Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

Town Line Road Dump Site
State Superfund Project
Town of Springport, Cayuga County, New York
Site Number 706007

March 2010

New York State Department of Environmental Conservation
DAVID A. PATERSON, *Governor* ALEXANDER B. GRANNIS, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Town Line Road Dump Site
State Superfund Project
Town of Springport, Cayuga County, New York
Site No. 706007

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Town Line Road Dump site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law, 6 NYCRR Part 375, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Town Line Road Dump site and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Description of Selected Remedy

Based on the results of the remedial investigation feasibility study (RI/FS) for the Town Line Road Dump site and the criteria identified for evaluation of alternatives, the Department has selected removal of drums, associated surficial soils and VOC contaminated subsurface soils, and excavation of waste and contaminated soil within the former municipal landfill area to the depth of the watertable; and institutional controls in the form of restrictions on access to on-site soil and the use of groundwater at the site, as well as the implementation of a site management plan. The components of the remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Removal of drums and in the immediate vicinity, associated surficial soils, and VOC contaminated subsurface soils with collection of end point samples. Potential areas of drum removal are shown on Figure 8. In the event that the remaining soil does not meet the lower of the protection of public health - residential or protection of groundwater SCOs for volatile organic compounds; the soil excavation will continue until they are achieved or groundwater or bedrock is encountered. Disposal off-site at an appropriate disposal facility.

3. Excavation of approximately 3,500 cubic yards of contaminated soil within the former municipal landfill area (see Figure 8) to the depth of the water table (approximately 13 feet

bgs), with collection of end point samples. Disposal off-site at an appropriate disposal facility.

4. Excavated areas will be backfilled to original grade with clean soil. The top six inches of soil must be of sufficient quality to support vegetation. Clean soil is soil that is tested and meets the Division of Environmental Remediation's criteria for backfill or local site background.

5. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the property to residential use, which will also permit commercial or industrial uses; (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

6. Development of a site management plan which will include the following institutional and engineering controls: (a) continued evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (b) monitoring of groundwater; (c) identification of any use restrictions on the site; and (d) provisions for the continued proper operation and maintenance of the components of the remedy.

7. The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal will: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

8. Since the remedy results in untreated hazardous waste remaining at the site, a long-term monitoring program will be instituted. VOCs in the groundwater would be monitored to document reductions in contaminant concentrations and volumes. This program will allow the effectiveness of the natural attenuation and potential threats to down-gradient receptors to be monitored and will be a component of the long-term management for the site.

9. An investigation of the potential for soil vapor intrusion at the adjacent off-site residential property will be completed during the remedial design phase. The results will be evaluated in accordance with appropriate guidance, and if needed, appropriate actions recommended.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

MAR 3 1 2010

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

RECORD OF DECISION

Town Line Road Dump Site
State Superfund Project
Town of Springport, Cayuga County, New York
Site No. 706007
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SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Town Line Road Dump Site. The presence of hazardous waste has created significant threats to human health and/or the environment that are addressed by this remedy presented in this Record of Decision (ROD). As more fully described in Sections 3 and 5 of this document, the past dumping of drums of liquid industrial wastes have resulted in the disposal of hazardous wastes, including volatile organic compounds (VOCs,). These wastes have contaminated the soil and both overburden and bedrock groundwater at the site, and have resulted in:

- a significant threat to human health associated with potential exposure to soil and groundwater.
- a significant environmental threat associated with the current impacts of contaminants to groundwater quality.

To eliminate or mitigate these threats, the Department has selected a remedy that includes removal of drums and debris in the immediate vicinity, associated surficial soils, and VOC contaminated subsurface soils; excavation of VOC contaminated soil within the former municipal landfill area to the depth of the water table; and institutional controls in the form of restrictions on access to on-site soil and the use of groundwater at the site, as well as the implementation of a site management plan.

The selected remedy, discussed in detail in Section 8, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Town Line Road Dump Site is an approximately 20 acre Class 2 inactive hazardous waste disposal site that is privately owned. The site is located on the south side of Town Line Road in the Town of Springport, Cayuga County (Figure 1). The site is bordered by agricultural land to the east, south, and west and to the north by Town Line Road. The area to the north of Town Line Road is also agricultural land. There are several small depressions at the site that are the remnants of early

20th Century gypsum mining exploration operations. There are no structures on site. A dirt road and paths are present. There is a natural gas well approximately 250 feet southwest of the site. The site land surface consists of agricultural fields and a densely wooded area. The topography consists of moderate hills that generally slope towards the west. There are four water-filled depressions located within the wooded area. These are designated as Pond 1 through Pond 4 on Figure 2. The underlying near surface soil deposits at the site were generally fine sandy silt with some clayey silt and trace amounts of gravel. Overburden materials generally extend to a depth of approximately 20 feet and are underlain by approximately one foot of weathered shale bedrock, 15-20 feet of competent limestone/dolostone bedrock, under which the carbonate bedrock contains fractures and possibly solution cavities based on the observed loss of drilling fluid. Overburden and bedrock groundwater flow are generally to the west, following both surficial and bedrock topography (Figure 3). The average horizontal groundwater gradient in the overburden is 0.02 and there appears to be a downward gradient of groundwater flow through the overburden into bedrock in the vicinity of the site.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

In 1968 and 1969 the northern portion of the site was reportedly used as a landfill by the Towns of Springport and Aurelius for municipal waste. From 1964 through 1970 employees of General Products (a.k.a. Wickes Manufacturing) of Union Springs, New York reportedly disposed of an estimated 600 drums of liquid trichloroethene (TCE) as well as waste hydraulic oil. The drums were allegedly transported to the site, opened, and allowed to drain onto the ground surface in the western-most depression on site. The empty drums were reportedly picked up at a later date and returned to General Products. In addition, employees of General Electric allegedly disposed of approximately 60 drums of unidentified liquid wastes at the site in 1965 or 1966.

