mound Plant Closeout Report, Building 85, Powder/Blend Process, Parcel 9 Final, March 2002	n/a	n/a
Building 300	Still in place	n/a	n/a
Building 301	Sold as GSA property	n/a	n/a
Building 301A	Sold as GSA property	n/a	n/a
Magazines 52 and 64	Mound Plant, Building Data Package for Magazines 52 & 64, Materials Storage, Release Block C Final February 1999	1/10/99	2/10/99
	Test Fire Valley, Closeout Report for Magazines 52 & 64, Material Storage, Release Block C Final July 1999	n/a	n/a
Building PH	See Building 24		
Well Houses (WH) WH-1 WH-2 WH-3	Miamisburg Closure Project, Building Data Package, Buildings WH-1, WH-2 and WH-3, Well Houses (Demolition), Final, January 2006	4/7/05	5/7/05
	Miamisburg Closure Project Closeout Report, Buildings WH-1, WH-2 and WH-3 (Well Houses), Demolition, Final, January 2006	n/a	n/a
PRS 8, 9, 10, 11, 12	Mound Plant Potential Release Site Package PRS #8/9/10/11/12, April 1996	3/18/96	4/1/96

Buiding	Document Description	Comment Period Start	Comment Period End
PRS 11	Miamisburg Closure Project Potential Release Site Package PRS 11 Addendum 1 Final May 2005	12/5/03	1/4/04
	Public Fact Sheet PRSS 11: Thorium and Polonium – Contaminated Waste Area, Final, May 2005	12/5/03	1/4/04
	PRS 11 Removal Action OSC Report, Final, June 2006	n/a	n/a
PRS 13	Mound Plant Potential Release Site Package PRS # 13, April 1997	2/27/97	4/3/97
PRS 14	Mound Plant Potential Release Site Package PRS # 14, July 1996	6/19/96	7/17/96
PRS 21, 22, 25, 26, 27, 29	Mound Plant, Potential Release Site Package, PRS 21, 22, 25, 26, 27, 29, June 2002	5/8/02	6/8/02
PRS 23	Mound Plant Potential Release Site Package PRS # 23, April 1997	2/27/97	4/3/97
PRS 24	Mound Plant, Potential Release Site Package, PRS # 24, April 1997	2/27/97	4/3/97
PRS 28	Mound Plant, Potential Release Site Package, PRS #28, June 2002	5/8/02	6/8/02
PRS 30	Mound Plant, Potential Release Site Package, PRS #30, September 1997	6/17/97	7/18/97
PRS 31 PRS 33 PRS 34	Miamisburg Closure Project Potential Release Site Package PRSs 31-36, 125 & 270, Final March 2003	12/4/02	1/3/03
PRS 59	Mound Plant, Potential Release Site Package, PRS # 59, September 1997	7/15/97	8/17/97
PRS 67	Public Fact Sheet PRSs 67, 68, 69 & 70: Site Stormwater Drainage System, Final, March 2005		
PRS 69	PRS 69 Removal Action OSC Report, Final, March 2006	n/a	n/a
PRS 71	Mound Plant, Potential Release Site Package, PRS # 71, November 1996	3/18/96	4/1/96
PRS 75	Mound Plant, Potential Release Site Package, PRS # 75, January 1997	11/29/96	1/1/97
	PRS 75 Removal Action OSC Report February 2006	n/a	n/a
PRS 81	Mound Plant, Potential Release Site Package, PRS # 81, November 1996	5/15//96	6/17/96
PRS 176	Mound Plant, Potential Release Site Package, PRS # 176/177/178/300, February 1997	1/9/97	2/13/97

Buiding	Document Description	Comment Period Start	Comment Period End
PRS 282	Miamisburg Closure Project Potential Release Site Package PRS 282 Addendum 1, Final, March 2003	1/8/03	2/7/03
	Potential Release Site, PRS 282, Spoils Area, Release Block S, Further Assessment Sampling, Sampling and Analysis Plan, Final April 2002	n/a	n/a
PRS 300	See PRS 176 document		
PRS 346	Mound Plant, Potential Release Site Package, PRS # 346/347/348/355/370, January 1997	12/19/96	1/23/97
PRS 354	Mound Plant, Potential Release Site Package, Release Block I, PRS # 354 Soil Contamination, Final Revision 1 July 2997	5/8/97	6/16/97
PRS 357	Mound Plant (Western Sector) Potential Release Site Package PRS #351/352/353/357/359/360/361/362/385/386/387, January 1997	12/19/96	1/23/97
PRS 358	Mound Plant Potential Release Site Package PRS #358, April 1997	2/27/97	4/3/97
	Miamisburg Closure Project Building Data Package Buildings PH and 24 (Demolition) Final October 2005	n/a	n/a
PRS 359	See PRS 357 document		
PRS 361	See PRS 357 document		
PRS 409	Miamisburg Closure Project Potential Release Site Package PRS 409 Addendum 1 Final February 2006	8/25/05	9/24//05
PRS 410	Miamisburg Closure Project Potential Release Site Package PRS 410 Addendum 1 Final April 2005	12/9/04	1/9/05
PRS 414	Miamisburg Closure Project Potential Release Site Package PRS 414 Addendum 1 Final April 2005	12/9/04	1/9/05
PRS 418	Mound Plant Potential Release Site Package PRS #418, January 2001	8/9/00	1/8/05
PRS 419	Mound Plant Potential Release Site Package PRS #419, April 2000	1/19/00	2/17/00
PRS 441	Potential Release Site (PRS) 441 On-Scene Coordinator (OSC) Report, October 27, 2009	n/a	n/a

APPENDIX D

Risk Tables

Table 1 – Overall Summary of Risks and Hazards at Parcel 9

Exposure Scenario	Risk Type	Excess Lifetime Cancer Risk (ELCR) for Carcinogenic Effects	Hazard Index (HI) for Non-Carcinogenic Effects
Construction Worker	Total Residual	1.3×10^{-5}	0.49
	Background	7.3×10^{-7}	0.0
	Incremental	1.3×10^{-5}	0.49
Site Worker	Total Residual	1.7×10^{-5}	0.039
	Background	5.0×10^{-7}	0.0
	Incremental	1.6×10^{-5}	0.039

Table 2 Identification of Constituents of Potential Concern for the Construction Worker Exposed to Surface and Subsurface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Inorganics (mg/kg)									
Aluminum	7429-90-5	1.10E+03	3.20E+04	85/89	9.63E+03	9.63E+03	1.90E+04	2.08E+04	No:1
Antimony	**7440-36-0**	**1.00E+00**	**4.46E+01**	**40/77**	**1.25E+01**	**1.25E+01**	--	**8.52E+00**	**Yes**
Arsenic	7440-38-2	1.20E+00	3.70E+01	95/107	5.06E+00	5.06E+00	8.60E+00	1.85E+00	No:1
Barium	7440-39-3	1.02E+01	3.20E+02	85/93	4.77E+01	4.77E+01	1.80E+02	1.47E+03	No:1
Beryllium	7440-41-7	1.10E-01	1.70E+00	71/88	6.48E-01	6.48E-01	1.30E+00	4.21E+01	No:1
Bismuth	07440-69-9	5.40E-01	7.70E+01	19/65	1.83E+01	1.83E+01	3.80E+01	--	No:1
Cadmium	7440-43-9	2.20E-01	9.30E+00	48/100	1.86E+00	1.86E+00	2.10E+00	5.46E+00	No:1
Calcium	7440-70-2	1.45E+04	3.45E+05	86/90	1.13E+05	1.13E+05	3.10E+05	--	No:1
Cerium	07440-45-1	1.59E+01	1.59E+01	1/5	1.18E+01[c]	1.18E+01	--	3.85E+04	No:2
Chromium	7440-47-3	1.20E+00	1.12E+02	88/94	2.29E+01	2.29E+01	2.00E+01	3.19E+04[d]	No:2
Cobalt	7440-48-4	1.00E+00	2.07E+01	89/95	9.19E+00	9.19E+00	1.90E+01	3.83E+02	No:1
Copper	7440-50-8	3.90E+00	4.46E+02	93/99	4.85E+01	4.85E+01	2.60E+01	8.52E+02	No:2
Gadolinium	**7440-54-2**	**9.00E+01**	**9.00E+01**	**1/1**	--	**9.00E+01**	--	--	**Yes**
Iron	7439-89-6	1.05E+01	3.60E+04	99/103	1.89E+04	1.89E+04	3.50E+04	--	No:1
Lanthanum	**7439-91-0**	**4.60E+00**	**9.10E+00**	**4/5**	**6.02E+00[c]**	**6.02E+00**	--	--	**Yes**
Lead	7439-92-1	2.90E+00	9.61E+01	93/107	1.33E+01	1.33E+01	4.80E+01	--	No:1
Lithium	7439-93-2	1.70E+00	3.95E+01	44/58	1.53E+01	1.53E+01	2.60E+01	--	No:1
Magnesium	7439-95-4	7.18E+03	8.23E+04	86/90	3.25E+04	3.25E+04	4.00E+04	--	No:1
Manganese	7439-96-5	2.97E-01	1.32E+03	97/103	4.19E+02	4.19E+02	1.40E+03	4.85E+02	No:1
Mercury	7439-97-6	7.00E-02	1.20E+00	19/99	1.63E-01	1.63E-01	1.50E-01	5.78E+04	No:2
Molybdenum	7439-98-7	9.00E-01	2.46E+01	13/36	1.07E+01	1.07E+01	2.72E+01	1.06E+02	No:1
Nickel	7440-02-0	3.20E+00	5.08E+01	85/100	1.96E+01	1.96E+01	3.20E+01	4.26E+02	No:1
Potassium	7440-09-7	1.95E+02	1.30E+04	92/98	2.35E+03	2.35E+03	1.90E+03	--	No:4
Praseodymium	**7440-10-0**	**1.07E+01**	**1.07E+01**	**1/5**	**7.36E+00[c]**	**7.36E+00**	--	--	**Yes**
Samarium	**7440-19-9**	**5.31E+01**	**5.31E+01**	**1/5**	**1.88E+01[c]**	**1.88E+01**	--	--	**Yes**
Selenium	07782-49-2	4.70E-01	7.10E+01	11/104	1.00E+00[c]	1.00E+00	5.90E-01	1.06E+02	No:2
Silver	7440-22-4	1.60E+00	2.15E+01	54/100	7.24E+00	7.24E+00	1.70E+00	1.06E+02	No:2
Sodium	7440-23-5	9.34E+01	1.55E+03	84/100	4.35E+02	4.35E+02	2.40E+02	--	No:4
Tantalum	**7440-25-7**	**1.90E+02**	**4.02E+02**	**8/12**	**2.87E+02**	**2.87E+02**	--	--	**Yes**
Thallium	07440-28-0	2.40E-01	7.60E-01	13/99	1.40E+00[c]	7.60E-01	4.60E-01	1.41E+00	No:2

