

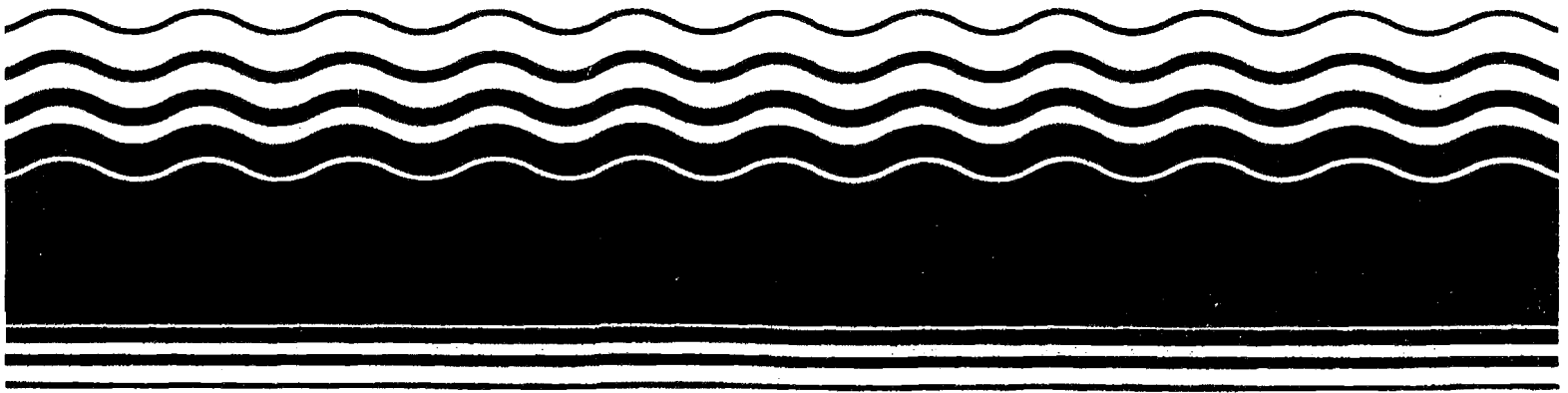
PB98-963136

EPA 541-R98-147

March 1999

EPA Superfund
Explanation of Significant Difference
for the Record of Decision:

Whitmoyer Laboratories
Jackson Township, PA
5/12/1998



AMENDMENT TO THE RECORD OF DECISION
OPERABLE UNIT TWO
WHITMOYER LABORATORIES SUPERFUND SITE

I. INTRODUCTION

Site Name: Whitmoyer Laboratories Superfund Site

Site Location: Myerstown, Lebanon County, Pennsylvania

Lead Agency: U.S. Environmental Protection Agency, Region III
("EPA" or "Agency")

Support Agency: Pennsylvania Department of Environmental
Protection ("PADEP")

A Record of Decision ("ROD") for the Whitmoyer Laboratories Superfund Site ("Site") for Operable Unit Two ("OU-2") was issued on December 17, 1990. This Amendment to the Record of Decision ("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 ("CERCLA"), 42 U.S.C. § 9617(c), and 40 C.F.R. § 300.435(c)(2)(I). This Amendment has been prepared to document the nature of the change made to the selected remedy identified in the ROD for OU-2; to summarize the information that led to the making of the change; and to affirm that the revised remedy complies with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621. The amendment fundamentally alters the remedy selected in the ROD for OU-2 with respect to scope, performance, and cost. This Amendment is incorporated into the Administrative Record for the Site¹.

New information became available following the issuance of the Record of Decision which gave rise to the need for an amendment. Specific information acquired during the remedial design and related activities included the following:

1. Excavation of wastes located within the on-site vault revealed four major categories of materials: contaminated soil; aniline still-bottom tars; a mixture of carbon/tar; and calcium arsenate sludge. Limited amounts of various debris (i.e., drum carcasses, wood, etc.) were mixed within each category.
2. There are several RCRA-permitted treatment facilities currently available to treat and dispose of the various

¹ This Amendment pertains only to the ROD for OU-2. Three RODs have been issued for the Whitmoyer Laboratories Site. The RODs for OU-1 and OU-3 are explained in the Site history and are unaffected by this Amendment.

categories of wastes excavated from the vault. All of the vault wastes except for the soils have been transported to off-site treatment and disposal facilities (see the Explanation of Significant Differences dated 12/28/94 and 11/7/95). Vault soils are temporarily stored in an on-site hazardous waste storage building.