3.2: Remedial History

In 1987, the Department first listed the site as a Class 2a site on the Registry of Inactive Hazardous Waste Disposal Sites in New York (the Registry) after the dumping was reported and site contaminants were discovered in a private well west of the site. Class 2a was a temporary classification assigned to a site that had inadequate and/or insufficient data for inclusion in any of the other classifications. Phase I and II investigations were completed by the Department in 1990 and 1993, respectively. These investigations included background reviews, the installation of bedrock monitoring wells, groundwater sampling, surface water and pond sediment sampling. In 1993, based on these data, the Department listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

- General Products (a.k.a. Wickes Manufacturing), Union Springs, New York
- General Electric, Auburn, New York
- Town of Springport, New York
- Town of Aurelius, New York

The PRPs declined to implement the RI/FS at the site when requested by the Department. After the remedy is selected, the PRPs will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the state for recovery of all response costs the state has incurred.

SECTION 5: SITE CONTAMINATION

A remedial investigation/feasibility study (RI/FS) has been conducted to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between April 2008 and November 2008. The field activities and findings of the investigation are described in the RI report.

The RI involved a local water use survey, surface water and sediment sampling and analysis, surface soil sampling and analysis, subsurface soil sampling and analysis, groundwater monitoring well installation, groundwater sampling and analysis, and soil vapor sampling and analysis to determine the impacts from the historical disposal on the site and at off-site down-gradient areas.

5.1.1: Standards, Criteria, and Guidance (SCGs)

To determine whether the soil, sediment, groundwater, and soil vapor contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on the Department's Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the Department's Soil Cleanup Objectives (SCO) for Unrestricted Use and Residential ("NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives").

- Sediment SCGs are based on the Department's Technical Guidance for Screening Contaminated Sediments dated January 1999.
- Soil vapor sample results were compared to the collected ambient air sample and to typical background levels of VOCs in outdoor air provided in the NYSDOH guidance document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," dated October 2006. The background levels are not SCGs and are used only as a general tool to assist in data evaluation.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI/FS report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

As described in the RI/FS report, soil, sediment, soil vapor, and groundwater samples were collected to characterize the nature and extent of contamination. As shown on Figures 4 through 7, the main categories of contaminants that exceed their SCGs in subsurface soil and groundwater are volatile organic compounds (VOCs). For comparison purposes, where applicable, SCGs are provided on the figures for each medium.

Chemical concentrations are reported in micrograms per liter (ug/l) for water and micrograms per kilogram for soil. Air samples are reported in micrograms per cubic meter (µg/m3).

Figures 4 through 7 also summarize the degree of contamination for the contaminants of concern in the soil and groundwater and compare the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Waste Materials

Numerous drums were observed at surface soil sampling location SS-4 which was located adjacent to Pond 4, one of which was labeled as formerly containing TCE. The drums were generally in poor condition, partially buried, and their current contents are unknown. Within the former municipal waste area, some degraded household waste material was encountered in some soil borings while installing the temporary well points. Most of the waste was encountered in soil borings that were drilled along the northern edge of the wooded area and was encountered near the ground surface in less than a five foot section of soil borings SB-6, SB-9, SB-14, and SB-15R, at depths from 0.5 feet bgs to 17.3 feet bgs in soil boring SB-4, and from 0.6 feet bgs to 11.6 feet bgs at soil boring SB-16. Waste identified during the RI/FS will be addressed in the remedy selection process.

Surface Soil

Four surface soil samples were collected during the investigation. The approximate locations of the surface soil samples are shown on Figure 4. VOCs were not detected in the samples at concentrations greater than 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives. Sample # SS-2 did show concentrations of barium, cadmium, chromium, copper, lead, mercury, nickel, and zinc which exceeded SCOs. SS-2 was located in a low lying area that was littered with debris, and the metal concentrations generally only slightly exceeded the SCO. Surface water sample SW-3 collected near the sample # SS-2 did not show any metal concentrations above SCO's. The groundwater sample SB-05, located in the same area, did not show any of the metals which exceeded SCOs in Sample # SS-2 in concentrations above groundwater standards. Therefore, these metals in surface soil detected at this location do not appear to be impacting groundwater or surface water quality. None of the surface soil samples collected during the Remedial Investigation contained concentrations of VOCs, SVOCs, pesticides, or PCBs greater than unrestricted SCOs.

Subsurface Soil

Twenty four soil borings were drilled to refusal at the bedrock surface (20 to 30 feet below ground surface) to evaluate overburden soil quality, as shown on Figure 5. The majority of the exceedances were in the former drum disposal area or in the former municipal landfill area. Trichloroethene was present at concentrations greater than the corresponding Unrestricted Use SCOs in soil samples from SB-5, SB-14, SB-17, SB-18, SB-19, SB-21, SB-22, and SB-23. Acetone was also present in a sample from SB-22 at a concentration greater than the corresponding Unrestricted Use SCO. The soil sample from SB-15 contained m/p-xylenes and o-xylene at concentrations greater than the corresponding Unrestricted Use SCOs. Arsenic, cadmium, chromium, copper, mercury, nickel, and zinc were the most frequently detected metals in soil samples collected during the RI. One or more of these metals were present at concentrations greater than the corresponding Unrestricted Use SCOs in soil samples from SB-6, SB-11, SB-13, SB-15, SB-16, and SB-22. Of these metals, only arsenic, chromium, and nickel were detected in groundwater at levels slightly exceeding the groundwater standard. Barium was also present at concentrations greater than the corresponding Unrestricted Use SCOs in soil samples from SB-17, SB-18, and SB-22. Soil samples from SB-22 also contained lead and silver at concentrations greater than the corresponding Unrestricted Use SCOs but below the corresponding Part 375 Protection of Groundwater Soil Cleanup Objective. One subsurface soil sample from SB-16 did show 50,800 ppm of copper exceeding the Unrestricted Use SCO of 50 ppm. This may have been due to buried copper wire or pipe at this location near the former municipal landfill area. None of the subsurface soil samples collected during the RI contained concentrations of SVOCs greater than the applicable Unrestricted Use SCOs.

