

FIVE-YEAR REVIEW REPORT

Millcreek Dump

Superfund Site

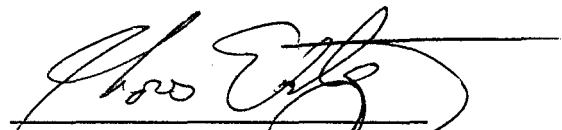
**Millcreek Township, Erie County,
Pennsylvania**

Prepared by:

U.S. Environmental Protection Agency

Region III

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Date

**U.S. Environmental Protection Agency
Region III
Hazardous Waste Management Division
Five-Year Review (Type Ia)
Millcreek Dump (Erie, Pennsylvania)**

I. Introduction.

Authority Statement. Purpose. EPA Region III conducted this review pursuant to CERCLA section 121(c), NCP section 300.400(f)(4)(ii), and OSWER Directives 9355.7-02 (May 23, 1991), and 9355.7-02A (July 26, 1994). It is a statutory review. The purpose of a five-year review is to ensure that a remedial action remains protective of public health and the environment and is functioning as designed. This document will become a part of the Site File. This review (Type Ia) is applicable to a site at which response is ongoing.

Site Characteristics. The Millcreek Dump occupies 84.5 acres in Millcreek Township, about two miles west of the City of Erie, Pennsylvania and one mile northeast of the Erie International Airport. A Conrail railroad track runs along the Site's southern border. To the north, east and west are highly developed residential and commercial areas. The Site's topography is relatively flat except for several isolated mounds of foundry sand. The Site was once a freshwater wetland, drained by Marshall's Run, which, after heavy storms, floods the east of the Site and adjacent residential areas. The perimeter of the Site is deciduous forest, while the central, southern, and southwestern portions are composed of fill material.

From 1941 to 1981, the Site operated as an unpermitted landfill for foundry sand and municipal and industrial waste. Within the past 20 years, waste oil was disposed of in bulk in the Site fill. The main contaminants at the Site are: polychlorinated biphenyls (PCBs), phthalates, phenols, polycyclic aromatic hydrocarbons (PAHs), volatile organics, polynuclear aromatic hydrocarbons (PNAs), and heavy metals such as lead and copper. The average fill depth on-site is seven feet. The depth of groundwater under the Site varies from zero to several feet below the surface. In 1981, the Pennsylvania Department of Environmental Resources closed the Site. From 1983 to 1986, EPA performed a removal action, including: constructing a fence and gates, demolishing sheds on the Site, removing 75 drums containing hazardous liquids, storing 364 drums containing nonhazardous materials, and removing and recycling clean, empty drums.

In 1984, the Site was placed on the National Priorities List. EPA completed a Remedial Investigation/Feasibility Study in August 1985, and issued a Record of Decision (ROD) on May 7, 1986. The remedy selected in the ROD consists of: (a) soil excavation and consolidation under a RCRA cap; (b) sediment excavation and consolidation under a RCRA cap; (c) site grading; (d) soil cover over remaining low level contaminated soils; (e) construction of surface water basins and ditches; (f) revegetation of soil cover and cap; (g)

installation of additional monitoring wells; (h) construction of a flood retention basin; and pumping and treating contaminated groundwater.

EPA has been working with approximately 34 Potentially Responsible Parties (PRPs). To date, twenty-eight PRPs have settled with EPA to pay \$10,765,000 of past costs, three PRPs have agreed to settle for \$517,500 and three PRPs have refused cooperate.

To manage the technical aspects of Site remediation and simplify dealings with numerous Potentially Responsible Parties (PRPs), EPA divided the Site into two Operable Units (OUs):

- Fund-lead OU-1, which includes groundwater extraction and treatment system (the “Plant”);
- PRP-lead OU-2, which includes the cap and flood retention basin.

In October 1989, EPA, through the U.S. Army Corps of Engineers (USACE), awarded a contract for groundwater extraction trenches (the extraction part of OU-1), to Internation Technology (IT) Corporation. This part of OU-1 was completed on December 4, 1990. The complementary part of OU-1 (groundwater treatment), including construction of the Millcreek Treatment Plant, was awarded to YWC Technologies, Inc. on June 5, 1990. YWC completed mobilization on March 26, 1990, and construction of the treatment plant in January 1992. The Operation and Maintenance Plan for the Plant was approved by USACE on October 4, 1995.

On December 18, 1989, USACE contracted with Malcolm Pynnie to design the cap and flood retention basin for OU-2. The design, after modifications described below, was approved by EPA on September 9, 1995. From 1994 to 1996, the PRPs have attempted, unsuccessfully, to obtain access from the owners of adjacent properties to begin construction of OU-2.

II. Discussion of Remedial Objectives; Areas of Noncompliance.

The Remedial Action Objectives, established in the ROD, are as follows:

1. Prevent on-site air dispersal of particles containing potentially hazardous substances.
2. Prevent dermal contact with potentially hazardous substances.
3. Prevent offsite transport of contaminated soil and sediment via erosion or storm transport.

4. Remediate offsite groundwater contamination to groundwater protection goals. Tentative levels established for cost estimating purposes are outlined in Table 1 of the ROD.
5. Remediate soil contamination to safe levels capable of preventing future groundwater contamination. Tentative levels established for cost estimating purposes are in Table 2 of the ROD.
6. Remediate sediment contamination capable of causing an impact on aquatic life or wildlife in the wetlands and Marshall's Run. Tentative levels established for cost estimating purposes are outlined in Table 3 of the ROD.
7. Remediate potential surface water contamination by remediating groundwater, soil and sediment contamination.

