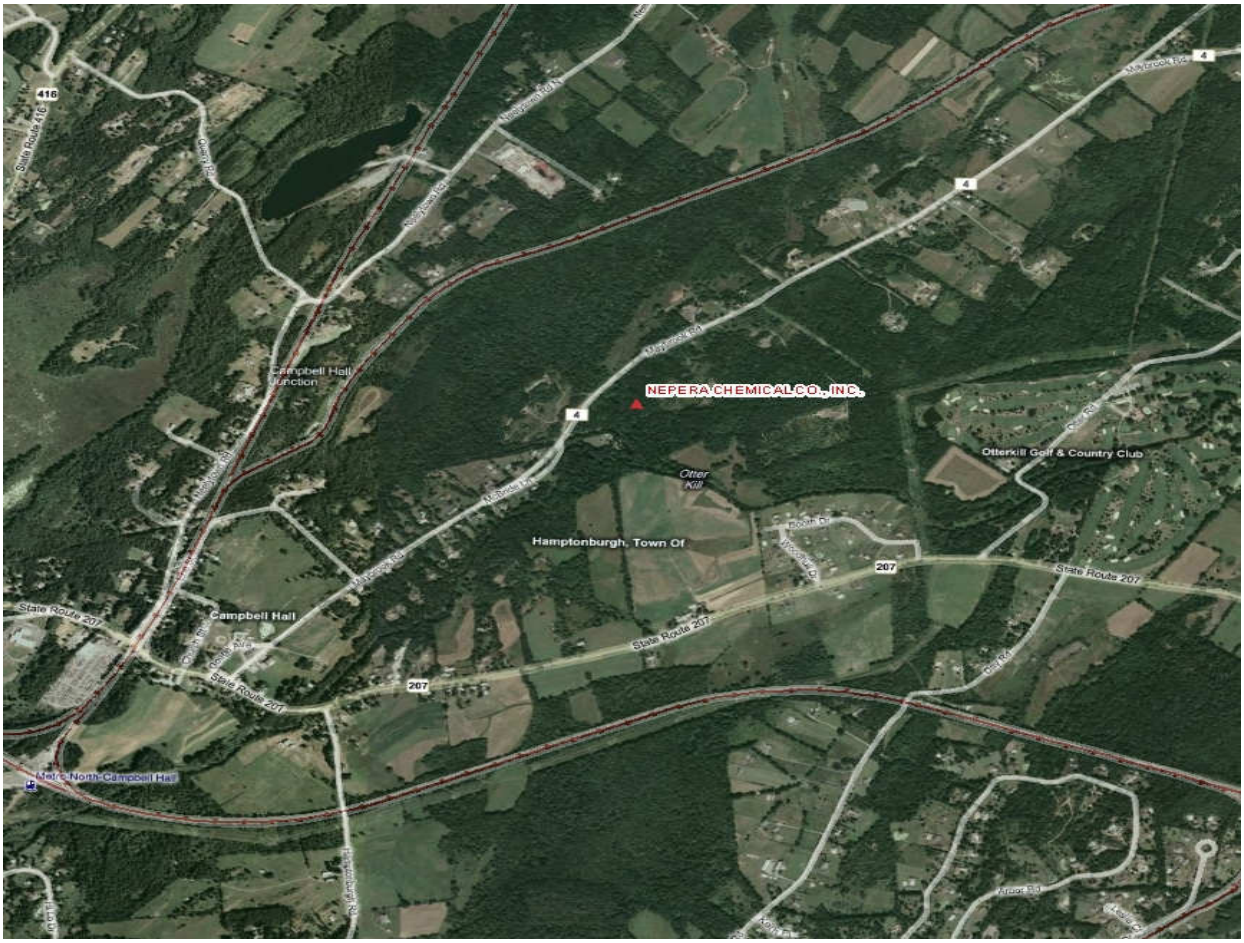
AMENDMENT TO THE RECORD OF DECISION

Nepera Chemical Company Superfund Site
Town of Hamptonburgh, Orange County, New York



United States Environmental Protection Agency
Region II
New York, New York
July 2011

DECLARATION FOR THE
AMENDMENT TO THE RECORD OF DECISION

SITE NAME AND LOCATION

Nepera Chemical Company Superfund Site
Hamptonburgh, Orange County, New York

Superfund Site Identification Number: NY000511451

STATEMENT OF BASIS AND PURPOSE

This Amendment to the 2007 Record of Decision (ROD Amendment) documents the U.S. Environmental Protection Agency's selection of a modified remedy for the source area soils (as previously selected in the 2007 Record of Decision (2007 ROD)) for the Nepera Chemical Company Superfund Site (Site), chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. Section 9601-9675, and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300. This decision document explains the factual and legal basis for selecting a modified (amended) remedy to address the source area soils. All other components of the 2007 ROD, including treatment of contaminated groundwater at the Site, remain unchanged. This ROD Amendment, as well as items identified in the attached index (see Appendix III), comprise the Administrative Record upon which the selected remedy is based.

The New York State Department of Environmental Conservation (NYSDEC) was consulted on the proposed amended remedy in accordance with CERCLA Section 121(f), 42 U.S.C. Section 9621(f), and it concurs with this amended remedy (see Appendix IV).

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this ROD Amendment, may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE AMENDED REMEDY

The amended remedy addresses the source area soils. The source area soils are contaminated soils consistent with the locations of former industrial lagoons used to

dispose of industrial wastewater. The amended remedy includes the following major components:

- excavation of on-Site soils;
- transportation of contaminated soils (e.g., soils exceeding soil cleanup objectives for unrestricted use) to an appropriate off-Site facility (or facilities);
- treatment and/or disposal of transported, contaminated soils at an appropriate off-Site facility (or facilities);
- post-excavation sampling to verify achievement of soil cleanup objectives;
- backfilling of excavated areas with clean soil meeting the requirements of 6NYCRR Subpart 375-6;

The effectiveness of the amended remedy will be determined based upon the attainment of specific performance standards and cleanup goals for soils.

The major components of the already selected groundwater remedy, which were selected in the 2007 ROD and are not being modified, include:

- Bioremediation of contaminated Site-related groundwater through the enhancement of the indigenous microbial population by introducing oxygenating compounds (e.g., oxygen releasing compounds) into targeted areas of the groundwater aquifer. Bioremediation (oxygenating compounds) technology would be applied as an initial enhancement within the excavated area of the former lagoons;
- Subsequent application(s) of oxygenating compounds (e.g., oxygen releasing compounds), if necessary, to address ongoing contamination in the groundwater;
- A long-term groundwater monitoring program will be implemented to verify that the concentrations and the extent of the groundwater contaminants are declining, and to evaluate the effectiveness of the remedy. This program will also include the continued sampling of the Town of Maybrook Public Wells and those private wells in the vicinity of the Site which are currently monitored; and
- Institutional controls, which will include an environmental easement/restrictive covenant filed in the property records of Orange County, restricting the use of groundwater at the Site as a source of potable or process water unless (or until) groundwater quality standards are met.

Additional information pertaining to the groundwater remedy can be found in the 2007 ROD and the Administrative Record supporting that decision.

The environmental benefits of the amended remedy may be enhanced by utilizing technologies and practices that are sustainable in accordance with Region 2's Clean and Green policy[1].

DECLARATION OF STATUTORY DETERMINATIONS

The amended remedy (hereinafter also referred to as the selected remedy), which amends the remedy for soils selected in the 2007 ROD, meets the requirements for remedial actions set forth in CERCLA Section 121, 42 U.S.C. Section 9621, because it: 1) is protective of human health and the environment; 2) meets a level or standard of control of the hazardous substances, pollutants, and contaminants which at least attains the legally applicable or relevant and appropriate requirements under federal and state laws; 3) is cost-effective; and 4) utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. In keeping with the statutory preference for treatment that reduces toxicity, mobility, or volume of contaminated media as a principal element of the remedy, the contaminated soil will be treated in accordance with the amended remedy.

Data from the source-area investigation shows that the former industrial lagoons are acting as a source of groundwater contamination. These lagoons, or “source areas”, are a significant reservoir for the migration of contamination to groundwater. The source areas will be addressed under the selected remedy in this ROD Amendment.

This amended remedy, upon completion, will not leave hazardous substances, pollutants, or contaminants remaining on the Site above levels that would otherwise prohibit unlimited use and unrestricted exposure. However, the groundwater remedial action (selected in the 2007 ROD) will require five or more years to complete. As such, a policy review will be conducted within five years after initiation of remedial action to ensure that the groundwater remedy is, or will be, protective of human health and the environment.

ROD DATA CERTIFICATION CHECKLIST

The ROD Amendment contains the remedy selection information noted below. More details may be found in the Administrative Record file for this ROD Amendment.

- Contaminants of concern and their respective concentrations (see ROD Amendment, page 10 and Appendix I, Figures 5 and 6);
- Baseline risk represented by the contaminants of concern (see ROD Amendment,

[1] See http://epa.gov/region2/superfund/green_remediation.

pages 8-9);

- Cleanup levels established for contaminants of concern and the basis for these levels (see ROD Amendment, page 10 and Appendix I, Table 1);

- Manner of addressing source materials constituting principal threats (see ROD Amendment, page iii and page 21);

- Current and reasonably-anticipated future land use assumptions and current and potential future beneficial uses of groundwater used in the baseline risk assessment and ROD (see ROD Amendment, pages 7-8);

- Potential land and groundwater use that will be available at the Site as a result of the selected remedy (see ROD Amendment, pages 24-25);

- Estimated capital, annual operation and maintenance, and present-worth costs; discount rate; and the number of years over which the remedy cost estimates are projected (see ROD Amendment, pages 15, 20, and 26 and Appendix II, Table 2); and

- Key factors used in selecting the remedy (*i.e.*, how the selected remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision)(see ROD Amendment, pages 21-22).

