

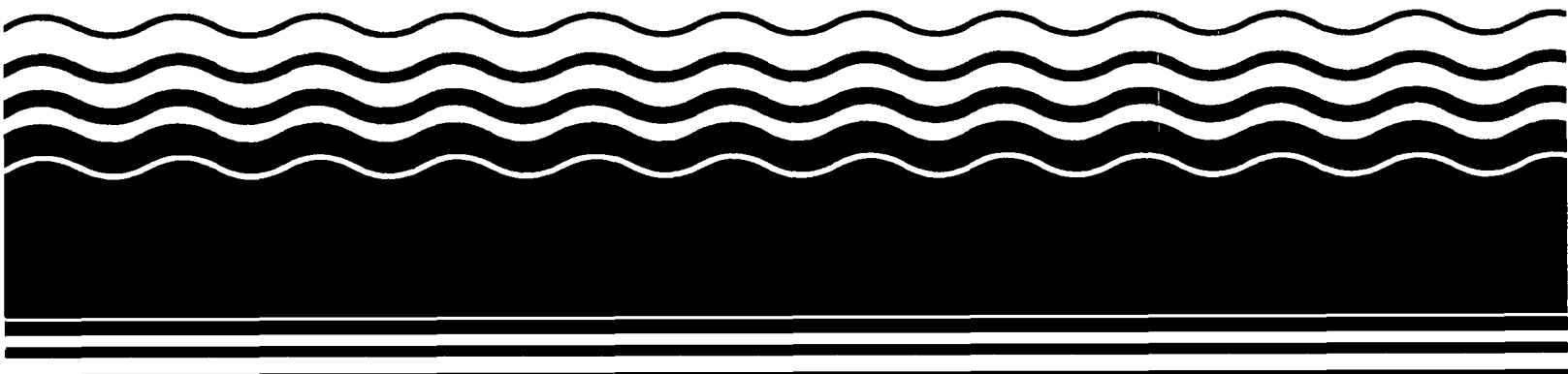
PB98-963131

EPA 541-R98-135

March 1999

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

Cosden Chemical Coatings Corp.
Beverly, NJ
9/24/1998



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEP 24 1998

REGION II

DATE:

SUBJECT: Explanation of Significant Differences for the
Cosden Chemical Coatings Superfund Site

FROM: Richard L. Caspe, Director
Emergency and Remedial Response Division

TO: Jeanne M. Fox
Regional Administrator

Attached for your approval is an Explanation of Significant Differences (ESD) for the Cosden Chemical Coatings Superfund site located in the City of Beverly, Burlington County, New Jersey. The differences between the remedy selected in the 1992 Record of Decision (ROD) and the actions described in the ESD relate to the on-site treatment of soil contaminated with inorganic compounds and PCBs, and the natural flushing of soil contaminated with volatile organic compounds (VOCs). The New Jersey Department of Environmental Protection (NJDEP) has reviewed and concurred with the ESD.

Extensive sampling performed during the remedial design has shown that significantly less soil is contaminated than estimated in the ROD, and that the contamination is distributed much more sporadically. As a result, EPA has determined that implementation of the in-situ treatment process called for in the ROD would be significantly more complicated and costly than originally anticipated and that off-site treatment and/or disposal, which was supported by the community, is preferable.

EPA has also re-examined the cleanup goals which were established in the ROD and has determined that the 500 parts per million (ppm) concentration for lead is no longer protective. As a result, the cleanup goal for lead is being changed to be consistent with the current EPA and NJDEP cleanup goal of 400 ppm.

Finally, EPA is also modifying the approach to remediating the VOC-contaminated soil which presents a source of ground water contamination. A relatively small amount of shallow soil contaminated with VOCs will also be excavated and transported off site for appropriate treatment and disposal. In addition, a soil vapor extraction system component will be added to enhance the effectiveness of the ground water extraction and treatment remedy currently being designed.

I recommend that you approve this ESD. My staff and I are available to discuss this recommendation at your convenience.

