STATE OF NEW YORK
DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

December 21, 2001

Mr. Michael O'Toole, P.E., Director
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway – 11th Floor
Albany, New York 12233-7011

Re: Explanation of Significant Differences
Volney Landfill
Site #738003 — File
(T) Volney, Oswego County

Dear Mr. O'Toole:

Staff reviewed the October 2001 Explanation of Significant Differences (ESD) for the Volney Landfill located in Volney, Oswego County. The 1987 Record of Decision (ROD) for the Volney Landfill, as modified by a 1989 Post Decision Document and a 1997 ESD, calls for the capping of the landfill side slopes and ground water extraction and treatment on an as needed basis. On-site and off-site monitoring wells, in addition to nearby residential wells, will be monitored on a long-term basis to evaluate the effectiveness of the selected remedy. Institutional controls preventing use of contaminated ground water downgradient from the landfill will be implemented and enforced by Oswego County. The ROD also called for further evaluation of potential migration of contaminants in groundwater and surface water.

Based on the results of the investigation recommended in the ROD, it has been determined that the existing remedy will adequately address the site-related ground water contamination.

I believe the remedy remains protective of public health. If you have any questions, please call Mr. Michael Rivara at (518) 402-7850.

Sincerely,

Gary A. Litwin, Director
Bureau of Environmental Exposure Investigation

cc: Mr. M. Rivara/Mr. D. Geraghty/FILE
Mr. J Quinn/Ms. H. Bishop - DEC
Mr. E. Walsh - OCHD
Mr. R. Parker - DEC Reg 7

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New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action
625 Broadway, Albany, New York 12233-7015
Phone: (518) 402-9625 • **FAX:** (518) 402-9022
Website: www.dec.state.ny.us

Vasu

Erin M. Crotty
Commissioner

MEMORANDUM

TO: Salvatore Ervolina, Assistant Division Director, DER

FROM: Chittibabu Vasudevan, Bureau Director, BERA, DER

SUBJECT: Volney Landfill Proposed ESD, Site ID # 738003

DATE: DEC 27 2001

FILE COPY

Please find attached a copy of the revised Explanation of Significant Differences (ESD) document for the above referenced Volney Landfill site, as submitted by the United States Environmental Protection Agency by email on December 14, 2001. This ESD has been submitted by the USEPA to address the Contamination Pathways Operable Unit 2 (OU2) portion of the site. USEPA feels that it has incorporated state concerns regarding institutional controls and the long term groundwater monitoring program (please see Section 3 & Footnote 4).

Also attached are:

- ✓ A copy of the original Explanation of Significant Differences
- ✓ A "red line strikeout" comparison of the original and revised documents
- ✓ A letter of concurrence provided by the New York State Department of Health
- ✓ A transmittal letter from you to the Division Director recommending concurrence
- ✓ A letter of concurrence for the Division Director's signature

Please notify me if you desire a briefing by staff on this revised document.

Attachments

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action, Room 242
50 Wolf Road, Albany, New York 12233-7010
Phone: (518) 457-4349 • **FAX:** (518) 457-4198
Website: www.dec.state.ny.us

John P. Cahill
Commissioner

April 14, 2000

Mr. Bruce N. Clark
Oswego County
Office of the County Attorney
Legislative Office Building
46 East Bridge Street
Oswego, N. NY. 13126-2137

Re: Volney Landfill Site Id No. 738003
95% Remedial Design Report

I am writing in regard to the above referenced document and the subsequent Final Remedial Design Report. Representatives of Barton & Loguidice, P.C., Oswego County and NYSDEC held a telephone conference call on April 11th to discuss outstanding issues related to the existing final design, as approved by the U. S. Environmental Protection Agency, of the Volney Landfill Gas Control System. From the points discussed during this conference call, the NYSDEC is requesting additional information (which B&L will provide) and gas sampling requirements.

