

PALMERTON ZINC SITE

PALMERTON, PA
U.S. EPA REGION III



FACT SHEET
DECEMBER 1995



EPA'S PRIVACY PROTECTION EFFORTS FRUSTRATED

November 20, 1995, in the U.S. District Court of the Eastern District of Pennsylvania, Judge Weiner denied EPA's motion to dismiss Viacom International's suit demanding the addresses of Palmerton citizens who participated in the interim action cleanup. Viacom International, whom EPA considers potentially responsible for the contamination at the Palmerton Zinc Site, filed the suit on April 17, 1995.

On December 5, 1995, EPA filed a Motion to Reconsider with the U.S. District Court. This motion asks the judge to reconsider his decision. It is not likely that a decision will be reached on this motion until at least January 1996.

EPA believes that the addresses of these citizens should remain confidential for three reasons:

- Previous privacy requests made by several of the citizens;
- Reports of harassment within the community over different views on the relative necessity of the cleanup;
- The collective and considerable distress caused by unauthorized release of citizen names, addresses, and personal information at an August 1994 Palmerton Environmental Task Force (PETF) meeting.

In addition, Viacom can obtain the addresses through another, non-litigious route. Viacom could sign a protective order with EPA and could then receive the addresses by agreeing to protect them from any public disclosure. The company has signed similar protective orders with EPA on this site in the past for similar types of information. For example, Viacom received the 1991 CDM sampling report under protective order. However, Viacom has refused to seek the addresses under protective order in this instance.

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UPDATE ON STATUS OF OPERABLE UNITS

The Palmerton Zinc Superfund Site poses complex contamination problems caused by the operation of the zinc smelters for approximately 80 years. In order to simplify the investigation and cleanup, EPA divided the site into four parts called operable units (see site map on page two). Operable unit one is the restoration of Blue Mountain. Operable unit two is the 33 million ton pile of waste material, called the cinder bank, that borders the Aquashicola Creek. Operable unit three covers the environmental contamination in the valley and includes the Borough of Palmerton. Operable unit four consists of the ground and surface water contamination in the area. The background and current status of each of these operable units are discussed on the following pages.

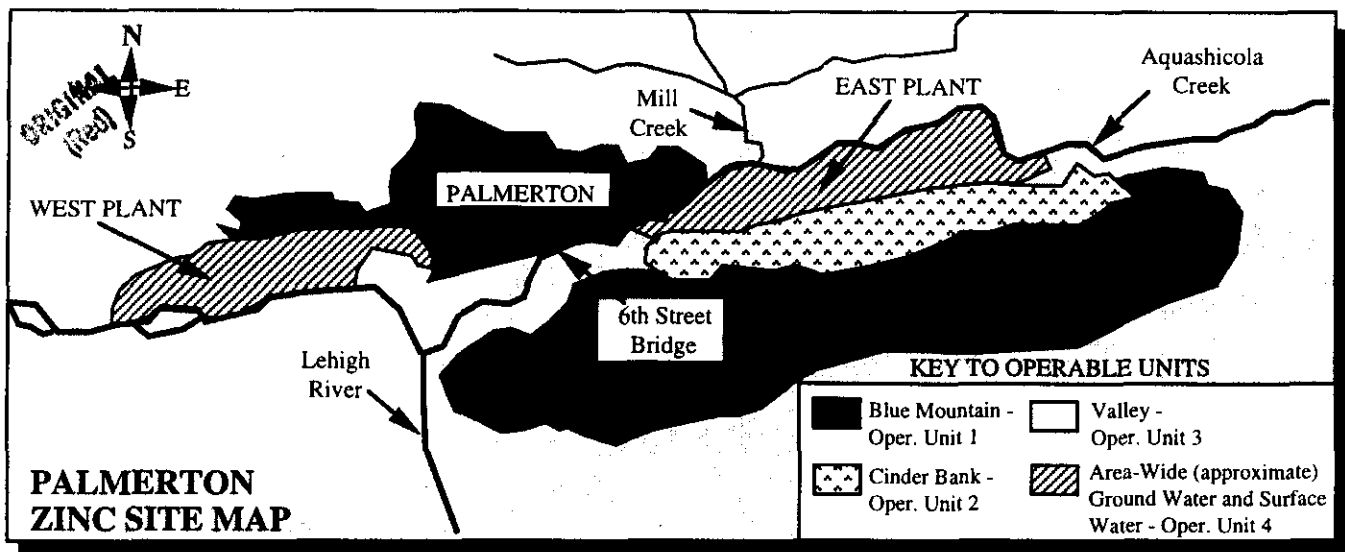


FOR MORE INFORMATION

All site-related documents can be found at:

Palmerton Library
4th Street and Delaware Avenue
Palmerton, PA 18071

Call Gerald Geiger, Director
at (610) 826-3424 for hours.



