Explanation of Significant Differences

Stuart Olver Holtz
Town of Henrietta, Monroe County
Site Registry No. 8-28-079

Denise M. Sheehan
Acting
Commissioner

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation October 2005

1.0: Introduction

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) is modifying the remedy selected by the March 31, 1997 Record of Decision (ROD) for the Stuart Olver Holtz (SOH) site based on new site information.

The SOH site is located at 39 Commerce Drive, in the Town of Henrietta, Monroe County, New York. The site occupies approximately 3.8 acres in a mixed commercial-industrial area. A former manufacturing building occupies the eastern half of the site. The remaining area consists of a paved parking lot, driveways and grass-covered areas. Immediately to the west of the site is a swale that receives drainage from the SOH site. The site is bounded on the east by several small businesses, on the west by Pullman Manufacturing, on the south by Ruby Gordon, Inc., and on the north side by Commerce Drive and several commercial properties. The SOH site was developed from farmland in 1962 as Electro Chemical Products, Inc., which evolved into Stuart Olver Holtz, Inc. SOH operated a specialty finishing business that included painting, conversion coating and metal plating of parts on a contractual basis. In 1974, a fire occurred at the site that destroyed a portion of the facility and resulted in the uncontrolled release of plating and coating solutions into the environment. In 1980, SOH applied for (but did not obtain) a permit to operate a solvent recovery unit at the facility and began accumulating drums of waste solvents for processing. The NYSDEC issued an enforcement order requiring SOH to remove the waste solvent drums, some of which had been observed to be leaking. The accumulation of drums had been a recurring problem at this facility, subsequently all drums have been removed. Efforts by the NYSDEC to have SOH complete an environmental cleanup of the site were not successful and the site was subsequently listed as a Class 2 inactive hazardous waste disposal site in 1989.

1.1: Statements of Purpose

As more fully described in Section 2 of this document, historic operations at the SOH site have resulted in the release of chlorinated solvents. The ROD documenting the site remedy was issued by the NYSDEC in March 1997, following completion of a Remedial Investigation/Feasibility Study (RI/FS). The ROD selected the following alternative to eliminate or mitigate the threats to human health and the environment posed by the site: A short-term source area extraction system, a down gradient contaminated groundwater collection trench system and passive pretreatment of contaminated groundwater by zero valence iron with eventual discharge to the local POTW, isolation and/or excavation and off-site disposal of contaminated surface soils, the construction of minor drainage improvements, and restoration of the excavated areas, implement institutional controls to reduce the potential for exposure to contaminated bedrock groundwater.

In 2000, NYSDEC conducted further site investigations to better define the source area and to determine if any unknown sources existed. In conjunction with these investigations, NYSDEC considered a proposal to conduct a field pilot study of permanganate injection. Permanganate injection is an in-situ chemical oxidation (ISCO) technology that is used to destroy chlorinated volatile contamination in soil and groundwater. The

purpose of the pilot test was to determine if permanganate injection would be a viable and cost effective remedial alternative for the overburden groundwater.

The permanganate injection pilot test was performed in July 2000. The pilot test concluded that permanganate injection is a feasible remedy for several volatile organic compounds (VOCs) in the site overburden groundwater. When permanganate injection is augmented with an in-situ bioremediation system, it provides a feasible and cost effective remedial alternatives for chlorinated VOCs in the site overburden groundwater. Permanganate injection will destroy the chlorinated ethenes while the subsequent bioremediation system will destroy the chlorinated ethanes.

In conjunction with the permanganate injection pilot test, NYSDEC has reevaluated the overburden groundwater alternative as previously selected by the 1997 ROD. Although both systems would reduce VOC contamination in the overburden groundwater, a significant difference in implementation time and cost between the two systems exists. The estimated time required to implement the passive groundwater treatment alternative is more than forty years while the estimated time required to implement the permanganate injection / augmented bioremediation system is nine years. The ROD's passive collection and treatment system does not directly address the contamination source area but relies on transport of contaminants from the source area to the passive collection and treatment system. A supplemental short term source area extraction would not be as effective in reducing contaminant concentrations as the permanganate injection system. The estimated total net present worth of the remedy stipulated in the 1997 ROD is $7,130,476. The estimated total net present worth of the proposed permanganate injection/augmented bioremediation system is $4,090,430. When comparing the ISCO remedy to the original remedy, the estimated total net present worth savings is approximately $3,040,046.

Retained 1997 ROD Components:

NYSDEC proposes to retain several of the actions as originally included with 1997 Record of Decision. They include the following:

- Excavate the on-site and off-site surface soils that are above standards, criteria and guidance (SCGs) values and dispose off-site. Regrade and restore the excavated areas.
- Remove sediments from site sumps, catch basins and related piping and dispose off-site.
- Decommission drainage lines or connections to and from the former SOH building.
- Disconnecting the SOH interior bedrock wells.