Table 2 Identification of Constituents of Potential Concern for the Construction Worker Exposed to Surface and Subsurface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Tin	07440-31-5	1.60E+00	1.61E+01	8/36	8.60E+00[c]	8.60E+00	2.09E+01	1.28E+04	No:1
Total Cyanide	00057-12-5	1.40E-01	6.10E-01	12/52	6.10E-01[c]	6.10E-01	--	4.26E+02	No:2
Vanadium	7440-62-2	4.80E+00	5.50E+01	91/95	2.07E+01	2.07E+01	2.50E+01	2.13E+01	No:1
Zinc	7440-66-6	9.40E+00	2.74E+02	86/100	7.45E+01	7.45E+01	1.40E+02	6.39E+03	No:1
Dioxins (ug/kg)									
1,2,3,4,6,7,8-Heptachlorodibenzofuran	**67562-39-4**	**2.20E-04**	**6.30E-03**	**4/13**	**4.30E-04[c]**	**4.30E-04**	--	--	**Yes**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	**57653-85-7**	**1.70E-03**	**1.70E-03**	**1/13**	**5.32E-04[c]**	**5.32E-04**	--	--	**Yes**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	**19408-74-3**	**8.90E-04**	**1.80E-03**	**2/13**	**5.66E-04[c]**	**5.66E-04**	--	--	**Yes**
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	4.20E-04	1.10E-03	2/13	4.08E-04[c]	4.08E-04	--	3.97E-02	No:2
1234678-HpCDD	**35822-46-9**	**5.20E-04**	**3.03E-02**	**5/13**	**1.46E-03[c]**	**1.46E-03**	--	--	**Yes**
1234789-HpCDF	**55673-89-7**	**6.20E-04**	**6.20E-04**	**1/13**	**4.00E-04[c]**	**4.00E-04**	--	--	**Yes**
123478-HxCDD	**39227-28-6**	**6.50E-04**	**6.50E-04**	**1/13**	**5.82E-04[c]**	**5.82E-04**	--	--	**Yes**
123478-HxCDF	**70648-26-9**	**1.80E-04**	**2.20E-03**	**3/13**	**3.98E-04[c]**	**3.98E-04**	--	--	**Yes**
123678-HxCDF	57117-44-9	5.80E-04	1.20E-03	2/13	2.88E-04[c]	2.88E-04	--	1.99E-01	No:2
2,3,4,6,7,8-Hexachlorodibenzofuran	**60851-34-5**	**1.50E-04**	**1.00E-03**	**3/13**	**5.52E-04[c]**	**5.52E-04**	--	--	**Yes**
2,3,7,8-Tetrachlorodibenzofuran	051207-31-9	3.90E-04	2.80E-03	2/13	5.80E-04[c]	5.80E-04	--	1.99E-01	No:2
2,3,7,8-Tetrachlorodibenzo-p-dioxin	001746-01-6	1.50E-03	3.00E-03	3/13	1.09E-03[c]	1.09E-03	--	1.86E-02	No:2
23478-PeCDF	57117-31-4	2.40E-04	1.50E-03	3/13	5.04E-04[c]	5.04E-04	--	3.97E-01	No:2
Octachlorodibenzofuran	39001-02-0	2.20E-04	1.03E-02	7/13	9.08E-04[c]	9.08E-04	--	1.99E+01	No:2
Octachlorodibenzo-p-dioxin	003268-87-9	2.73E-01	2.73E-01	1/13	1.72E-02[c]	1.72E-02	--	1.99E+01	No:2
Explosives (ug/kg)									
1,3-Dinitrobenzene	000099-65-0	2.00E+02	2.00E+02	1/57	1.50E+03[c]	2.00E+02	--	2.13E+03	No:2
1,3,5-Trinitrobenzene	000099-35-4	3.10E+02	3.10E+02	1/57	1.50E+03[c]	3.10E+02	--	6.39E+05	No:2
2,4-Dinitrotoluene	000121-14-2	2.00E+02	2.00E+02	1/163	5.94E+02[c]	2.00E+02	--	3.54E+03	No:2
2,6-Dinitrotoluene	000606-20-2	2.90E+02	2.90E+02	1/163	1.30E+03[c]	2.90E+02	--	3.54E+03	No:2
HMX	002691-41-0	4.10E+02	6.60E+02	2/62	2.97E+03[c]	6.60E+02	--	1.06E+06	No:2
RDX	000121-82-4	7.10E+02	6.85E+03	4/62	2.41E+03[c]	2.41E+03	--	2.71E+04	No:2
Pesticides and PCBs (ug/kg)									
4,4'-DDD	000072-54-8	9.20E-01	2.80E+00	5/100	8.33E+00[c]	2.80E+00	4.20E+03	1.24E+04	No:1
4,4'-DDE	000072-55-9	2.40E-01	1.60E+00	10/100	3.70E+00[c]	1.60E+00	4.30E+03	8.77E+03	No:1
4,4'-DDT	000050-29-3	2.20E-01	3.10E+00	9/100	9.13E+00[c]	3.10E+00	1.30E+04	8.12E+03	No:1
Aldrin	000309-00-2	1.20E-01	2.50E+00	8/100	3.13E+00[c]	2.50E+00	--	1.42E+02	No:2

Table 2 Identification of Constituents of Potential Concern for the Construction Worker Exposed to Surface and Subsurface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
alpha-BHC	000319-84-6	2.10E-01	1.10E+01	13/100	2.33E+00[c]	2.33E+00	--	4.73E+02	No:2
alpha-Chlordane	005103-71-9	1.00E-01	4.80E+00	10/99	1.07E+01[c]	4.80E+00	--	7.61E+03	No:2
Aroclor-1242	053469-21-9	3.70E+01	1.00E+03	3/610	4.00E+01[c]	4.00E+01	--	--	No:3
Aroclor-1248	**12672-29-6**	**7.10E+00**	**3.80E+04**	**307/610**	**9.60E+02**	**9.60E+02**	--	--	**Yes**
Aroclor-1254	011097-69-1	4.24E+01	2.00E+02	7/285	7.09E+01[c]	7.09E+01	5.80E+04	3.20E+02	No:1
Aroclor-1260	011096-82-5	2.54E+01	9.90E+01	4/285	7.28E+01[c]	7.28E+01	--	--	No:3
Aroclor-1262	**037324-23-5**	**4.10E+00**	**1.30E+03**	**32/325**	**4.00E+01[c]**	**4.00E+01**	--	--	**Yes**
Aroclor-1268	011100-14-4	5.60E+01	1.80E+02	5/325	3.90E+01[c]	3.90E+01	--	--	No:3
delta-BHC	000319-86-8	1.90E-01	1.90E-01	1/100	6.83E+00[c]	1.90E-01	--	--	No:3
Dieldrin	000060-57-1	9.20E-02	6.40E+00	10/100	3.73E+00[c]	3.73E+00	--	1.86E+02	No:2
Endosulfan II	033213-65-9	2.00E-01	3.50E+00	3/100	3.80E+00[c]	3.50E+00	--	--	No:3
Endosulfan sulfate	001031-07-8	1.30E-01	2.00E+00	5/100	1.83E+01[c]	2.00E+00	--	--	No:3
Endrin	000072-20-8	1.20E-01	1.60E+00	5/100	4.73E+00[c]	1.60E+00	--	6.39E+03	No:3
Endrin aldehyde	**007421-93-4**	**7.10E-01**	**4.70E+00**	**8/96**	1.72E+01[c]	**4.70E+00**	--	--	**Yes**
Endrin ketone	053494-70-5	1.50E-01	2.00E+00	5/100	1.83E+01[c]	2.00E+00	--	--	No:3
gamma-BHC (Lindane)	000058-89-9	3.30E-02	3.30E-02	1/100	3.20E+00[c]	3.30E-02	--	2.29E+03	No:2
gamma-Chlordane	005103-74-2	2.90E-01	3.50E+00	7/100	1.06E+01[c]	3.50E+00	--	7.61E+03	No:2
Heptachlor	000076-44-8	3.60E-02	2.80E-01	2/100	2.40E+00[c]	2.80E-01	--	6.62E+02	No:2
Heptachlor epoxide	001024-57-3	1.00E-01	1.10E+01	6/100	9.23E+00[c]	9.23E+00	--	2.77E+02	No:2
Methoxychlor	00072-43-5	3.10E-01	1.80E+01	7/100	9.12E+01[c]	1.80E+01	3.00E+04	1.06E+05	No:1
Semi-Volatile Organic Compounds (ug/kg)									
1,2,4-Trichlorobenzene	000120-82-1	3.00E-01	2.20E+00	17/678	5.80E+00[c]	2.20E+00	--	1.72E+05	No:2
2-Methylnaphthalene	000091-57-6	8.60E+01	1.90E+02	3/108	7.69E+02[c]	1.90E+02	--	8.52E+04	No:2
4-Methylphenol	000106-44-5	2.60E+02	2.90E+02	2/106	7.70E+02[c]	2.90E+02	--	1.06E+05	No:2
Acenaphthene	000083-32-9	2.10E+01	1.30E+03	9/108	7.49E+02[c]	7.49E+02	--	9.76E+05	No:2
Acenaphthylene	000208-96-8	2.30E+02	2.30E+02	1/108	7.59E+02[c]	2.30E+02	--	--	No:3
Anthracene	000120-12-7	3.10E+01	8.00E+02	12/109	7.40E+02[c]	7.40E+02	--	4.88E+06	No:2
Benz(a)anthracene	000056-55-3	2.90E+01	2.50E+03	26/108	3.24E+02	3.24E+02	--	3.12E+03	No:2
Benzo(a)pyrene	**000050-32-8**	**3.10E+01**	**2.30E+03**	**28/108**	**2.95E+02**	**2.95E+02**	--	**3.12E+02**	**Yes**
Benzo(b)fluoranthene	**000205-99-2**	**3.80E+01**	**4.90E+03**	**26/108**	**4.54E+02**	**4.54E+02**	--	**3.12E+03**	**Yes**
Benzo(g,h,i)perylene	**000191-24-2**	**1.00E+02**	**1.10E+03**	**16/108**	**7.20E+02[c]**	**7.20E+02**	--	--	**Yes**
Benzo(k)fluoranthene	000207-08-9	3.70E+01	4.50E+03	20/108	7.70E+02[c]	7.70E+02	--	3.12E+04	No:2

