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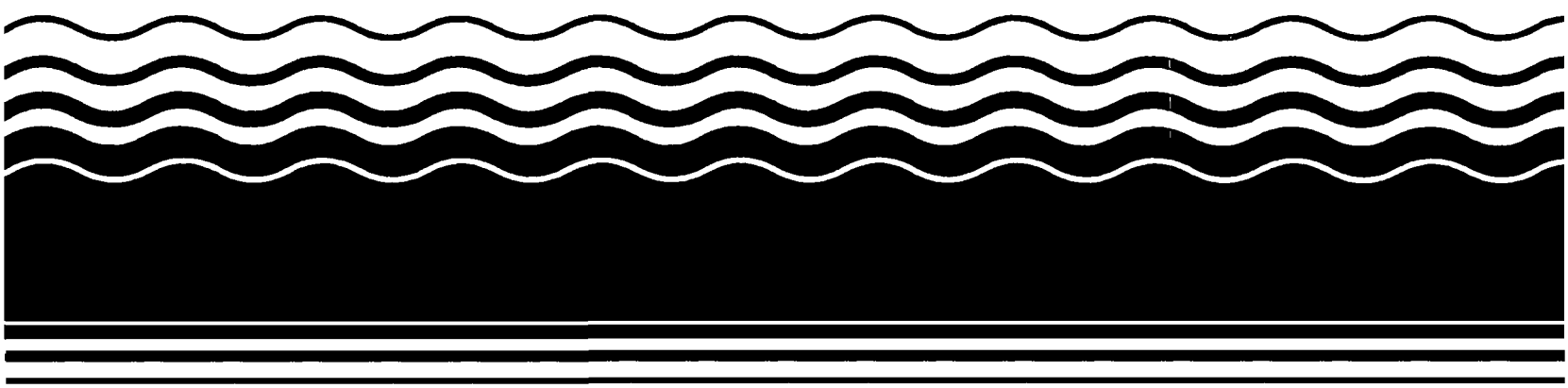
March 1999

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

Carroll & Dubies Sewage Disposal
Port Jervis, NY
8/24/1998



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: AUG 24 1998

SUBJECT: Explanation of Significant Differences for the Carroll & Dubies Sewage Disposal Superfund Site

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

TO: Jeanne M. Fox
Regional Administrator

Attached is an Explanation of Significant Differences (ESD) for the Carroll & Dubies Sewage Disposal Superfund site.

The March 31, 1995 first operable unit (OU1) Record of Decision (ROD) called for the excavation, treatment and long-term on-site containment of contaminated lagoon materials and soil. The ROD also contained a contingency remedy that would require some of those wastes to be transported off-site for treatment and disposal at a licensed hazardous waste facility, if studies during the design indicated it was not practicable to treat these materials on-site.

Supplemental sampling activities were conducted in March 1997 during the remedial design phase of the remedy. The results of the investigation confirm the findings of the previous investigations regarding the types of wastes and contaminants present in the lagoons. It was also found that the most highly contaminated waste disposed of in the lagoons, the industrial organic waste, has a very distinct color and plastic-like texture. The industrial waste has the tendency to bond together and separate from the surrounding solid waste in one mass. Therefore, the bioslurry treatment of these wastes was not deemed to be practicable; it was determined that the contingency remedy should be implemented. Based on these physical properties, and properties of other wastes present, it was determined that the waste in and surrounding each lagoon can be readily segregated into specific waste streams based on physical characteristics, making additional off-site treatment more cost-effective.

The modified remedy expands the off-site treatment and disposal component of the contingency remedy; more of the waste will be treated off-site. In addition, none of the waste will require on-site containment and maintenance i.e., all of the subject waste will either be treated below health-based levels, or will be disposed off-site at a licensed treatment and disposal facility. The contaminated materials targeted for remediation remains the same. The attached ESD documents these findings.

Please indicate your approval of the ESD by signing below. If you have any questions related to the ESD, please call me at extension 4390.