3. Characterization of vault soils, bench-scale treatability testing, and full-scale demonstration tests indicate that off-site chemical stabilization followed by disposal in a Subtitle C landfill is an appropriate alternative to the on-site incineration remedy selected for vault soils in the ROD for OU-2. The new information acquired and EPA's conclusions are discussed in more detail below.

II. SUMMARY OF THE SITE HISTORY, SELECTED REMEDY AND PRIOR MODIFICATIONS

The Whitmoyer Laboratories Site is the location of a former veterinary feed additives and pharmaceuticals manufacturing facility. Production began at the Site in 1934 and in the mid-1950's, the facility began using arsenic in the production of feed additives. Other products produced included a coal-tar dip, used to treat skin disorders; piperazine, a worming agent; and sulfa drugs, used to inhibit bacterial growth. In addition to arsenic, a number of products manufactured by the facility contained aniline, an organic chemical derived from benzene.

The original Site owner, C.W. Whitmoyer, Sr. sold the facility to the Rohm and Haas Company in 1964. In 1978, Rohm and Haas sold the company to Beecham Inc., who in turn sold the facility to Stafford Laboratories, Inc. in 1982. Stafford Laboratories, Inc. filed for Chapter 11 bankruptcy in mid-1984 and continued operations at the Site until January 1987.

EPA began assessing Site conditions in 1984. However, when the facility closed in 1987, the RCRA Closure Plan had only been partially implemented. The Site was listed on the National Priority List ("NPL") in 1986, and throughout 1987, EPA conducted numerous sampling activities, both on- and off-site. In 1988, EPA removed approximately 400 drums from the Site while beginning a fund-lead Remedial Investigation/Feasibility Study. A ROD for Operable Unit One ("OU-1") was issued on June 30, 1989 for the consolidation, removal and treatment of concentrated liquids and decontamination of 32 tanks and vessels. The OU-1 remedial action was completed in September 1990.

The ROD for OU-2 was issued on December 17, 1990 and addressed the concentrated wastes in the concrete vault, wastes abandoned in two groups of lagoons, products and miscellaneous materials abandoned in buildings, and the buildings and related

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structures. A complete description of the selected remedy as well as EPA's rationale for the decision is presented in the ROD for OU-2. The major components of the selected remedy are:

- On-site incineration of the high organic content vault wastes (also referred to as the "upper vault wastes"), contents of buried drums located adjacent to the vault, residual materials remaining in tanks and process vessels, miscellaneous products and feedstocks, and combustible demolition debris exhibiting the RCRA arsenic toxicity characteristic.

- Fixation of lagoon wastes, incineration residuals, and low organic content vault wastes.

- Surface cleaning and demolition of contaminated structures.

- Coating and sealing all noncombustible, permeable demolition debris exhibiting the RCRA arsenic toxicity characteristic.

- Surface cleaning the noncombustible, impermeable demolition debris exhibiting the RCRA arsenic toxicity characteristic.

- Salvaging nonhazardous demolition debris, as feasible.

- Disposal of the following in off-site landfills: the treated wastes; the untreated nonhazardous lagoon wastes; the untreated nonhazardous miscellaneous products/feedstocks; and the untreated nonhazardous demolition debris that is not salvaged.

On December 30, 1990, the final ROD for Operable Unit Three ("OU-3") was issued. It addressed contaminated soils and adjacent sediments, nonhazardous buildings, and ground water. The major components of the remedy included treatment of heavily contaminated soil and sediments, capping of remaining contaminated soils and sediments, building demolition and salvaging or disposal of debris, and pumping and treatment of contaminated ground water.

On December 28, 1994, EPA issued an Explanation of Significant Differences ("ESD") that modified the remedy to allow the following materials to be incinerated at an off-site facility:

- Laboratory bottles;
- Wooden debris from the vault;
- Transformers (with and without detectable PCBs);
- Crushed drums with adhering tar-like material;
- "Unexpected" solid and liquid wastes from the vault;
- Miscellaneous materials from on-site buildings;

- Wooden tanks and process vessels; and
- Combustible demolition debris exhibiting the RCRA arsenic toxicity characteristic.