Amended 1997 ROD components:

NYSDEC proposes to amend the 1997 Record of Decision with the following:

- Implement a permanganate injection system to destroy chlorinated ethenes in overburden groundwater. Injection wells installed at the perimeter of the site on the down gradient boundary, at the source area, and within the on-site plume would be utilized to inject a solution of permanganate into the overburden groundwater. Further enhancements to the permanganate injection delivery systems in the source area such as galley trenches and/or the addition of in-situ soil mixing or excavation will be evaluated in the remedial design.
- Implement an augmented bioremediation system utilizing a carbon source to destroy chlorinated ethanes. The augmented biormediation system would be implemented upon completion of the permanganate

injection. The system would utilize the former permanganate injection wells at the source area and within the plume for injection.

- Conduct periodic long-term groundwater monitoring to verify the effectiveness of the remedy.
- Construct drainage improvements between Ruby Gordon and the SOH site to minimize groundwater recharge to the Ruby Gordon basement.
- Conduct soil gas and air sampling (indoor, ambient, subslab) of relevant areas adjacent to the site.
- Imposition of an institutional control in the form of an environmental easement that will require compliance with the approved site management plan.
- Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by NYSDOH.
- Require the property owner to complete and submit to the NYSDEC a periodic certification.

2.1: Site History and Description

The Stuart Olver Holtz site was first developed from farm land in 1962 as Electro Chemical Products, Inc. The company evolved into Stuart Olver Holtz, Inc. (SOH) as the business and properties were passed on to successors. SOH operated a specialty finishing business which included painting, conversion coating and metal plating of parts on a contract basis. In 1974, a fire occurred at the site, destroying a portion of the facility and also causing the release of plating and coating solutions into the environment.

In 1980, SOH applied for a permit to operate a solvent recovery unit at the facility and began accumulating drums of waste solvents for processing. Due to regulation changes, the permit was not issued, however SOH had accumulated a substantial volume of waste in the interim. Subsequently the NYSDEC issued an enforcement order against SOH requiring removal of the drums, some of which had been observed to be leaking. The accumulation of drums had been a recurring problem at this facility, subsequently all drums have been removed. After efforts to have SOH complete a clean up of the site were not successful, the site was listed as an inactive hazardous waste disposal site with a Class 2 designation.

In 1986 SOH filed a Chapter 11 - Bankruptcy Petition. A plan for business reorganization was approved by the court that entailed transfer of the manufacturing facility to Metalade, Inc. Metalade established SOH Acquiring, Inc. to hold title to the facility and then leased it back from this holding company. Metalade conducted the same type of manufacturing operation at the facility as had SOH. A separate parcel of the property is still owned by principals of the original SOH, however, SOH as a corporation was dissolved. Environmental assessments of the site made in conjunction with this transfer confirmed the presence of soil and groundwater contamination at the site.

Adjoining the property to the south is Ruby Gordon, Inc., a furniture sales and warehousing enterprise. Ruby Gordon applied for a NYSDEC permit to discharge groundwater collected from basement sumps to a nearby surface drainage ditch. Due to the proximity to the SOH site and the presence of VOCs there, Ruby Gordon was required to analyze its sump water for VOCs. Because of VOC contaminant levels found in the sump water, this water is now pre-treated and then discharged to the Monroe County Pure Waters POTW.

In April 1985 and again in March 1986, the NYSDEC conducted an inspection of the SOH Facility. During those inspections several chemical containers and drums were observed unprotected outside of the facility, in the southwestern portion of the site. Container and drum contents were reported to consist of 1, 1, 1-trichloroethane, etching waste, methylene chloride, waste thinner, nickel stripping solution, plating waste paint,

and other solvents. The inspection also revealed the presence of three large dumpsters containing electroplating sludge outside of the SOH facility.

In 1987, a Site Assessment was conducted by SOH. Based on the results of this investigation, the following conclusions were reached:

- Groundwater flow in the overburden aquifer is generally toward the west to northwest.
- VOCs were discovered in soil samples collected from the southwestern portion of the site, particularly in the vicinity of the drum storage area.
- VOCs were found in the three new monitoring wells in the southwestern portion of the site.
- VOCs were found in the two existing on-site production wells. Due to the lack of information about construction of these wells and indications that they may be screened at a different interval than the newly installed monitoring wells, the source of contamination and the direction of bedrock flow at these locations could not be determined.

In April 1991, Ruby Gordon conducted hydrogeologic investigations of the Ruby Gordon property to determine if SOH was contributing to contaminants detected in the Ruby Gordon basement sumps. This study concluded that contaminants found in water from the three basement sumps were attributable to contaminated groundwater migrating from the SOH site.