AUTHORIZING SIGNATURE

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Walter E. Mugdan, Director
Emergency and Remedial Response Division

Date

AMENDMENT TO THE RECORD OF DECISION FACT SHEET
EPA REGION II

Site

Site name:	Nepera Chemical Company Superfund Site
Site location:	Town of Hamptonburgh, Orange County, New York
Listed on the NPL:	June 1, 1986

Record of Decision

Date signed:	July 15, 2011
Selected remedy:	Contaminated soils in the source area (former lagoon area) will be excavated and transported to an off-site facility for treatment and/or disposal. All of the other components of the 2007 remedy unrelated to addressing the contaminated soil, including the treatment of groundwater with oxygenating compounds, remain unchanged.
Capital cost:	$3 million
Operation, maintenance, and monitoring cost:	$25,000
Present-worth cost:	$3,026,900
Lead	EPA
Primary Contact:	Mark Dannenberg, Remedial Project Manager, (212) 637-4251
Secondary Contact:	Salvatore Badalamenti, Chief, Central New York Remediation Section, (212) 637-3314
Main PRPs	Nepera Corporation, Cambrex Corp., Pfizer, Inc.

Waste

Waste type:	Organics (Volatile and semi-volatile organic compounds, including pyridine-related compounds)
Waste origin:	On-Site waste disposal activities (namely, chemical processing wastewater from the Nepera, Inc. facility in Harriman, New York)
Contaminated media:	Soil and groundwater

DECISION SUMMARY

Nepera Chemical Company Superfund Site
Town of Hamptonburgh, Orange County, New York

United States Environmental Protection Agency
Region II
New York, New York
July 2011

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ATTACHMENTS

SITE NAME, LOCATION, AND DESCRIPTION

The Nepera Chemical Company Site[1] (Site) includes a 29-acre property located on County Highway 4 in Hamptonburgh, Orange County, New York (hereinafter, the Nepera Property), and all contamination emanating from the Nepera Property (see Appendix I, Figures 1 and 2). The Site property is bounded on the north by Orange County Highway 4, Beaverdam Brook to the west, the Otter Kill to the south, and an undeveloped tract of land to the east.

The Nepera Property is owned by Nepera, Inc. Wastewaters from chemical production processes conducted at the Nepera plant facility located in Harriman, New York, were trucked to the Site and discharged into lagoons on the Nepera Property. The lagoons, comprising an area of approximately five acres, were constructed within the Nepera Property.

The Town of Hamptonburgh is located in the northern part of Orange County, New York, in the Poughkeepsie-Newburgh metropolitan area. Its population was 4,686, based on the 2000 census. The latitude of the Town of Hamptonburgh is 41.450N and the longitude is 74.253W.

Approximately 6,500 people live within three miles of the Nepera Property. The area where the Site is located is zoned residential/agricultural. Three residences exist in the immediate vicinity of the Site. These residences are located approximately 250 feet, 175 feet and 450 feet to the west, north and northeast of the Nepera Property boundary, respectively. These residences rely on private supply wells for their drinking water. The vicinity near the Nepera Property is residential and agricultural in nature. The public water supply wells for the Village of Maybrook are located approximately 800 feet to the east-northeast of the Nepera Property.

The Site is situated in the Valley and Ridge province of the Appalachian Region in Orange County, New York. In general, the topography of the area is typified by relatively low-lying ridges and valleys. The Nepera Site has low-lying, rolling hill topography. Two hills, and a portion of a third, occupy the Site with a maximum local relief of approximately 40 feet. Most of the Site is forested. The Site is located within a 4.5-square mile watershed consisting of Beaverdam Brook and its tributaries, which discharge to the Otter Kill located approximately 500 feet to the south of the Nepera Property. The geologic units at the Site are divided into two primary units, the overburden (comprised of topsoil, fill, and gravel) and the bedrock (comprised predominantly of shale). Ground surface topography is generally bedrock controlled in that the ground surface generally follows the bedrock surface topography. The overburden thickness at the Site is also related to

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[1] The Site's Superfund Site Identification Number is NY000511451. The U.S. Environmental Protection Agency (EPA) is the lead agency; the New York State Department of Environmental Conservation (NYSDEC) is the support agency.

bedrock topography in that it is generally thinner (or absent) over bedrock ridges, while greater overburden thicknesses have been deposited in bedrock depressions and valleys. The overburden ranges in thickness from 0 to 20 feet in the vicinity of the former lagoons.

The former lagoon area, which was stripped of vegetation while in use, is now covered with grasses, wild flowers, and mixed brush. There are two aquifers that exist beneath the Site, the overburden aquifer and the bedrock aquifer. The overburden aquifer is the surficial unit which overlies the bedrock aquifer. The bedrock aquifer is the primary source for public water in the area. No significant layers of impeding clays were observed between the two aquifers within the study area. An east-to-west trending groundwater divide is present in the bedrock aquifer underlying (and transecting) the lagoon area. As such, groundwater flow has a northerly and a southerly component radiating from this divide.

Both aquifers have been impacted by Site-related contamination. The unconsolidated deposits that form the overburden are generally thin (e.g., 5 to 20 feet). The overburden overlies the harder and denser bedrock, which is comprised of compressed shale and sandstone. The shale bedrock has a high degree of fracturing and the bedrock aquifer provides a significant portion of the groundwater for domestic uses in the area.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

The Nepera Chemical Company was a producer of bulk pharmaceutical chemicals, hydrogels, and pyridine-based industrial chemical intermediate compounds at its facility, located in Harriman, New York, approximately 25 miles away from the Site.

The Nepera Property was purchased by the Nepera Chemical Company in 1952**.** The Nepera Chemical Company was purchased by Warner Lambert Corporation in 1956 and reincorporated as Nepera, Inc. From 1953 through 1967, Nepera constructed and used lagoons at the Site (see Appendix I, Figure 3) for the discharge of industrial wastewater generated at its plant in Harriman. No wastewater disposal has taken place at the Site since December 1967. All of the lagoons were back-filled with clean soil by 1974.

Beginning in 1967, numerous investigations were conducted by various consultants to Nepera, Inc. to determine the extent of contamination at the Site. Based on the results of these investigations, NYSDEC placed the Site on the New York Registry of Inactive Hazardous Waste Disposal Sites. On August 17, 1984, the State of New York entered into a Consent Decree with Nepera to conduct a remedial investigation to determine the nature and extent of contamination at the Site.

On June 1, 1986, EPA placed the Site on the National Priorities List (NPL) of sites promulgated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA). EPA subsequently designated the New

York State Department of Environmental Conservation (NYSDEC) as the lead regulatory agency for overseeing the implementation of a remedial investigation (RI)[2] and feasibility study (FS)[3], also referred to as the RI/FS, at the Site.

Beginning in 1988, under an NYSDEC-issued order, Nepera, Inc. hired a contractor to conduct an investigation to determine the nature and extent of the contamination at and emanating from the Site. The investigation of groundwater was expanded in 1993 and again in 2001, with the installation of additional groundwater monitoring wells. Subsequent groundwater monitoring was conducted in 2001 and 2002. Extensive additional soil sampling activities were conducted in 2002 and a wetland delineation survey was conducted in 2003. The phased approach to the RI was iterative in nature, where the results of each task were used to focus the scope of each subsequent task.

During the several phases of the RI, a total of 38 groundwater monitoring wells were installed in the study area (see Appendix I, Figure 3). The first draft RI Report was submitted in March, 1996. NYSDEC and EPA determined that further work was necessary to define the type and extent of soil contamination at the Site and to determine the downgradient extent of the groundwater contamination plume which emanated from the Site. In March, 2005, an updated draft RI Report was submitted to NYSDEC and EPA. This document was further revised and an approved Final RI Report was submitted on June 16, 2006. An approved Final FS Report was submitted on June 26, 2007. The EPA was designated as the lead agency for the Site at the conclusion of the RI/FS process in 2007.

A Record of Decision was issued on September 28, 2007 (2007 ROD), calling for, among other things, excavation of the soil in the source area (former lagoon area), the design and construction of an on-Site biocell to contain the excavated soil, the installation of a soil vapor extraction (SVE) system within the biocell, and operation of the SVE and the biocell systems to remediate contaminated soil. In addition, the 2007 ROD included a groundwater remedy, institutional controls, and long-term groundwater monitoring.

EPA and the Potentially Responsible Parties (PRPs) signed a Consent Decree to carry out the remedial design (RD), construction of the selected remedy, and to implement the Remedial Action (RA); the Consent Decree was entered in U.S. District Court in October 2008.

Additional activities were performed during the RD. Specifically, major RD activities included: on-Site soil borings, soil sampling, surveying activities, and recalculation of the

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[2] The purpose of the RI was to determine the nature and extent of the contamination at and emanating from the Site and to evaluate the human health and ecological risks.

[3] The purpose of the FS was to identify and evaluate remedial alternatives to address this contamination.

volume estimates of the contaminated soil within the former source area. The results of these activities led to a reappraisal of the nature and extent of the contaminated soils. The results of the RD are summarized in the "SUMMARY OF SITE CHARACTERISTICS" Section in this document. More detailed information on the activities performed during the Remedial Design are presented in the *Remedial Design Report, Nepera Chemical Company Site, March 2011 (*2011 RD Report), which is in the Administrative Record.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

The Proposed Plan for the modified source-area soils remedy for the Site was released to the public for comment on May 20, 2011. This document, along with the 2011 Remedial Design Report and the rest of the documents supporting the proposed amended remedy, were made available to the public at information repositories maintained at the Town of Hamptonburgh Town Hall in Campbell Hall, New York and the EPA Region II Office in New York City. The notice of availability for the above-referenced documents was published in the *Times Herald-Record* on May 20, 2011. The public comment period ran from May 20, 2011 to June 20, 2011. On June 15, 2011, EPA conducted a public meeting at the Town of Hamptonburgh Town Hall to inform local officials and interested citizens about the Superfund process, to present the Proposed Plan for the Site, and to respond to questions and comments from the approximately 50 attendees. Responses to the questions and comments received at the public meeting and in writing during the public comment period are included in the Responsiveness Summary (see Appendix V).