An ESD No.2 was issued on November 7, 1995 that selected off-site treatment and disposal of additional wastes originally determined to be treated on-site. ESD No. 2 documented the decision to: 1) incinerate the aniline still-bottom tars and carbon/tar wastes excavated from the vault at off-site facilities (several incineration facilities were subsequently used); 2) stabilize the calcium arsenate sludge; 3) incinerate wastes with elevated levels of organic compounds, (i.e., fuel and waste oils, aniline residuals, and organic product residuals); and, 4) stabilize wastes with a limited amount of organic compounds (i.e., floor sweepings, concrete residuals, wood, and debris).

III. REASONS FOR ISSUING THE ROD AMENDMENT

In the ROD for OU-2, the selected remedy for "upper vault wastes" (UVW) was bulk excavation, followed by the following treatment steps:

- on-site incineration in the presence of cement/pozzolan fixative agents (to inhibit arsenic volatilization during incineration);
- fixation of incineration residuals using a cement/pozzolan-based process or similar fixation process that provides equivalent protection; and
- off-site disposal of the treated residuals.

During implementation of the U.S. EPA-approved Remedial Design ("RD") Work Plan, the responsible parties, collectively known as the Whitmoyer Laboratories Private Study Group ("WLPSG"), excavated the UVW from the vault and segregated the wastes into three treatability groups: (1) soil, (2) carbon/tar mixture, and (3) tar. The characterization results for the wastes in these treatability groups were provided to U.S. EPA in the July 29, 1994 Vault Wastes Characterization Results Report ("Characterization Results Report"). Off-site incineration of the carbon and tar wastes began in December 1996 and is expected to be completed by January 1999.

For the remaining UVW treatability group, which consists of approximately 1,400 yd³ of arsenic-contaminated vault soils, WLPSG identified an alternative to the ROD selected remedy of on-site incineration. Based on new information developed during the RD, including characterization of the vault soils, extensive bench-scale treatability testing, and full-scale testing, it was demonstrated that off-site chemical fixation (a.k.a. stabilization) and disposal of the treated soils at a Subtitle C landfill is an appropriate alternative to on-site incineration.

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The rationale for the identification of stabilization as an appropriate treatment technology for the vault soils, and its identification of appropriate treatment levels are discussed below, along with an evaluation of stabilization vis-a-vis the remedy selection criteria specified in the National Oil and Hazardous Substances Pollution Contingency Plan, as amended, ("NCP"), 40 C.F.R. Part 300.

IV. DESCRIPTION OF THE NEW ALTERNATIVE

As discussed in detail in the Characterization Results Report, the vault soils contain primarily arsenic and relatively low concentrations of organic compounds. With regard to the organic content, the vault soils are more similar to the calcium arsenate sludge excavated from the lower portion of the vault (Lower Vault Wastes - "LVW"), which also contain primarily arsenic, than to the UVW carbon/tar and tar groups which contain elevated levels of arsenic and organic compounds. This comparison is shown below.

Waste Group	Arsenic Content average %	Aniline Content average %
Vault Soil	9	0.2
LVW	20	0.1*
Carbon/Tar	11	10
Tar	10	10

* maximum concentration

Because of the vault soils' chemical similarity to the LVW, for which WLPSG demonstrated that stabilization provides effective treatment, WLPSG undertook a series of bench-scale tests to evaluate the effectiveness of stabilization. The results of these treatability tests are summarized below.

As shown in the Characterization Results Report, the vault soils exhibit only the D004 (arsenic) characteristic. Therefore, the only potentially applicable Land Disposal Restrictions ("LDR") treatment standard for the soils is arsenic at 5 mg/L as a constituent concentration in waste extract. 40 C.F.R. Part 268. Although organic constituents were detected at low levels in the soils, no applicable treatment standards exist for these constituents under current regulations. Additionally, for soils that are subject to LDR treatment standards, compliance with an LDR treatment standard can be achieved by using a treatability variance, as explained in U.S. EPA's Superfund LDR Guide #6A (see Administrative Record). Under a treatability variance, an alternate treatment level for soil with arsenic concentrations greater than 10 mg/kg would be the achievement of greater than 90% reduction in TCLP-arsenic concentration.