Ground Water Objectives (Objectives 4, 5 and 7). Successful construction and operation of the Plant would contribute to completion of Objectives 4, 5 and 7 of the ROD (the "Ground Water Objectives"). These objectives focus on remedying ground water contamination at the Site.

The Plant was designed by a USACE contractor and started operations in February 1992. The cost of design, construction, and operation were paid by EPA. Meanwhile, EPA negotiated with the PRPs concerning conditions under which the PRPs would operate the Plant. Four PRPs and the Township (a third-party defendant) agreed to operate the Plant for 10 years after EPA and the Commonwealth of Pennsylvania found the Plant to be "operational and functional." The cost of 10 years' operation, in present value, is \$2,700,000, according to EPA estimates. The Township agreed to pay \$35,000 annually for 10 years to the four PRPs for the cost of Plant operation. EPA also negotiated Superfund State Contracts dated September 29, 1989 and July 30, 1990 with the Commonwealth of Pennsylvania. Under the SSCs, the Commonwealth will assume responsibilities for Plant operation and maintenance ten years after the date on which the Commonwealth agrees that the Plant is fully operating and functioning according to the design requirements.

Completion of Objectives 4, 5 and 7 has been hampered by a disagreement with the Commonwealth over the operation of the Plant. During the first four years of the operation, the Commonwealth maintained that the Plant was not "operational and functional." The Commonwealth based its opinion on the fact that the Plant occasionally exceeded effluent discharging limits ("NPDES standards") for specific contaminants, and that the flow rate for the trenches and air stripper pumps did not meet the design requirements. EPA and USACE did not share this opinion and considered the Plant to be operational and functional. On June 13, 1995, EPA and the Commonwealth agreed on a definition of conditions to be satisfied in order for the Plant to be "operational and functional." The Commonwealth and EPA designed a plan for additional monitoring, which will reveal whether the Plant can maintain

“overlapping capture zones between the groundwater collection trenches throughout [an] eighteen month monitoring period.”

Soil and Sediment Objectives (Objectives 1, 2, 3 and 6). Successful construction of the OU-2 would contribute to completion of Objectives 1, 2, 3, and 6 of the ROD, which focus on remediating contaminated soil and sediment at the Site.

Nineteen PRPs have been working on OU-2. This OU includes two main parts: construction of the flood retention basin and construction of the cap. Malcolm Pyrmie developed and presented a design for the cap and flood retention basin.

Completion of the soil and sediment objectives has been delayed by two different problems. First, the PRPs and Township requested significant changes to the design of the flood retention basin:

- The Township asked for a bigger flood retention basin, which would be sufficient to protect the residents downstream of the Site from all flooding from Marshall’s Run during the 100-year storm event;
- The PRPs asked for a smaller flood retention basin, which would be sufficient to protect residents downstream of the Site from the additional flooding that might be caused by the fallout from the Site.

Discussion of these changes was complicated because the Commonwealth, USACE, and the PRPs were using different computer models to predict potential floods. EPA brought the interested parties together to resolve their differences. The result was an agreement on the parameters of a redesigned flood retention basin, which was based on a single computer model, agreed to by all. The new remedial design for the OU-2, including a cap, flood retention basin, and Marshall’s Run re-channeling was approved by EPA on September 9, 1995.

After EPA approved the remedial design, the PRPs asked the owners of various pieces of property next to the Site for access to their property during construction activities. All the owners granted access, except for the Township, which promised to give PRPs the access, and Conrail. At first, Conrail wanted the PRPs to purchase its entire property. The PRPs responded with a proposal to purchase four acres necessary to enter the Site. Conrail rejected this offer. In the middle of 1996, Conrail proposed to donate its property to the Township for the Township’s use. The Township, through the PRPs, expressed its opinion that it could not accept this offer without receiving written assurance from EPA that accepting Conrail’s property would not increase the Township’s obligations with respect to the Superfund site. EPA is discussing this issue directly with the Township. When access to Conrail’s property is resolved, construction of the cap and flood retention basin can begin.

III. Recommendations.

EPA should assist the PRPs in attempting to get access to Conrail's property through negotiation. As part of this effort, EPA should consider issuing an assurance letter for the Township; a draft of a letter which would satisfy the Township will be submitted by Township. If these efforts are not successful within a short time, EPA should thoroughly investigate the possibility of issuing an order to Conrail, requiring it to grant access. An access order would simplify further construction.

IV. Statement on Protectiveness.

At this time, the remedy is not protective of human health and the environment. EPA is taking the following steps to make the remedy protective:

- OU-1: Monitoring trench levels and cleanup levels until eighteen months monitoring data is available. These data would be used to prove that the Plant appropriately remediates groundwater contamination. In the event the effluent levels differ from the cleanup standards, or the capture zones of the Plant do not overlap the plume of contaminated groundwater, the Plant will be redesigned.
- OU-2: Assisting PRPs in their attempts to obtain the access to start OU-2 construction at the Site.

V. Next Five-Year Review.

The next five-year review will be completed no later than March 26, 2000.