Attachment



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

SEP 18 1998

Mr. Richard Caspe
Director of Emergency Remedial Response Division
USEPA - Region II
290 Broadway - Floor 19
New York, N.Y. 10007-1866

Subject: Cosden Chemical Coatings Corporation Superfund Site
Explanation of Significant Difference (ESD)

Dear Mr. Caspe:

The Department of Environmental Protection has evaluated and concurs with the components of the Explanation of Significant Differences (ESD) proposed by EPA for the Cosden Chemical Coatings Corporation Superfund site. The differences between the remedy selected in the 1992 ROD and the actions described in the ESD relate to the on-site treatment of soil contaminated with inorganic compounds and PCBs and the treatment of VOCs. The changes include the following:

1. The original estimate of 8,000 cubic yards of soil contaminated with metals and PCBs was reduced to 3,700 cubic yards of soil to be addressed.
2. The treatment technology of in-situ stabilization for soil contaminated with inorganic contaminants and PCBs was changed to excavation, off-site stabilization, disposal and backfill.
3. Shallow soil contaminated with VOCs will now be excavated and transported off-site for treatment or disposal since these soils represent a continuing source to ground water contamination. No active remedial measures for VOCs were selected in the ROD since VOCs did not pose an unacceptable dermal contact or ingestion risk and were expected to flush out of the soils as part of the ground water extraction and treatment remedy.
4. A soil vapor extraction system component will be added to the ground water extraction and treatment remedy included in the ROD to address residual VOC contaminated soils.
5. The clean-up goal of 500 ppm for lead established in the ROD will be decreased to 400 ppm.

The State of New Jersey appreciates the opportunity to participate in the decision making process and looks forward to future cooperation with USEPA.

Sincerely,

Richard J. Giniello
Assistant Commissioner

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EXPLANATION OF SIGNIFICANT DIFFERENCES

COSDEN CHEMICAL COATINGS CORPORATION

Site Name and Location

Cosden Chemical Coatings Corporation
City of Beverly
Burlington County, New Jersey

Introduction

The United States Environmental Protection Agency (EPA) presents this Explanation of Significant Differences (ESD) to explain a change made to the remedy selected in the September 30, 1992 Record of Decision (ROD) for the Cosden Chemical Coatings Corporation Superfund site. This change relates to that portion of the remedy which addresses the treatment of soil and is the result of information obtained and developed subsequent to the 1992 ROD.

This ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. 9617(c), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300.435(c)(2)(i), which contain provisions for addressing and documenting changes that occur to a remedy after a ROD is signed. The ESD and documents which form the basis for the decision to change the response action will be incorporated into the Administrative Record for the site in accordance with Section 300.825(a)(2) of the NCP. The Administrative Record is available for review during normal business hours at EPA Region II, 290 Broadway, New York, New York 10007, (212) 637-4308, and at the Municipal Building in the City of Beverly, Burlington County, New Jersey.

Summary of Site History, Contamination Problems, and Selected Remedy

The Cosden Chemical Coatings site is located in the southeastern corner of the City of Beverly in Burlington County, New Jersey. The 6.7-acre site is bounded on the north and east by residential streets, on the south by Conrail tracks, and on the west by undeveloped land. The Beverly Elementary School is located 0.2 miles to the northeast. The neighboring area is suburban with some light industry. The Delaware River is approximately 4,000 feet to the north, and Rancocas Creek approximately 1.5 miles southwest of the site. Approximately 3,000 people live within a one-mile radius of the site.

Cosden Chemical Coatings Corporation was a paint formulation and manufacturing facility which produced coatings for industrial applications. In the manufacturing process, pigments were combined with resins and solvents and then placed into a mixing tank where other ingredients were added to produce the final coating products. The mixing tanks were then washed out with solvents, and the material was transferred to drums. Organic solvents used in the manufacturing process were recycled until 1974. After 1974, drums containing spent solvents were stored on site; some of these drums leaked onto the ground and caused soil and groundwater contamination. Solvents were also stored in underground storage tanks, which have leaked.