OPERABLE UNIT 1: BLUE MOUNTAIN RESTORATION

Background

Lead, cadmium, zinc, and other pollutants from the zinc smelter operations settled on the north slope of Blue Mountain and killed most of the trees, plants, and grasses there. In 1988, the Zinc Corporation of America (ZCA) signed an agreement with EPA to develop the Blue Mountain Restoration Project as an interim remedy. The goal of this project was to reestablish first grasses and then trees to the approximately 1,000 treeless acres of Blue Mountain.

Project Start

Horsehead Resources Development Company (HRD) immediately began work on behalf of ZCA. HRD tested several soil additives to determine which would best stabilize hazardous metals in the soil and enhance growth. HRD also tested different grasses and trees to identify those that would thrive on the Mountain. In April 1991, EPA approved HRD's interim plan to begin restoring grass and trees on Blue Mountain.

HRD divided the Mountain into sections and addressed each section over several growing seasons (spring-summer-fall). HRD first cut roadways up the steep face of the Mountain. HRD then used the roads to apply a mixture of sewage sludge, fly ash, and limestone, called ECOLOAM™, to the sections to control pH, stabilize the metals in the soil, and provide nutrients for the growing trees and grass. This ambi-

tious and difficult engineering project was further complicated by State law which allowed HRD to apply sewage sludge to the Mountain only during a six-month period each year.

Project Evaluation

After three years, EPA requested that the U.S. Army Corps of Engineers (USACE) conduct a general evaluation of the project. Restoration experts from the USACE Waterways Experiment Station (WES) in Vicksburg, Mississippi, and the USACE Cold Regions Research and Engineering Laboratory (CRREL) in Hanover, New Hampshire, visited Blue Mountain several times over the summer and fall of 1994 to take samples of soil and vegetation and to audit HRD's work.

In March 1995, USACE issued a report describing the following findings:

- ECOLOAM™ appeared to stabilize the treated areas, reduce soil erosion, and reduce the amount of metals dissolving into runoff.
- Grass cover establishment was very successful.
- Tree cover establishment was not successful.

Eleven of the 14 evaluated plots did not have the recommended number of trees per acre. In addition, some of the trees were not of the stock planted by HRD but other species which absorb hazardous metals from the soil and put the ecosystem at further risk. For example, poplar trees take up cadmium from the soil and, in the fall, lose their leaves, now contaminated with cadmium. Birds, rodents, earthworms, and other members of the recovering ecosystem are then

exposed to the contaminant, making the problem worse.

USACE suggested planting seedlings of species which absorb little or no hazardous metals from the soil to meet the recommended number of trees in each plot. Some seedlings were planted directly into the Blue Mountain soil and some were planted with a sheathing of ECOLOAM™ to determine which method best allows the main root (tap root) to reach the soil below the contaminated layers. HRD suggested decreasing the amount of grass seeded to reduce competition with the germinating tree seed while still providing vegetative cover to control erosion.

Current Progress

HRD voluntarily agreed to carry out these changes this past summer. In October, EPA and USACE inspected the tree seedling plots and found that most are thriving. EPA and USACE plan to evaluate the seedling plots and the modified seeded areas again in 1996.



OPERABLE UNIT 2: CINDER BANK

Background

The cinder bank consists of by-products from the zinc smelter operations. It is approximately 100 feet high, ranges from 500 to 1,000 feet wide, and includes an estimated 33 million tons of various materials, including heavy metals.

Cleanup Difficulties

Cleanup of the cinder bank poses unique problems because of its size, its make-up, and the fact that much of it is smoldering. The main hazards posed by the cinder bank include:

Fire: Due to the make-up of the cinder bank, it is difficult to accurately determine where fires are burning within the cinder bank. Disturbing the surface of the cinder bank may provide more oxygen to the fires and increase their intensity.

Subsidence: Due to fire eating away portions of the cinder bank under the surface and previous mining activities (to reclaim heavy metals), the cinder bank surface is likely to cave in unexpectedly. The use of heavy machinery on the cinder bank can contribute to this effect.