Subsurface soil contamination identified during the RI/FS will be addressed in the remedy selection process.

Groundwater

The bedrock surface was mapped based on direct-push refusal depths and depth to bedrock encountered during deep monitoring well drilling. As shown on Figure 3, there is a bedrock valley

trending east-west that likely controls overburden groundwater presence and flow. Drilling of the deep bedrock wells during the investigation indicated that overburden materials generally extend to a depth of approximately 20 feet and are underlain by approximately one foot of weathered shale bedrock, 15-20 feet of competent limestone/dolostone bedrock, under which the carbonate bedrock contains fractures and possibly solution cavities based on the observed loss of drilling fluid. Saturated overburden thicknesses range from zero in the southern portion of the investigation area to approximately five feet in the northern portion of the investigation area. Overburden and bedrock groundwater flow are generally to the west. Based on groundwater elevations, chlorinated VOC distribution in overburden and bedrock groundwater, bedrock surface mapping, and inferred fracture and solution cavities based on drilling fluid losses, there appears to be a downward gradient of groundwater flow through the overburden into bedrock in the vicinity of the site.

Groundwater samples were collected from 10 temporary monitoring wells, four existing bedrock monitoring wells, and 10 newly installed monitoring wells, as shown on Figures 6 and 7. TCE was present at concentrations greater than the corresponding Class GA Standard in overburden groundwater samples from GB-5, GB-11, GB-14, GB-17, GB-18, GB-20, MW-1S, MW-5S, and MW-6S. Overburden groundwater samples from GB-11, GB-17, GB-20, GB-22, MW-1S, MW-4S, MW-5S, and MW-6S contained cis-1,2-dichloroethene at concentrations exceeding the corresponding Class GA Standard. Overburden groundwater samples from GB-11, GB-17, GB-22, MW-1S, and MW-6S also contained trans-1,2-dichloroethene at concentrations exceeding the corresponding Class GA Standard. Vinyl chloride was present at concentrations greater than the corresponding Class GA Standard in overburden groundwater samples from GB-22 and MW-6S. The sample from GB-15 contained 1,4-dichlorobenzene, benzene, and ethyl benzene at concentrations greater than the corresponding Class GA Standards, while the sample from MW-6S contained 1,1-dichloroethene, and dichlorodifluoromethane at concentrations greater than the corresponding Class GA Standards. One SVOC, 2-chloronaphthalene, was present in the sample from GB-19 at 12 ppb a concentration greater than the corresponding Class GA Standard of 10 ppb. Antimony, arsenic, barium, chromium, iron, lead, magnesium, manganese, nickel, sodium, and thallium were the most frequently detected metals in overburden groundwater samples collected during the RI, and at least one of these metals was present in all samples at concentrations greater than the corresponding Class GA Standards. Groundwater metal samples were not field filtered. Arsenic, chromium, and nickel, which exceeded SCOs in subsurface soil, only slightly exceeded groundwater stands at one overburden location, SB-14. Arsenic was detected at 35.5 ppb exceeding the standard of 25 ppb, chromium was detected at 159 ppb exceeding the standard of 50ppb, and nickel was detected at 155 ppb exceeding the standard of 100 ppb. SB-14 is located within the former municipal landfill area. None of the overburden groundwater samples collected during the RI contained concentrations of pesticides or PCBs greater than the applicable Class GA Standards.

Cis-1,2-dichloroethene, trans-1,2-dichloroethene, and TCE were present at concentrations greater than the corresponding Class GA Standards in bedrock groundwater samples from MW-1D, MW-4D, MW-GW-5.

Molecular genetic testing for *Dehalococcoides* in the microbial population of groundwater at the site was conducted using samples from MW-4S, MW-5S, MW-6S, and GB-9. *Dehalococcoides* has been shown to naturally degrade TCE to cis-1,2-dichloroethene, vinyl chloride, and ethene. None of the groundwater samples from the site contained *Dehalococcoides* bacteria.

Previous sampling of the dug well on the adjacent residential property to the west of the site by the NYSDEC in 1987 detected TCE, cis-1,2-dichloroethene, chloroform, and vinyl chloride at concentrations of 33ppb, 138ppb, 9ppb, and 1 ppb, respectively, which are generally consistent with concentrations of chlorinated VOCs detected in the sample from monitoring well MW-1S during the RI. The Department returned to the residential property in 1996 to resample and found the dug well abandoned and a new drilled bedrock well installed. This well was sampled at that time and contained cis-1,2- dichloroethene, TCE, vinyl chloride, and trans-1,2 dichloroethene at concentrations of 12, 3.7, 0.5, 0.5 ppb, respectively, which are consistent with the concentrations of chlorinated VOCs detected in the sample from bedrock well MW-1D during the RI. An activated carbon water treatment system was installed on the water supply and the property received municipal water beginning in approximately 2006.

