

**EPA Superfund
Explanation of Significant Differences:**

**WHITMOYER LABORATORIES
EPA ID: PAD003005014
OU 02
JACKSON TOWNSHIP, PA
11/07/1995**

**EXPLANATION OF SIGNIFICANT DIFFERENCES NO. 2
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 "the Agency")

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

A Record of Decision ("ROD") for the Whitmoyer Laboratories Superfund Site ("Site") for Operable Unit Two ("OU 2") was signed on December 17, 1990. This Explanation of Significant Differences ("ESD") No. 2 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 is now a part of the Administrative Record for the Site.

Additional information became available following the issuance of the ROD for OU 2 which gave rise to the need for an ESD. Specific information acquired during the remedial design includes: (1) a detailed inventory of on-site wastes located within the vault and other on-site structures; (2) the current availability of RCRA-permitted incineration and fixation facilities with adequate capacity to safely and efficiently handle the wastes; and (3) waste acceptance by the RCRA Subtitle C treatment and disposal facilities. The wastes covered by this ESD include the Lower Vault Wastes (sludge and sand), the Upper Vault carbon/tar and tar wastes, hazardous miscellaneous products and feedstocks, and hazardous wood and residual debris. The new information acquired and EPA's conclusions are discussed in more detail below.

**II. SUMMARY OF THE SITE HISTORY, CONTAMINATION PROBLEMS, AND
SELECTED REMEDY**

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 in 1982 to Stafford Laboratories. Stafford Laboratories filed for 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 Priorities List 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 signed in June, 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 signed in December 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 themselves and related 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, 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.

- Decontamination and demolition of Site 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 signed and 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.

An ESD for the ROD for OU 2 was signed on December 28, 1994 for the off-site incineration of relatively low-volume wastes previously located in on-site buildings and the vault. These wastes included laboratory bottles, wood debris from the vault, unexpected liquids and solids from the vault, transformers, demolition debris, and wooden tanks and vessels.

III. DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

Following the issuance of the ROD for OU 2, a detailed inventory and analysis of wastes revealed that a variety of waste materials, originally designated for on-site incineration, could be fixated or encapsulated at an off-site facility due to the limited presence of volatile and semi-volatile organic compounds. Materials selected for off-site fixation or encapsulation include cornmeal, floor sweepings, miscellaneous products and feedstocks, concrete residuals, baghouse filters, filter tubes, spill residuals, crushed fiber drums, wood, and debris.

The detailed inventory and analysis of OU 2 wastes revealed that the remaining OU 2 materials selected for on-site incineration could be incinerated at an off-site facility. These wastes typically have a significantly higher level of volatile and semi-volatile organic compounds. OU 2 wastes designated for off-site incineration include various fuel and waste oils, aniline residuals, light ballasts, and organic product residuals.

Over 600 laboratory bottles containing less than 5 gallons each have been consolidated. In accordance with the ESD No. 1 issued on December 28, 1994, high organic laboratory wastes have been, and will continue to be, incinerated at an off-site facility. However, ESD No. 2 provides the option, with EPA's prior approval, to fixate and dispose at an off-site facility, certain laboratory wastes that are not appropriate for incineration due to their low organic content.

A detailed list of all OU 2 materials that are to be incinerated or fixated and disposed at the off-site treatment facilities is provided in the Final Remedial Action Design Plan for Characterization, Treatment and Disposal of Potentially Hazardous Miscellaneous Products/Feedstocks, Debris and Residuals.

Analysis and treatability testing of Lower Vault Wastes ("LVW") have also demonstrated the opportunity for off-site treatment and disposal. Calcium arsenate sludges located in the lower portion of the vault have been successfully fixated at an off-site facility. The LVW were originally selected for on-site fixation. LVWs will be excavated from the vault and loaded on-site into rail cars. The LVWs will be shipped via rail to North Las Vegas where the wastes will be unloaded onto trucks for final shipment to the US Ecology treatment and disposal facility located in Beatty, Nevada.

Additional vault wastes, primarily spent carbon and aniline tars excavated from the upper portion of the vault have been demonstrated to be acceptable for incineration at the Aptus/Rollins incinerator in Aragonite, Utah. Upper vault carbon, tars and associated debris shall be incinerated at an off-site treatment facility. All residual wastes shall be properly handled and disposed in accordance with the permit requirements of the treatment and disposal facilities.

Treatability testing of contaminated soils excavated from the vault are still in progress. Vault soils are the last category of wastes that remain targeted for on-site incineration. It is anticipated that a request for off-site treatment of soils from the vault will be submitted in the near future.