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Bench-scale stabilization treatability tests were conducted in 1995 to identify a formulation that could feasibly and consistently achieve the 5 mg/L arsenic LDR treatment standard for D004 wastes. The investigation began with the chemical formulation that WLPSG had demonstrated, after extensive bench-scale tests, to be successful in treating the calcium arsenate sludge to meet the LDR treatment standard. However, when applied to vault soils, that formulation (and several other variations of the formulation) was unable to achieve the 5 mg/L (arsenic) LDR treatment standard, although virtually all of the formulations tested were able to achieve a 90% reduction in the TCLP-arsenic concentration.

Full-scale stabilization demonstration tests were conducted in November 1996 to confirm that: 1) off-site stabilization can be implemented at full-scale; 2) adequate reduction in leachable arsenic (i.e., TCLP arsenic) can be achieved; and, 3) vault soils will be accepted at one or more off-site disposal facilities in accordance with the facility's Waste Analysis Plan and RCRA permit requirements.

Prior to testing, each facility obtained at least one representative sample of the vault soils for analysis of TCLP-arsenic and TCLP-aniline. Each facility also conducted post-treatment verification analysis for TCLP-arsenic and TCLP-aniline following treatment of each batch. The vault soils are characterized as a RCRA hazardous waste for arsenic only (D004 waste code). As such, TCLP-arsenic is the only applicable LDR treatment standard for the vault soils. Although organic constituents were detected at low levels in the vault soils, no applicable treatment standards exist for these constituents under current regulations. Therefore, the LDR treatment standard for arsenic is the only treatment standard that applies. An evaluation of the pre- and post-treatment TCLP-aniline concentration was recommended by U.S. EPA to determine the effect the full-scale stabilization process had on the leachability of aniline.

Full-scale demonstration tests were conducted at the US Ecology (Beatty, Nevada) and Chemical Waste Management (Emelle, Alabama) RCRA Subtitle C facilities where similar testing for the lower vault wastes were previously conducted. Both facilities achieved a greater than 90% reduction in TCLP-arsenic, with US Ecology achieving a reduction of 95.8% and 98.1%. Although bench-scale testing revealed a substantial decrease in TCLP-aniline (88%), full-scale testing at both facilities indicated an increase in TCLP-aniline (see Administrative Record for Results of Full-Scale Tests for Upper Vault Soils).

WLPSG contacted US Ecology and Chemical Waste Management in the Spring of 1997 regarding the level of leachable aniline from the stabilized soils. A representative from each facility

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coordinated with the appropriate regulatory agency (Nevada Department of Environmental Protection and EPA Region IV, respectively) to ensure that they were aware of the organic constituents in the soil and EPA Region III's plans to amend the ROD for OU-2 to stabilize the vault soils. Both the Nevada Department of Environmental Protection and EPA Region IV indicated they would support the issuance of the Region III treatability variance to stabilize the vault soils (i.e., achieve a reduction in TCLP-arsenic greater than 90%) and were not concerned with the relatively low levels of leachable aniline.

Based on the results of the bench-scale and full-scale tests, it has been demonstrated that stabilization of the soils can comply with the applicable LDR treatment standard for arsenic through the use of a treatability variance. The fixation formulation identified through WLPSPG's extensive testing can consistently and feasibly reduce TCLP-arsenic concentrations by more than 90%. An evaluation of off-site stabilization vis-a-vis the remedy selection criteria specified in the NCP is presented below to support the conclusion that off-site stabilization is an appropriate alternative to the ROD-selected remedy of on-site incineration of the vault soils.

V. EVALUATION OF ALTERNATIVES

Overall Protection of Human Health and the Environment

Both on-site incineration followed by stabilization of residuals and off-site stabilization rely on immobilization of the arsenic to protect human health and the environment, and do not result in the destruction of arsenic, the principal hazardous constituent of the soils. Both remedies provide adequate protection of human health and the environment.

The concentration and/or mobility of the relatively minor organic constituents of the soils are not expected to be significantly impacted by the chemical additions necessary during off-site stabilization of the soils. Chemical conversion (e.g., oxidation) and physical depletion (e.g., volatilization) during the stabilization process may reduce the concentration of the organic constituents. Although the relatively minor organic constituents of the soils may not be destroyed as they would be in incineration, the relatively low concentrations of these constituents remaining after off-site stabilization and disposal in a Subtitle C landfill would be expected to present insignificant risk to human health and the environment.