- Based upon the discussion and descriptions provided during the conference call by Barton & Loguidice, P.C., the NYSDEC now has the requisite information to allow the current Landfill Gas Control System contained in the Volney Landfill Remedial Design Report Final Design, dated September, 1999, calling for the installation of four vents per acre with one vent in four installed deep into the waste mass. However, the NYSDEC has significant concerns with the emission of gaseous chlorinated organic compounds from the landfill and will require sampling of the deep gas wells to be installed. Eighteen of the forty-four deep wells must be sampled on a random distribution and analysis of the samples effected according to EPA method TO-14 to provide site-specific data. Should the sampling data and subsequent modeling forecast unacceptable concentrations of contaminant gases at off-site receptors, NYSDEC will require treatment of the vented gases, whether through an active gas collection and treatment system, or flaring (supported by information that the constituents will be reduced to acceptable concentrations or dissociated to benign products), or any other treatment system B&L may consider effective and economically feasible.

- During construction of the remedy, in the interests of worker safety and potential off-site receptors, DEC requires gaseous sampling to ensure that they will not be impacted by unacceptable concentrations A significant portion of total landfill gas generated will be allowed to migrate off site based upon the landfill gas collection design; therefore, in addition to the deep well sampling, an ambient air monitoring plan must be developed to sample locations along the perimeter of the landfill at a minimum, depending upon initial sampling results. Additionally, please note that the NYSDEC may require a modification to the gas collection design dependent on the results of the gas sampling and potential migration data.

← gas handling?

- The landfill gas collection system cited on pg. 15 of the Final Design document (Drawing G-2) was never included in the submission. This drawing needs to be submitted to the NYSDEC for review.

asked for full set

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action
625 Broadway, Albany, New York 12233-7015
Phone: (518) 402-9625 • **FAX:** (518) 402-9022
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

MEMORANDUM

TO: Chittibabu Vasudevan, Assistant Division Director, DER

FROM: Jim Quinn, Federal Projects Section, BERA, DER

SUBJECT: Volney Landfill Proposed ESD, ID # 738003

DATE: November 16, 2001

In advance of our briefing on November 26, 2001, please find attached a copy of the proposed Explanation of Significant Differences (ESD) for the above referenced Volney Landfill site as well as a copy of a site summary sheet. This ESD has been submitted by the United States Environmental Protection Agency (USEPA) to address the Contamination Pathways Operable Unit 2 (OU2) portion of the site.

Attachments

cc: J. Quinn / H. Bishop / File

Explanation of Significant Differences (ESD) Summary Sheet
November 2001

Site Number: 738003
Name of Site: Volney Landfill
Town and County: Town of Volney, Oswego County

Prepared By:
United States Environmental Protection Agency

Description of Problem:
Landfilling operations were conducted at the 85 acre unlined Volney Landfill from 1969-1983. The landfill is presently owned by Oswego County, the RP for the site. Most of the waste materials disposed of at the landfill consisted of residential and industrial wastes, however approximately 8,000 drums from Pollution Abatement Services, a hazardous waste incineration facility located in Oswego County, were approved for disposal by NYSDEC. Although the approval was for only known and limited chemical residues, it was later learned that about 50 to 200 drums contained liquid waste of unknown volume and composition. The location(s) of these drums within the landfill is unknown. In 1979 NYSDEC entered into a consent order with the landfill owner, Oswego County, after groundwater quality standards were contravened in monitoring wells near the site.

Description of Remedy:
A Record of Decision was prepared by USEPA in 1987 to address source control measures for the Volney Landfill site. The ROD was later modified by a 1989 Post-Decision Document and a 1997 ESD, calling for the capping of the landfill side slopes and ground water extraction and treatment, on an as-needed-basis. The ROD also mandated the performance of a Contamination Pathways Remedial Investigation and Feasibility Study (CPRI/FS) as a second operable unit (OU2) to evaluate the potential for the migration of contaminants into the ground water, surface water, and sediments of the adjacent areas surrounding the site. Based upon the results of the Contamination Pathways Remedial Investigation Report (CPRI), EPA has determined that the above-described ground water remedy, in combination with natural attenuation, will adequately address the site-related ground water contamination. In addition, EPA has determined that the surface water and sediments located in the nearby creek and the surrounding wetlands do not pose a threat to public health nor an ecological threat. Based upon these above referenced conclusions, EPA has decided that completing a Feasibility Study and ROD for the second operable unit of the site are unnecessary, and has therefore issued the attached ESD.