Groundwater contamination identified during the RI/FS will be addressed in the remedy selection process.

Surface Water

Four surface water samples (one from each pond) were collected during the investigation. As shown on Figure 6, no VOC's were detected above SCGs. In addition, no metals were detected above SCGs.

No site-related surface water contamination of concern was identified during the RI/FS. Therefore, no remedial alternatives need to be evaluated for surface water.

Sediments

Four sediment samples (one from each pond) were collected during the investigation, as shown on Figure 4. Acetone was detected at concentrations ranging from 32ppb to 110 ppb in sediment samples SD-1, SD-2, SD-3, and SD-4. Acetone detected in samples is often an artifact of the laboratory analysis. This is likely the case as acetone was not detected in surface water or groundwater. Samples SD-3 and SD-4 both contained zinc at a concentration greater than the corresponding lowest effect level but below the severe effect level in the technical guidance. Sample SD-4 also contained mercury at a concentration of 0.55 ppm greater than the corresponding lowest effect level of 0.15 ppm but below severe effect level for mercury of 1.3 ppm. The lowest effect level indicates a level of sediment contamination that can be tolerated by the majority of benthic organisms, but still causes toxicity to a few species. The severe effect level indicates the concentration at which pronounced disturbance of the sediment dwelling community can be expected. None of the sediment samples collected during the RI contained concentrations of SVOCs, pesticides, or PCBs greater than the applicable guidance values.

No site-related sediment contamination of concern was identified during the RI/FS. Therefore, no remedial alternatives need to be evaluated for sediments.

Soil Vapor/Sub-Slab Vapor/Air

Two soil vapor monitoring points were installed in the areas containing the highest concentrations of VOCs in the soil and/or groundwater, as shown on Figure 2. Chlorinated VOC contaminants of

concern that are present in soil and/or groundwater are generally absent or present at low concentrations in soil vapor.

No site-related soil vapor contamination of concern was identified during the RI/FS. Therefore, no remedial alternatives need to be evaluated for this medium.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. There were no IRMs performed at this site during the RI/FS.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 8 of the RI/FS report, which is available at the document repositories listed in Section 1.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

The potential for trespassers to come into contact with a small area of contaminated surface soils is unlikely based on existing site conditions. Groundwater at the site is not used for drinking water purposes since the area is served by public water. NYSDOH and NYSDEC will evaluate the need for additional investigations to determine the potential for soil vapor intrusion into structures on or near the site.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

The Fish and Wildlife Impact Analysis, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

VOCs have impacted the groundwater resource. Plant communities and ecosystems present on and near the site are not regionally scarce and do not appear to have been adversely affected by the presence of contaminants. Wildlife resources in the vicinity of the site are mostly mobile, common species, that have sufficient adjacent habitat that is of equal or higher quality than that on the site. Therefore a viable exposure pathway to fish and wildlife receptors is not present.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The remediation goals for this site are to eliminate or reduce to the extent practicable:

- exposures of construction and/or utility workers at or around the site to chlorinated VOCs or metals in subsurface soils, or chlorinated VOCs in soil vapor and groundwater;

- the release of contaminants from subsurface soil and groundwater into indoor air of future buildings through soil vapor intrusion.

Further, the remediation goals for the site include attaining to the extent practicable:

- ambient groundwater quality standards; and
- the Department's Soil Cleanup Objectives (SCO) for Unrestricted Use and Residential ("NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives").

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Town Line Road Dump Site were identified, screened and evaluated in the FS report which is available at the document repositories established for this site.

A summary of the remedial alternatives that were considered for this site is discussed below. The present worth represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following potential remedies were considered to address the contaminated soil and groundwater at the site.

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2: Institutional Controls and Monitoring

Present Worth: $380,000
Capital Cost: $55,000
Annual Costs:
(Years 1-30): $25,000

Alternative 2 would include groundwater monitoring, plus the implementation of restrictions on the use of the property and the use of groundwater at the site and in the area of the off-site plume. Groundwater use restrictions would include an environmental easement to prevent future use of the groundwater and control activities at the site, including notification procedures for future owners and/or developers/workers of the restricted use of the property. Because contamination would remain both on- and off-site, a Site Management Plan (SMP) would be required that would provide specific requirements for site development and use including periodic site inspections. The SMP would include an evaluation of the potential for soil vapor intrusion to occur in any future buildings constructed on-site and evaluate off-site impacts. A long-term monitoring program would be implemented at the site to evaluate the extent of contaminant migration and attenuation. Monitoring of the existing groundwater monitoring well network would be part of this alternative.

Alternative 2 would utilize the existing installed sampling points and two to four additional down-gradient points and thus would not require a significant design or implementation period.
Alternative 2 would also require the imposition of an institutional control in the form of an environmental easement that would require (a) limiting the site use to commercial use, which would also permit industrial use, consistent with local zoning; (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water,

without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

The Alternative 2 Site Management Plan (SMP) would specify the procedures necessary to maintain the site remedy.

Alternative 3: Excavation

Present Worth: $1,700,000
Capital Cost: $1,300,000
Annual Costs:
(Years 1-30): $25,000

Alternative 3 would include all of the elements of Alternative 2, except that the environmental easement would allow residential use in addition to commercial and industrial use, plus the following items:

- Removal of drums and in the immediate vicinity, associated surficial and VOC contaminated subsurface soils;
- Excavation of approximately 3,500 cubic yards contaminated soil within the former municipal landfill area to the depth of the water table, approximately 13 feet bgs;
- Off-site disposal in accordance with applicable federal, state, and local regulations;
- Confirmatory sampling of excavated areas, followed by backfill to original grade with clean soil that meets the Division of Environmental Remediation's criteria for backfill or local site background.
- Post-excavation groundwater monitoring.