Stabilized soils will be disposed at a Subtitle C landfill constructed with liners and leachate collection systems. As a result, off-site stabilization of soils and disposal of the treated soils at a Subtitle C facility would provide protection of human health and the environment by 1) immobilizing arsenic,

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the principal hazardous constituent in the soil, and other constituents of the soils, and 2) significantly reducing the potential for exposure to the treated soils. In addition, off-site stabilization of the soils would eliminate potential exposures from potentially hazardous emissions that may occur during on-site incineration of the soils, thus providing to the community around the Whitmoyer Site (or off-site incinerator) a greater level of overall protection than that provided by the ROD selected remedy.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Off-site stabilization of the vault soils will comply with LDR treatment requirements with the use of a treatability variance as discussed above, and all other applicable state and federal ARARs. This signed Amendment to the ROD for OU-2 by the EPA Region III Regional Administrator hereby provides the treatability variance required to perform the stabilization of the vault soils.

The on-site handling, loading, and pre-transportation preparation of the vault soils will be conducted in accordance with the following Applicable or Relevant and Appropriate Requirements (ARARs):

a) Federal Requirements

- 40 C.F.R. §261.3; §261.7; §261.10; §261.24 and §261.33 - RCRA Regulations for Hazardous Waste Identification;
- 40 C.F.R. Part 264, Subparts I, L, CC, and DD - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities: Use and Management of Containers; Waste Piles; Air Emission Standards for Tanks, Surface Impoundments, and Containers; Containment Buildings.

b) State Requirements

- 25 PA Code §261.3; §261.7; §261.10; §261.24 and §261.33 - Pennsylvania regulations for Hazardous Waste Identification;
- 25 PA Code Chapter 264, Subparts I, L and T - Pennsylvania regulations for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities: Use and Management of Containers; Waste Piles; Containment Buildings;
- 25 PA Code §123.1 and §123.2 - Pennsylvania regulations for air pollution control of fugitive emissions.

In addition to the compliance with ARARs, compliance with

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all applicable federal, state, and local statutes, regulations and ordinances regarding the off-site transportation, storage, treatment and disposal of vault soils and debris is required.

Long-term Effectiveness and Permanence

The long-term effectiveness of off-site stabilization with disposal in a Subtitle C landfill would be similar to that for on-site incineration, since both alternatives would rely on immobilization and engineering controls to minimize potential exposure to arsenic. Although incineration would enhance long-term effectiveness and permanence through destruction of organic contaminants, stabilization has been shown to reduce the mobility of arsenic in vault soils.

Reduction of Toxicity, Mobility, or Volume Through Treatment

The ROD selected remedy of on-site incineration would decrease the toxicity of the wastes by physically altering the organic contaminants in the soil. However, incineration would not reduce the toxicity or volume of the principal hazardous constituent, arsenic, and could potentially mobilize arsenic into the environment. According to the ROD remedy, vault wastes would be incinerated in the presence of cement/pozzolan fixative agent to inhibit arsenic volatilization during the thermal treatment step. Given the low organic content of the vault soils, any reduction in the volume of soil by incineration would be more than offset by the addition of these fixative agents. Furthermore, fixation of the incineration residuals using a cement/pozzolan-based process would further increase the final volume of treated soils.

Off-site stabilization would virtually eliminate any potential for arsenic to be mobilized into the environment because arsenic mobility would be reduced by greater than 90% and the treated soils would be disposed in a Subtitle C landfill with liners and a leachate collection system. The addition of stabilizing agents to the soils would increase the soil volume; however, this increase is expected to be comparable to the volume increase resulting from on-site incineration followed by stabilization of the residual material.

Short-term Effectiveness

The period of time needed to complete the stabilization of the soils is expected to be approximately six months. WLPSG has identified at least two facilities that can accept and treat the soils, which decreases the amount of time needed to complete the remedy. This is significantly less than the amount of time required to incinerate the soils either on-site or even at an off-site location. On-site incineration would take several years to implement and raise serious concerns regarding the potential

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for arsenic volatilization and accidental releases. Off-site incineration has been selected in the two previous ESDs to treat wastes requiring incineration. However, due to the limited capacity of off-site incinerators that are able to accept arsenic-contaminated waste streams and the amount of site wastes still waiting to be treated, it would be approximately one year before the facilities could even begin to treat the vault soils. Completion of off-site incineration would likely take several years and require long-term storage either on-site or at an alternate location.