Approved: _____ 8/24/98
Jeanne M. Fox
Regional Administrator
Date

Attachment

Explanation of Significant Differences

CARROLL & DUBIES SEWAGE DISPOSAL SITE
Town of Deerpark Orange County, New York

EPA
Region 2

August 1998

INTRODUCTION

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 117(c), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan, if after the Environmental Protection Agency (EPA) selects a remedial action, there is a significant change with respect to that action, an explanation of the significant differences and the reasons for such changes must be published.

This Explanation of Significant Differences (ESD) describes changes to the March 31, 1995 First Operable Unit Record of Decision (OU1 ROD) for the lagoons and surrounding impacted soils located at the Carroll and Dubies Sewage Disposal Superfund Site (the Site). As discussed in detail below, this ESD eliminates the necessity for the long-term storage of contaminated wastes at the Site by enhancing the off-Site treatment and disposal component of the original remedy, while eliminating the on-Site containment cell. This ESD was developed by EPA, as lead agency, with support from the New York State Department of Environmental Conservation (NYSDEC). The changes summarized herein are described in the "Technical Memorandum Expanded Contingency Remedy Report" dated May 1998 and the "Sampling and Analysis Report" dated June 1997, which should be consulted for a more detailed description of the proposed changes to the selected remedy for the lagoons and surrounding impacted soils.

This ESD is being provided as a supplement to those reports, to inform the public of EPA's and NYSDEC's changes to the selected remedy for the lagoons and impacted soils, and to solicit public comment on the changes.

This ESD will become part of the Administrative Record file for the Site. The entire Administrative Record for the Site, which includes, among other things, the ROD, the Technical Memorandum Expanded Contingency Remedy, the Sampling and Analysis Reports, and other relevant documents, is available to the public for a public comment period, which begins on August 31, 1998 and concludes on September 29, 1998. These documents are available for public review at the following location:

Town Hall
Drawer A
Huguenot, New York 12746
Tel. (914) 856-2210
Hours: 8:00 a.m. - 4:00 p.m.
(Mon. - Fri.)

components of the OU1 ROD include:

- Excavation of all contaminated materials from Lagoons 1, 2, 3, 4, 6, 7 and 8, as well as the contaminated soils in the vicinity of those lagoons.
- Treatment of excavated soil/sludges which contain organic constituents above the treatment levels specified in the ROD via on-Site ex-situ vapor extraction.
- Additional treatment of Lagoon 7 soils/sludges via on-Site ex-situ bioslurry (treatment targeted primarily for semi-volatile contaminants).
- Stabilization/solidification of soils/sludges which fail the Resource Conservation and Recovery Act's (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) levels for inorganic constituents, as specified in 40 C.F.R. §262.24.
- Placement of treated and untreated soil/sludge in a lined and capped cell consistent with the modified requirements of New York Code of Rules and Regulations Part 360. The base of the cell was to have consisted of a high density polyethylene (HDPE) liner and a sand drainage layer. The cell was to be sloped to a leachate collection system. The cap was to have consisted of a low- permeability clay layer, an HDPE membrane, a sand drainage layer, and a topsoil cover layer.
- Recommendations that deed and well restrictions be imposed to protect the integrity of the cap.

The OU1 ROD also states that further treatability studies were necessary to demonstrate that the bioslurry process could reduce the complex mix of organic chemical constituents in Lagoon 7 to remediation goals. Because of this uncertainty, the OU1 ROD also included a contingency remedy for Lagoon 7 to be implemented if treatability study results indicated that bioslurry would not be effective in reducing the levels of contaminants in the Lagoon 7 materials, particularly, the semi-volatile contaminants, to remediation goals. The contingency remedy includes excavation, off-Site treatment and off-Site disposal of Lagoon 7 materials at a licensed hazardous waste treatment, storage and disposal facility.