Alternative 3 would reduce the contaminant mass in the soil and the source material of the groundwater plume, and is expected to result in lower the VOC concentrations in groundwater over time.

Alternative 4: Excavation + In-Situ Chemical Oxidation (ISCO) using Fenton's Reagent and Sodium Permanganate

Present Worth: $2,900,000
Capital Cost: $2,800,000
Annual Costs:
(Years 1-5): $25,000

Alternative 4 would include all of the elements of Alternative 3, plus the following items:

- A pilot test, including installation of injection wells, to determine chemical oxidant radius of influence and treatability;
- Injection of Fenton's reagent as the primary source area treatment, followed by injection of sodiumpermanganate in the source area and within the off-site plume through injection wells;

- Pre- and Post-injection soil and groundwater sampling; and
- Groundwater monitoring

Alternative 5: Excavation + Enhanced Bioremediation

Present Worth: $2,400,000
Capital Cost: $2,200,000
Annual Costs:
(Years 1-10): $30,000

Alternative 5 would include all of the elements of Alternative 3, plus the following items:

- A pilot test, including installation of injection wells, to determine amendment radius of influence and treatability;
- Injection of electron donor/nutrient amendments and cultured microbial population of *Dehalococcoides* for both primary source area treatment and within the off-site plume through injection wells;
- Pre- and Post-injection soil and groundwater sampling; and
- Groundwater monitoring

Alternative 6: Excavation + ISCO using Fenton's Reagent and Sodium Permanganate followed by Enhanced Bioremediation polishing

Present Worth: $2,600,000
Capital Cost: $2,400,000
Annual Costs:
(Years 1-10): $25,000

Alternative 6 would include all of the elements of Alternative 4 using Fenton's Reagent and Sodium Permanganate for primary source area treatment, plus the following items:

- Injection of electron donor/nutrient amendments and cultured microbial population of *Dehalococcoides* through injection wells within the off-site plume following source area treatment by excavation and ISCO.

The time required to design and implement Alternative 6 would be approximately five years. An estimated time period of ten years was used for this Alternative, however, actual time frames will depend on remedial effectiveness.

The Potential Remediation areas for Alternatives 3-6 are shown on Figure 8.

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of inactive hazardous waste disposal sites in New York A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

   The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in Table 1.

This final criterion is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the Department addressed the concerns raised.

In general, the comments were supportive of the selected remedy.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the Department has selected Alternative 3, Excavation as the remedy for this site. The elements of this remedy are described at the end of this section.

8.1 Basis for Selection

The selected remedy is based on the results of the RI and the evaluation of alternatives presented in the FS.

Alternative 3 is selected because, as described below, it satisfies the threshold criteria and provides the best balance of the primary balancing criteria described in Section 7.2. It would achieve the remediation goals for the site by removing the waste drums, buried waste, and impacted soils that create the most significant threat to public health and the environment and are the primary sources of groundwater contamination. Alternatives 4, 5, and 6 would also comply with the threshold selection criteria, but at a much higher cost. Alternatives 1 and 2 would not comply with the threshold selection criteria because the waste materials would remain a source to groundwater and a threat to public health.

Because Alternatives 3, 4, 5, and 6 satisfy the threshold criteria, the five balancing criteria are particularly important in selecting a final remedy for the site.

Alternatives 4 (excavation and ISCO), 5 (excavation and bioremediation), and 6 (excavation and ISCO + bioremediation) would have the greatest short-term effectiveness because in addition to addressing the source of contamination as Alternative 3 does, they would directly treat the impacted groundwater. Alternatives 3, 4, 5, and 6 would all be effective in the long-term because they remove the source material and human exposure threat. The time needed to achieve the remediation goals would be shortest for Alternative 4 and similar for Alternatives 5, and 6. Alternatives 3, 4, 5, and 6 would all require an environmental easement, providing for a land use restriction and a groundwater use restriction.

Alternative 3 is easily implementable. Alternatives 4, 5, and 6 are also readily implementable, but involve additional components and have inherent uncertainties associated with in-situ treatment (i.e., getting the treatment fluids in contact with contaminated media at depth). Alternative 3, excavation and removal of on-site waste and associated soil, would remove any exposed contamination on-site;

reducing the possibility of human exposure. Although this would remove a large percentage of the contamination on-site, low concentrations in groundwater would remain. Therefore, restrictions on the use of the property and on groundwater would be needed. In the absence of an identified down-gradient receptor, these institutional controls would be protective and more cost-effective than direct groundwater treatment.

Alternative 3 would not reduce the toxicity or mobility of the contaminants, but would reduce the contaminant mass in the soil and the source material of the groundwater plume, and is expected to result in lower VOC concentrations in groundwater over time. The time required to design and implement Alternative 3 would be approximately one year. An estimated monitoring time period of thirty years was used to calculate the total present worth cost for this Alternative.

Alternative 4 would reduce the toxicity of the CVOCs by oxidizing them to non-toxic end products. This alternative would have no effect on the mobility of the contaminants, but would be expected to greatly reduce the contaminant mass in the groundwater. Alternative 4 would remove the source material of the groundwater plume. The time required to design and implement Alternative 4 would be approximately three years. An estimated time period of five years was used was used to calculate the total present worth cost for Alternative 4.

Alternative 5 would reduce the toxicity of the CVOCs by facilitating reductive dechlorination to non-toxic end products. This alternative would have no effect on the mobility of the contaminants, but would be expected to greatly reduce the contaminant mass in the groundwater. Alternative 5 would also remove the source material of the groundwater plume. The time required to design and implement Alternative 5 would be approximately five years. An estimated time period of ten years was used was used to calculate the total present worth cost for Alternative 5.