Off-site transportation under either alternative would be conducted in accordance with all ARARs. Under these requirements, transportation risks would be very low for both alternatives.

Implementability

WLPSG has identified adequate off-site treatment and disposal capacity for the soils and at least two facilities that can accept and stabilize the soils. For the on-site incineration remedy, a facility would need to be designed, constructed, and tested to ensure it would not pose an unacceptable risk to the surrounding community. As a result, incinerating the wastes on-site would be a much more complicated remedy to implement with a greater potential for delay. Incinerating the wastes at an off-site location would be a less complicated remedy to implement when compared to on-site incineration; however, as discussed above, the time required to implement off-site incineration is several years longer than the time required to stabilize the soils and place them in a Subtitle C landfill.

Cost

The present-worth cost for stabilization of the 1400 yd³ of soils is expected to be approximately \$685,000, including transportation costs to Beatty, Nevada. On-site handling costs are not included but would be a constant factor regardless of the treatment implemented. Off-site incineration costs range from \$ 2.4 - 3.1 million, depending on the facility performing the incineration. On-site incineration costs would be significantly higher than the cost to incinerate at an off-site facility.

State Acceptance.

The Commonwealth of Pennsylvania did not concur with the selection of the on-site incineration remedy. On July 22, 1996 PADEP indicated that they support modifying the ROD to treat vault wastes at off-site locations where possible. PADEP concurred with the two ESDs which selected off-site treatment locations for wastes originally selected for on-site incineration and on-site stabilization. On January 9, 1998 PADEP concurred

with the proposed Amendment to the ROD for OU-2.

Community Acceptance.

Community concerns have been raised regarding the safety of on-site incineration since EPA proposed the remedy in 1990. Several homes are immediately adjacent to the Site and a grammar school is located approximately 1/2 mile north of the Site. EPA discussed the strategy to treat the vault wastes at off-site locations during several public meetings since the issuance of the ROD in 1990. During each discussion, the citizens and local officials present strongly supported the selection of off-site treatment facilities and continued to express strong concerns regarding on-site incineration. On-site incineration was selected in the OU-2 ROD because off-site facilities were not available to incinerate the arsenic-contaminated wastes in 1990.

VI. SUPPORT AGENCY COMMENTS

All of the above changes to the remedy have been coordinated with representatives of PADEP pursuant to 40 C.F.R. § 300.435(c)(2). PADEP submitted a letter on January 9, 1998 concurring with the changes to the selected remedy as described in this Amendment to the ROD for OU-2.

VII. AFFIRMATION OF THE STATUTORY DETERMINATIONS

EPA has determined that the revised remedy complies with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621. Considering the new information that has been developed and the changes that have been made to the selected remedy, EPA believes that the remedy remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this Remedial Action as described in the ROD for OU-2 for this Site, and is cost-effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this Site.

VIII. PUBLIC PARTICIPATION

A draft of the Amendment to the ROD for OU-2 was released for public comment as part of the Administrative Record file on February 3, 1998. The Administrative Record also includes the RODs for OU-1, OU-2 and OU-3, and all documents that formed the basis for EPA's selection of the cleanup remedy in the RODs. A summary of the proposed Amendment and other related documents and the information upon which it is based have been included in the Administrative Record file and the information repository for this Site. The Administrative Record is available for public review at the locations listed below:

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U.S. EPA, Region III
841 Chestnut Building
Philadelphia, PA 19107
Hours: Mon. - Fri., 9:00 a.m. - 4:00 p.m.

Whitmoyer Community Library
199 North College Street
Myerstown, PA 17067

The notice of availability of these documents was published in the Lebanon Daily News on February 3, 1998. The public was provided thirty (30) days from the notice date to submit comments. Two letters were received during the public comment period and have been added to the Administrative Record. Both letters were from elected officials who stated their support of the proposed Amendment to the Record of Decision.