Dust: Working with heavy equipment on the cinder bank creates a great deal of dust. Consider-

able dust was created during previous mining activities. Similar dust would contain heavy metals and may further spread the contamination both through the air and through runoff from the cinder bank.

Physical Hazards: Previous mining activities created steep cliffs and overhangs which, with the subsidence danger, create serious safety issues for workers.

These dangers are not associated with the entire cinder bank but they do pose problems for significant portions of it.

Experimental Method Proposed

Due to these difficulties, EPA is evaluating an experimental control method proposed by HRD. In 1991, HRD proposed using a vegetative cover, similar to the one on Blue Mountain, to control dust emissions and reduce contaminated runoff from the cinder bank.

The Pennsylvania Department of Environmental Protection (PADEP) approved the proposal in principle in late 1992. After negotiating some sludge application issues, EPA approved the final work plan in August 1995. The plan proposes three phases. Phase I involves 94 acres of the cinder bank which are believed to be non-burning and accessible with limited grading of the surface.

Within this area, HRD would apply the sludge mixture at three different rates to determine which is the most effective and environmentally acceptable amount. The application rate is based on the amount of nitrogen in the sludge. HRD proposed a high rate (5,500 dry tons of nitrogen per acre), PADEP's current maximum rate (1,000 dry tons per acre), and a median rate (3,500 dry tons per acre). After applying the sludge mixture, HRD will apply grass seed mix and begin monitoring runoff and ground water for nitrogen and heavy metals.

Phase II involves 27 acres which are believed to be non-burning but require road construction to reach. Phase III involves 37 acres which are known or are expected to be burning.

Current Progress

HRD leveled approximately 13.2 acres of the cinder bank in September and October 1995 in preparation for sludge application in April 1996. HRD will start with the median application rate.



Operable Unit 3: Valley Soil Contamination

Background

The Source Identification Study conducted by the National Enforcement Investigation Center (NEIC) and released in 1994 confirmed that historic zinc smelting at the Palmerton plant is the primary source of the lead, cadmium, and zinc contamination in Palmerton soil and homes. In addition, the study revealed that current electric arc furnace (EAF) dust recycling activities at the facility also have contributed to the contamination.

EPA's approach to this contamination problem is twofold:

- Remove the threat to the most at-risk residents (small children and pregnant women)
- Assess the risk to other residents and then determine how to proceed.

Home Cleanup

Using data gathered through a previous environmental study of the area and additional outreach, EPA identified homes with both the most at-risk members and high levels of contamination. EPA then offered, if the residents agreed, to clean these homes to remove the contamination and protect the residents. The home cleanup program is voluntary. To date, EPA has begun cleanup work at 76 homes in Palmerton. While most homes have been completely cleaned, EPA was unable to clean all because of the drought. The remaining homes will be cleaned next spring.

Risk Assessment

The second part of EPA's approach involves conducting a risk assessment to determine whether the contamination poses dangers to residents other than the most at-risk population. HRD and Viacom have conducted two risk assessments. However these risk assessments were flawed and EPA decided to conduct its own.

Because of the high community concern regarding this operable unit, EPA allowed maximum community involvement in conducting the risk assessment. The PETF, the responsible parties, and EPA meet every two weeks so that EPA can receive input from the group and share information and progress on the risk assessment.

EPA continues to invite and evaluate input from the many stakeholders in Palmerton. This is not negotiation, but evaluation. EPA will decide the methods and data to include in the risk assessment process, and EPA will make the final determination about the risk posed by the industrial contamination.

Current Progress

The community, responsible parties, and EPA are successfully working together on this effort. In addition, EPA Region VIII is conducting a study with pigs to assess the hazards posed by the soil contamination in Palmerton. EPA is feeding Palmerton soil to the pigs and then studying how it is absorbed into their bodies. EPA expects to complete this study in March 1996 and use the data in the risk assessment. The responsible parties have offered to pay for this study.

EPA is very pleased with the progress of the risk assessment and the spirit of cooperation being shown between the community, the responsible parties, and EPA.



OPERABLE UNIT 4: GROUND WATER/SURFACE WATER CONTAMINATION

Background

EPA will request that the responsible parties conduct a study of the types and extent of contamination in the ground and surface water in the area around the site.

Current Progress

EPA is finalizing an Administrative Order on Consent (AOC) to the responsible parties. By signing the AOC, the responsible parties agree to conduct the work. EPA expects to submit the AOC to the parties by the end of the year.

EPA CONTACTS

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