Issues:
NYSDEC and NYSDOH have asked EPA for the implementation of institutional controls restricting the use of groundwater on all county owned properties neighboring the landfill site. Bedrock and overburden monitoring wells showed concentrations of VOCs and SVOCs above 6 NYCRR Part 703.5 standards. Arsenic has been detected above drinking water standards in downgradient bedrock wells. Elevated levels of arsenic found in bedrock wells has been attributed to naturally occurring arsenic. Residential wells sampled have not shown contamination above drinking water standards. Delineation of specific downgradient wells to be sampled under a long term groundwater monitoring plan has not yet been completed.

Explanation of Significant Differences

VOLNEY LANDFILL SITE

TOWN OF VOLNEY
Oswego County, New York

EPA
Region 2

October 2001

MARK YOUR CALENDAR

November ??, 2001 at 7:00 p.m.: Public availabiltily session to discuss this Explanation of Significant Differences.

Volney Town Hall
1445 County Route 6
Fulton, New York 13069

INTRODUCTION

Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan require an explanation if, after the selection of a remedial action plan, a component of the action differs in any significant respect from the original action. Any such significant difference, and the reasons for such changes, must be published.

The 1987 Record of Decision (ROD) for the Volney Landfill site, as modified by a 1989 Post-Decision Document (PDD) and a 1997 Explanation of Significant Differences (ESD), called for the capping of the landfill side slopes[1] and ground water extraction and treatment, on an as-needed-basis, to address the intermittent ground water contamination impacting areas immediately downgradient from the landfill. In addition, institutional controls (*i.e.*, deed restrictions) will be implemented to prevent the installation of drinking water wells immediately downgradient from the landfill.

The ROD also called for a supplemental investigation to evaluate the potential for the migration of contaminants in the ground water and to the surface water and sediments of the adjacent Bell Creek and wetlands surrounding the site.

Based upon the results of this supplemental investigation, it has been determined that the above-described ground water remedy will adequately address the site-related ground water contamination. Moreover, natural attenuation[2] appears to be occurring between the landfill and downgradient residential wells, thereby providing further protection to these wells. In addition, it has been determined that the surface water and sediments located in Bell Creek and the surrounding wetlands do not pose a threat to public health or an ecological threat. Therefore, it has been concluded that the remedy for the site is protective of human health and the environment and complies with federal and state requirements that were identified in the ROD. The findings noted above are being documented by this ESD.

This ESD will become part of the Administrative Record file for the site. The entire Administrative Record for the site, which includes the remedial investigation (RI) report, feasibility study (FS) report, ROD, PDD, Contamination Pathways Investigation Report, Contamination Pathways Investigation Human Health and Ecological Risk Assessments, the 1997 ESD, this ESD, and other relevant documents are available for public review at the following location:

Fulton Public Library
160 South First Street
Fulton, NY 13069

Hours: 10:00 A.M. - 5:00 P.M. (Monday, Friday, and Saturday), 10:00 A.M. - 8:00 P.M. (Tuesday - Thursday)

The Administrative Record file and other relevant reports and documents are also available for public review at the EPA Region II office at the following location:

U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, New York 10007

[1] The top of the landfill was capped in the early 1980s

[2] Natural attenuation is the use of natural processes, such as degradation, dispersion, and dilution, to reduce contaminant concentrations to levels that are protective of human health and the environment

Hours: 9:00 A.M. - 5:00 P.M. (Monday - Friday)

SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

The 85-acre Volney Landfill is located in a rural area of the Town of Volney, New York. Bell Creek, which flows north to south, is located to the east of the landfill and wetlands are located to the north, east, southeast, and southwest of the landfill.