Requests for the off-site treatment and disposal of all waste materials will be coordinated with EPA and PADEP and with the appropriate out-of-state regulators as defined in EPA's Off-site Rule.

EPA has determined that these changes are a Significant Difference to the remedy set forth in the ROD for OU 2, but do not require an amendment to the ROD for OU 2. The wastes covered by this ESD must be shown to exhibit chemical characteristics, including arsenic content, consistent with the permit limits for the off-site facility specified for a particular waste. The on-site incineration remedy described in the ROD for OU 2 required stabilization of all incineration residues. Stabilization of incinerator residues will be performed only as necessary to comply with the permits of the off-site disposal facility.

Materials covered by ESD No. 2 will be characterized according to the requirements of the off-site treatment facilities. If any materials are determined to have chemical characteristics which make off-site incineration or fixation infeasible, these materials would then be temporarily staged on-site for future treatment and disposal. The results of analyses used to characterize the material for off-site disposal shall be reported to U.S. EPA prior to any transport from the Site.

Emissions from any off-site, RCRA-permitted facility selected for wastes from the Whitmoyer Site are required to be within permit limits for that facility. The risks associated with such emissions would not be expected to be greater than for on-site treatment. Based on available information, short-term risks due to emissions from an off-site incinerator are expected to be as low or lower than those associated with on-site incineration. Risks in the area of the Whitmoyer Site will be reduced under the off-site treatment modification to the remedy.

Transportation risks associated with off-site fixation are significantly reduced versus on-site fixation because of the lower quantity of wastes that would require transportation for off-site disposal. Vehicle traffic will be further reduced by using rail lines for shipping the 2500 cubic yards of lower vault wastes for off-site treatment. However, although the volume of vehicle traffic is significantly decreased, the transportation involves the movement of untreated hazardous materials.

Off-site transportation will be conducted in accordance with all appropriate National Transportation and Safety Requirements and all applicable or relevant and appropriate requirements ("ARARs") including 40 C.F.R. Parts 107 and 171-179 (DOT regulations for waste transport), 40 C.F.R. Parts 262 and 263 (RCRA Hazardous Waste Transportation), and 25 PA Code Chapter 263 (Waste Transportation). The remedial action must be implemented under the provisions of these ARARs to protect human health and the environment, therefore, overall transportation risks are considered low. This modification to the selected remedy is protective of human health and the environment.

A significant advantage of off-site treatment is the improved timeliness of treating wastes off-site versus the construction of temporary on-site facilities. As a result of the extensive land-use requirements for on-site treatment, remediation of the contaminated soil and lagoons would be delayed until on-site treatment was completed. The design, construction, testing, operation, and disassembly of the on-site incinerator and fixation facility would add a minimum of thirty (30) months to the current schedule.

Off-site incineration and fixation is cost-effective relative to on-site treatment. The overall cost savings to the selected remedy for the above modifications is estimated at \$7,000,000.

Community concerns have been raised regarding the safety of on-site incineration. Several homes are immediately adjacent to the Site and a grammar school is located approximately one-half mile north of the Site. The community has expressed concerns regarding on-site incineration. Off-site incineration was investigated during the Remedial Investigation/Feasibility Study

("RI/FS"). However, at the time of the RI/FS, the off-site incineration facilities were unavailable to accept the wastes. The community was extremely supportive of treating wastes at off-site facilities during recent public meetings.

IV. SUPPORT AGENCY COMMENTS

All of the above changes to the remedy have been coordinated with representatives of PADEP. PADEP submitted a letter on October 3, 1995 concurring with the changes to the selected remedy as described in this ESD.

V. AFFIRMATION OF THE STATUTORY DETERMINATIONS

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 all 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.

VI. PUBLIC PARTICIPATION

A summary of the proposed ESD was released for public comment as part of the Administrative Record file on August 14, 1995. The Administrative Record also includes the RODs and all documents that formed the basis for EPA's selection of the cleanup remedy in the RODs. The proposed ESD and other related documents and the information upon which it is based have been included in the Administrative Record file for this Site. The Administrative Record is available for public review at the locations listed below:

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 July 31, 1995 and August 14, 1995. The public was provided thirty (30) days from the notice date to submit comments. No written comments were received by EPA during the public comment period. EPA held a public meeting on

August 14, 1995 to discuss the proposed modifications to the selected remedy. The public strongly supported all proposed modifications.

8/17/95
Date



Thomas C. Voltaggio, Director
Hazardous Waste Management Division