A grass fire that occurred at the site on April 22, 1980 prompted the Burlington County Department of Public Safety to report the site conditions to the New Jersey Department of Environmental Protection (NJDEP). Subsequent site visits by the NJDEP revealed the presence of surface spills, and several hundred unsecured drums. Various court actions and negotiations undertaken by NJDEP against Cosden Chemical Coatings Corporation resulted in a judicial consent order on February 5, 1985 that required Cosden to clean up the site. Cosden initiated the cleanup in February 1985, but abandoned cleanup efforts after 88 of 695 drums were removed. In January 1986, NJDEP undertook an emergency removal of the drummed material, and cleanup of surface spills around the drum storage areas.

The site was placed on the National Priorities List (NPL) of Superfund Sites in July 1987 and EPA began a remedial investigation and feasibility study (RI/FS) in April 1988. Cosden ceased operating in May 1989. In June 1989, EPA initiated emergency cleanup activities at the site by constructing a fence around areas of soil contamination and began removing the remaining drums, paint cans, pigment bags, mixing tanks, and underground storage tank contents. On May 28, 1990, as the removal action was nearly completed, a fire occurred inside the process building which consumed a majority of the building. The building was condemned by the Beverly City building inspector on May 31.

The RI found that the soil was contaminated with volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons, polychlorinated biphenyls (PCBs), and inorganic compounds; ground water was contaminated with VOCs and inorganics; and the building was contaminated with inorganics, PCBs, and asbestos. Based on the results of the RI, EPA and NJDEP established remedial action objectives for the site which called for prevention of exposures to contaminant sources that present a significant human health risk, and restoration of contaminated ground water to drinking

water standards. To accomplish these objectives, EPA selected a remedy in the ROD signed on September 30, 1992, which included the following major elements:

- In-situ stabilization of approximately 8,000 cubic yards of soil contaminated with inorganic compounds and polychlorinated biphenyls;
- Decontamination and demolition of the building on the site with disposal of the building debris at an appropriate off-site facility; and
- Extraction of contaminated ground water with on-site treatment and recharge to the underlying aquifer.

Because the levels of VOCs in the soil did not pose an unacceptable dermal contact or ingestion risk, no active remedial measures were selected in the ROD. The ROD recognized that the VOCs in the soil represented a continuing source of ground water contamination, but it expected that the VOCs would be gradually reduced through natural soil flushing and the operation of the ground water extraction and treatment system.

On-site activities related to the building decontamination, demolition and disposal were initiated in July 1995 and were completed in January 1996. The ground water remedy is currently being designed. This ESD addresses differences to the remedy selected for the soil cleanup.

Description of the Significant Differences and the Basis for those Differences

The differences between the remedy selected in the 1992 ROD and the actions described in this ESD relate to the on-site treatment of soil contaminated with inorganic compounds and PCBs, and the natural flushing of VOC-contaminated soil. The other components of the remedy selected in the 1992 ROD remain unchanged.

In the ROD, EPA evaluated the following alternatives for remediating the contaminated soil on the site: no action; limited action; capping; excavation, off-site stabilization and disposal, and backfill; excavation, on-site stabilization, and on-site backfill; and in-situ stabilization. Each alternative was evaluated with respect to a number of criteria including overall protection of human health and the environment; long-term effectiveness and permanence; reduction of toxicity, mobility, or volume; and cost.

The ROD determined that the no action/limited action alternatives would not offer adequate protection of human health and the environment, would not achieve cleanup goals, and would not

provide long-term effectiveness. It was determined that capping would be protective of human health but would not meet applicable or relevant and appropriate requirements (ARARs). It was determined that the three remaining alternatives would satisfy the majority of the evaluation criteria, and that the off-site treatment and disposal alternative would provide the greatest overall protection of human health and the environment, and long-term effectiveness. Further, the off-site treatment and disposal alternative was preferred by the community while the on-site alternatives were not supported. The off-site treatment and disposal alternative was not selected, however, because it was estimated to cost more than twice as much as in-situ stabilization and it was believed to be more difficult to implement due to a limited availability of acceptable off-site treatment and disposal facilities.

