Explanation of Significant Differences

Cortese Landfill Site

TOWN OF TUSTEN
SULLIVAN COUNTY, NEW YORK

EPA Region 2 September 2013

INTRODUCTION

Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 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 in an Explanation of Significant Differences (ESD).

In October 2010, the U.S. Environmental Protection Agency (EPA), as the lead agency, along with the New York State Department of Environmental Conservation (NYSDEC), as the support agency, issued a Record of Decision (ROD) and ROD Amendment (2010 ROD/ROD Amendment) for the Cortese Landfill Superfund Site (Site), which amended the remedy selected in the 1994 ROD for this Site and called for, among other things, treatment of saturated[1] volatile organic compound (VOC)-contaminated source material in two newly identified source areas of the Site using air sparging (AS) and soil-vapor extraction (SVE), followed by the application of in-situ chemical oxidation, if necessary, to address remaining more recalcitrant source materials. The primary source area is located beneath the disposal trench in the center of the landfill where groundwater concentrations of contaminants consistently exceeded federal and state standards. The secondary source area was thought to exist beneath the former septage lagoons and a small disposal trench outside the landfill footprint. See Figure 1.

At the time of the 2010 ROD/ROD Amendment, the extent of contamination to be treated had been delineated in the primary area and contamination was inferred to be present in the secondary area. Since the issuance of the 2010 ROD/ROD Amendment, soil boring data collected in association with the installation of AS wells in the secondary source area indicate that no material was detected that would constitute a source of contamination to groundwater. It appears that previous remedial activities in conjunction with time have eliminated the need for AS and SVE in this area. This ESD presents, and provides the basis for, this modification.

SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

The Site, located within the Town of Tusten (Hamlet of Narrowsburg), Sullivan County, New York, is bounded to the northeast by a steep bedrock escarpment and to the southwest by the Norfolk Southern railroad embankment. The Delaware River is located approximately 400 feet west of the landfill. The property encompasses approximately 3.75 acres of land owned by the defunct John Cortese Construction Corp. and another 1.53-acre parcel along the northern margin of the Cortese property owned by the Town of Tusten, which purchased the property from Mr. Cortese in 1973. On the landfill-side of the railroad embankment, areas to the southeast, east and northeast are wooded. Areas south of the landfill are seasonally flooded as a result of perched water conditions. In addition, there are several small wetlands in the immediate area of the landfill. Along the western perimeter of the 3.5-acre landfill are an unpaved road and the railroad embankment. The unpaved road, which is between the landfill and the railroad embankment, is used by Norfolk Southern employees for access to the railroad tracks.

Six residences are located between the railroad embankment and the Delaware River. The residences are connected to the Narrowsburg public water supply. The water supply is currently provided by three wells, one of which is located approximately 750 feet northwest of the landfill. These wells are hydraulically upgradient or sidegradient of the Site and are, thus, not affected by Site-related contamination.

[1] Below the water table.

The landfill, which was initially called the Tusten Landfill, received municipal waste at an estimated rate of 3,000 cubic yards per year from 1970 to 1981. Prior to 1970, the property that the landfill now occupies was undeveloped. Disposal practices at the landfill were poorly documented, hence records regarding the types and volume of waste received are essentially nonexistent. For a six-month period in 1973, however, drummed industrial wastes were apparently received at the landfill, most of which were transported by Gaess Environmental Services, Inc. (purchased thereafter by SCA Services, Inc. or SCA). These wastes apparently included drums containing paint thinners and sludge, solvents, dyes, waste oil, and other petroleum waste products. Disposal included the burial and/or emptying of drums in trenches and the emptying of tanker trucks into one of two lagoons located on-site south of the landfill. The other lagoon was allegedly used exclusively for the disposal of residential septage sludge.

A Draft Environmental Impact Statement for the Tusten Landfill was submitted to the NYSDEC in 1979 to fulfill part of the requirements necessary to complete a permit filed by the John Cortese Construction Corp. in order to continue to operate the landfill. The report concluded that a need existed for the continued operation of the landfill and it recommended groundwater monitoring to determine potential adverse effects from previous disposal practices. Subsequent groundwater monitoring revealed elevated concentrations of VOCs and semi-volatile organic compounds (SVOCs). Based on the results of this monitoring, the Site was placed on the National Priorities List (NPL) in June 1986.