SCOPE AND ROLE OF THE OPERABLE UNIT

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), at 40 CFR Section 300.5, defines an operable unit as a discrete action that comprises an incremental step toward comprehensively addressing Site problems. A discrete portion of a remedial response eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. The cleanup of the Nepera Chemical Company Site is not divided into separate operable units. Instead, the entire cleanup of the Site is evaluated holistically. However, the Site is being addressed with separate remedial activities for groundwater and soils; these remedial activities will be performed in concert with each other. This ROD Amendment modifies the soils remedy only. All other aspects of the 2007 ROD remain unchanged.

The primary objective of this action (the ROD Amendment) is to remediate the contaminated soils, and, thereby, remove any direct contact threat posed by soils and remove the sources of further groundwater contamination at the Site. This action will ultimately support restoration of groundwater quality beneath and downgradient of the source areas and minimize any potential future health and environmental impacts from

contaminated groundwater.

SUMMARY OF SITE CHARACTERISTICS

The data collected during the RI and other sampling efforts provided EPA with specifics related to Site characteristics, as well as information to perform a Risk Assessment. RI-related sampling of groundwater, surface and subsurface soil, and sediment on and around the Site was conducted in several phases from 1988 to 2004. In addition, groundwater continues to be sampled on an annual basis since 2004. Furthermore, additional soil sampling was performed in 2010, during the Remedial Design phase.

This ROD Amendment addresses source area soils associated with the former industrial lagoons, the characteristics of which are summarized in this section. This section of the ROD Amendment provides an overview of the Site's geology and hydrogeology; the sampling strategy used at the Site; the conceptual Site model; and the nature and extent of contamination at the Site. Further detailed information about the Site's characteristics can be found in the RI Report.

Geology/Hydrogeology

The Site is situated in the valley and ridge province of the Appalachian Region in Orange County, New York. In general, the topography of the area is typified by relatively low-lying ridges and valleys. There are two aquifers that exist beneath the Site, the overburden aquifer and the bedrock aquifer. Both aquifers have been impacted by Site-related contamination. The unconsolidated deposits that form the overburden are generally thin (e.g., 5 to 20 feet). The overburden overlies the harder, denser bedrock consisting of compressed shale and sandstone. The shale bedrock has a high degree of fracturing and the bedrock aquifer provides a significant portion of the groundwater for domestic uses in the area.

Cultural Resources

A Cultural Resources Survey was performed for the Site and indicated that there were neither any significant National Register of Historic Places or National Register of Historic Places-eligible properties nor any likely prehistoric resources within the project boundaries. As such, the regulatory requirements relating to the identification and protection of historic properties/places have been addressed and no additional archaeological investigations are considered necessary at the Site.

Nature and Extent of Contamination

Activities performed as part of the RI included: on-site soil borings, soil sampling, monitoring well drilling and installation, groundwater sampling, and residential well

sampling. These activities were performed by the potentially responsible parties (PRPs) with EPA and NYSDEC oversight. Site-related contamination was found in soil and groundwater. The results of the RI and more recent activities are summarized below.

Soil: RI soil sampling activities were conducted in phases. Sampling performed in 1991 and 1996 identified contamination in the lagoon area and determined the lagoon area to be the primary source of the contaminants in the groundwater (see Appendix I, Figures 5 and 6). The primary contaminants identified during soil sampling activities include benzene (maximum concentration of 13 milligrams per kilogram (mg/kg)), chlorobenzene (maximum concentration of 12 mg/kg), ethylbenzene (maximum concentration of 22 mg/kg), toluene (maximum concentration of 52 mg/kg), xylenes (maximum concentration of 300 mg/kg) and pyridine-related compounds (maximum concentration of 74 mg/kg of 2-amino pyridine). All of these contaminants are deemed to be contaminants of concern (COCs) for the Site. In addition, several samples revealed elevated levels of metals, including mercury and manganese. An additional 120 soil samples were collected from the lagoon area in 2003 to evaluate levels of metals. Soil samples were also collected from locations not impacted by the Site to determine Site-specific background levels for metals. Analytical data from the 2003 sampling activities indicated that the concentration levels of metals in the lagoon area were comparable to background concentrations and, as such, metals are not considered to be COCs. The presence of mercury in earlier samples (from 1991 and 1995) was of additional concern as the form of mercury (e.g., organo-mercury or inorganic mercury) can significantly change its toxicity. As such, additional analyses were performed on selected samples collected in 2003 to determine the form (or species) of mercury present in Site soils. These analyses determined that over 99% of the mercury present in Site soils is in the form of inorganic mercury, which is significantly less toxic than organo-mercury.

Additional activities were performed during the RD. Specifically, major RD activities included: on-Site soil borings, soil sampling, surveying activities, and recalculation of the volume estimates of the contaminated soil within the former source area.

Additional sampling was conducted in late 2010 to identify pyridine-related compounds that, in previous analytical studies, were tentatively identified. One pyridine-related tentatively identified compound (TIC) was positively identified, namely 2,4-bipyridine. This compound was added to the list of COCs for the Site, and a remediation goal was established for 2,4-bipyridine (see Appendix II, Table 1).

Surveying activities along with a thorough analysis of test pitting and boring information was performed. This work led to a better defined contamination source area. The projected volume of contaminated soils at the Site was recalculated. In addition, a waste characterization of the contaminated soils was conducted. Much of the soil is now expected to be classified as non-hazardous under the Resource Conservation and Recovery Act (RCRA). As such, the capital cost for disposal will be significantly less than projected in the FS. In addition, Nepera identified three Treatment, Storage, and Disposal

(TSD) facilities within close proximity of the Site willing to accept the waste. These facilities are much closer than previously projected in the FS, so there is a shorter distance to transport the contaminated soil, which is in accordance with Region 2's Clean and Green policy.

Groundwater: The groundwater monitoring program included installation of groundwater monitoring wells, sampling of groundwater monitoring wells located at (and bordering) the Site and analyses of these samples for organic and inorganic compounds. These efforts were comprised of several separate field mobilizations conducted between 1995 and 2003. The investigation was conducted in an iterative manner, where the results of each task were used to develop the scope of each subsequent task. The results of these activities were used to identify the COCs in both aquifers, and to determine the extent of the groundwater contamination in both the overburden and bedrock aquifers.

As with the contaminated soil, the primary contaminants identified in groundwater include benzene, chlorobenzene, ethylbenzene, toluene, xylenes and pyridine-related compounds. These contaminants were detected above drinking water maximum contaminant levels (MCLs) in the wells located within the property boundary. As this ROD Amendment does not change the groundwater remedy selected in the 2007 ROD, a more detailed description of activities and presentation of groundwater data can be found in the 2007 ROD and the Administrative Record supporting that document.

Residences in the vicinity of the Site rely on private wells for their potable water supply. As a precautionary measure, to ensure that these wells are not impacted by the Site, private wells in the immediate vicinity of the Nepera property have been, and continue to be, routinely sampled for Site-related contaminants. With the exception of minor levels of Site-related contaminants detected below drinking water standards (e.g., MCLs) in May 2002 and September 2003, sampling data indicate non-detectable levels of Site-related contaminants in private wells. Also, because of their close proximity to the Site (approximately 800 feet), the public wells located on County Highway 4, which are used to supply drinking water to customers served by the Village of Maybrook, are monitored on a quarterly basis for Site-related contaminants and must comply with the New York State Department of Health drinking water standards. Site-related contaminants have not been detected in the Village of Maybrook Public Wells.

Contaminant Fate and Transport

Migration of contaminants at the Site occurs from contaminated soils to the groundwater. Migration of dissolved contaminants also occurs within the groundwater aquifers. The site-related volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) emanate from source area soils (the former lagoon area) which, itself, still act as an ongoing source of groundwater contamination and migration to both the overburden and bedrock aquifers. Groundwater contamination is at a maximum beneath the source area and has generally been confined within the Nepera Property boundary. Figure 3 (in

Appendix I) depicts the current conceptual Site model[2].

CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

The Site is in an area used for residential and/or agricultural purposes. The zoning of the Site (residential/agricultural) is not expected to change in the near future.

The groundwater at the Site is classified by NYSDEC as under the Water Class "GA", which is groundwater suitable as a source of drinking water. As such, there is a future potential beneficial use of groundwater at the Site as a drinking water source. Residences in the vicinity of the Site rely on private wells for their potable water supply. In addition, public water supply wells of the Village of Maybrook are located approximately 800 feet east-northeast of the property boundary.

SUMMARY OF SITE RISKS

Human Health Risk Assessment

As part of the RI/FS, EPA conducted a baseline risk assessment to estimate the current and future effects of contaminants on human health and the environment. A baseline risk assessment is an analysis of the potential adverse human health effects caused by the release of hazardous substances from a site in the absence of any actions or controls to mitigate such releases, under current and future land uses. A baseline risk assessment was conducted as part of the 2007 RI/FS report and was discussed in the 2007 ROD. It focused on contaminants in the subsurface soil and the groundwater which were likely to pose significant risks to human health and the environment. The risk assessment for this Site, entitled *Human Health Baseline Risk Assessment for the Nepera Chemical Company Site, Orange County, New York*, the 2007 RI/FS report, and the 2007 ROD are available in the Administrative Record which supports the selection of that remedy. The risk assessment provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by the remedial action.