Alternative 6 would destroy the CVOCs by oxidizing them to non-toxic end products and transitioning to reductive dechlorination. This alternative would have no effect on the mobility of the contaminants, but would be expected to greatly reduce the contaminant mass in the groundwater, and in the source area.

Alternatives 3, 4, 5, and 6 would reduce the contaminant mass and have little effect on the mobility of contaminants, but would have varying effects in the reduction of toxicity. Adding groundwater treatment to the baseline excavation and drum removal work increases the remedial costs significantly. Alternative 3 is the least expensive of alternatives that satisfy the threshold criteria, making it very favorable because it would eliminate a continuing source of groundwater contamination at the site, and monitors residual ground water contamination to prevent human exposure. The treatment involved in Alternatives 4, 5, and 6 are the most costly remedies and their effectiveness is uncertain. Their costs are similar to each other. Designing the remedy, mobilizing the equipment, preparing the site, remedial chemicals, and construction management are substantial costs associated with each of these remedies. By removing the immediate threat to public health and the source of groundwater contamination, groundwater treatment would not be necessary.

The estimated present worth cost to implement the remedy is $1,700,000. The cost to construct the remedy is estimated to be $1,300,000 and the estimated average annual costs for 30 years is $25,000.

8.2 Elements of the Selected Remedy

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Removal of drums and in the immediate vicinity, associated surficial soils and VOC contaminated subsurface soils with collection of end point samples. Potential areas of drum removal are shown on Figure 8. In the event that the remaining soil does not meet the lower of the protection of public health - residential or protection of groundwater for volatile organic compounds; the soil excavation will continue until they are achieved or groundwater or bedrock is encountered. Disposal off-site at an appropriate disposal facility.

3. Excavation of approximately 3,500 cubic yards of contaminated soil within the former municipal landfill area (see Figure 8) to the depth of the water table (approximately 13 feet bgs), with collection of end point samples. Disposal off-site at an appropriate disposal facility.

4. Excavated areas will be backfilled to original grade with clean soil. The top six inches of soil must be of sufficient quality to support vegetation. Clean soil is soil that is tested and meets the Division of Environmental Remediation's criteria for backfill or local site background.

5. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the property to residential use, which would also permit commercial or industrial uses; (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

6. Development of a site management plan which will include the following institutional and engineering controls: (a) continued evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (b) monitoring of groundwater; (c) identification of any use restrictions on the site; and (d) provisions for the continued proper operation and maintenance of the components of the remedy.

7. The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal will: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-

approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

8. Since the remedy results in untreated hazardous waste remaining at the site, a long-term monitoring program will be instituted. VOCs in the groundwater would be monitored to document reductions in contaminant concentrations and volumes. This program would allow the effectiveness of the natural attenuation and potential threats to down-gradient receptors to be monitored and will be a component of the long-term management for the site.

9. An investigation of the potential for soil vapor intrusion at the adjacent off-site residential property will be completed during the remedial design phase. The results will be evaluated in accordance with appropriate guidance, and if needed, appropriate actions recommended.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties was established.
- A public meeting was held on February 24, 2010 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

Table 1
Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
Alt # 1- No Action			
Alt. # 2 - Institutional Controls & Monitoring	$55,000	$25,000	$380,000
Alt. # 3 - Excavation	$1,300,000	$25,000	$1,700,000
Alt. # 4 - Excavation & In-Situ Chemical Oxidation (ISCO) using Fenton's Reagent and Sodium Permanganate	$2,800,000	$25,000	$2,900,000
Alt. # 5 - Excavation &Enhanced Bioremediation	$2,200,000	$30,000	$2,400,000
Alt. # 6 - Excavation & ISCO using Fenton's Reagent and Sodium Permanganate followed by Enhanced Bioremediation Polishing	$2,400,000	$25,000	$2,600,000

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Town Line Road Dump Site
State Superfund Project
Town of Springport, Cayuga County, New York
Site No. 706007

The Proposed Remedial Action Plan (PRAP) for the Town Line Road site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 12, 2010. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater at the Town Line Road Dump site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 24, 2010, which included a presentation of the remedial investigation/feasibility study (RI/FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 18, 2010. This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

Comments received at the Public Meeting –

COMMENT 1:
I am the former town supervisor. A number of years ago, an employee at General Products informed me of dumping at this site. This employee, who wished to remain anonymous, used to leave early from work on certain days, and meet the dump operator at the site to dispose of solvents. Subsequent to this, in 1987, the well water at the down gradient home was first sampled, and levels were high, way above drinking water standards. The local newspaper ran a big article, and the town received a letter that they shouldn't use the water from their well for drinking or showering. Folks said the water smelled ok. I can provide a copy of this article and letter to the Department if needed.

RESPONSE 1:
Thank you. We do have the analytical data from the 1987 water well sample in our file, but we do not have a copy of the newspaper article. You are correct that the 1987 sample from the old dug well at that residence showed concentrations of VOCs significantly above standards and they were correctly advised to stop using the well. That shallow dug well was abandoned, the mobile home was replaced with a modular home, and they drilled a deeper bedrock well. The bedrock well was also found to be contaminated, although at lower concentrations, and the residence was provided with a carbon filtration unit which was maintained by the Department from 2001 until 2006 when they were connected to public water.

COMMENT 2:
How will the Department ensure any contamination is kept from moving off-site once excavation work is begun?