The ROD estimated that approximately 8,000 cubic yards (yd³) of soil contaminated with inorganic compounds and PCBs would be stabilized using in-situ solidification, and that soil and debris contaminated with PCBs at a concentration greater than 50 parts per million (ppm) would be transported off site for treatment and disposal. This was based on an assumption that a large, contiguous area was contaminated to a depth of four feet, and that the majority of the material was located within the site fence.

Extensive soil sampling was performed during the design of the remedy. That sampling indicated that, rather than being one large, contiguous area, the contamination is distributed in many isolated locations. This resulted in a reduction in the estimated volume of contaminated soil from 8,000 yd³ to less than 3,700 yd³. Additionally, the sporadic distribution of the contamination, and the presence of a greater portion of the contamination outside the site fence than originally believed, indicated that implementation of an in-situ stabilization treatment process and its subsequent monitoring would be significantly more complicated and costly than originally anticipated. Therefore, EPA reconsidered the off-site treatment approach and determined that it could be implemented more easily and cost effectively than an in-situ treatment remedy, and that it was the approach originally supported by the community. Further, analytical testing of the soil has indicated that much of it will not likely need to be treated prior to disposal at a permitted facility.

As a result, EPA has decided that off-site treatment and/or disposal of the soil is preferable to in-situ treatment. Utilizing off-site treatment and disposal will eliminate the need for long-term monitoring of the effectiveness of the in-situ treatment process, and likely eliminate the need for institutional controls. Because no costs associated with mobilizing and demobilizing a solidification/stabilization unit

at the site will be incurred, and the estimated volume of contaminated soil has been significantly reduced, the overall cost of the remedy will also be decreased. The estimated present worth cost to implement the original remedy is approximately \$3.3 million, compared to about \$2.1 million for this change to the remedy.

EPA has also re-examined the cleanup goals which were established in the ROD and has determined that the 500 ppm concentration for lead is no longer protective. As a result, the cleanup goal for lead has been changed to be consistent with the current EPA and NJDEP cleanup goal of 400 ppm. The other soil cleanup goals for the site (beryllium 1 ppm, chromium 390 ppm, and PCBs 1 ppm) remain unchanged. However, as noted in the ROD, EPA recognizes that NJDEP has requested that the soil be remediated to the levels specified in its Soil Cleanup Criteria, but because those criteria have not been promulgated they are not considered ARARs under Section 121(d) of CERCLA. The NJDEP may agree to fund the incremental cost associated with any additional cleanup, or to implement institutional controls. Further, because the NJDEP and EPA cleanup goals for PCBs are not substantially different, the soil remediation effort may actually achieve the NJDEP goal with no additional cleanup activity or cost.

Finally, EPA has also modified the approach to remediating the VOC-contaminated soil which presents a source of ground water contamination. A relatively small amount of shallow soil contaminated with VOCs will be excavated and transported off site for appropriate treatment and disposal during the soil remediation effort described above. In addition, a soil vapor extraction system component will be added to the ground water extraction and treatment remedy currently being designed. These efforts are expected to significantly reduce the duration of the ground water restoration and result in an overall cost savings.

Support Agency Comments

The State of New Jersey supports EPA's revision to the remedy and decision to issue this ESD.

Affirmation of Statutory Determinations

Considering the new information that has been developed and the changes that have been made to the selected remedy, EPA and NJDEP believe that the modified remedy remains protective of human health and the environment, complies with federal and state requirements that were identified in the ROD and this ESD as applicable or relevant and appropriate to this remedial action, and is cost effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.

Public Participation Activities

In accordance with the NCP, a formal public comment period is not required when issuing an ESD. However, EPA will announce the availability of this ESD in the Burlington County Times. This ESD has been placed in the Administrative Record for the site.



Jeanne M. Fox
Regional Administrator



Date