3.0: CURRENT STATUS

The NYSDEC is currently contracting to have the SOH building demolished. It was revealed through the additional remedial design work that a significant source of contamination exists under the SOH building. These impacted soils are substantially contributing to the groundwater contamination found at this site. In order to safely and fully characterize the extent of this contamination, it is necessary to demolish the existing, dilapidated structure. Post excavation, a supplemental sampling program will be initiated with the installation of additional soil borings through the remaining building slab. This additional characterization work is necessary to determine the extent of the contamination. This information, along with existing site information, will be utilized to properly design the proposed in-situ oxidation remedy. The contract for the demolition activities was approved in October 2005, it is anticipated that the demolition work and following remedial components will be completed by the Spring of 2006:

- Remove sediments from site sumps, pits, catch basins and related piping and dispose off-site. The remaining sumps and pits would be sealed with gravel and concrete.
- Decommission drainage lines or connections to and from the former SOH building.
- Disconnect and seal the SOH interior bedrock wells.

The remedial design is anticipated to be completed by the end of 2006 with implementation of the proposed chemical oxidation alternative by the Spring of 2007.

4.0: Description of Significant Differences

4.1: New Information

In 2000, NYSDEC conducted further site investigations to better define the source area and to determine if any unknown sources existed. In conjunction with these investigations, NYSDEC considered a proposal to conduct a field pilot study of permanganate injection. Permanganate injection is an ISCO technology that is used to destroy chlorinated volatile contamination in soil and groundwater. The purpose of the pilot test was to determine if permanganate injection would be a viable and cost effective remedial alternative for the overburden groundwater.

The permanganate injection pilot test was performed in July 2000. The pilot test concluded that permanganate injection is a feasible remedy for several VOCs in the site overburden groundwater. When permanganate injection is augmented with an in-situ bioremediation system, it provides a feasible and cost effective remedial alternatives for all chlorinated VOCs in the site overburden groundwater. A first phase of permanganate injection will destroy the chlorinated ethenes while the subsequent bioremediation system will destroy the chlorinated ethanes.

4.2: Comparison of Changes with Original Remedy

The significant difference of the proposed remedy, compared to the remedy selected in the March 1997 ROD, is that the scope will be modified such that the planned passive groundwater treatment system, shallow groundwater collection trenches and groundwater extraction wells will not be installed.

The performance of the modified remedy will be the same as the intended performance of the original remedy; this performance will be achieved through the installation of an in-situ chemical oxidation system to address groundwater contamination. With the planned demolition of the SOH building, contaminated soils under the building will be investigated and treated through chemical oxidation or removed through excavation.

Once all aspects of the modified remedy have been implemented there will be a significant decrease in the cost of the remedy and estimated time frame to achieve remediation compared to the cost and time interval of the original remedy (Table 1.).

A modification of this nature is considered to be a significant, but not a fundamental change to the ROD.

The remedial goals included in the March 1997 ROD for this site include:

- Eliminate to the extent practicable the potential for direct human or animal contact with site contaminants.
- Reduce, control, or eliminate to the extent practicable the contamination present within the soils and waste on site.
- Reduce, control, or eliminate to the extent practicable any further migration of contaminated groundwater from the site, including migration into the Ruby Gordon basement sumps.
- Provide, to the extent practicable, for attainment of groundwater SCGs in the area affected by the site.

The ROD, as modified by this Explanation of Significant Differences (ESD), is protective of human health and the environment and meets the goals originally included in the March 1997 ROD. The New York State Department of Health concurs that the modified remedy is protective of public health.

5.0: SCHEDULE AND ADDITIONAL INFORMATION

The NYSDEC has moved forward with the schedule to implement the demolition work which should be substantially complete by Spring 2006. The additional site characterization will be conducted immediately after demolition. The final Remedial Design is anticipated to be completed by the Spring 2007.

If you have questions or need additional information you may contact any of the following:

Mr. Jeffrey McCullough
Project Manager
NYS Department of Environmental Conservation
625 Broadway
Albany, NY 12203-7013
(518) 402-9812
Toll Free: (888) 459-8667

Mr. Matthew Forcucci
NYS Department of Health
584 Delaware Avenue
Buffalo, New York 14202
(716) 847-4385

This Explanation of Significant Differences (ESD) will become part of the Administrative Record for this Site. The information here is a summary of what can be found in greater detail in documents that have been placed in the following repositories:

Town of Henrietta
Town Library
455 Calkins Road
Henrietta, NY 14467

NYS Dept. of Environmental Conservation
Region 8 Headquarters
6724 East Avon-Lima Road
Avon, NY 14414
Hours: Monday-Friday 8:30-4:45
Contact: Ms. Lisa Silvestri at (585) 226-5326

Interested persons are invited to contact the NYSDEC's Project Manager for this site to obtain more information or have questions answered. The project manager for this site is Mr. Jeffrey McCullough. To obtain additional information, he can be contacted at 625 Broadway, Albany, New York, 12233-7013, telephone number: 518-402-9812, email *jbmccull@gw.dec.state.ny.us.*

Table 1.