RESPONSE 2:
Since the wastes were disposed of and have been buried at the site for over 40 years, we do not expect that excavation will result in release of contaminants in source areas that are currently contained. We do not expect to encounter any intact drums of liquid waste. Nevertheless, precautions will be taken during the excavation to ensure that releases are prevented. Details of those preventative measures will be determined during the next phase of work, the remedial design.

COMMENT 3:
The proposed remedy is expensive, who pays for it?

RESPONSE 3:
The Department will approach the potentially responsible parties to see if they will implement the remedy selected in this Record of Decision (ROD). If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the state for recovery of all response costs the state has incurred.

COMMENT 4:
I live just north of the site and would like my water tested, as I am not supplied with public water. Several other people living in the vicinity of the site also requested that their wells be tested.

RESPONSE 4:
A representative from the Cayuga County Health Department is in attendance tonight. We will make sure that she has the contact information from anyone who lives in the vicinity of the site and has a concern about their water supply. We will also ensure that the New York State Department of Health (NYSDOH) has the contact information of anyone who wants their well sampled. They will work directly with the Cayuga County Health Department to ensure that these concerns are properly addressed.

COMMENT 5:
Did the down gradient home get sampled for soil vapor intrusion?

RESPONSE 5:
Two soil vapor samples were collected and analyzed during the Remedial Investigation. The sample locations were selected by the NYSDOH, and were in line between the site and the nearby down gradient home (the locations are shown on PRAP Figure 2 as the blue diamond). These samples did not detect any contamination,. Nevertheless, a sub-slab and indoor air sample will be collected and analyzed during the remedial design phase of work if the homeowner is willing to allow us into their home to collect the sample.

COMMENT 6:
Will the proposed remedy excavate the contamination down to bedrock?

RESPONSE 6:
Possibly within the drum disposal area, but not within the former municipal landfill area. In the former municipal landfill area the plan is to excavate to the water table, about 13 feet, to remove the potential source of groundwater contamination in that area. In the former municipal landfill area, the data does not indicate any source material below the water table, so excavation below the water table is not anticipated.

COMMENT 7:
Do we know the extent of the groundwater plume – has it been defined?

RESPONSE 7:
The extent of the groundwater contaminant plume is shown on PRAP Figure 8. The site remedy includes a site management plan. A key component of the site management plan will be a long term groundwater monitoring well network. This will help to confirm and further our understanding of groundwater quality and movement.

COMMENT 8:
It was noted that the Department plans to install additional monitoring wells as part of the remedy. Where will these go?

RESPONSE 8:
Those locations will be determined during the development of the site management plan. Groundwater monitoring wells will be concentrated downgradient, to the west and northwest of the site.

COMMENT 9:
It was mentioned that kids on ATVs use the trails on the site. Is there a danger of their being exposed to contamination?

RESPONSE 9:
Direct contact with a small area of contaminated surface soil is not expected unless people trespass on the site. Soil sample #SS-2 is located next to Pond #3 which is surrounded by thick brush and vegetation, making access difficult to this small area.

COMMENT 10:
I understand the excavation part of the remedy. What about the rest (chemical treatment, etc)?

RESPONSE 10:
The Department has selected Alternative 3, Excavation, as the remedy for this site. Alternatives 4, 5, and 6, which were evaluated but not selected, included using chemical additives, such as strong oxidizing agents and sodium permanganate, in an attempt to accelerate the breakdown of the residual volatile organic contaminants in the groundwater. These alternatives would include

a pilot test and the installation of injection wells. Alternative 5 would include injection of electron donor/nutrient amendments and a cultured microbial population of *Dehalococcoides* for both primary source area treatment and within the off-site plume. Given the concentration of contaminants detected in the groundwater, and weighing the evaluation criteria identified in Section 7 of this ROD, the alternatives that included such aggressive groundwater treatment methods were not selected.

COMMENT 11:
During implementation of the remedy, after you dig down to bedrock, I recommend you check the bed-rock surface for fissures and cracks. There is a Federal Superfund site in the county where it is suspected that contamination from the GE Auburn site entered the bedrock and migrated to Union Springs and contaminated the water supply.

RESPONSE 11:
We are aware of the USEPA lead Federal Superfund site and the extent of that groundwater plume that was tracked from near Auburn all the way to Union Springs. The bedrock underlying the Town Line Road Dump site belongs to the Silurian age Bertie Group and may include the upper beds of the Camillus Formation. It is an argillaceous dolostone and limestone. It is weathered at the surface and does have fissures which do effect groundwater movement. We may encounter bedrock during excavation in the drum disposal area, but our intent here is to remove what is left of a potential source of groundwater contamination. It is not likely that we will be able to expose the bedrock surface for examination.

COMMENT 12:
When will you start (implementation of the remedy)?

RESPONSE 12:
For a discussion of who implements the remedy, see Response 3. After the Record of Decision is signed, we will move into the remedial design phase. It is anticipated that the actual remedial construction, the excavation work, would begin within 2 years .

COMMENT 13:
It was mentioned that under the state superfund, the state attempts to get cost recovery from the responsible parties. Is it harder to do this if there are changes in corporate entities? One of the attendees noted that General Products is also known as Wicks, which was bought by TRW. It was also noted that the TRW plant in Union Springs is closed, but TRW still operates a plant in Auburn.

RESPONSE 13:
See response to comment #3. Changes in corporate entities may complicate that process.

COMMENT 14:
Can I get an electronic copy of the PRAP? (Requested by four attendees).

RESPONSE 14:

Yes. We have your e-mail addresses and you will be provided with electronic copies of the PRAP.

COMMENT 15:
In addition to the information in the document repository, there may be historical information regarding the site in the Town of Springport or Town of Aurelius.