The original risk assessment considered ingestion, inhalation, and dermal contact with groundwater; ingestion and dermal contact with surface soil and sediment; and inhalation of ambient air for the exposure of hypothetical residents. As no remedial activities have been performed since the original risk assessment, the findings and determinations of the risk assessment remain the same. The potential Site-related human health risks related to soils and groundwater at the Site that were identified in the 2007 ROD have not changed. The conclusion set forth in the human health risk assessment, which is part of

[2] This conceptual site model illustrates contaminant sources, and potential human and ecological receptors.

the 2007 RI/FS report and was discussed in the 2007 ROD, was that hypothetical future use of the groundwater at the Site would pose an unacceptable risk to human health. Furthermore, the on-Site soils act as a continuous source of contamination to the groundwater, yielding a risk from exposure or consumption of groundwater. The human health risk assessment tables (Tables A through F) are presented in Appendix II.

Ecological Risk Assessment

A baseline ecological risk assessment (BERA) was prepared to identify the potential environmental risks associated with surface water, groundwater, sediment, and soil. This document is also available in the Administrative Record for the 2007 ROD. The results of the BERA suggested that there are contaminants in groundwater, soils, and sediment, but they are not present at levels posing significant risks to ecological receptors. The potential for risk to ecological receptors exposed to Site-related contaminants was limited to isolated locations, primarily in Lagoon 6, and the risk associated with this area used the conservative assumption that the ecological receptors (e.g., soil invertebrates, mammalian insectivores, and carnivores) spend 100% of their lives in the area of Lagoon 6. The contaminants that were identified in the BERA (outside of Lagoon 6) were determined not to pose a potential for adverse ecological effects because they were common elements of soil that were not related to Site operations; they were detected at concentrations lower than background levels; they were infrequently detected; or they were detected at concentrations indicating that the hazard quotients (HQs) were only slightly above 1 with no adverse impacts to exposed receptors expected. The HQ is simply the ratio of the exposure estimate to an “effects concentration” considered to represent a "safe" environmental concentration or dose. Hazard quotients with values less than 1.0 are considered indicative of acceptable risk. A detailed presentation of these data can be found in the RI Report.

Summary of Human Health Risks

The greatest potential future carcinogenic risk attributable to the Site is associated with the ingestion of groundwater. The potential cancer risk is based on current levels of groundwater contaminants. If no action is taken with respect to the source areas, the continued release of contaminants into Site groundwater could result in a greater potential cancer risk at some point in the future if groundwater were to be used for potable purposes. Additionally, significant noncarcinogenic effects from the potential future ingestion of Site groundwater by area residents have also been established in the risk assessment. Furthermore, the risk assessment established a potential cancer risk and the potential for noncarcinogenic effects to a hypothetical future construction worker exposed to soils.

Basis for Action

Based upon the quantitative human-health risk assessment, EPA has determined that the response action selected in this ROD Amendment is necessary to protect the public health or welfare or the environment from actual releases of hazardous substances in the environment. The response action is warranted because:

1. Exposure to contaminated soil poses non-carcinogenic risks to human health;

2. The contaminated soil continues to be a source of groundwater contamination. As such, a remedial action is warranted to reduce contamination in the soil to levels below cleanup objectives;

3. Groundwater COCs are present in concentrations both above MCLs and that pose a significant potential risk from direct exposure to potentially exposed populations. As such, a remedial action is warranted to restore the contaminated groundwater for future use. The remedial action for contaminated groundwater was selected in the 2007 ROD and is unchanged by this ROD Amendment.

REMEDIAL ACTION OBJECTIVES

Remedial action objectives are specific goals to protect human health and the environment. These objectives are based on available information and standards, such as applicable or relevant and appropriate requirements (ARARs), to-be-considered guidance, and Site-specific risk-based levels.

The Remedial Action Objectives (RAOs) identified for the Site are to:

1. prevent exposure of human receptors to contaminated soils and contaminated groundwater;

2. minimize migration of contaminants from soils to groundwater;

3. ensure that hazardous constituents within the soil and meet acceptable levels consistent with reasonably anticipated future use; and

4. minimize potential human contact with waste constituents.

Implementing active remedies in the source area and in the groundwater aquifers (through implementing this ROD Amendment and the 2007 ROD) will address the risks associated with the Site-related contaminants. Specifically, implementation of the soil remedy prescribed in this ROD Amendment is expected to reduce the concentration of contaminants in soils to levels below soil cleanup objectives and, thereby, eliminate or

minimize migration of contaminants from soils to groundwater. The cleanup levels for the soil COCs and their bases are presented in the following table.

Cleanup Levels for Soils	
Contaminant	**Cleanup Levels for Soils (ug/kg)**
Benzene	60 [1]
Chlorobenzene	1,100 [1]
Ethylbenzene	1,000 [1]
Toluene	700 [1]
Xylenes	260 [1]
2-amino pyridine	400 [2]
Pyridine	400 [2]
Alpha picoline	575 [2]
Acetone	50 [1]
Aniline	1,510 [2]
2,4-bipyridine [3]	400 [2]

[1] The values shown are from *NYSDEC Subpart 375: Remedial Program Soil Cleanup Objectives*.
[2] The values shown were derived by NYSDEC based on the *Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, January 24, 1994.*
[3] The parameter was determined to be present in Site soils as a result of soil sampling activities performed in 2010.

BASIS FOR ROD AMENDMENT

Originally Selected Soil Remedy

The original soil remedy, as presented in the 2007 ROD, was described as follows:

- Excavation of Contaminated Soils: Site soils that exceed NYSDEC soil cleanup objectives within the former lagoons will be excavated and placed into a biocell to be situated at the Site;
- Treatment of Soils in the Biocell: Specifically, the biocell will operate as a dual-technology system utilizing SVE and biological degradation within an engineered below-grade biocell. The soils would be treated within the biocell by installing perforated pipes within multiple layers of the biocell. The perforated pipes would be connected to a blower unit to draw air through the piles; contaminants would be volatilized into this air. The air would be treated, if necessary, using carbon adsorption, prior to being recirculated or exhausted to the atmosphere. In addition, nutrients would be added to the treatment

layers as required to enhance biological degradation. In general, the biocell would be operated in two primary modes: SVE mode (high air flow rate); and bioremediation mode (low air flow rate). During the SVE mode, the system would be operated at higher air flow rates which would be selected to optimize the removal of the VOCs constituents using SVE. After the removal rate of the VOCs decreases to an asymptotic or nominal rate, the system would be switched over to the bioremediation mode. During the bioremediation mode, the system would be operated at an optimized air flow rate selected to sustain the aerobic biodegradation of the remaining VOCs and SVOCs. Excavated soils would be treated to reach target cleanup levels; and

- Backfilling of Excavated Areas: The excavated areas of the Site, which are not utilized in the construction of the biocell, will be backfilled to grade, using clean fill meeting NYSDEC soil cleanup objectives.

Basis for Amended Soil Remedy

Based on data collected during the remedial design process performed as a result of the 2007 ROD, it was determined that the presumed RCRA characteristics and estimated volume of contaminated materials and resultant projected costs represent a fundamental change to those assumptions relied upon when selecting the original remedy. Specifically, a waste characterization of the contaminated soils was conducted. Much of the soil is now expected to be classified as non-hazardous. As such, the capital cost for disposal will be significantly less than projected in the FS. In addition, sampling and surveying activities performed in 2010 provided EPA with a more accurate characterization of the extent of contamination at the Site. The calculation of the volume of contaminated soils is presented below.

The former lagoons are within an area approximately five acres in size, but the total area of the actual six lagoons is smaller. The total area of contaminated soils (i.e., the six lagoons) is estimated to be 128,850 square feet (approximately three acres). The volume calculations for contaminated soil are based on the actual surface area of each lagoon, the average depth of the overburden within each lagoon (down to bedrock), the thickness of a distinct black-stained layer observed during the completion of test pits, and the amount of the clean fill that was put into the lagoons when they were closed (in 1968 and 1974).

- The volume of the clean backfill in the lagoon area is conservatively estimated to be 11,000 cubic yards. This is based on a total surface area of the actual lagoons of 75,000 square feet and a depth of four feet. Sampling will be performed to validate this assumption during remedy implementation.
- The volume of the soil extending from the top of the stained soils, which have typically been contaminated, down to the top of competent bedrock is conservatively estimated to be 24,000 cubic yards. Furthermore, it is conservatively estimated that approximately 50% of the soil below the 4-foot

backfill material is stained. As such, approximately 12,000 cubic yards of the 24,000 cubic yards are assumed to be stained and 12,000 cubic yards are assumed to be non-stained. For calculation purposes, one-third of this "non-stained" material (4,000 cubic yards) is assumed to be contaminated at levels which exceed the soil cleanup objectives.

- Therefore, the total volume of contaminated material is estimated to be 16,000 cubic yards. The projected volume for off-site treatment or disposal is 16,000 cubic yards (which is approximately 21,600 tons).
- The previous estimate for the total volume of contaminated soil, which was used in the 2007 ROD, was 24,086 cubic yards.

Based on the updated information, the revised calculation for the projected volume of contaminated soils that will be transported from the Site for treatment and/or disposal is approximately 33% less (16,000 cubic yards compared to 24,000 cubic yards) than the previous calculation used in the September 28, 2007 ROD.

In addition, the costs associated with the alternative were also recalculated. The capital costs associated with the previous calculation used in the 2007 ROD for contaminated soils were presented in a range. Specifically, the capital cost ranged from $5,736,000 to $11,208,000. Based on the information collected during the RD phase of the project, the capital cost associated with this remedy for soils has been revised (updated) since the FS Report and the 2007 ROD. The revised/updated calculation for capital cost is $3,000,000. This represents a significant difference from the previous estimate (approximately 50% less than the previous calculation for the low-end of the range). A comparison of the cost data for the remedy selected in the 2007 ROD verses the remedy selected in this ROD Amendment is reported in the following table.

