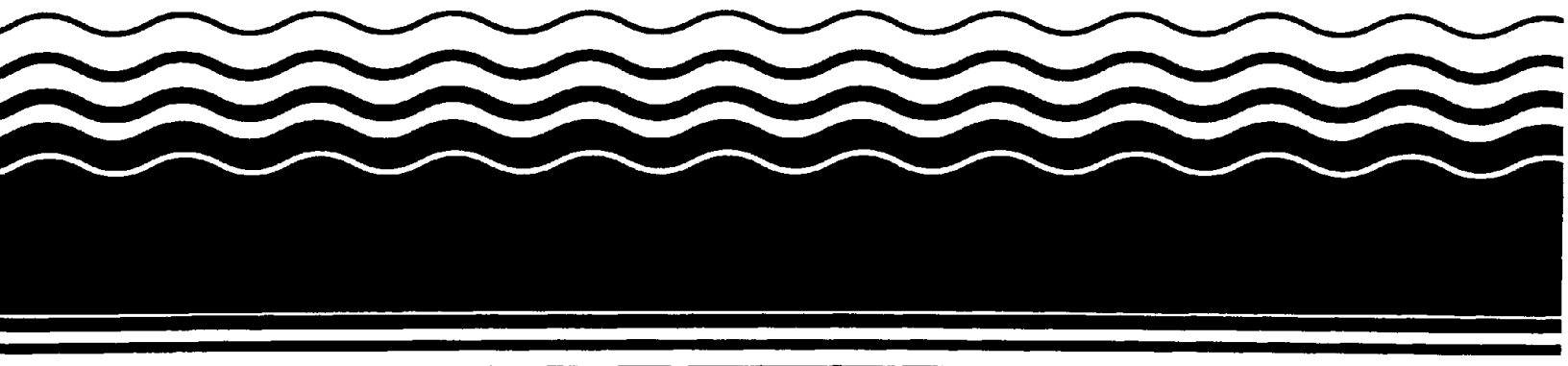


**PB98-963111  
EPA 541-R98-043  
September 1998**

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

**Osborne Landfill (ROD #2)  
Grove City, PA  
8/24/1998**



**EXPLANATION OF SIGNIFICANT DIFFERENCES  
OSBORNE LANDFILL SUPERFUND SITE**

**I. INTRODUCTION**

**SITE NAME:** Osborne Landfill Superfund Site

**SITE LOCATION:** Pine Township, Mercer County Pennsylvania

**LEAD AGENCY:** U.S. Environmental Protection Agency,  
Region III ("EPA" or the "Agency")

**SUPPORT AGENCY:** Pennsylvania Department of Environmental Protection  
("PADEP")

**Statement of Purpose**

This explanation of Significant Differences ("ESD") is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended ("CERCLA"), and is now a part of the Administrative Record for the Osborne Landfill Superfund Site ("Site"). This document explains significant differences to the remedy selected in the Record of Decision ("ROD") for the Site signed by the Director of Superfund on December 30, 1997. This ESD makes changes to the ROD previously issued, which is attached as Exhibit 1.

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

The Osborne Landfill Site is located in Pine Township, Mercer County, Pennsylvania. Located less than one mile east of Grove City, Pennsylvania, the Site encompasses approximately 15 acres along the East Pine Street extension. Strip mining was conducted at the Site during the 1940s prior to disposal of wastes in the strip mine pit. To the north of the Site are woodlands. Farmland is present to the east and southeast across the East Pine Street Extension. A large shallow pond is located just west of the Site and considered to be a federally protected wetland. Another wetland is situated south of the Site on both sides of the East Pine Street Extension. The immediate Site area is sparsely populated. Most of the residential homes near the Site, are located along Enterprise Road, which is approximately 1/4 mile north of the Site, and to the east on Diamond Road. Homes along Enterprise Avenue and Diamond Road previously used

ground water, but Cooper Industries extended the municipal water line around the eastern perimeter of the Site and connected any resident along the extension who was willing to accept the connection.

Fill material was deposited into the strip mine pool at the base of the highwall from the late 1950s to 1978, when the Site was closed by PADEP for not having a permit to accept wastes. A wide array of wastes were disposed which contained metals, volatile organic hydrocarbons, semi-volatiles and PCBs. The primary waste by volume was foundry sand.