1997 Record of Decision	2005 Proposed Remedy
Estimated time frame to remediate - 40 years	Estimated time frame to remediate - 9 years
Total net present worth - $ 7,130,476	Total net present worth - $ 4,090,430
Install a shallow groundwater collection trench system along the north and west property boundaries to collect and contain contaminated groundwater.	Implement a permanganate injection system to destroy chlorinated ethenes in overburden groundwater. Injection wells installed at the perimeter of the site on the down gradient boundary, at the source area, and within the on-site plume would be utilized to inject a solution of permanganate into the overburden groundwater. Further enhancements to the permanganate injection delivery systems in the source area such as galley trenches and/or the addition of in-situ soil mixing or excavation, will be evaluated in the remedial design. Implement an augmented bioremediation system utilizing a carbon source to destroy chlorinated ethanes. The augmented biormediation system would be implemented upon completion of the permanganate injection. The system would utilize the former permanganate injection wells at the source area and within the plume for injection.
Install and operate a passive groundwater pretreatment system. The system consists of subsurface vaults containing zero valence iron filings for destruction of chlorinated VOCs. Pre- treated groundwater would discharge by gravity to the sanitary sewer for final treatment at the local POTW.	
Install and operate groundwater extraction wells for removal of contaminants from the source area near OW-7s.	
Install and operate a shallow groundwater collection trench adjacent to the Ruby-Gordon basement to intercept contaminated groundwater.	
	Conduct soil gas and air sampling (indoor, ambient, subslab) of relevant areas adjacent to the site.
	Imposition of an institutional control in the form of an environmental easement that will require compliance with the approved site management plan. Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by NYSDOH. Require the property owner to complete and submit to the NYSDEC a periodic certification.
Construct drainage improvements between Ruby-Gordon and the SOH site to minimize groundwater recharge to the Ruby-Gordon basement.	
Excavate the on-site and off-site surface soils that are above SCGs and haul off-site for disposal. Regrade and restore the excavated areas.	
Clean and dispose off-site accumulated sediments from site sumps, catch basins and related piping. Evaluate and decommission drainage lines or connections, disconnect the SOH interior bedrock wells.	
Conduct periodic, long term groundwater monitoring to verify the effectiveness of the remedy.	

9/30/05
Date

Jeffrey McCullough, Project Manager
Remedial Bureau D

9/30/05
Date

A. Joseph White, Section Chief
Remedial Bureau D

10/4/05
Date

Edward R. Belmore, Bureau Director
Remedial Bureau D

10/5/05
Date

Salvatore Ervolina, Assistant Director
Division of Environmental Remediation

10/19/05
Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

STATE OF NEW YORK
DEPARTMENT OF HEALTH

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

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

Dennis P. Whalen
Executive Deputy Commissioner

October 7, 2005

Mr. Dale Desnoyers, Director
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway - 12th Floor
Albany, NY 12233-7011

Re: Explanation of Significant Differences
Stuart-Olver-Holtz
Site #828079
Henrietta (T), Monroe County

Dear Mr. Desnoyers:

Staff reviewed the September 2005 Explanation of Significant Differences (ESD) for the Stuart-Olver-Holtz site located in the Town of Henrietta, Monroe County. I understand that the proposed changes to the 1997 Record of Decision (ROD) include implementation of a permanganate injection system and an augmented bioremediation system to destroy chlorinated ethenes, long-term groundwater monitoring to assess the effectiveness of the remedy, construction of drainage improvements between the site and a neighboring business, soil gas and indoor air sampling adjacent to the site, and imposition of an institutional control in the form of an environmental easement that will require compliance with the approved site management plan, restrictions on the use of groundwater, and periodic certification. Based on this information, I believe that the proposed changes to the ROD are protective of public health and concur with the ESD.

Should you have any questions, please contact Mark VanValkenburg at (518) 402-7860.

Sincerely,

Steven M. Bates, Assistant Director
Bureau of Environmental Exposure Investigation

cc: G. A. Carlson, Ph.D./A. Grey, Ph.D.
Mr. M. VanValkenburg
Mr. M. Forcucci, WRO
Mr. R. Elliott, MCHD
Mr. B. Putzig, DEC Region 8

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