Table 2 Identification of Constituents of Potential Concern for the Construction Worker Exposed to Surface and Subsurface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Benzoic acid	000065-85-0	3.90E+01	7.70E+02	12/90	3.60E+03[c]	7.70E+02	--	6.88E+07	No:2
Bis(2-ethylhexyl) phthalate	00117-81-7	4.80E+01	2.90E+03	44/106	4.43E+02	4.43E+02	--	1.72E+05	No:2
Butyl benzyl phthalate	000085-68-7	2.50E+01	6.70E+02	6/106	7.55E+02[c]	6.70E+02	--	3.44E+06	No:2
Carbazole	000086-74-8	1.90E+01	3.00E+02	4/66	3.90E+02[c]	3.00E+02	--	1.20E+05	No:2
Chrysene	000218-01-9	2.90E+01	4.00E+03	31/106	3.64E+02	3.64E+02	--	3.12E+05	No:2
Dibenz(a,h)anthracene	**000053-70-3**	**2.40E+01**	**1.00E+03**	**8/108**	**7.49E+02[c]**	**7.49E+02**	--	**3.12E+02**	**Yes**
Dibenzofuran	000132-64-9	4.00E+01	2.40E+02	4/106	**7.55E+02[c]**	2.40E+02	--	3.44E+04	No:2
Diethyl phthalate	000084-66-2	9.00E+00	1.10E+02	4/106	**7.55E+02[c]**	1.10E+02	--	1.38E+07	No:2
Dimethyl phthalate	000131-11-3	1.00E+02	1.10E+02	2/106	**7.65E+02[c]**	1.10E+02	--	2.13E+08	No:2
Di-n-butyl phthalate	000084-74-2	3.90E+01	6.70E+02	17/106	**7.45E+02[c]**	6.70E+02	--	1.72E+06	No:2
Di-n-octyl phthalate	000117-84-0	9.00E+00	3.00E+02	7/106	**7.65E+02[c]**	3.00E+02	--	8.52E+05	No:2
Fluoranthene	00206-44-0	6.00E+00	5.60E+03	34/108	4.97E+02	4.97E+02	--	6.51E+05	No:2
Fluorene	000086-73-7	6.40E+01	3.90E+02	4/108	7.59E+02[c]	3.90E+02	--	6.51E+05	No:2
Indeno(1,2,3-cd)pyrene	000193-39-5	4.60E+01	1.30E+03	19/108	7.19E+02[c]	7.19E+02	--	3.12E+03	No:2
N-Nitrosodi-n-propylamine	000621-64-7	5.10E+01	5.10E+01	1/106	7.70E+02[c]	5.10E+01	--	3.44E+02	No:2
N-Nitrosodiphenylamine	000086-30-6	6.60E+01	1.10E+02	2/106	7.55E+02[c]	1.10E+02	--	3.44E+05	No:2
Phenanthrene	**000085-01-8**	**2.70E+01**	**3.90E+03**	**30/108**	**3.72E+02**	**3.72E+02**	--	--	**Yes**
Phenol	000108-95-2	9.00E+01	1.20E+02	3/106	7.65E+02[c]	1.20E+02	--	5.16E+06	No:2
Phenol, 4-chloro-2-(phenylmethyl)	**120-32-1**	**1.10E+02**	**2.00E+02**	**4/19**	6.38E+02[c]	2.00E+02	--	--	**Yes**
Pyrene	00129-00-0	3.00E+00	6.10E+03	36/108	5.02E+02	5.02E+02	--	4.88E+05	No:2
Volatile Organic Compounds (ug/kg)									
1,1,1-Trichloroethane	000071-55-6	3.40E-01	2.10E+02	14/758	5.80E+00[c]	5.80E+00	--	6.84E+05	No:2
1,1,2-Trichloro-1,1,2-trifluoroethane	000076-13-1	7.40E-01	1.80E+01	17/608	5.70E+00[c]	5.70E+00	--	6.93E+06	No:2
1,1-Dichloroethane	000075-34-3	3.90E+00	5.20E+00	2/757	5.80E+00[c]	5.20E+00	--	1.93E+05	No:2
1,1-Dichloroethene	000075-34-3	1.00E+00	3.03E+04	73/864	5.80E+00[c]	5.80E+00	--	4.20E+04	No:2
1,2-Dibromo-3-chloropropane	000096-12-8	7.00E+00	7.00E+00	1/572	1.10E+01[c]	7.00E+00	--	7.28E+02	No:2
1,2-Dichlorobenzene	000095-50-1	3.90E-01	3.20E+01	23/679	5.80E+00[c]	5.80E+00	--	2.86E+05	No:2
1,2-Dichloroethane	000107-06-2	4.80E-01	1.50E+01	3/757	5.70E+00[c]	5.70E+00	--	3.45E+03	No:2
1,2-Dichloropropane	000078-87-5	4.80E-01	2.00E+00	5/757	5.80E+00[c]	2.00E+00	--	2.08E+03	No:2
1,3-Dichlorobenzene	000541-73-1	3.90E-01	1.70E+00	8/678	5.80E+00[c]	1.70E+00	--	5.16E+05	No:2
1,4-Dichlorobenzene	000106-46-7	4.30E-01	4.20E+00	12/678	5.80E+00[c]	4.20E+00	--	1.00E+05	No:2
2-Butanone	000078-93-3	2.00E+00	7.20E+01	30/754	2.20E+01[c]	2.20E+01	--	6.65E+06	No:2

Table 2 Identification of Constituents of Potential Concern for the Construction Worker Exposed to Surface and Subsurface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
2-Hexanone	000591-78-6	2.00E+00	1.70E+01	3/755	2.20E+01[c]	1.70E+01	--	--	No:3
4-Methyl-2-Pentanone	000108-10-1	1.00E+00	1.30E+02	10/755	2.20E+01[c]	2.20E+01	--	1.47E+06	No:2
Acetone	000067-64-1	2.00E+00	5.30E+02	140/755	2.20E+01[c]	2.20E+01	--	1.92E+07	No:2
Ammonia	**07664-41-7**	**1.40E+01**	**2.70E+01**	**2/13**	**2.00E+03[c]**	**2.70E+01**	--	--	**Yes**
Benzene	000071-43-2	4.60E-01	1.40E+03	78/872	5.80E+00[c]	5.80E+00	--	6.46E+03	No:2
Carbon disulfide	000075-15-0	4.00E-01	4.30E+01	83/755	5.80E+00[c]	5.80E+00	--	1.16E+05	No:2
Carbon tetrachloride	000056-23-5	1.00E+00	5.80E+02	32/866	5.80E+00[c]	5.80E+00	--	2.44E+03	No:2
Chlorobenzene	000108-90-7	1.60E+00	3.00E+00	3/757	5.80E+00[c]	3.00E+00	--	4.85E+04	No:2
Chloroform	**000067-66-3**	**1.60E-01**	**3.67E+03**	**211/866**	**3.13E+01**	**3.13E+01**	--	**2.56E+03**	**Yes**
Chloromethane	000074-87-3	6.90E-01	6.90E-01	1/757	1.10E+01[c]	6.90E-01	--	1.59E+04	No:2
cis-1,2-Dichloroethene	000156-59-2	4.30E-01	2.01E+05	157/672	5.80E+00[c]	5.80E+00	--	2.13E+05	No:2
Cyclohexane	000110-82-7	5.00E-01	6.40E-01	3/583	5.80E+00[c]	6.40E-01	--	--	No:3
Ethylbenzene	000100-41-4	2.80E-01	7.50E+03	83/871	5.80E+00[c]	5.80E+00	--	7.80E+04	No:2
Isopropylbenzene	000098-82-8	8.00E-01	8.00E-01	1/585	5.80E+00[c]	8.00E-01	--	5.28E+04	No:2
Methyl-Cyclohexane	000108-87-2	4.00E-01	1.40E+00	29/583	5.80E+00[c]	1.40E+00	--	--	No:3
Methylene chloride	00075-09-2	8.40E-01	2.90E+03	340/757	2.01E+01	2.01E+01	--	8.25E+04	No:2
m-Xylene	000108-38-3	1.70E+01	1.70E+01	1/18	5.80E+00[c]	5.80E+00	--	2.77E+05	No:2
Naphthalene	000091-20-3	2.00E+00	1.30E+02	5/114	5.80E+00[c]	5.80E+00	--	1.79E+04	No:2
o-Xylene	000095-47-6	7.00E+00	7.00E+00	1/18	5.80E+00[c]	5.80E+00	--	4.26E+07	No:2
Styrene	000100-42-5	1.60E-01	9.00E-01	7/757	5.80E+00[c]	9.00E-01	--	1.46E+06	No:2
Tetrachloroethene	**00127-18-4**	**3.50E-01**	**2.23E+04**	**327/864**	**1.92E+02**	**1.92E+02**	--	**3.66E+03**	**Yes**
Toluene	00108-88-3	2.20E-01	7.16E+04	577/870	6.40E+02	6.40E+02	--	2.00E+05	No:2
Total 1,2-Dichloroethene	000540-59-0	1.00E+00	1.80E+03	50/192	6.71E+01	6.71E+01	--	1.92E+05	No:2
Total Xylenes	001330-20-7	4.00E-01	2.40E+01	31/788	5.80E+00[c]	5.80E+00	--	6.42E+04	No:2
trans-1,2-Dichloroethene	000156-60-5	3.20E-01	2.00E+03	35/672	5.80E+00[c]	5.80E+00	--	4.26E+05	No:3
Trichloroethene	**00079-01-6**	**4.20E-01**	**1.43E+05**	**378/863**	**1.28E+03**	**1.28E+03**	--	**4.38E+02**	**Yes**
Trichlorofluoromethane	000075-69-4	2.90E-01	5.50E+00	35/590	5.80E+00[c]	5.50E+00	--	1.30E+05	No:2
Vinyl chloride	000075-01-4	2.00E+00	2.30E+03	33/866	5.80E+00[c]	5.80E+00	--	1.07E+03	No:3
Radionuclides (pCi/g)									
Actinium-227		1.50E-01	2.29E+00	52/3883	3.59E-01[c]	3.59E-01	1.10E-01	4.56E-01	No:3
Actinium-228	14331-83-0	1.90E-01	1.79E+00	408/500	6.46E-01	6.46E-01	--	2.17E-01	No:5
Americium-241		4.00E-02	5.42E-01	78/3978	8.81E-02[c]	8.81E-02	--	6.32E+00	No:2