Landfilling operations were conducted in a 55-acre unlined disposal area from 1969 to 1983. Most of the waste materials disposed of at the landfill consisted of residential, commercial, institutional, and light industrial wastes; however, approximately 8,000 drums from Pollution Abatement Services, a hazardous waste incineration facility located in Oswego, New York, were approved for disposal at the landfill by the New York State Department of Environmental Conservation (NYSDEC). While the approval applied only to discarded drums containing known and limited chemical residues, it was later reported that approximately 50 to 200 of these drums contained liquid waste of unknown volume and composition. The physical condition and locations of these drums in the landfill are unknown.

After ground water quality standards were contravened in monitoring wells located near the site, in 1979, NYSDEC entered into a consent order with the current owner of the landfill, Oswego County. The consent order required the capping the landfill top with a liner and soil, capping the side slopes with compacted soil, installing a gas collection system, and installing a leachate[3] collection system. This work was performed between 1979 and 1985. Off-site leachate disposal and ground water monitoring have been performed since the completion of the closure activities.

In October 1984, the Volney Landfill site was included on the Superfund National Priorities List.

An RI/FS was conducted from 1985 to 1987 by NYSDEC, and a ROD was signed by EPA on July 31, 1987. The selected remedy included capping of the landfill side slopes with an impermeable membrane, installation of a more extensive leachate collection drain system and a subsurface ground water containment barrier (slurry wall), treatment of the collected leachate either on- or off-site, and long-term monitoring.

After the signing of the ROD, it was learned that a quality assurance/quality control review of the analytical data associated with the RI had not been performed. EPA re-sampled the site in 1988 and, based upon the sampling results, concluded that hazardous substances were present at the site at levels that posed a risk to public health and the environment. On September 29, 1989, EPA issued a PDD, which reaffirmed the remedy selected in the ROD. In response to comments received during the public comment period, the PDD also called for a re-evaluation of the cost-effectiveness of the slurry wall called for in the ROD and a determination as to whether to provide for on- or off-site leachate treatment.

Studies conducted from 1989 to 1990 provided information about off-site leachate treatment and updated the construction costs for the site remedy. The studies concluded, however, that before any final decisions related to the slurry wall or leachate treatment could be made, additional testing was needed to resolve several critical issues concerning the site hydrogeology (*i.e.*, possible artesian conditions, ground water flow issues, and no reduction in contaminated leachate collection volume since the 1985 capping of the landfill).

An Administrative Order on Consent was signed in 1993 for the performance of a pre-design study by a group of Potentially Responsible Parties (PRPs). Based upon the results of the pre-design study, which was completed in 1997, EPA determined that there is no definable contaminant ground water plume, only intermittent increases in contaminant concentrations. It was also determined that natural attenuation is occurring in a sizable buffer zone between the landfill and eight downgradient residential wells. This conclusion was based upon the fact that contamination has not been found in the downgradient private wells, with the closest well being located approximately 450 feet from the landfill. In addition, it was determined that the installation of a slurry wall and a more extensive leachate collection drain system would not offer a significant protective benefit when considering its relatively high cost and the relatively low contaminant concentration of the leachate that is generated. Also, off-site treatment and disposal of the leachate would be more cost-effective than on-site treatment and disposal (due to the low concentration of leachate that is generated and the significant cost to construct and operate an on-site treatment facility). Based upon these findings, an ESD was issued by EPA in 1997, which concluded that a slurry wall should not be installed, the intermittent ground water contamination should be extracted on an as-needed-basis, and the collected contaminated ground water should be treated off-site.

Negotiations with 40 PRPs for the performance of the design and construction of the remedy resulted in the PRPs signing a consent decree in May 1998. The design began shortly thereafter, and was completed in September 1999. The construction commenced in the Summer of 2000, and was completed in late September 2001.