Following the listing of the site on the NPL, SCA performed a remedial investigation (RI) from 1987-1989 under NYSDEC oversight. The results revealed elevated levels of VOCs, SVOCs and metals in soil and groundwater. In April 1990, NYSDEC transferred the lead role for the Site to the EPA. The EPA subsequently entered into an Administrative Order on Consent (AOC) with SCA to perform supplemental RI work and to complete a feasibility study (FS). Based upon the results of the RI/FS, a ROD was signed in September 1994 (1994 ROD), selecting a remedy for the Site. The key components of the selected remedy included the removal and off-Site treatment and/or disposal of drums and contaminated soil associated with the drums, construction of a low permeability cover system over the landfill meeting the requirements of 6 NYCRR Part 360, extraction and treatment of contaminated groundwater at the landfill and natural attenuation of the groundwater contamination downgradient from the landfill perimeter.

The drum and septage lagoon removal components of the selected remedy were performed in 1995 and 1996. Removal of 300 drums, the septage lagoons, and associated contaminated soils from small trenches in the secondary source area was performed in 1995. Approximately 4,700 drums were removed from the disposal trench in the center of the landfill (the primary source area) in 1996. In all, the drum and septage lagoon removal effort resulted in the excavation and removal of more than 5,000 drums, three tractor-trailer loads of hazardous sludge and 50 dump trucks of contaminated soil. The cap component of the remedy was completed in 1998.

In scoping out the design of the groundwater extraction and treatment system, it was determined that there were logistical problems associated with construction of this aspect of the remedy, including space constraints related to siting the groundwater management system's infrastructure, as well as difficulties related to transmitting the treated effluent either beneath the railroad embankment to the Delaware River or to groundwater. In response to these concerns, considerable effort was devoted to discerning remedial approaches that would reduce the reliance on the full-scale groundwater extraction and treatment system contemplated in the 1994 ROD. These efforts took the form of investigations, studies and bench- and pilot-scale treatability testing. As a result of the reassessment, which was performed through 2009, the EPA concluded that there were previously unidentified sources of VOC non-aqueous phase liquid (NAPL)[2] contamination in saturated soils located beneath the former drum-disposal areas (a primary area located beneath the landfill drum-disposal area, with the presumption that a small, secondary drum-disposal/septage-lagoon area located south of the landfill was similarly affected).

The 1994 ROD estimated that capping the landfill in combination with groundwater extraction and treatment at the landfill and downgradient natural attenuation would result in achieving the cleanup goals in the groundwater in 14 years. With the confirmed presence of a NAPL source, the cleanup time-frame estimate for the groundwater remedy increased to 150 years. For this reason, new remedial alternatives were assessed in the document entitled *Former Source Areas Feasibility Study Report, Cortese Landfill Site, Narrowsburg, New York*, Geosyntec Consultants, September 2010 (2010 FS). The 2010 ROD/ROD amendment was approved on October 5, 2010 and provided for a source area remedy (ROD) and a modified groundwater remedy (ROD amendment), which included treatment of saturated VOC-contaminated source material in two areas of the Site using AS with SVE, followed by the application of in-situ chemical oxidation, if necessary, to address remaining more recalcitrant source materials. The remedy selected in the 2010 ROD/ROD Amendment also calls for the utilization of monitored natural attenuation[3] of the groundwater downgradient from the landfill perimeter.

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[2] Concentrated liquid contamination, typically oil-like, that forms a separate phase in the subsurface.

[3] Natural attenuation is a variety of *in-situ* processes which, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in groundwater.

BASIS FOR THE DOCUMENT AND DESCRIPTION OF SIGNIFICANT DIFFERENCES

The 2010 ROD called for, among other things, treatment of saturated VOC-contaminated source materials in the primary and secondary source areas using AS with SVE.