Table 2 Identification of Constituents of Potential Concern for the Construction Worker Exposed to Surface and Subsurface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Beryllium-7	013966-02-4	2.20E+00	2.20E+00	1/5	4.72E-01[c]	4.72E-01	--	4.61E+00	No:2
Bismuth-210M		4.79E-02	9.10E-01	6/3168	6.35E-02[c]	6.35E-02	--	8.97E-01	No:3
Bismuth-212	14913-49-6	3.80E-01	1.76E+00	58/58	1.21E+00	1.21E+00	--	1.11E+00	No:5
Bismuth-214	14733-03-3	2.33E-01	2.50E+00	506/511	8.21E-01	8.21E-01	1.20E+00	1.31E-01	No:1
Cesium-134	13967-70-9	5.30E-02	5.30E-02	1/1	--	5.30E-02	--	1.38E-01	No:2
Cesium-137+D		**1.00E-02**	**1.50E+00**	**307/3937**	**6.00E-02[c]**	**6.00E-02**	**4.20E-01**	**3.82E-01**	**Yes**
Cobalt-60		1.00E-02	8.85E-02	35/3937	7.80E-02[c]	7.80E-02	--	7.91E-02	No:3
Lead-210+D	14255-04-0	2.16E-01	5.69E+00	1568/3840	6.69E-01	6.69E-01	1.20E+00	6.25E-01	No:1
Lead-212	15092-94-1	1.12E-01	2.00E+00	156/505	6.61E-01	6.61E-01	1.50E+00	1.79E+00	No:1
Lead-214	15067-28-4	2.20E-01	3.20E+00	498/500	8.69E-01	8.69E-01	1.20E+00	1.00E+00	No:1
Neptunium-237+D	13994-20-2	4.70E-01	4.70E-01	1/1	--	4.70E-01	--	1.10E+00	No:2
Plutonium-238		**2.90E-03**	**5.39E+01**	**697/4304**	**8.40E+00[c]**	**8.40E+00**	**1.30E-01**	**6.12E+00**	**Yes**
Plutonium-239/240		7.85E-03	1.74E+00	104/639	6.95E-02[c]	6.95E-02	1.80E-01	6.01E+00	No:2
Potassium-40	13966-00-2	9.90E-01	3.94E+01	540/558	1.44E+01	1.44E+01	3.70E+01	1.18E+00	No:1
Protactinium-231+D		6.67E-01	1.91E+00	5/3168	1.93E+00[c]	1.91E+00	--	3.91E-01	No:3
Radium-224	13233-32-4	1.04E+00	2.30E+00	13/13	1.80E+00	1.80E+00	1.50E+00	3.24E+00	No:2
Radium-226+D	13982-63-3	1.19E-01	2.80E+00	3886/3942	8.72E-01	8.72E-01	2.00E+00	1.10E-01	No:1
Radium-228+D	**15262-20-1**	**2.90E-01**	**1.31E+00**	**9/9**	**7.58E-01**	**7.58E-01**	**--**	**1.67E-01**	**Yes**
Strontium-90+D		7.18E-02	5.78E+00	9/47	4.88E-01[c]	4.88E-01	7.20E-01	9.40E+00	No:2
Thallium-208	14913-50-9	7.20E-02	5.80E-01	440/443	2.55E-01	2.55E-01	--	5.59E-02	No:5
Thorium-227	15623-47-9	7.00E-02	2.29E+00	4/7	2.07E+00[c]	2.07E+00	--	2.14E+00	No:5
Thorium-228+D	14274-82-9(+D)	2.90E-02	2.10E+00	698/719	7.57E-01	7.57E-01	1.50E+00	1.19E-01	No:1
Thorium-230+D		**8.40E-02**	**2.71E+00**	**708/3957**	**7.53E+00[c]**	**2.71E+00**	**1.90E+00**	**9.26E-02**	**Yes**
Thorium-232+D	7440-29-1	3.70E-02	2.00E+01	3648/4280	4.90E-01	4.90E-01	1.40E+00	6.90E-02	No:1
Thorium-234	15065-10-8	1.16E+00	3.60E+00	37/38	2.12E+00	2.12E+00	--	1.76E+01	No:2
Tritium	10028-17-8	1.70E-02	5.00E+01	119/119	4.57E+00	4.57E+00	1.60E+00	7.58E+03[e]	No:2
Uranium-233/234	**U-233/234**	**1.89E-01**	**1.70E+00**	**525/527**	**7.16E-01**	**7.16E-01**	**--**	**4.82E-01**	**Yes**
Uranium-234	13966-29-5	2.79E-01	1.08E+00	73/78	6.82E-01	6.82E-01	1.10E+00	1.05E+01	No:1
Uranium-235+D		1.40E-02	1.60E-01	92/544	4.00E-01[c]	1.60E-01	1.10E-01	1.54E+00	No:2
Uranium-235/236		2.77E-02	1.50E-01	88/420	8.30E-02[c]	8.30E-02	1.10E-01	3.10E-01	No:2
Uranium-238+D	**7440-61-1(+D)**	**1.80E-01**	**2.21E+00**	**2791/3240**	**6.92E-01**	**6.92E-01**	**1.20E+00**	**4.13E+00**	**Yes[f]**

Notes:

a. Unless otherwise denoted, value listed represents 95% UCL

b. COPC analyte status definitions:

- Yes –retained as a COPC
- No:1 –not retained as a COPC due to background concentration > lower of the maximum detected concentration or 95% UCL concentration
- No:2 –not retained as a COPC due to RBGV > maximum concentration
- No:3 –not retained as a COPC due to ≤5% detected
- No:4 –not retained as a COPC as it is considered an essential nutrient
- No:5 –not retained as a COPC as it is part of the thorium-232, uranium-235, and uranium-238 natural decay series with a half-lives less than or equal to 6 months

c. Value represents 70th percentile

d. RBGV for chromium (III)

e. RBGV for tritium (particulate)

f. Although the 95% UCL is < background, uranium-238 was retained as a COPC as it is process-related.

Table 3-Identification of Constituents of Potential Concern for a Site Employee Exposed to Surface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Inorganics (mg/kg)									
Aluminum	7429-90-5	1.10E+03	3.20E+04	30/30	1.25E+04	1.25E+04	1.90E+04	1.69E+05	No:1
Antimony	7440-36-0	1.00E+00	4.46E+01	14/30	1.97E+01	1.97E+01	--	8.18E+01	No:2
Arsenic	7440-38-2	1.60E+00	7.70E+00	32/36	4.48E+00	4.48E+00	8.60E+00	2.26E+00	No:1
Barium	7440-39-3	1.02E+01	1.10E+02	30/30	5.87E+01	5.87E+01	1.80E+02	1.25E+04	No:1
Beryllium	7440-41-7	1.10E-01	1.40E+00	27/30	8.90E-01	8.90E-01	1.30E+00	3.70E+02	No:1
Bismuth	07440-69-9	3.60E-01	6.91E+01	17/22	2.64E+01	2.64E+01	3.84E+01	--	No:1
Cadmium	7440-43-9	3.50E-01	9.30E+00	20/36	2.83E+00	2.83E+00	2.10E+00	1.01E+01	No:2
Calcium	7440-70-2	4.51E+04	3.45E+05	36/36	1.24E+05	1.24E+05	3.10E+05	--	No:1
Chromium	7440-47-3	2.70E+00	4.64E+01	36/36	2.48E+01	2.48E+01	2.00E+01	3.07E+05[d]	No:2
Cobalt	7440-48-4	1.00E+00	1.30E+01	36/36	8.52E+00	8.52E+00	1.90E+01	1.93E+03	No:1
Copper	7440-50-8	3.90E+00	4.46E+02	36/36	1.05E+02	1.05E+02	2.60E+01	8.18E+03	No:2
Iron	7439-89-6	3.31E+03	3.40E+04	36/36	1.79E+04	1.79E+04	3.50E+04	--	No:1
Lanthanum	**7439-91-0**	**3.40E+00**	**4.60E+00**	**1/2**	--	**4.60E+00**	--	--	**Yes**
Lead	7439-92-1	2.90E+00	9.61E+01	36/36	2.71E+01	2.71E+01	4.80E+01	--	No:1
Lithium	7439-93-2	1.70E+00	3.95E+01	16/22	1.65E+01	1.65E+01	2.60E+01	--	No:1
Magnesium	7439-95-4	1.44E+04	8.23E+04	36/36	3.84E+04	3.84E+04	4.00E+04	--	No:1
Manganese	7439-96-5	1.34E+02	6.36E+02	36/36	4.07E+02	4.07E+02	1.40E+03	3.25E+03	No:1
Mercury	7439-97-6	1.30E-01	1.20E+00	8/33	2.00E-01[c]	2.00E-01	1.50E-01	5.78E+04	No:2
Molybdenum	7439-98-7	9.00E-01	2.46E+01	12/16	1.27E+01	1.27E+01	2.72E+01	1.02E+03	No:1
Nickel	7440-02-0	3.20E+00	3.15E+01	36/36	2.10E+01	2.10E+01	3.20E+01	4.09E+03	No:1
Potassium	7440-09-7	5.03E+02	1.00E+04	32/32	4.44E+03	4.44E+03	1.90E+03	--	No:4
Selenium	07782-49-2	3.80E+01	5.50E+01	3/36	1.10E+00[c]	1.10E+00	5.90E-01	1.02E+03	No:2
Silver	7440-22-4	1.60E+00	2.15E+01	28/36	8.34E+00	8.34E+00	1.70E+00	1.02E+03	No:2
Sodium	7440-23-5	9.34E+01	1.55E+03	29/36	6.94E+02	6.94E+02	2.40E+02	--	No:4
Tantalum	**7440-25-7**	**3.28E+02**	**3.28E+02**	**1/1**	--	**3.28E+02**	--	--	**Yes**
Thallium	07440-28-0	4.30E-01	6.90E-01	2/33	1.64E+00[c]	6.90E-01	4.60E-01	1.35E+01	No:2
Tin	07440-31-5	1.60E+00	1.61E+01	8/16	6.73E+00	6.73E+00	2.09E+01	1.23E+05	No:1
Total Cyanide	00057-12-5	1.40E-01	3.10E-01	4/23	1.20E+00[c]	3.10E-01	--	4.09E+03	No:2
Vanadium	7440-62-2	4.80E+00	4.80E+01	36/36	2.36E+01	2.36E+01	2.50E+01	2.04E+02	No:1