The ROD called for an investigation to evaluate the potential for the migration of contaminants in the ground water and to the surface water and sediments of the adjacent Bell Creek and wetlands surrounding the site. This investigation was initiated in 1990 under an Administrative Order on Consent with the PRPs, but was delayed while the pre-design study noted above was

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[3] Leachate is the liquid that trickles through or drains from the land filled waste, carrying soluble components from the waste

completed. The investigation was reactivated in 1998 (at the same time as the initiation of the design). The resulting Contamination Pathways Investigation Report and Contamination Pathways Human Health and Ecological Risk Assessments were completed in September 2001.

DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

The 1987 ROD for the Volney Landfill site, as modified by the 1989 PDD and 1997 ESD, calls for ground water extraction and treatment, on an as-needed-basis, to address the intermittent ground water contamination located downgradient from the landfill. In addition, institutional controls (*i.e.*, deed restrictions) will be implemented to prevent the installation of drinking water wells immediately downgradient from the landfill. The ROD also called for an investigation to evaluate the potential for the migration of contaminants in the ground water and to the surface water and sediments of the adjacent Bell Creek and wetlands surrounding the site. Based upon the results of that investigation, it has been determined that intermittent ground water extraction and treatment, in combination with natural attenuation, will adequately address the site-related ground water contamination and a supplemental ground water remedy does not need to be implemented.

While the levels of contaminants in the ground water downgradient from the landfill intermittently exceed drinking water standards (*e.g.*, the levels of total volatile organics have varied from 170 to over 2,000 micrograms per liter [µg/l])[4] in one well located within 30 feet of the limit of waste and from non-detect to levels marginally above drinking water standards in several wells located within 200 feet of the limit of waste), there are no drinking water wells in this area. However, to avoid future risk to human health, institutional controls will be established to prevent the installation of drinking water wells until ground water standards are met.

Seven surface water samples (five from Bell Creek and an adjacent wetland and one each from tributaries feeding into Bell Creek and Black Creek) and 11 sediment samples (six from Bell Creek and an adjacent wetland, one each from tributaries feeding into Bell Creek and Black Creek and three from other drainage areas) were analyzed for a total of 22 inorganic and 99 organic compounds. There were no site-related organic compounds identified as contaminants of potential ecological concern in the surface water and sediment samples. The levels of inorganic compounds present in the surface water and sediments do not exceed NYSDEC's inorganic sediment screening values[5]. Based upon these findings and the fact that there is no visible evidence of ecological effects (*e.g.*, no stressed vegetation), it has been concluded that the levels of contaminants that are present in the surface water and sediments in the creeks and wetlands and other areas in the vicinity of the site do not pose an ecological threat. Also, the levels of contaminants that are present in the surface water and sediments do not pose a public health threat. Consequently, the surface water and sediments do not require remediation.

SUPPORT AGENCY COMMENTS

NYSDEC supports the findings of this ESD.

AFFIRMATION OF STATUTORY DETERMINATIONS

Considering the results of a supplemental investigation, EPA and NYSDEC believe that the remedy remains protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to this remedial action or provides justification for a waiver, and is cost-effective. In addition, the remedy utilizes 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 in selecting an effective remedy for each Superfund site. Toward this end, a public availability session will be held at the Volney Town Hall, Volney, New York on November XX, 2001 at 7:00 p.m. to discuss the ESD. Questions or comments related to this ESD or the planned construction activities can also be directed to:

Jack O'Dell
Remedial Project Manager
Central New York Remediation Section
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, New York 10007-1866

Telephone: (212) 637-4256
Telefax: (212) 637-3966
e-mail: odell.jack@.epa.gov

[4] The drinking water standard for individual volatile organic compounds is 5 µg/l

[5] Division of Fish and Wildlife, Division of Marine Resources, *Technical Guidance for Screening Contaminated Sediments* November 1999

File on eDOCs X Yes _____ No
Site Name Volney
Site No. 738003
County ~~Oswego~~ Oswego
Town Volney
Foilable X Yes _____ No
File Name 2002-01-09 FSD
Scanned & eDOC _____