Supplemental sampling activities were conducted in March 1997 during the remedial design phase of the remedy. These supplemental sampling activities consisted of waste and subsurface soil sampling, air monitoring and sampling, and the collection of one surface water sample from Lagoon 2. Twenty-four trenches were excavated in specific areas of the lagoons, 18 waste samples were collected from within the lagoons, and 25 soil samples were collected from below the waste. While the results confirmed the findings of the December 1993 Remedial Investigation Report (RI), regarding the types of wastes and contaminants present in the lagoons, it provided new information regarding the ability to segregate these wastes and refined the estimated volume of waste present. The results of the investigation indicate that the most highly contaminated waste disposed of in the lagoons, the industrial organic waste, has a very distinct color and plastic-like texture. The industrial waste has the tendency to bond together and separate from the surrounding solid waste in one mass. Based on these physical properties, and properties of other wastes present, it was determined that the waste in and surrounding each lagoon can be segregated into specific waste streams based on physical characteristics. Four waste types

Lagoons 3, 7 and 8

Multi-colored industrial waste was encountered in discrete areas of Lagoons 3, 7 and 8. The colors include pink, green, turquoise, white gray and tan. The waste was disposed in localized layers that range from less than 1 inch to 2 feet in thickness. In addition to being distinct in color, the waste has similar physical properties that distinguishes it from the other waste disposed in the lagoons, in that the waste is highly plastic and greasy in texture. Analysis of the industrial waste in Lagoons 3 and 7 indicate the presence of volatile organic compounds (VOCs) above the remediation levels. These VOCs include benzene, 1,4-dichlorobenzene, toluene, and tetrachloroethene, and the semi-volatile organic compound, di-n-butylphthalate. The industrial waste in Lagoons 3 and 7 did not contain inorganic compounds in excess of levels requiring excavation.

Lagoon 8 contains industrial waste with VOCs similar to Lagoons 3 and 7. However, benzene, toluene, 1,4-dichlorobenzene, trichloroethene, and tetrachloroethene levels are significantly lower than the concentrations identified in Lagoons 3 and 7. The industrial waste found in Lagoon 8 is also different from that in Lagoons 3 and 7 in that it contains elevated levels of chromium.

The industrial wastes in Lagoons 3, 7 and 8 are mixed with municipal sewage sludge/septage waste, and solid waste. The sewage and solid waste material is layered between and around the industrial waste. Based on the data collected from the additional sampling activity, the sewage and solid wastes have been impacted by the disposal of industrial waste.

The subsurface soil below the areas that contain industrial waste in Lagoons 3, 7 and 8 has also been impacted by contaminants identified in the industrial waste disposed in the respective lagoons.

The impact to the subsurface soil in Lagoon 3 appears to be limited to three feet below the industrial waste. In Lagoon 7, excavation levels were exceeded in the subsurface soil for di-n-butylphthalate and tetrachloroethene down to a depth of 12 feet (approximately four feet below the bottom of the lagoon waste).

Subsurface soil below the bottom of Lagoon 8 waste exceeded the excavation level for chromium. The vertical extent of the chromium impact is approximately 20 to 23 feet below the ground surface in Lagoon 8. This subsurface soil will require excavation and removal. Deeper soils are not believed to be impacted by chromium or other contaminants. In the event that sampling indicates that deeper soils exceed the excavation levels, excavation will continue to the water table, which has been encountered at approximately 30 to 31 feet below ground surface in the vicinity of Lagoon 8.

DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE REASONS FOR THOSE DIFFERENCES

By this notice, EPA is modifying the remedy selected in the OU1 ROD. The modified remedy expands the off-Site treatment and disposal component of the contingency remedy; more of the waste will be treated off-Site. In addition, none of the waste will require on-Site containment and maintenance i.e., all of the subject waste and soil will either be treated below health-based levels, or will be disposed off-Site. The contaminated materials targeted for remediation and all the cleanup levels in the OU1 ROD remain the same.

In addition, the modified remedy continues to utilize permanent solutions and alternative treatment technologies to the maximum extent practicable for this Site.

PUBLIC PARTICIPATION ACTIVITIES

EPA and NYSDEC rely on public input to ensure that the concerns of the community are considered. Towards this end, EPA invites comments or questions related to this ESD. This document and supporting information are available to the public through their inclusion in the Administrative Record for the Site located at the addresses listed above. The public comment period begins on August 31, 1998 and continues until September 29, 1998. All comments or questions should be directed to:

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Eastern New York Remediation Section
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, New York 10007-1866

Telephone: (212) 637-3967
Fax: (212) 637-3966