Table 3-Identification of Constituents of Potential Concern for a Site Employee Exposed to Surface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Zinc	7440-66-6	9.40E+00	2.74E+02	36/36	1.39E+02	1.39E+02	1.40E+02	6.13E+04	No:1
Explosives (ug/kg)									
1,3-Dinitrobenzene	000099-65-0	2.00E+02	2.00E+02	1/27	1.50E+03[c]	2.00E+02	--	2.04E+04	No:2
1,3,5-Trinitrobenzene	000099-35-4	3.10E+02	3.10E+02	1/27	1.50E+03[c]	3.10E+02	--	6.13E+06	No:2
2,4-Dinitrotoluene	000121-14-2	2.00E+02	2.00E+02	1/64	7.20E+02[c]	2.00E+02	--	2.57E+03	No:2
HMX	002691-41-0	4.10E+02	6.60E+02	2/32	3.00E+03[c]	6.60E+02	--	1.02E+07	No:2
RDX	000121-82-4	7.10E+02	6.85E+03	4/32	2.50E+03[c]	2.50E+03	--	5.20E+04	No:2
Pesticides/PCBs (ug/kg)									
4,4'-DDD	000072-54-8	9.20E-01	2.80E+00	5/37	8.20E+00[c]	2.80E+00	4.30E+03	2.38E+04	No:1
4,4'-DDE	000072-55-9	2.40E-01	1.60E+00	9/37	3.80E+00[c]	1.60E+00	4.00E+03	1.68E+04	No:1
4,4'-DDT	000050-29-3	2.20E-01	2.10E+00	6/37	8.92E+00[c]	2.10E+00	1.30E+04	9.56E+03	No:1
Aldrin	000309-00-2	1.20E-01	2.50E+00	6/37	3.22E+00[c]	2.50E+00	--	1.03E+02	No:2
alpha-BHC	000319-84-6	2.10E-01	1.10E+01	9/37	2.40E+00[c]	2.40E+00	--	9.08E+02	No:2
alpha-Chlordane	005103-71-9	1.00E-01	4.80E+00	10/37	1.04E+01[c]	4.80E+00	--	7.64E+03	No:2
Aroclor-1242	053469-21-9	3.70E+01	1.00E+03	3/547	4.00E+01[c]	4.00E+01	--	--	No:3
Aroclor-1248	**12672-29-6**	7.10E+00	3.80E+04	**305/547**	**1.07E+03**	**1.07E+03**	--	--	**Yes**
Aroclor-1254	011097-69-1	4.24E+01	6.64E+01	5/222	5.62E+01[c]	5.62E+01	5.80E+04	6.83E+02	No:1
Aroclor-1260	011096-82-5	4.46E+01	9.90E+01	3/222	4.67E+01[c]	4.67E+01	--	--	No:3
Aroclor-1262	**037324-23-5**	**4.10E+00**	**1.30E+03**	**32/325**	4.00E+01[c]	**4.00E+01**	--	--	**Yes**
Aroclor-1268	011100-14-4	5.60E+01	1.80E+02	5/325	3.90E+01[c]	3.90E+01	--	--	No:3
delta-BHC	000319-86-8	1.90E-01	1.90E-01	1/37	6.70E+00[c]	1.90E-01	--	--	No:3
Dieldrin	000060-57-1	9.20E-02	6.40E+00	9/37	3.82E+00[c]	3.82E+00	--	3.58E+02	No:2
Endosulfan II	**033213-65-9**	**2.00E-01**	**3.50E+00**	**3/37**	**4.94E+00[c]**	**3.50E+00**	--	--	**Yes**
Endosulfan sulfate	**001031-07-8**	**1.30E-01**	**2.00E+00**	**4/37**	**1.78E+01[c]**	**2.00E+00**	--	--	**Yes**
Endrin	000072-20-8	1.50E-01	1.60E+00	3/37	5.34E+00[c]	1.60E+00	--	6.13E+04	No:2
Endrin aldehyde	**007421-93-4**	**7.10E-01**	**4.70E+00**	**8/34**	**1.67E+01[c]**	**4.70E+00**	--	--	**Yes**
Endrin ketone	**053494-70-5**	**1.50E-01**	**2.00E+00**	**5/37**	**1.78E+01[c]**	**2.00E+00**	--	--	**Yes**
gamma-BHC (Lindane)	000058-89-9	3.30E-02	3.30E-02	1/37	3.54E+00[c]	3.30E-02	--	4.40E+03	No:2
gamma-Chlordane	005103-74-2	2.90E-01	3.50E+00	7/37	1.04E+01[c]	3.50E+00	--	7.64E+03	No:2
Heptachlor	000076-44-8	3.60E-02	2.80E-01	2/37	2.68E+00[c]	2.80E-01	--	1.27E+03	No:2
Heptachlor epoxide	001024-57-3	1.00E-01	4.10E-01	4/37	8.92E+00[c]	4.10E-01	--	6.29E+02	No:2
Methoxychlor	00072-43-5	3.10E-01	1.80E+01	5/37	8.93E+01[c]	1.80E+01	3.00E+04	1.02E+06	No:1

Table 3-Identification of Constituents of Potential Concern for a Site Employee Exposed to Surface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Semi-Volatile Organic Compounds (ug/kg)									
1,2,4-Trichlorobenzene	000120-82-1	3.00E-01	2.20E+00	17/604	5.70E+00[c]	2.20E+00	--	6.23E+05	No:2
2-Methylnaphthalene	000091-57-6	1.70E+02	1.90E+02	2/39	7.62E+02[c]	1.90E+02	--	8.18E+05	No:2
4-Methylphenol	000106-44-5	2.60E+02	2.60E+02	1/37	7.72E+02[c]	2.60E+02	--	1.02E+06	No:2
Acenaphthene	000083-32-9	2.10E+01	1.30E+03	8/39	7.62E+02[c]	7.62E+02	--	3.09E+06	No:2
Anthracene	000120-12-7	5.20E+01	8.00E+02	9/39	7.46E+02[c]	7.46E+02	--	1.55E+07	No:2
Benz(a)anthracene	**000056-55-3**	**5.30E+01**	**2.50E+03**	**20/39**	**5.88E+02**	**5.88E+02**	--	**1.98E+03**	**Yes**
Benzo(a)pyrene	**000050-32-8**	**3.10E+01**	**2.30E+03**	**24/39**	**5.34E+02**	**5.34E+02**	--	**1.98E+02**	**Yes**
Benzo(b)fluoranthene	**000205-99-2**	**4.70E+01**	**4.90E+03**	**20/39**	**9.82E+02**	**9.82E+02**	--	**1.98E+03**	**Yes**
Benzo(g,h,i)Perylene	**000191-24-2**	**1.00E+02**	**1.10E+03**	**14/39**	**3.38E+02**	**3.38E+02**	--	--	**Yes**
Benzo(k)fluoranthene	000207-08-9	3.70E+01	4.50E+03	15/39	9.33E+02	9.33E+02	--	1.98E+04	No:2
Benzoic acid	000065-85-0	8.20E+01	7.70E+02	7/34	3.51E+03[c]	7.70E+02	--	2.49E+08	No:2
Bis(2-ethylhexyl) phthalate	00117-81-7	6.90E+01	2.90E+03	19/37	7.40E+02	7.40E+02	--	1.25E+05	No:2
Butyl benzyl phthalate	000085-68-7	8.30E+01	6.70E+02	4/37	7.54E+02[c]	6.70E+02	--	1.25E+07	No:2
Carbazole	000086-74-8	1.90E+01	3.00E+02	4/22	7.05E+02[c]	3.00E+02	--	8.72E+04	No:2
Chrysene	000218-01-9	2.90E+01	4.00E+03	23/37	6.85E+02	6.85E+02	--	1.98E+05	No:2
Dibenz(a,h)anthracene	**000053-70-3**	**2.40E+01**	**1.00E+03**	**7/39**	**7.62E+02[c]**	**7.62E+02**	--	**1.98E+02**	**Yes**
Dibenzofuran	000132-64-9	4.00E+01	2.40E+02	4/37	7.54E+02[c]	2.40E+02	--	1.25E+05	No:2
Diethyl phthalate	000084-66-2	8.30E+01	1.10E+02	2/37	7.54E+02[c]	1.10E+02	--	4.99E+07	No:2
Dimethyl phthalate	000131-11-3	1.10E+02	1.10E+02	1/37	7.72E+02[c]	1.10E+02	--	2.04E+09	No:2
Di-n-butyl phthalate	000084-74-2	8.80E+01	6.70E+02	7/37	7.42E+02[c]	6.70E+02	--	6.23E+06	No:2
Di-n-octyl phthalate	000117-84-0	2.40E+01	1.80E+02	4/37	7.72E+02[c]	1.80E+02	--	8.18E+06	No:2
Fluoranthene	00206-44-0	5.50E+01	5.60E+03	25/39	1.14E+03	1.14E+03	--	2.06E+06	No:2
Fluorene	000086-73-7	6.40E+01	3.90E+02	4/39	7.62E+02[c]	3.90E+02	--	2.06E+06	No:2
Indeno(1,2,3-cd)pyrene	000193-39-5	4.60E+01	1.30E+03	17/39	3.56E+02	3.56E+02	--	1.98E+03	No:2
Phenanthrene	**000085-01-8**	**5.30E+01**	**3.90E+03**	**22/39**	**1.25E+03**	**1.25E+03**	--	--	**Yes**
PHENOL, 4-CHLORO-2-(PHENYLMETHYL	**120-32-1**	**1.10E+02**	**2.00E+02**	**4/14**	**6.76E+02[c]**	**2.00E+02**	--	--	**Yes**
Pyrene	00129-00-0	3.80E+01	6.10E+03	26/39	1.08E+03	1.08E+03	--	1.55E+06	No:2
Volatile Organic Compounds (ug/kg)									
1,1,1-Trichloroethane	000071-55-6	3.40E-01	2.10E+02	14/621	5.70E+00[c]	5.70E+00	--	5.72E+07	No:2
1,1,2-Trichloro-1,1,2-trifluoroethane	000076-13-1	7.40E-01	1.80E+01	16/597	5.70E+00[c]	5.70E+00	--	6.13E+09	No:2
1,1-Dichloroethane	000075-34-3	3.90E+00	5.20E+00	2/621	5.70E+00[c]	5.20E+00	--	2.04E+07	No:2