Cost Comparison for Two Different Estimates for the Excavation and Disposal of Contaminated Soils

COST	2007 ROD ESTIMATES[1]	CURRENT 2011 ROD AMENDMENT ESTIMATES	PERCENTAGE DIFFERENCE BETWEEN 2007 AND 2011 ESTIMATES
Capital Cost	$5,736,000	$3,000,000	- 48%
O & M Cost	$22,000	$25,000	+ 12%
Present Worth Cost	$5,759,600	3,026,900	- 47%
Construction Time	1 year	1 year	Not applicable

[1] The amount used here is actually the lowest cost amount projected; if the highest projected amount ($11,208,000) were to be used, the change in cost would have been a 73% reduction in capital cost.

SUMMARY OF REMEDIAL ALTERNATIVES

CERCLA Section 121(b)(1), 42 U.S.C. §9621(b)(1), mandates that remedial actions must be protective of human health and the environment, be cost-effective, comply with ARARs, and utilize permanent solutions, alternative treatment technologies, and resource recovery alternatives to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ, as a principal element, treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants at a site. CERCLA Section121(d), 42 U.S.C. §9621(d), further specifies that a remedial action must attain a level or standard of control of the hazardous substances, pollutants, and contaminants that at least attains federal and state ARARs, unless a waiver can be justified pursuant to CERCLA Section121(d)(4), 42 U.S.C. §9621(d)(4).

Detailed descriptions of the remedial alternatives for addressing the contamination associated with the Site can be found in the FS report and in the 2007 ROD. During the RD, waste characterization, volume estimates, and cost information were refined; these refinements are reflected in the alternatives described below.

The Proposed Plan for the Amendment to the Record of Decision presented a summary of three soil remediation alternatives (including a "No-Action" alternative, as required by the NCP). The groundwater remedy remains unchanged from the 2007 ROD, and is, therefore, not addressed in this ROD Amendment. In accordance with CERCLA, this document presents a detailed Nine Criteria Analysis of the original remedy, the proposed amendment alternative, and the "No-Action" alternative.

SOIL REMEDIAL ALTERNATIVES

The two active soil remedial alternatives, namely, the original remedy and the proposed amendment presented below, would both include the response activities set forth in the following four paragraphs, including institutional controls. The institutional controls are required components of the 2007 ROD and remain unchanged. An environmental easement/restrictive covenant would be filed in the property records of Orange County. The easement/covenant would, at a minimum, require: (a) restricting new construction at the Site unless an evaluation of the potential for vapor intrusion is conducted and mitigation, if necessary, is performed in compliance with an EPA-approved site management plan (SMP); (b) restricting the use of groundwater on the Property as a source of potable or process water unless or until groundwater quality standards are met; and (c) the owner/operator to complete and submit periodic certifications that the institutional and engineering controls are in place.

The SMP is a required component of the 2007 ROD and remains unchanged. The SMP would provide for the proper management of all Site remedy components post-construction, such as institutional controls, and shall also include: (a) monitoring of Site groundwater to ensure that, following the soil excavation, the groundwater quality

continues to improve and contaminant levels are reduced to levels below Federal and State standards; (b) identification of any use restrictions on the Site; (c) necessary provisions for implementation of the requirements of the above easement/covenant; and (d) provision for any operation and maintenance required of the components of the remedy.

Physical controls, such as regular maintenance of the perimeter fence, would be implemented to restrict Site access, for as long as necessary, and thereby prevent the potential exposure to chemicals present in the soils in the vicinity of the former lagoons.

This remedial action, upon completion, will not leave hazardous substances, pollutants, or contaminants remaining on the Site above levels that allow for unlimited use and unrestricted exposure, but it will require five or more years to complete. As such, a policy review will be conducted within five years after initiation of remedial action to ensure that the remedy is, or will be, protective of human health and the environment. If justified by the review, additional response actions may be required.

Finally, there is a requirement that those private wells in the vicinity of the Site and the Town of Maybrook Public Water Supply wells, all currently being monitored in relation to this Site, will continue to be monitored on an ongoing basis. The frequency of the residential well sampling will be periodically reevaluated.

Soil Remedial Alternatives

Alternative 1 - No Action

Capital Cost: $0

Annual Cost: $0

Present-Worth Cost: $0

Construction Time: Not Applicable

The "No Action" alternative is considered in accordance with NCP requirements and provides a baseline for comparison with other alternatives. If this alternative were implemented, the current status of the Site would remain unchanged. Institutional controls would not be implemented to restrict future Site development or use. Engineering controls would not be implemented to prevent Site access or exposure to Site contaminants. Although existing security fencing at the Site would remain, it would not be monitored or maintained under this alternative.

Alternative 2 – Excavation and Off-Site Disposal (Proposed Amendment)

Capital Cost: $3,000,000

Annual Cost: $25,000

Present-Worth Cost: $3,026,900

Construction Time: 1 year

Alternative 2 involves the excavation of soils within the former lagoons containing COCs at concentrations exceeding NYSDEC Soil Cleanup Objectives (SCOs) for unrestricted land use. The excavated soils would be disposed of off-Site at a permitted TSD facility. Prior to off-Site land disposal, contaminated soils would be required to comply with RCRA land disposal requirements. Based upon sampling performed during the RD, it is estimated that 16,000 cubic yards will need to be transported for disposal.

The Capital Cost associated with Alternative 2 has been revised/updated since the 2007 FS Report. Sampling performed during the RA will define how much of the contaminated soil would be classified as hazardous waste under RCRA, which may alter, somewhat, the cost to handle and dispose of that material.

Alternative 2 would include the following major components:

- excavation of on-Site soils;
- transportation of contaminated soils (e.g., soils exceeding soil cleanup objectives) to appropriate off-Site facility (or facilities);
- treatment and/or disposal of transported, contaminated soils at appropriate off-Site facility(ies);
- post excavation sampling to verify achievement of soil cleanup objectives;
- backfilling of excavated areas with clean soil meeting the requirements of 6NYCRR Subpart 375-6.

<u>Alternative 3 – Excavation and On-Site SVE and Biocell</u>

Capital Cost: $2,388,000

Annual Cost: $406,000

Present-Worth Cost: $3,232,200

Construction Time: 2 years

This alternative would involve the excavation of the soils within the former lagoons and treatment of the soils with concentrations of COCs exceeding the NYSDEC SCOs for unrestricted land use utilizing SVE and biological degradation within an on-Site

engineered below-grade biocell. Excavated soils would be treated to reach unrestricted land use SCOs.

The soils would be treated within the biocell by installing perforated pipes within multiple layers of the biocell. The perforated pipes would be connected to a blower unit to draw air through the piles; contaminants would be volatilized into this air. The air would be treated, if necessary, using carbon adsorption, prior to being recirculated or exhausted to the atmosphere. Nutrients would be added to the treatment layers as required to enhance biological degradation.

In general, the biocell would be operated in two primary modes: SVE mode (high air flow rate) and bioremediation mode (low air flow rate).

During the SVE mode, the system would be operated at higher air flow rates which would be selected to optimize the removal of the VOCs constituents using SVE. After the removal rate of the VOCs decreases to an asymptotic or nominal rate, the system would be switched over to the bioremediation mode. During the bioremediation mode, the system would be operated at an optimized air flow rate selected to sustain the aerobic biodegradation of the remaining VOCs and semi-volatile organic compounds.

COMPARATIVE ANALYSIS OF ALTERNATIVES

During the detailed evaluation of remedial alternatives, each alternative is assessed against nine evaluation criteria, namely, overall protection of human health and the environment, compliance with ARARs, long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, short-term effectiveness, implementability, cost, and state and community acceptance.

The evaluation criteria are described below.

- Overall protection of human health and the environment addresses whether or not a remedy provides adequate protection and describes how risks posed through each exposure pathway (based on a reasonable maximum exposure scenario) are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

- Compliance with ARARs addresses whether or not a remedy would meet all of the applicable or relevant and appropriate requirements of other federal and state environmental statutes and requirements or provide grounds for invoking a waiver.

- Long-term effectiveness and permanence refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met. It also addresses the magnitude and effectiveness

of the measures that may be required to manage the risk posed by treatment residuals and/or untreated wastes.

- Reduction of toxicity, mobility, or volume through treatment is the anticipated performance of the treatment technologies, with respect to these parameters, which a remedy may employ.

- Short-term effectiveness addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.

- Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.

- Cost includes estimated capital and operation and maintenance (O&M) costs, and net present-worth costs.

- State acceptance indicates if, based on its review of the Site-related documents and 2011 Proposed Plan, the state concurs with the preferred remedy at the present time.

- Community acceptance refers to the public's general response to the alternatives described in the 2011 Proposed Plan.

A comparative analysis of these alternatives based upon the evaluation criteria noted above follows.

Overall Protection of Human Health and the Environment

If no action were to be implemented, Alternative 1 would not provide any control of exposure to contaminated soils, would not reduce risk to human health posed by contaminated soils, and would not be protective of groundwater. Alternative 2 would be protective of human health and the environment since all contaminated soils would be removed from the Site. Alternative 3 would also be protective of human health and the environment since all contaminated soils would be excavated and treated within a closed treatment system. Direct contact risks for both Alternatives 2 and 3 would be significantly reduced as contaminants in the soils would be treated or removed. In addition, Alternatives 2 and 3 would significantly reduce or eliminate potential impacts to groundwater.

Compliance with ARARs

If no action were to be implemented, Alternative 1 would not achieve ARARs and to be considered criteria (TBCs).

Alternatives 2 and 3 would both meet unrestricted use NYS Part 375 SCOs. However, Alternative 2 would meet the SCOs within 3 or 4 months, whereas Alternative 3 would most likely not meet these SCOs for 3 or more years.