Several Remedial Investigations have been conducted at the Site. These investigations have focused on the fill area, the wetlands to the southwest of the Site, the Clarion Aquifer/Mine Void system, the Homewood Aquifer System and the deeper Connoquenessing and Burgoon Aquifers. These investigations documented contamination in the fill above EPA's action levels. These investigations also documented contamination of ground water in the Clarion Formation (primarily in the mine voids) with vinyl chloride above Maximum Contaminant Levels (MCLs) allowed by the Safe Drinking Water Act. The wetlands to the southwest did not contain contaminants at levels of concern.

The ROD #1 selected installation of a slurry wall around the perimeter of the Site, and a clay cap to prevent infiltration into the fill. To prevent leachate from leaving the fill, extraction wells were installed in the fill to remove leachate and to produce an inward hydraulic containment. The collected leachate is treated by an iron and manganese removal system, air stripping and carbon adsorption. The treated leachate is injected into the mine pool to the east of the Site. ROD#1 also selected pump and treatment as the remedy for contaminated ground water in the Clarion Aquifer.

During the design phase, field work showed that it was not possible to remediate the Clarion Aquifer as described in ROD#1. Aquifer response tests performed during the Remedial Design indicated that reasonable ground water capture zones could not be created by extraction wells placed in the Clarion Aquifer. Instead, very narrow columns of water would be drawn from the more contaminated mine pool into the Clarion sandstone aquifer. EPA was also conducting an investigation of the deeper aquifers at the Site, which are in communication with the shallow aquifer. EPA decided to wait until the investigations were completed, so that an implementable ROD for all Site ground water could be issued. A second Record of Decision(ROD#2) issued on December 30, 1997, addressed all site ground water and the wetlands to the southwest of the Site. The wetlands had not been impacted by Site contaminants and EPA selected "No Action" for the southwest wetlands. EPA selected "Natural Attenuation with Monitoring" for the contaminated Clarion aquifer and three years of ground water monitoring for the deeper uncontaminated aquifers at the Site. In ROD#2, EPA specifically listed the wells that would be monitored.

At the time that the Feasibility Study was completed for the Natural Attenuation with monitoring ground water alternative, the slurry wall and clay cap had not been constructed. The

construction of the slurry wall and cap necessitated the closure of some wells that would be destroyed by the construction. After ROD#2 was issued, EPA was informed by Cooper Industries that two of the wells on the list specified in the ROD had been abandoned because their location interfered with the slurry wall and clay cap construction. The two wells which were abandoned were MWV-2 (mine void well adjacent to original east fence line) and MWC-3 (also adjacent to the original east fence line). The slurry wall containment performance wells installed as well nests C-2 and C-3 in the Clarion Aquifer are very close to the locations of the closed wells in Clarion/Mine Void formation. These wells perform the same function as the wells that were closed and are sampled periodically for Site contaminants. Therefore the removal of these wells from the monitoring network does not significantly reduce the scope of the selected monitoring program.

### **III. DESCRIPTION OF SIGNIFICANT DIFFERENCES**

Subsequent to the issuance of ROD#2, EPA determined that minor corrections should be made describing the remedies set forth in ROD#2. These changes are identified as Significant Differences and do not constitute ROD amendments, as that term is used in 40 C.F.R. Section 300.435(c)(2)(ii), to ROD#2. The Significant Difference between the remedies presented in the ROD#2 and the change to ROD#2 that will be implemented is explained below. Except to the extent changed by the section below, all of the terms of ROD#2 remain in effect.