Table 3-Identification of Constituents of Potential Concern for a Site Employee Exposed to Surface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Vinyl chloride	000075-01-4	3.20E+00	8.70E+00	2/621	5.70E+00[c]	5.70E+00	--	3.82E+03	No:2
Radionuclides (pCi/g)									
Actinium-227+D		1.50E-01	2.29E+00	32/2530	3.63E-01[c]	3.63E-01	1.10E-01	5.02E-01	No:3
Actinium-228	14331-83-0	1.90E-01	1.79E+00	383/470	6.46E-01	6.46E-01	--	2.01E-01	No:5
Americium-241		4.00E-02	5.42E-01	61/2583	9.00E-02[c]	9.00E-02	--	9.93E+00	No:2
Beryllium-7	013966-02-4	2.20E+00	2.20E+00	1/5	4.72E-01[c]	4.72E-01	--	4.28E+00	No:2
Bismuth-210M		4.85E-02	9.10E-01	4/2242	6.38E-02[c]	6.38E-02	--	8.67E-01	No:3
Bismuth-212	14913-49-6	3.80E-01	1.76E+00	56/56	1.21E+00	1.21E+00	--	1.03E+00	No:5
Bismuth-214	14733-03-3	2.33E-01	2.50E+00	472/476	8.03E-01	8.03E-01	1.20E+00	1.22E-01	No:1
Cesium-134	13967-70-9	5.30E-02	5.30E-02	1/1	--	5.30E-02	--	1.28E-01	No:2
Cesium-137+D		**1.20E-02**	**1.50E+00**	**211/2552**	**6.15E-02[c]**	**6.15E-02**	**4.20E-01**	**3.56E-01**	**Yes**
Cobalt-60		1.00E-02	8.85E-02	17/2551	7.80E-02[c]	7.80E-02	--	7.35E-02	No:3
Lead-210+D	14255-04-0	2.16E-01	5.69E+00	1004/2533	6.65E-01	6.65E-01	1.20E+00	1.19E+00	No:1
Lead-212	15092-94-1	1.12E-01	2.00E+00	474/474	6.64E-01	6.64E-01	1.50E+00	1.73E+00	No:1
Lead-214	15067-28-4	2.20E-01	3.20E+00	465/467	8.49E-01	8.49E-01	1.20E+00	9.29E-01	No:1
Neptunium-237+D	13994-20-2	4.70E-01	4.70E-01	1/1	--	4.70E-01	--	1.08E+00	No:2
Plutonium-238		**2.90E-03**	**5.39E+01**	**590/2719**	**7.95E+00[c]**	**7.95E+00**	**1.30E-01**	**1.13E+01**	**Yes**
Plutonium-239/240		8.60E-03	1.74E+00	85/540	6.92E-02[c]	6.92E-02	1.80E-01	1.11E+01	No:2
Potassium-40	13966-00-2	9.90E-01	3.94E+01	484/489	1.49E+01	1.49E+01	3.70E+01	1.12E+00	No:1
Protactinium-231+D		6.67E-01	1.91E+00	4/2243	1.90E+00[c]	1.90E+00	--	4.41E-01	No:3
Radium-224	13233-32-4	1.04E+00	2.30E+00	13/13	1.80E+00	1.80E+00	1.50E+00	5.47E+00	No:2
Radium-226+D	13982-63-3	1.19E-01	2.72E+00	2525/2552	8.11E-01	8.11E-01	2.00E+00	1.05E-01	No:1
Radium-228+D	**15262-20-1**	**2.90E-01**	**1.31E+00**	**9/9**	**7.58E-01**	**7.58E-01**	--	**1.76E-01**	**Yes**
Strontium-90+D		7.18E-02	6.27E-01	5/13	4.32E-01[c]	4.32E-01	7.20E-01	1.50E+01	No:1
Thallium-208	14913-50-9	7.20E-02	5.80E-01	415/418	2.55E-01	2.55E-01	--	5.18E-02	No:5
Thorium-227	15623-47-9	7.00E-02	2.29E+00	4/7	3.44E-01[c]	3.44E-01	--	2.17E+00	No:5
Thorium-228+D	14274-82-9(+D)	2.90E-02	2.10E+00	612/622	7.72E-01	7.72E-01	1.50E+00	1.14E-01	No:1
Thorium-230+D		**8.40E-02**	**2.71E+00**	**616/2560**	**7.29E+00[c]**	**2.71E+00**	**1.90E+00**	**9.58E-02**	**Yes**
Thorium-232+D	7440-29-1	3.70E-02	4.82E+00	2408/2703	5.22E-01	5.22E-01	1.40E+00	6.88E-02	No:1
Thorium-234	15065-10-8	1.16E+00	3.60E+00	34/35	2.08E+00	2.08E+00	--	2.58E+01	No:2
Tritium	10028-17-8	1.02E-01	8.68E-01	8/14	5.73E-01	5.73E-01	1.60E+00	1.45E+04[e]	No:1

Table 3-Identification of Constituents of Potential Concern for a Site Employee Exposed to Surface Soil in Parcel 9

Analyte	CAS Number	Minimum Concentration	Maximum Concentration	Detection Frequency	95% UCL or 70th Percentile[a]	EPC	Background Value	RBGV	COPC?[b]
Uranium-233/234	**U-233/234**	**1.89E-01**	**1.70E+00**	**495/497**	**7.14E-01**	**7.14E-01**	--	**5.52E-01**	**Yes**
Uranium-234	13966-29-5	3.10E-01	9.40E-01	30/30	7.01E-01	7.01E-01	1.10E+00	1.97E+01	No:1
Uranium-235+D		1.40E-02	1.30E-01	85/498	1.30E-01[c]	1.30E-01	1.10E-01	1.55E+00	No:2
Uranium-235/236		3.40E-02	1.50E-01	72/358	9.28E-02[c]	9.28E-02	--	3.32E-01	No:2
Uranium-238+D	**7440-61-1(+D)**	**1.80E-01**	**2.21E+00**	**2019/2271**	**7.07E-01**	**7.07E-01**	**1.20E+00**	**5.22E+00**	**Yes[f]**

Notes:

a. Unless otherwise denote, value listed represents 95% UCL

b. COPC analyte status definitions:

Yes –retained as a COPC

No:1 –not retained as a COPC due to background concentration > lower of the maximum detected concentration or 95% UCL concentration

No:2 –not retained as a COPC due to RBGV > maximum concentration

No:3 –not retained as a COPC due to ≤5% detected

No:4 –not retained as a COPC as it is considered an essential nutrient

No:5 –not retained as a COPC as it is part of the thorium-232, uranium-235, and uranium-238 natural decay series with a half-lives less than or equal to 6 months