Soil boring data collected in association with the installation of the AS wells in the secondary source area now indicates that there is very little contamination in this area; more specifically, no material was detected that would constitute a source of contamination to groundwater. The data indicate that the drum and lagoon soil removal effort in conjunction with time has eliminated the potential risk to human health and the environment and, consequently, the need for AS and SVE in this area. This ESD documents this modification.

The estimated present-worth cost of treating the contaminated source materials with AS/SVE in both source areas is $8,100,000. The estimated present-worth cost of treating only the area located beneath the landfill drum-disposal area is $6,100,000.

SUPPORT AGENCY COMMENTS

NYSDEC, after careful consideration of the modified remedy, supports this ESD, as the modified remedy significantly changes but does not fundamentally alter the remedy selected in the 2010 ROD.

FIVE-YEAR REVIEWS

Since hazardous substances, pollutants or contaminants remain at the Site which do not allow for unlimited use or unrestricted exposure, in accordance with 40 CFR 300.430(f)(4)(ii), the remedies for the Site must be reviewed no less often than every five years.

Five-year reviews were completed in 2001, 2006 and 2011. A fourth five-year review will be conducted before July 2016.

AFFIRMATION OF STATUTORY DETERMINATIONS

Considering the new information that has been developed and the change that has been made to the selected remedy, the EPA and NYSDEC believe that the remedy as revised 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, and is cost-effective. In addition, the modified remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this Site. The modified remedy satisfies CERCLA §121.

PUBLIC PARTICIPATION ACTIVITIES

Pursuant to NCP §300.825(a)(2), this ESD will become part of the Administrative Record file for the Site. The Administrative Record for the remedial decisions related to the Site, is available for public review at the following locations:

Tusten-Cochecton Library
198 Bridge Street
Tusten, NY 12764
(845) 252-3360

Monday, Wednesday and Friday: 10:00 am – 8:00 pm
Tuesday & Saturday: 10:00 am – 1:00 pm

U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, NY 10007-1866
(212) 637-3263

Monday to Friday: 9:00 am – 5:00 pm

The EPA and NYSDEC are making this ESD available to the public to inform them of the change made to the remedy. Should there be any questions regarding this ESD, please contact:

Mark Granger
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) 637-3551
e-mail: granger.mark@.epa.gov

With the publication of this ESD, the public participation requirements set out in §300.435(c)(2)(i) of the NCP have been met.

Area Excluded From Treatment Under This ESD

Contaminated Area to be Treated

FORMER LOCATION OF INTACT DRUM DISPOSAL AREA 1b

FORMER LOCATION OF INTACT DRUM DISPOSAL AREA 1A

FORMER LOCATION OF INTACT DRUM DISPOSAL AREA 2

FORMER SEPTAGE LAGOONS

PZ-1

PZ-2

MW-4A

MW-4B

MW-10

MW-1C

MW-1B

MW-1A

MW-9

MW-5

MW-3B

MW-3A

MW-7A

MW-7B

MW-6A

MW-6B

GRAVEL ROAD

DELAWARE DRIVE

CONRAIL RAILROAD

RR SIGNAL

Steps

TANK

BOULDER

DELAWARE RIVER

E 337,500

E 338,000

E 337,000

N 1,009,000

N 1,008,500

N 1,006,500

LEGEND

- LANDFILL PROPERTY BOUNDARY
- 750 TOPOGRAPHIC CONTOUR
- MW-10 MONITORING WELL
- PZ-1 PIEZOMETER

100 0 100
SCALE FEET

NOTES

REFERENCE: FIGURE DEVELOPED FROM FIGURE 4A OF THE SHALLOW GROUNDWATER HOT SPOT INVESTIGATION, REMEDIAL WORK ELEMENT II, CORTESE LANDFILL SITE, NARROWSBURG, NEW YORK (GOLDER ASSOCIATES, INC.; 2001).

FORMER SOURCE AREAS
CORTESE LANDFILL SITE
NARROWSBURG, NEW YORK

Figure 1