5/12/98
Date

W. Michael McCabe
for W. Michael McCabe, Regional Administrator
U.S. EPA Region III

**RESPONSIVENESS SUMMARY
FOR THE
AMENDMENT TO THE RECORD OF DECISION
OPERABLE UNIT TWO
WHITMOYER LABORATORIES SUPERFUND SITE
MYERSTOWN, LEBANON COUNTY, PENNSYLVANIA**

**Public Comment Period
February 3, 1998 through March 4, 1998**

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**Responsiveness Summary
Whitmoyer Laboratories Superfund Site
Myerstown, Lebanon County, Pennsylvania**

This Responsiveness Summary is divided into the following sections:

I. Summary of Major Comments and Questions Received During the Public Meeting and EPA Responses

This section documents comments and questions during the February 10, 1998 Public Meeting which was held at the Jackson Township Municipal Building in Myerstown, PA.

II. Summary of Major Comments and Questions Received During the Public Comment Period and EPA Responses

This section provides a comprehensive response to all significant comments received in writing by EPA during the Public Comment period.

Part I: Summary of Commentors' Major Issues and Concerns During the Public Meeting

This section provides a summary of commentors' major issues and concerns and EPA's response to those issues and concerns during the February 10, 1998 public meeting. A copy of the complete transcript from that meeting is included in the Administrative Record.

"Commentors" may include local homeowners, representatives from nearby businesses, elected officials, and representatives of potentially responsible parties ("PRPs").

1. A local elected official stated his support for the offsite treatment of site wastes but also expressed concern for the people residing in the area where the wastes are to be treated.

EPA Response: The facility that will be treating the soils is permitted, designed, and built to receive such waste and conduct the required treatment activities. Facilities such as these are located in areas in order to have a minimal impact to the surrounding area.

2. A citizen inquired about the method of transporting the wastes from the Whitmoyer Laboratories Site.

EPA Response: Wastes will be shipped from the site via rail cars or trucks. Rail cars are carefully lined and covered prior to shipment. Wastes are transferred into large containers if transported via truck. All rail cars and trucks will be inspected before leaving the site.

3. A citizen inquired about the level of hazardous waste in the soil.

EPA Response: Arsenic is in soils at levels up to 10 to 12 percent and aniline can be detected at up to 2 percent.

4. A local elected official requested an update on the ground water treatment facility.

EPA Response: The ground water treatment facility will treat up to 250 - 300 gallons of contaminated ground water per minute. The extraction wells will capture approximately 97% of the plume and construction is anticipated to be completed in April 1998.

5. During the update on future site activities, a citizen requested clarification on future modifications to the Record of Decision in regard to onsite and adjacent surface soils.

EPA Response: EPA has not made any decision to modify this portion of the Record of Decision at this time, although changes are being considered. Soil samples are being collected to gather additional information needed to make a recommendation, which will be subject to public notice and comment prior to EPA's final decision.

6. An attendee at the meeting requested information regarding the length of time to pump and treat the ground water, the level of contamination remaining after treatment, and the presence of organic chemicals.

EPA Response: Pumping will likely take several decades, the arsenic cleanup level is 50 parts per billion, and various organic chemicals such as aniline, tetrachloroethene, and 1,2-dichloroethene are also present.

7. A citizen requested additional information about the stabilization process.

EPA Response: EPA requested the Design Engineer to describe the process. Ms. Jennifer Bryson of ENVIRON described that stabilization is a two-step process. The first step is a patented process which converts the arsenic into a form that makes it more easily bound to other compounds. The second part of the process is to add a cement-like mixture to solidify the material prior to disposing it into a lined cell in a hazardous waste landfill. The landfill is then covered with a multi-layer cap.

Part II. Summary of Major Comments and Questions Received in Writing During the Public Comment Period

1. Pennsylvania Senator David J. Brightbill submitted a letter supporting the Amendment to the Record of Decision stating that "EPA has proven flexible and responsive to input from nearby communities by finding a different solution to this problem [other than on-site incineration]."

EPA Response: No response was necessary.

2. Pennsylvania Representative Peter J. Zug also submitted a letter supporting EPA's proposed Amendment to the Record of Decision, stating that..."this proposal will provide a safe, effective alternative to on-site incineration."

EPA Response: No response was necessary.