c. Value represents 70th percentile

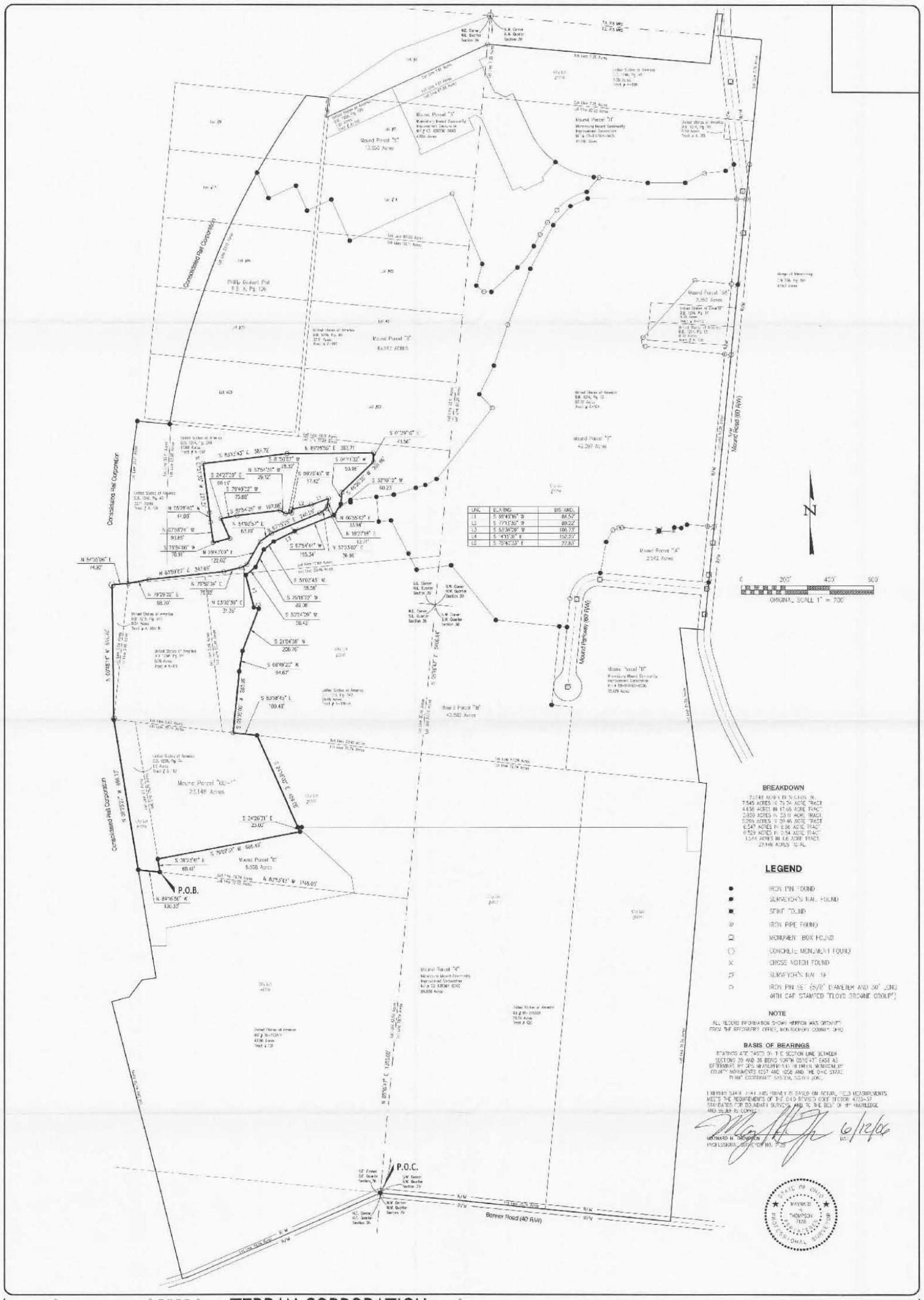
d. RBGV for chromium (III)

e. RBGV for tritium (particulate)

f. Although the 95% UCL is < background, uranium-238 was retained as a COPC as it is process-related.

Appendix E

Legal Description of Parcel 9



1 OF 1

Floyd Browne Group
Solutions for Your World

PROJECT NO.: 05-0304-010
DRAWN BY: DBP
CHECKED BY: MHT
DATE ISSUED: 06-12-06

TERRAN CORPORATION
BOUNDARY SURVEY
MOUND ROAD
MIAMISBURG, OHIO

PLAT OF SURVEY FOR
23.148 ACRES
SITUATED IN THE STATE OF OHIO, COUNTY OF MONTGOMERY, CITY OF MIAMISBURG, BEING PART OF SECTION 36, FRACTIONAL TOWNSHIP 2, RANGE 5, MIAMI RIVERS SURVEY.

Floyd Browne Group

Description of 23.148 Acres

Situated in the State of Ohio, County of Montgomery, City of Miamisburg, being part of Section 36, Fractional Township 2, Range 5, Miami Rivers Survey, being 23.148 acres out of Section 36, being part of City of Miamisburg Lot No. 4777 and Lot No. 2290, being 7.545 acres of land that lie over and across a 79.74 acre tract of land described in deed to the United States of America of record in Deed Microfiche No. 81-376A01, being 4.658 acres of land that lie over and across a 17.68 acre tract of land described in deed to the United States of America of record in Deed Book 1214, Page 248, being 0.030 acres of land that lie over and across a 33.11 acre tract of land described in deed to the United States of America of record in Deed Book 1246, Page 45, being 2.295 acres of land that lie over and across a 20.46 acre tract of land described in deed to the United States of America of record in Deed Book 1215, Page 347, being 6.547 acres of land that lie over and across a 6.66 acre tract of land described in deed to the United States of America of record in Deed Book 1258, Page 56, being 0.529 acres of land that lie over and across a 0.54 acre tract of land described in deed to the United States of America of record in Deed Book 1215, Page 347, being 1.544 acres of land that lie over and across a 1.6 acre tract of land described in deed to the United States of America of record in Deed Book 1258, Page 74, and being more particularly described as follows:

COMMENCING for reference at a railroad spike found at the southeast corner of said Section 36 and the southwest corner of Section 30, Fractional Township 2, Range 5, Miami Rivers Survey and being an angle point in the southerly line of a 94.838 acre tract of land as described in deed to Miamisburg Mound Community Improvement Corporation of record in Deed Microfiche No. 02-128007-0040;

Thence North 05°16'47" East with the section line between Section 30 and Section 36 and crossing said 94.838 acre tract, a distance of 1353.00 feet to a point at the northeasterly corner of a 42.56 acre tract of land described in deed to the United States of America of record in Deed Microfiche No. 81-323A11;

Thence North 83°53'43" West with the northerly line of said 42.56 acre tract and the southerly line of said 79.74 acre tract, a distance of 1146.00 feet to an iron pin found at the southeasterly corner of said 1.6 acre tract, being the southwesterly corner of said 79.74 acre tract, and being the **TRUE POINT OF BEGINNING** of the tract to be described;

Thence North 84°16'50" West with the southerly line of said 1.6 acre tract and the northerly line of said 42.56 acre tract, a distance of 100.33 feet to an iron pin found at the southwesterly corner of said 1.6 acre tract and being on the easterly right of way line of the Consolidated Rail Corporation tract;

Thence North 09°25'27" West with said easterly right of way line and the westerly line of said 1.6 acre tract, a distance of 696.73 feet to an iron pin found at the northwesterly corner of said 1.6 acre tract and the southwesterly corner of said 0.54 acre tract;

Thence North 00°48'14" West with said easterly right of way line and the westerly line of said 0.54 acre tract, a distance of 616.70 feet to a concrete monument found;

Thence North 84°55'06" East with said right of way line and the northerly line of said 0.54 acre tract, a distance of 74.92 feet to an iron pin set at the northeasterly corner of said 0.54 acre tract, being the northwesterly corner of said 6.66 acre tract, and being the southwesterly corner of said 33.11 acre tract;

3769 Columbus Pike, P.O. Box 8016 ■ Delaware, Ohio 43015-8016 ■ 740.363.6792 ■ fax: 740.363.6536
www.floydbrowne.com ■ 1.800.325.7647

Thence North 79°29'02" East crossing said 33.11 acre tract, a distance of 98.70 fe an iron pin set;

Thence crossing into and through said 17.68 acre tract with the following thirty-two courses and distances:

1.) North 83°59'02" East, a distance of 347.69 feet to an iron pin set;

2.) North 76°52'04" East , a distance of 79.92 feet to an iron pin set;

3.) North 63°02'39" East, a distance of 31.36 feet to an iron pin set;

4.) North 29°43'09" East, a distance of 122.02 feet to an iron pin set;

5.) North 54°03'57" East, a distance of 63.19 feet to an iron pin set;

6.) North 67°15'25" East, a distance of 240.29 feet to an iron pin set;

7.) North 57°23'02" East, a distance of 36.99 feet to an iron pin set;

8.) North 19°27'18" East, a distance of 13.71 feet to a surveyor's nail set;

9.) North 06°55'42" East, a distance of 33.94 feet to an iron pin set;

10.) South 69°49'16" West, a distance of 84.57 feet to an iron pin set;

11.) South 77°13'35" West, a distance of 89.22 feet to an iron pin set;

12.) South 09°29'45" West, a distance of 17.42 feet to an iron pin set;

13.) South 81°50'07" West, a distance of 28.32 feet to an iron pin set;

14.) North 57°54'36" West, a distance of 29.12 feet to an iron pin set;

15.) South 82°54'26" West, a distance of 197.88 feet to an iron pin set;

16.) South 79°49'02" West, a distance of 75.88 feet to an iron pin set;

17.) South 24°27'29" East, a distance of 99.13 feet to an iron pin set;

18.) South 75°54'00" West, a distance of 78.91 feet to an iron pin set;

19.) North 07°58'24" West, a distance of 93.66 feet to an iron pin set;

20.) North 05°28'40" West, a distance of 44.09 feet to an iron pin set;

21.) North 07°27'35" West, a distance of 227.31 feet to an iron pin set;

22.) North 83°13'43" East, a distance of 387.72 feet to an iron pin set;

23.) North 89°28'55" East, a distance of 397.71 feet to an iron pin set;

24.) South 01°39'10" East, a distance of 41.56 feet to an iron pin set;

25.) South 46°26'35" West, a distance of 201.86 feet to an iron pin set;

26.) South 04°41'32" West, a distance of 53.96 feet to an iron pin found;

27.) South 32°10'12" West, a distance of 60.23 feet to a railroad spike found;

28.) South 67°54'44" West, a distance of 195.34 feet to a railroad spike found;

29.) South 63°34'09" West, a distance of 106.73 feet to an iron pin found;

30.) South 51°02'43" West, a distance of 58.56 feet to an iron pin found;

31.) South 25°16'22" West, a distance of 89.08 feet to an iron pin found;

32.) South 50°24'09" West, a distance of 58.42 feet to an iron pin found in said 20.46 acre tract;

Thence crossing said 20.46 acre tract with the following five (5) courses and distances:

1.) South 14°15'31" East, a distance of 152.25 feet to an iron pin found;

2.) South 75°40'33" East, a distance of 22.83 feet to an iron pin found;

3.) South 21°04'56" West, a distance of 206.76 feet to an iron pin found;

4.) South 08°49'20" West, a distance of 94.67 feet to an iron pin found;

5.) South 05°38'00" West, a distance of 283.96 feet to an iron pin set on the southerly line of said 20.46 acre tract and the northerly line of said 79.74 acre tract;

Thence South 83°58'45" East with said line, a distance of 109.48 feet to an iron pin found;

Thence crossing said 79.74 acre tract with the following three (3) courses and distances:

1.) South 24°18'00" East, a distance of 459.08 feet to an iron pin found;

2.) South 24°26'31" East, a distance of 23.00 feet to an iron pin found;

3.) South 79°07'51" West, a distance of 666.49 feet to an iron pin found on the westerly line of said 79.74 acre tract and the easterly line of said 1.6 acre tract;

Thence South 09°23'41" East with said line, a distance of 60.41 feet to the **TRUE POINT OF BEGINNING,** containing 23.148 acres of land, more or less.