#### **RECORD OF DECISION ISSUED ON DECEMBER 1997**

In ROD#2, EPA specifically listed the wells that would be monitored as part of the selected remedy CM-2 (Natural Attenuation With Monitoring). At the time that the Feasibility Study was developed for alternative CM-2, the slurry wall and clay cap had not been constructed. The construction of the slurry wall and cap necessitated the closure of some wells that would be destroyed by the construction. After the ROD#2 was issued, EPA was informed by Cooper Industries that two of the wells on the list specified in ROD#2 had been abandoned because their location interfered with construction. The two wells which were abandoned were MW-V2 (mine void well adjacent to original fence line) and MWC-3 also adjacent to the original fence line. The performance wells installed as well nests C-2 and C-3 are very close to the locations of these closed wells and collect water from the Clarion Formation. Therefore the removal of wells MW-V2 and MW-C3 from the monitoring network does not significantly reduce the scope of the selected monitoring program. This ESD corrects the list of wells that will be monitored. As the result of this change and a calculation mistake in the original cost estimate, the cost of the remedial action has changed, and Cooper Industries has revised the cost sheet for CM-2 which is attached. EPA has added the additional cost of the increased well testing required by the ROD#2 for a total cost of \$252,725. The detailed breakdown of the costs is attached.

#### **IV. PUBLIC PARTICIPATION**

This ESD and the information upon which it is based have been included in the Administrative Record file for this Site. The Administrative Record also includes both RODs and all documents that formed the basis for EPA's selection of the Remedial Actions for the 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

and

Grove City Community Library  
125 West Main Street  
Grove City, PA 16127

Questions and comments on EPA's action and requests to review the Administrative Record can be directed to:

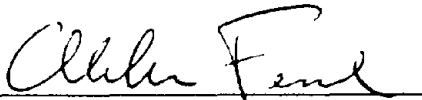
Frank Vavra  
Remedial Project Manager  
Mail Code: 3HS22  
U.S. EPA, Region III  
841 Chestnut Building  
Philadelphia, PA 19107  
(215) 814-3221

#### **VI. SUPPORT AGENCY REVIEW**

The Pennsylvania Department of Environmental Protection has concurred with the proposed changes to the remedial action in the proposed Explanation of Significant Differences in a letter dated July 29, 1998.

**VII. AFFIRMATION OF STATUTORY DETERMINATION**

Considering the new information that has been developed and the changes that have been made to the scope of the selected remedies, the EPA and PADEP believe that the revised remedy remains protective of human health and the environment, complies with the Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and are cost effective. In addition, the revised remedy utilizes treatment technologies that permanently and significantly reduce the toxicity, mobility, or volume of the hazardous substances to the maximum extent practicable for this Site.



Abraham Ferdas, Director  
Hazardous Sites Cleanup Division

8/24/98  
Date

**TABLE 4-1**  
**ALTERNATIVE CM2 - NATURAL ATTENUATION WITH MONITORING**  
**CLARION AQUIFER AND MINE VOID SYSTEM**  
**OSBORNE LANDFILL SITE**  
**OPERABLE UNIT 2**  
**FOCUSED FEASIBILITY STUDY**

ITEM	QUANTITY	CAPITAL COSTS	ANNUAL O & M COSTS	PRESENT WORTH
<b>CONSTRUCTION</b>				
Well Installation	1 Monitoring Well	\$7,800		
<b>ENGINEERING</b>				
Monitor Well Installation	1 Monitoring Well	\$1,429		
Monitoring Costs	9 Wells Semi-Annually (1)		\$19,840	\$100,916
	6 Wells Quarterly (2)			
	9 Wells Annually (3)			
Annual Report			\$5,424	\$43,990
Monitoring Well Maintenance	13 Wells		\$1,300	\$10,644
Annual O & M Total			\$26,563	
Five Year Review (Present Worth)		\$14,976		
<b>CONSTRUCTION SUBTOTAL</b>		\$24,204		
Health and Safety	0%	\$0		
Bid Contingency	10%	\$2,420		
Scope contingency	15%	\$3,631		
<b>CONSTRUCTION TOTAL</b>		\$30,255		
Permitting & Legal	6%	\$1,813		
Services During Construction	7%	\$2,118		
<b>TOTAL IMPLEMENTATION COST</b>		\$33,885		
Engineering & Design	10%	\$3,389		
<b>TOTAL CAPITAL COSTS</b>		\$37,274		
<b>TOTAL PRESENT WORTH</b>				\$252,726

(1) MWV-1, MWV-3, MWV-5, MWV-9, MWC-2, MWC-4, MW-7, MW-8, MW-9

(2) MWV-4, MWV-6, MWV-7, MWV-8, King, Parlor

(3) Up to 9 residential wells will be sampled annually. The actual number to be sampled may vary based on access and approval.