Since Alternatives 2 and 3 would involve the excavation of contaminated soils, they would require compliance with fugitive dust and VOC emission requirements. In addition, Alternative 2 and to a lesser extent Alternative 3 (if carbon were used), would be subject to Federal and state regulations related to the transportation and off-site treatment/disposal of wastes.

Long-Term Effectiveness and Permanence

Alternatives 1 would not reduce risk in the long term, since the contaminants would not be controlled, treated or removed. Alternative 2 would provide a high degree of long-term effectiveness and permanence, because the impacted soils would be permanently removed from the Site. Alternative 3 is expected to provide a similar level of long-term effectiveness and permanence, although there is a chance that it could be difficult to attain cleanup levels for some of the more recalcitrant contaminants. Alternatives 2 and 3 both involve long-term groundwater monitoring requirements.

Reduction of Toxicity, Mobility, or Volume through Treatment

Alternatives 1 and 2 do not use any soil treatment technologies on the Site to reduce the toxicity, mobility or volume of contaminants through treatment. However, under Alternative 2, contaminated soils may undergo thermal treatment off-site at the TSD facility (if necessary based on compliance with RCRA land disposal requirements), which would reduce the toxicity, mobility or volume of contaminants through treatment. Alternative 3 involves treatment that would effectively reduce the toxicity, mobility, or volume of contaminants on the Site.

Short-Term Effectiveness

There are no short-term impacts for the No Action alternative (Alternative 1). Under Alternatives 2 and 3, some particulate emissions may result during soil handling, excavation and/or removal. Dust control and soil erosion and sedimentation controls would reduce the short-term impacts. Safety techniques including alarmed perimeter and excavation area air monitoring equipment and fencing would be used to minimize exposure risks. Alternative 2 requires the transportation of the contaminated soils to an off-site location, which would result in more truck traffic entering and leaving the Site. It is estimated that there would be no more than 20 truck trips per day. This impact would be minimized as it is subject to New York State and federal regulations related to the

transportation and off-site treatment/disposal of wastes; trucks would be instructed to stay on roads designated as truck routes, and the transportation plan will be shared with the Town of Hamptonburgh.

While both Alternatives 2 and 3 present some risk to on-Site workers through dermal contact and/or inhalation of groundwater, treatment reagents/residuals, dust, soil, or soil vapor, these exposures can be minimized by utilizing proper protective equipment.

For Alternatives 2 and 3, the vehicle traffic associated with the amended remedial action (such as for transport of contaminated soils and cleanfill) would impact the local roadway system and nearby residents for a short-term duration through increased congestion and noise level.

Under Alternatives 2 and 3, disturbance of the land during construction could affect the surface water hydrology of the Site. There is a potential for increased stormwater runoff and erosion during excavation and construction activities that could be properly managed to prevent excessive water and sediment loading to adjacent wetlands.

Alternatives 2 and 3 would generate treatment residues which would have to be appropriately handled. Alternative 1 would not generate such residues. Any treatment residuals would have to be appropriately handled (*e.g.,* off-Site treatment/disposal).

Because no further action would be performed under Alternative 1, there would be no implementation time. It is estimated that it would take a few months to complete Alternative 2 and 1 year to construct the remedy for Alternative 3.

It is estimated that Alternative 2 would achieve cleanup goals for soils in approximately 3 to 4 months. It is estimated that Alternative 3 would achieve cleanup goals for soils in 3 to 5 years. Therefore, while the potential exposure to workers or nuisance to the public can be managed or addressed in Alternatives 2 and 3, these exposures and nuisances will be for a considerably shorter duration under Alternative 2.

Implementability

Except for Alternative 1 which requires no action whatsoever, Alternative 2 would be the simplest to implement. Alternative 2 uses well established technologies for digging and transporting contaminated soils. Furthermore, Alternative 2 does not require construction activities or ongoing O&M issues pertaining to treatment of the soils on Site. Alternative 3 does require construction activities and ongoing O&M issues pertaining to treatment of the soils on-Site. Furthermore, it may be difficult to attain cleanup levels for some of the more recalcitrant contaminants using the technologies associated with Alternative 3. It is not precisely known how long the on-Site biocell associated with Alternative 3 would need to be operated; specifically, the biocell may need to be operated additional years to achieve the remediation goals for the pyridine compounds. Long-term groundwater

monitoring would be required under both Alternatives 2 and 3 to assess the effectiveness of the soils remedy in reducing the affect on the groundwater contamination.

Cost of Soil Remedy Alternatives

The present-worth costs for Alternatives 1 through 3 are calculated using a discount rate of 7 percent; a 1-year time interval was used for Alternatives 1 and 2, and a 3- year time interval for Alternative 3. The estimated capital, annual O&M, and present-worth costs for each of the alternatives are presented in the following table.

Cost Comparison of Soil Remedy Alternatives

Alternative	Capital Cost	Annual O&M	Present Worth
1	$0	$0	$0
2	$3,000,000	$25,000	$3,026,900
3	$2,388,000	$406,000	$3,232,200

State Acceptance

NYSDEC concurs with the selected remedy; a letter of concurrence is attached (see Appendix IV).

Community Acceptance

Comments received during the public comment period indicate that the public generally supports the selected remedy. These comments are summarized and addressed in the Responsiveness Summary, which is attached as Appendix V to this document.

PRINCIPAL THREAT WASTE

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP Section 300.430 (a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for the migration of contamination to groundwater, surface water, or air, or act as a source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis through a detailed analysis of alternatives, using the remedy selection criteria which are described above. The manner in which

principal threats are addressed provides a basis for making a statutory finding that the remedy employs treatment as a principal element.

Although treatment will be applied to the VOC-contaminated soil and groundwater, there are no principal threats at the Site. The identified contamination is in the groundwater and on-Site soils; no evidence was found during the remedial investigation that nonaqueous phase liquids are present within the aquifers. Soil sample results indicate that while source materials are present, they are not considered to be highly toxic or highly mobile and could be contained. Therefore, no principal threat wastes are present at the Site.

SELECTED REMEDY

Summary of the Rationale for the Selected Remedy

Based upon consideration of the requirements of CERCLA, the detailed analysis of the alternatives, and public comments, EPA, in conjunction with NYSDEC, has determined that Alternative 2 (Excavation and Off-Site Treatment/Disposal of Contaminated Soils) best satisfies the requirements of CERCLA Section 121, 42 U.S.C. §9621, and provides the best balance of tradeoffs among the remedial alternatives with respect to the NCP's nine evaluation criteria, 40 CFR § 300.430(e)(9).

EPA believes that Alternative 2 is the most cost-effective option for the contaminated soils given the evaluation criteria and reasonably anticipated future land use. Alternative 2 is protective of human health and the environment, would provide a permanent solution, and would achieve soil cleanup objectives for the Site-related COCs in the shortest amount of time and in the most cost-effective manner. Therefore, EPA and NYSDEC believe that Alternative 2 would effectuate the soil cleanup while providing the best balance of tradeoffs with respect to the evaluating criteria.

Alternative 1 was not selected because it calls for no action and would not be protective of human health and the environment. Similarly, Alternative 3 is not selected because it is more expensive than Alternative 2, will take several years longer to realize cleanup objectives, and there is a possibility that it will be difficult to attain cleanup levels.

Alternative 2 will result in the removal of the source of groundwater contamination which will work, in conjunction with the groundwater action at the Site, to attain the performance standards for groundwater.

Alternative 2 would be protective of human health and the environment, provide long-term effectiveness, achieve ARARs in a reasonable time frame, and be cost-effective among alternatives with respect to the evaluation criteria.

Therefore, EPA and NYSDEC believe that the combination of Alternative 2 and the current groundwater remedy would successfully remediate the contaminated soils and expedite the remediation of contaminated groundwater at the Site, respectively, while providing the best balance of tradeoffs among the alternatives with respect to the evaluation criteria. Furthermore, the selected remedy relating to soils would utilize permanent solutions and treatment technologies to the maximum extent practicable.

Description of the Selected Remedy

The selected amended remedy to address the source areas represents an amendment to the soil portion of the 2007 ROD and includes the following components[4]:

1) excavation of contaminated soils throughout the former lagoon area where contaminants in soils exceed NYSDEC Soil Cleanup Objectives for unrestricted use;
2) transport of contaminated soils that exceed the SCOs to a permitted TSD facility;
3) post-excavation confirmatory sampling; and
4) backfilling the excavated areas with clean fill.

The groundwater remedy previously selected in the 2007 ROD remains unchanged with regard to all but the soils component of that remedy (e.g., no change to the long-term groundwater monitoring).

The amended remedy effectively removes the sources of contamination in the soils, thereby eliminating further impacts to groundwater. Post-excavation sampling shall be performed to verify achievement of SCOs. Clean fill would be used to backfill all excavated areas. Alternative 2 will be performed in concert with the groundwater remedy previously selected in the 2007 ROD, which requires that the excavated area will be treated with oxygenating or oxygen-releasing compounds to create an aerobic environment and, thereby, stimulate biodegradation within the area of elevated groundwater contamination. After the initial treatment, additional applications of the oxygenating compounds may be necessary. During the initial phase, additional overburden and bedrock groundwater monitoring wells will be installed and incorporated into a SMP which will include a groundwater monitoring program. This monitoring program will be performed to monitor the effects of the soils and groundwater remedies on both the overburden and bedrock aquifers to reduce contaminant levels to below Federal and State standards. Institutional controls, *i.e.*, groundwater well restrictions, will be put in place at the Site.

Institutional controls (which were required by, and remain unchanged from, the 2007 ROD) will be enacted at the Site, which include the development of an environmental

[4] See Figure 6 for illustration of the selected soil remedy.

easement/restrictive covenant to be filed in the property records of Orange County that include groundwater use restrictions at the Site. Furthermore, new construction at the Site will be restricted unless an evaluation of the potential for vapor intrusion is conducted and mitigation, if necessary, is performed.