Subject however to all easements, restrictions and rights-of-way of record, if any.

Basis of Bearing is the section line between Sections 30 and 36 being North 05°16'47" East as determined by GPS measurements between Montgomery County Monuments 1057 and 1058 and the Ohio State Plane Coordinate System, South Zone. All iron pins Set are 5/8" solid iron pins 30" in length with an orange plastic cap stamped "Floyd Browne Group".

The above description is based on and referenced to an exhibit prepared by Floyd Browne Group dated 06-12-06, attached hereto and made a part hereof.

All references are to the records of the Recorder's Office, Montgomery County, Ohio.

6/12/06

Maynard H. Thompson, P.S. Date
Professional Surveyor No. 7128

Appendix F

Environmental Covenant

To be recorded with Deed Records - ORC ' 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by the United States of America, acting through the United States Department of Energy (USDOE), the United States Environmental Protection Agency (US EPA) and the Ohio Environmental Protection Agency (Ohio EPA) pursuant to Ohio Revised Code (ORC) §5301.80 to 5301.92, and the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), as amended, 42 U.S.C. §§ 9601-9675, for the purpose of subjecting the Property to the activity and use limitations set forth herein.

Whereas USDOE and US EPA entered into a federal facility agreement (FFA) under Section 120(e) of CERCLA, 42 U.S.C. 9620(e) in June 1990 for the completion by USDOE of all necessary remedial action at USDOE's Mound, Ohio facility; and

Whereas Ohio EPA became a party with USDOE and US EPA to a revised FFA on July 15, 1993; and

Whereas, in accordance with the FFA, a Record of Decision ("ROD") selecting a remedy to address contaminated soil and ground water at Parcel 9 of the Mound facility was issued in June 1995;

Whereas, a Record of Decision Amendment of the Operable Unit 1 ("OU-1") ROD was completed in September 2011; OU-1 is located within Parcel 9 of the Mound property; and

Whereas, the remedy for Parcel 9 requires certain restrictions on the use of the Property.

Now therefore, US DOE, US EPA and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns an approximately 23 acre tract of real property identified as Parcel 9, owned by USDOE, located in Miamisburg, Montgomery County, Ohio, and more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein (Property). The larger Mound property within which Parcel 9 is located is approximately 306 acres in size and is more particularly described in Exhibit A attached hereto.

3. Environmental Response Project. The response actions performed or to be performed to implement the remedy selected in the Record of Decision dated June 1995 and the Record of Decision Amendment dated September 2011 for Parcel 9 of the Mound facility are an Environmental Response Project as defined in ORC § 5301.80(E). An administrative record for the Record of Decision for Parcel 9 is maintained by USDOE at the DOE-Legacy Management Business Center, 99 Research Park Road, Morgantown, WV 26505 and at www.lm.doe.gov/mound.

4. Owner. The United States of America, acting through the United States Department of Energy, is the current owner of the Property.

5. Holder. The United States Department of Energy, headquartered at 1000 Independence Avenue SW, Washington, DC 20585 is the holder of this Environmental Covenant.

6. Agency. US EPA and any successor agency and its respective officer, agents, contractors and other invitees is the "Agency" as defined in ORC § 5301.80(B) and the "Applicable Agency" as that term is used in ORC §§ 5301.80 to 5301.92 because US EPA determines or approves the Environmental Response Project pursuant to which this covenant was created.

7 Activity and Use Limitations. As part of the remedial action described in the Record of Decision dated June 1995 and Record of Decision Amendment dated September 2011 for Parcel 9, Owner hereby imposes and agrees to comply with the following activity and use limitations:

a. Limitation on movement of soil. No soil from the Property shall be placed on any property outside the boundaries of the Mound property, described in Exhibit A, without prior written approval from Ohio Department of Health (ODH), Ohio EPA and US EPA, or successor agencies.

b. Prohibition against residential use or farming activities. The Property shall not be used for any residential or farming activities, or any other activities which result in the chronic exposure of children under eighteen years of age to soil or ground water from the Property. Prohibited uses shall include, but not be limited to:

(1) Single or multi-family dwellings or rental units;
(2) Day care facilities;
(3) Schools or other educational facilities for children under eighteen years of age; and
(4) Community centers, playgrounds or other recreational or religious facilities for children under eighteen years of age.

c. Prohibition against use of ground water. Ground water under the Property shall not be extracted, consumed, exposed or used in any way without prior written approval of US EPA and Ohio EPA.

8. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC §5301.85, subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

9. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC §5301.91. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict US DOE, US EPA or the Director of Ohio EPA from exercising any authority under applicable law.

10. Rights of Access. Owner hereby grants to US EPA, Ohio EPA and ODH, their agents, contractors, and employees the right of access to the Property for implementation or enforcement of this Environmental Covenant. Any Transferee shall grant to US EPA, Ohio EPA, ODH, US DOE, its agents, contractors and employees the right of access to the Property for implementation or enforcement of this Environmental Covenant.

11. Compliance Reporting. US DOE, or its successors or assigns, shall submit to US EPA, Ohio EPA and ODH on an annual basis written documentation, in accordance with the Record of Decision for Parcel 9 dated June 1995 and the Record of

Decision Amendment dated September 2011 for Parcel 9, verifying that the activity and use limitations are being complied with and remain in place.

12. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

> "THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED_____, 20__, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE MONTGOMERY COUNTY RECORDER ON _____, 20__, IN [DOCUMENT ____, *or* BOOK___, PAGE ____,]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS:
>
> Prohibition against residential use and farming activities; prohibition against use of groundwater; prohibition against removal of soil from Mound property.
>
> Owner or transferee, if applicable, shall notify Ohio EPA within ten (10) days after each conveyance of an interest of the Property or any portion thereof. The notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred."

13. Representations and Warranties. US DOE hereby represents and warrants to the other signatories hereto:

A. that the US DOE is the sole owner of the Property;

B. that the US DOE holds fee simple title to the Property which is free, clear and unencumbered;

C. that the US DOE has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;

D. that the US DOE has identified all other persons that own an interest in or hold an encumbrance on the Property and notified such persons of the Owner's intention to enter into this Environmental Covenant; and

E. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which US DOE is a party or by which US DOE may be bound or affected.

14. Amendment or Termination. This Environmental Covenant may be amended or terminated by consent of all of the following: US DOE, any Transferee, US EPA, and Ohio EPA, pursuant to ORC §5301.90 and other applicable law. The term, "Amendment," as used in this Environmental Covenant, shall mean any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations when there is at least one limitation remaining. The term, "Termination," as used in this Environmental Covenant, shall mean the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant.

This Environmental Covenant may be amended or terminated only by a written instrument duly executed by the US DOE, US EPA, the Director of Ohio EPA and the Transferee, if any, of the Property or portion thereof, as applicable. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, the Owner or Transferee shall file such instrument for recording with the Montgomery County Recorder's Office, and shall provide a file- and date-stamped copy of the recorded instrument to Ohio EPA.

15. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

16. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

17. Recordation. Within thirty (30) days after the date of the final required

signature upon this Environmental Covenant, US DOE shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Montgomery County Recorder's Office.

18. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Montgomery County Recorder.

19. Distribution of Environmental Covenant. US DOE shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: US EPA, Ohio EPA, ODH and the City of Miamisburg.

20. Notice. Unless otherwise notified in writing by or on behalf of the current owner or US DOE, any document or communication required by this Environmental Covenant shall be submitted to:

Regional Project Manager, Mound Site
US EPA, Region V – SR-6J
77 West Jackson Boulevard
Chicago, IL 60604

Site Coordinator, Mound Site
Division of Environmental Response and Revitalization
Ohio EPA-Southwest District Office
401 East 5th Street
Dayton, OH 45402

LM Site Manager
10995 Hamilton-Cleves Road
Harrison, OH 45030

U.S. DOE/LM-2012
11025 Dover Street, Suite 1000
Westminster, CO 80021-5573

The undersigned representative of Owner represents and certifies that *[he/she]* is authorized to execute this Environmental Covenant.

IT IS SO AGREED:

United States Department of Energy

_____
Signature of Owner

_____ _____
Printed Name and Title Date

State of _____)
) ss:
County of _____)

Before me, a notary public, in and for said county and state, personally appeared , a duly authorized representative of _____, who acknowledged to me that *[he/she]* did execute the foregoing instrument on behalf of _____.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this ____day of _____, 20__.

_____
Notary Public

OHIO ENVIRONMENTAL PROTECTION AGENCY

_____ _____

Scott J. Nally, Director Date

State of Ohio)
) ss:
County of Franklin)

Before me, a notary public, in and for said county and state, personally appeared Scott J. Nally, the Director of Ohio EPA, who acknowledged to me that he did execute the foregoing instrument on behalf of Ohio EPA.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____day of _____, 20__.

_____

Notary Public

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

_____ _____

Richard C. Karl Date
Director, Superfund Division, Region 5

State of Illinois)
) ss:
County of Cook)

Before me, a notary public, in and for said county and state, personally appeared _____, the Director, Superfund Division, of Region 5, US EPA, who acknowledged to me that he did execute the foregoing instrument on behalf of US EPA.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____day of _____, 20__.

_____

Notary Public