The amended remedy involves the removal of contaminated soils from the Site, which are above health-based levels. If justified by post-excavation sampling or from future reviews, additional remedial actions may be implemented at the Site.

The environmental benefits of the amended remedy should be enhanced by implementation of technologies and practices that are sustainable in accordance with EPA Region 2's Clean and Green policy[5]. This will include green remediation technologies and practices.

In general, five-year reviews are required whenever a remedial action results in hazardous substances, pollutants, or contaminants remaining on site. The five-year review requirement in CERCLA §121(c) is triggered when remaining on-site hazardous substances, pollutants, or contaminants are above levels that allow for "unlimited use and unrestricted exposure." This remedial action, upon completion, will not leave hazardous substances, pollutants, or contaminants remaining on the Site above levels that allow for unlimited use and unrestricted exposure. However, the groundwater remedial action (selected in the 2007 ROD) will require five or more years to complete. As such, a policy review will be conducted within five years after initiation of remedial action to ensure that the groundwater remedy is, or will be, protective of human health and the environment. If justified by the review, additional response actions may be implemented.

Summary of the Estimated Remedy Costs

The estimated capital, annual O&M, and total present-worth costs (using the federal standard 7% discount rate) for the amended remedy are $3.0 million, $25,000, and $3,026,900, respectively (see Appendix II, Table 2).

These cost estimates are based on the best available information regarding the anticipated scope of the selected remedy. Changes in the cost elements are likely to occur as a result of new information and data collected during the implementation of the remedy.

Expected Outcomes of the Selected Amended Remedy

The results of the human health risk assessment indicated that there are unacceptable hazards from potential exposure to groundwater through ingestion and inhalation and to

[5] See http://epa.gov/region2/superfund/green_remediation.

soils through contact and ingestion.

All groundwater at the Site is classified as GA, which is groundwater suitable as a source of drinking water. There is a future potential beneficial use of groundwater at the Site as a drinking water source.

The groundwater remedy selected in the 2007 ROD will:

- Prevent or minimize potential, current, and future human exposures including inhalation of vapors and ingestion of groundwater contaminated with VOCs and SVOCs;

- Ultimately restore the Site-contaminated portions of the groundwater aquifer to levels which meet NYS Groundwater and Drinking Water Quality Standards once the entire Site remediation is accomplished.

The amended soil remedy selected in this ROD Amendment will:

- Prevent exposure of human receptors to contaminated soils;

- Remediate contaminated soils and achieve soil cleanup objectives;

- Minimize migration of contaminants from soils to groundwater.

Furthermore, by implementing this soil remedy, the time needed to achieve soil cleanup objectives will be reduced by at least three years. This is expected to also decrease the time needed to achieve groundwater cleanup objectives. It is estimated that it will take 4 months to achieve soil cleanup objectives under this ROD Amendment and 10 years to achieve the groundwater cleanup objectives under the 2007 ROD groundwater remedy.

AMENDMENT OF 2007 RECORD OF DECISION

As discussed above, additional activities performed during RD (after the 2007 ROD was issued) indicate a substantial modification of the conceptual Site model. Specifically, surveying activities along with a thorough analysis of test pitting and boring information led to a better defined contamination source area. The projected volume of contaminated soils at the Site was recalculated. In addition, a waste characterization of the contaminated soils was conducted which led to the determination that much of the contaminated soil is now expected to be classified as non-hazardous under RCRA. As such, the capital cost for disposal is expected to be significantly less than as projected in the FS and relied upon in the 2007 ROD.

STATUTORY DETERMINATIONS

Under CERCLA Section 121 and the NCP, the lead agency must select remedies that are protective of human health and the environment, comply with ARARs (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, or contaminants at a Site. For the reasons discussed below, EPA has determined that the selected amended remedy meets these statutory requirements.

Protection of Human Health and the Environment

The results of the risk assessment indicate that, if no action is taken, the Site will pose an unacceptable increased future cancer risk and an unacceptable non-cancer hazard risk to human health for the hypothetical future use of the soil and groundwater at the Site. The amended remedy and the 2007 ROD groundwater remedy will together prove to be protective of human health and the environment in that they will address the source contamination and will restore groundwater quality beneath and downgradient of the source area over the long term. Combined with institutional controls, the amended remedy in this ROD Amendment and the 2007 ROD groundwater remedy will provide protectiveness of human health and the environment over both the short and long term.

Compliance with ARARs and Other Environmental Criteria

A summary of the ARARs and "Other Criteria, Advisories, or Guidance TBCs" which will be complied with during implementation of the amended remedy and the 2007 ROD groundwater remedy, is presented below.

- Clean Air Act, National Ambient Air Quality Standards (40 CFR 50)
- Groundwater Quality Regulations (6 NYCRR Parts 700-705)
- National Primary Drinking Water Standards (MCLs and non-zero maximum contaminant level goals) (40 CFR 141)
- NYSDEC Subpart 375: Remedial Program Soil Cleanup Objectives
- National Environmental Policy Act (40 CFR 1500 to 1508)
- National Emissions Standards for Hazardous Air Pollutants (40 CFR Parts 51, 52, 60, and 61)
- New York State Department of Health Drinking Water Standards (10 NYCRR Part 5)
- New York State Regulations for Prevention and Control of Air Contamination and Air Pollution (6 NYCRR Part 200)
- New York State Drinking Water Standards (NYCRR Part 5)

- New York State Air Cleanup Criteria, January 1990
- New York State Department of Environmental Conservation Guidelines for the Control of Toxic Ambient Air Contaminants, DAR-1, November 12, 1997
- New York Air Quality Standards (6 NYCRR Part 257)
- New York State Department of Environmental Conservation, Technical and Operational Guidance Series 1.1.1, November 1991
- Safe Drinking Water Act Proposed MCLs and nonzero MCL Goals
- Resource Conservation and Recovery Act, Land Disposal Requirements (applicable LDR treatment standards at 40 CFR Section 268.40 or 268.48)
- all applicable RCRA regulations

Cost-Effectiveness

A cost-effective remedy is one whose costs are proportional to its overall effectiveness (NCP Section 300.430(f)(1)(ii)(D)). Overall effectiveness is based on the evaluations of: long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness. Based on the comparison of overall effectiveness (discussed above) to cost, the amended remedy for soil meets the statutory requirement that Superfund remedies be cost-effective in that it is similar in cost to the previously selected remedy and it will achieve the remediation goals in a much smaller time frame.

Each of the alternatives underwent a detailed cost analysis. In that analysis, capital and annual O&M costs were estimated and used to develop present-worth costs. In the present-worth cost analysis, annual O&M costs were calculated for the estimated life of each alternative using a 7% discount rate. The estimated present-worth cost of the selected remedy is $3,026,900.

While both action alternatives will effectively achieve the soil cleanup objectives and provide the same degree of protection of human receptors, the selected alternative will result in achieving the soil cleanup objectives in a much shorter time frame. It is also expected that the amended soil remedy will help to achieve the restoration of water quality in the aquifer much more quickly than the other originally selected soils remedy. Therefore, EPA believes that the amended remedy is the most cost effective.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

The amended remedy provides the best balance of tradeoffs among the alternatives with respect to the balancing criteria set forth in NCP Section 300.430(f)(1)(i)(B), such that it represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner at the Site. In addition, the selected remedy provides the greatest protection of human health and the environment, provides the greatest long-term effectiveness, is able to achieve the ARARs more quickly, or as quickly, than the other alternatives, and is cost-effective. The amended remedy will

provide a permanent remedy to reduce the toxicity, mobility, and volume of the contaminants in the source area and the groundwater.

Preference for Treatment as a Principal Element

The statutory preference for remedies that employ treatment as a principal element is satisfied under the amended remedy for soil and under the 2007 ROD remedy for groundwater in that the source area and the contaminated groundwater will be treated, and treatment will be used to reduce the toxicity, mobility, and volume of contamination and achieve cleanup levels.

Five-Year Review Requirements

In general, five-year reviews are required whenever a remedial action results in hazardous substances, pollutants, or contaminants remaining on site. The five-year review requirement in CERCLA §121(c) is triggered when remaining on-site hazardous substances, pollutants, or contaminants are above levels that allow for "unlimited use and unrestricted exposure." This remedial action, upon completion, will not leave hazardous substances, pollutants, or contaminants remaining on the Site above levels that allow for unlimited use and unrestricted exposure. However, the groundwater remedial action (selected in the 2007 ROD) will require five or more years to complete. As such, a policy review will be conducted within five years after initiation of remedial action to ensure that the groundwater remedy is, or will be, protective of human health and the environment.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan, released for public comment on May 20, 2011, identified Alternative 2, excavation and off-site treatment of contaminated soil, as the preferred source-area and soil remedy. Based upon its review of the written and oral comments submitted during the public comment period, EPA has determined that no significant changes to the remedy, as originally identified in the Proposed Plan, are necessary or appropriate.

RESPONSIVENESS SUMMARY

Nepera Chemical Company, Inc, Superfund Site

INTRODUCTION

A responsiveness summary is required by regulations promulgated under the Superfund statute. It provides a summary of citizens' comments and concerns received during the public comment period, as well as the responses of the United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) to those comments and concerns. All comments summarized in this document have been considered in EPA and NYSDEC's final decision involving selection of a remedy for the Nepera Chemical Company, Inc. Superfund Site (Site).

SUMMARY OF COMMUNITY RELATIONS ACTIVITES

As lead agency for the Site, EPA has ensured that Site-related reports have been made available for public review at information repositories at the USEPA Region II Superfund Records Center, 290 Broadway, New York, NY, and at the Hamptonburgh Town Hall, 18 Bull Road, Campbell Hall, New York.

The Proposed Remedial Action Plan (or Proposed Plan) was prepared by EPA, with consultation by NYSDEC, and finalized on May 20, 2011. A notice of the Proposed Plan and public comment period was published in the Times Herald-Record on May 20, 2011 consistent with the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) §300.430(f)(3)(i)(A), and a summary of the Proposed Plan was mailed to all persons on the Site mailing list. On May 20, 2011, the EPA released for public comment the Proposed Plan for the Nepera Chemical Company, Inc. Superfund Site (Site). The Proposed Plan was made available for review at the information repositories for the Site. The public comment period began May 20, 2011 and ended on June 20, 2011. During the public comment period, EPA held a public meeting on June 15, 2011 to discuss the Proposed Plan and received comments on it. In addition, EPA received written comments on the Proposed Plan during the public comment period. This document summarizes the comments submitted by the public and EPA's responses.

PUBLIC COMMENTS AND EPA'S RESPONSES

Comment 1: How much wastes were disposed of from the Harriman Plant to the lagoon site in a weekly period?

Response 1: The lagoons were used from 1953 to 1967 for the disposal of wastewater generated at the Nepera, Inc. facility located in Harriman, New York. Wastewater from the facility's chemical processing operations was transported to the Hamptonburgh Site and disposed of in six lagoons constructed on the site. Approximately 50,000 gallons/week of wastewater were disposed of in the lagoons from 1953 to 1967.

Comment 2: What is the area where the soil contamination has occurred?

Response 2: The soil contamination is predominantly restricted to the original area of the constructed lagoons, which is less than 5 acres.

Comment 3: For how long will monitoring be performed after the remedies are implemented?

Response 3: Soil sampling would be performed throughout the remedy implementation process until soil cleanup objectives are achieved. Once soil cleanup objectives are achieved, no further soil sampling would be required. Groundwater monitoring will be performed until it can be shown that the aquifers are returned to drinking water quality or EPA determines that monitoring should no longer be required. It is estimated that groundwater monitoring will continue for ten years to ensure that drinking water standards are met.

Comment 4: What are the long-term plans for this property?

Response 4: EPA does not determine land-use or zoning requirements for Site properties, that is a local governmental function. The property is currently zoned for residential/agricultural use. As a result, EPA determined that a residential use was a reasonably anticipated future use for the Site property. The cleanup objectives were developed on the basis of a residential use of the property, which typically results in the most stringent cleanup levels. The property owner, Nepera, Inc., ultimately would determine the long-term property usage consistent with local land-use and zoning requirements.

Comment 5: How far away from the Site are the private wells that are being monitored for Site-related contaminants?

Response 5: Four private wells have been monitored. Two of the private wells are approximately 175 feet and 200 feet from the northern property boundary; one well is 250 feet from the west-southwest property boundary; one well is several hundred feet from the northwest property boundary.

Comment 6: Is there a program that will test my well for the contaminants known to exist at the Site?

Response 6: There is an ongoing program, which is being performed by the potentially responsible parties (PRPs) to monitor private wells in the immediate vicinity of the Site. The monitoring program continues to reflect that these private wells have not been impacted by Site-related contamination and that there is currently no need to expand the program to include additional private wells.

Comment 7: What assurances are there that the water on my property will not become contaminated?

Response 7: One of the objectives of the remediation is to restore the aquifer to drinking water quality. The contamination has existed at this Site for several decades. Both the overburden and bedrock aquifers have been impacted. Groundwater monitoring data reflects that the groundwater contaminant plume has remained predominantly on the Site property and is not expanding. Implementation of the soil remedy will remove the source of ongoing groundwater contamination and expedite the restoration of the groundwater to drinking water standards. Implementation of the groundwater remedy selected in the 2007 Record of Decision will further reduce the levels of contaminants in both aquifers. Groundwater samples will continue to be collected at monitoring wells on the Site and from private wells in the immediate vicinity of the Nepera Property to ensure that no private wells are impacted by Site-related contaminants and to monitor the effectiveness of the remedy.

Comment 8: How can we be sure that the municipal wells owned by the Village of Maybrook, or private wells in the Town of Hamptonburgh, will not be affected by contamination at the Site?

Response 8: The Village of Maybrook has public water supply wells located near the Site. These wells are analyzed on a quarterly basis for Site-related contaminants, none of which have ever been detected. In the event that monitoring should indicate that the Village of Maybrook public water supply wells have been impacted by the Site-related contaminants above health-based levels, a contingency plan exists, from the 2007 Record of Decision, that would provide for a wellhead treatment for the Village of Maybrook wells on an interim basis pending further consideration of groundwater treatment alternatives to meet groundwater treatment standards. In addition, a groundwater monitoring program will continue to be performed to evaluate the

effectiveness of the selected remedy and to ensure that no private wells are impacted by Site-related contaminants.

Comment 9: Regarding the Maybrook public water wells, isn't there a "T" located somewhere closer to the lagoons for the ability to hook-up Hamptonburgh or Campbell Hall to the Maybrook water supply?

Response 9: The EPA does not have detailed information pertaining to the location or supply capacity of the water distribution line(s) serviced by the Town of Maybrook Department of Public Works. They should be contacted for further information regarding this question.

Comment 10: A resident recommended installing a 360 cap over the area, and grading the area to promote runoff. This would limit infiltration of precipitation into the contaminated soil.

Response 10: These measures were evaluated in the Feasibility Study and the Proposed Plan. EPA did not select the capping alternative because under this alternative, the contaminated soils would remain on-Site and would continue to come into contact and impact the relatively shallow overburden aquifer. The selected remedy will permanently remove contaminated soil from the Site, thereby removing the source of ongoing contamination of the underlying aquifers.

Comment 11: If the remedy involves excavating contaminated soil, what is the likelihood that the contaminants will become airborne? How can we be sure that the air quality near the surrounding homes will not be impacted?

Response 11: A community health and safety plan will be followed to ensure that the excavation activities do not cause the spread of contamination. Precautions will be taken to prevent contaminants from becoming airborne. These precautions may include wetting down the soil, and putting up curtains to prevent contaminants from spreading. In addition, the plan will require air monitoring devices be used at the perimeters of the work site and in the excavation area itself to ensure that contaminants are not leaving the work area. If monitoring reveals that specified levels have been exceeded, corrective measures will be implemented.

Comment 12: A concern was expressed regarding the high volume of traffic that would be created under the preferred remedy (excavation of contaminated soils for off-Site treatment/disposal).

Response 12: For a temporary duration, there will be some increase in truck traffic. It is anticipated that an average of roughly 20 truck trips will occur per day over the projected schedule for the work.

Comment 13: Page 9 of the Proposed Plan states "It is estimated that there would be no more than 20 truck trips per day."

Response 13: The 20 trips noted in the Proposed Plan roughly equates to the average over the projected schedule for the work. The PRPs have requested some flexibility on this estimate. The actual number of truck trips on any given day for an excavation and off-site treatment/disposal project is influenced by a number of factors such as weather conditions, truck availability, excavation production, and disposal facility acceptance rate. To account for these influences, flexibility is needed in the maximum number of truck trips per day. To achieve the project schedule, the flexibility for up to 40 truck trips per day on some days will be necessary.

Comment 14: What route would the trucks use to transport contaminated soils from the Site?

Response 14: The prepared transport plan will require trucks stay on roads designated as truck routes. The proposed truck route requires that the trucks go east on County Highway 4, and follow Route 207, through the Town of Maybrook, and enter onto Interstate 84. From there, the trucks will either travel west to Morrisville, PA, or get onto the NY Thruway and travel north to Fort Edward, NY.

Comment 15: What are the locations of the treatment, storage, and disposal facilities that have been identified that are willing to accept the contaminated soils for treatment/disposal?

Response 15: It is anticipated that the contaminated soils will be transported to two facilities: Clean Earth in Morrisville, Pennsylvania, and ESMI, near Fort Edward, New York.

Comment 16: Are there plans to treat the contaminated soil at the treatment, storage, and disposal facilities?

Response 16: Both of the treatment, storage, and disposal facilities (Clean Earth in Morrisville, Pennsylvania, and ESMI, near Fort Edward, New York) perform thermal treatment. It is expected that the contaminated soils will be treated thermally, as necessary, at one or both of these facilities.

Comment 17: Who is the contractor hired to do the remedial activities associated with this Site?

Response 17: The PRPs have hired WRS Compass to do the remedial activities associated with this Site.

Comment 18: If an accident were to occur with one of the trucks moving contaminated soils from the Site, would you notify or call the Orange County Hazardous Materials team?

Response 18: An Emergency Contingency Plan, which will include a list of emergency contacts, will be prepared. If anything were to happen, the plan would be followed and everybody on the list would be contacted. In addition, a transportation plan will be developed and transport would be conducted in conformance with appropriate transportation requirements for hauling materials.

Comment 19: What steps will be taken during excavation to prevent contamination washing from the excavation site into nearby Beaverdam Brook, Otter Kill, and the aquifers?

Response 19: The remedial action contractor will install berms, swales, and check dams to minimize water run-on and water run-off from active excavation areas. In addition, dewatering activities will be performed in the excavation during the remedial action.

Comment 20: The security fence around the property is in disrepair. Will that be repaired before any excavation is done on the property?

Response 20: The PRPs have been asked to inspect the perimeter fence and to expeditiously make any necessary repairs.

Comment 21: The rear gate (along the railway grade) on the security fence is frequently left open.

Response 21: The EPA is not aware of the gate being left open. Unless activities are being conducted on the Site, which the EPA should be alerted to, then the gate should be closed and locked. Per the fence inspection in response 17 above, locks and locking mechanisms will also be inspected.

Comment 22: A resident indicated he observed the Site for years and saw individuals in white suits at the Site at 2 o'clock in the morning.

Response 22: EPA has consulted with the PRPs and NYSDEC about this matter. While sampling crews have gone onto this Site in white tyvek suits during the daytime, none of the parties are aware of anyone going onto the Site during the night.