RESPONSE 15:
Thank you. At some point the Department may want to look into that further as it may help with cost recovery efforts, but we believe that we have the information that we need now to proceed with the selection of a remedy for the site.

COMMENT 16:
A county employee noted that historic aerial photos going back to the 1930's show other sink holes/ dug pits in the Town (i.e., in addition to the ones shown in the PRAP) which are now filled in. This includes one area across the road from the site. He suggested that these areas be investigated with a metal detection device to determine if there are buried drums.

RESPONSE 16:
This type of information is very helpful. We have examined all the historic aerial photos of the site that are on file at the State Archives in the York State Museum Building in Albany. We have your contact information, and we will be in touch with you regarding the disposal of drums on the north side of Town Line Road in the Town of Aurelius to evaluate whether further investigation is needed in this area.

Written Comments:

Mr. Bill Bennett submitted a letter dated February 16, 2010 which included the following comments:

COMMENT 17:
Instead of replacing the soil completely, I suggest that it be turned into a small wetland area. There appears to be a small spring, and many ducks and geese frequent the area.

RESPONSE 17:
In the drum disposal area, it might be possible to slightly enlarge Pond #4 as a result of the drum, debris, and contaminated soil removal rather than importing clean fill. The former municipal landfill area currently underlies a portion of a productive agricultural field, so the plan for that area is to remove approximately 3,500 cubic yards of soil and waste to the water table (approximately 13 feet below grade level) and replace this excavation with clean soil. Based on the results of post excavation sampling, the area may able to be restored to agricultural use. In any case, the quality of the wildlife habitat will be improved.

Mr. Bruce R. Natale, P.E., Cayuga County Environmental Engineer & SWM Program Administrator, Cayuga County Department of Planning & Economic Development submitted a letter dated March 17, 2010 which included the following comments:

COMMENT 18:
ALL of the scrap metal and surface debris should be removed from the site. Removing just "most" of the debris may leave some barrels and/or hot spots hidden, especially in the area that may have been a farm dump from pre-1954 until the dumping activities ceased.

RESPONSE 18:
Our intent is to remove what remains of the source of groundwater contamination. Any surface or buried drums that may have contained VOCs have rusted and released any contents decades ago. The extent of surface scrap metal or debris to be removed will be determined during the remedial design phase, but the Department can only remove surface debris which is within the scope of the inactive hazardous waste disposal site remedial program.

COMMENT 19:
There are two adjacent parcels which were operated as dumps by the same private operator as your subject site. All three parcels were under single ownership in the 1960's. These two adjacent sites should also be investigated. The 3 acre Parkinson site may have been just west of your site, possibly connecting to your drum site around pond 4. The Re-Ho-Both Enterprises site was directly across the road and also run by Mr. Parkinson. At a minimum, I would suggest that NYS perform ground penetrating radar and magnetic scans over these areas as a check for buried drums.

RESPONSE 19:
We have examined all the historic aerial photos of the site that are on file at the State Archives in the York State Museum Building in Albany and the maps, aerial photos, and information included in attachments A through J with your correspondence. The aerial photos do give an indication of what areas appear to be cleared, but it is not possible to determine if what appears to be a clearing was an area where dumping occurred. However the information you have provided is helpful.

During the remedial design phase, we expect that some field investigation work will be necessary to better define the amount of material to be removed from the site. This work would most likely be done with a geoprobe, and some geoprobe borings could be done in the area which you have shown on your attachment "J" as a "farm dump" area from 1954 to 1963. The area you have shown as a suspected "Parkinson" dump area from 1963 to 1969 is within the site and immediate downgradient area which was investigated during the 1993 Phase II investigation and the Remedial Investigation. The Phase II investigation included drilling seven borings which were completed as bedrock monitoring wells. During the RI, twenty-four geoprobe borings were advanced to the bedrock surface, with temporary 1-inch monitoring wells installed in each one. Groundwater samples were collected and analyzed from ten of these wells. In addition, ten permanent monitoring wells were installed - five completed in the overburden on top of the bedrock surface, and five completed in the bedrock. Based on all of the data collected, we were able to identify only two potential source areas for groundwater contamination. These areas will be excavated and removed as part of the site remediation. As previously stated, a key component of the site management plan will be a long term downgradient groundwater monitoring well

network. If the data collected tends to indicate other source areas, supplemental investigation may be performed in the future.

The north side of Town Line Road in the Town of Aurelius, which you have shown as the "Re-Ho-Both" area on attachment "J", could be investigated by the Department using ground penetrating radar or conducting a magnetometer survey to see if an old drum disposal area could be located. If this work were done in the future, it would be considered as investigation of a separate potential site.

COMMENT 20:
TCE is suspected to have been dumped at the site near pond 4. Is the NYSDEC certain that there is no DNAPL pool or plume on or in the bedrock?

RESPONSE 20:
While it is possible that some DNAPL may be present at the bedrock surface, we didn't find any during our investigation of the site, nor were the dissolved concentrations of TCE in groundwater indicative of the presence of DNAPL on the bedrock surface. If DNAPL is encountered during the drum excavation near Pond 4 it will be removed. The long term groundwater monitoring well results will determine how successful we are in removing the residual source of groundwater contamination. If VOC concentrations in groundwater do not decrease over time as we expect they will, the remedy will be reevaluated in the future.

Telephoned Comments:

COMMENT 21:
A telephone call was received from Eileen O'Connor from the Cayuga County Health Department on March 2, 2010 which included the following comments:

The PRAP states on page 9 that it is possible for trespassers to come into contact with contaminated surface soil. Page 5 of the PRAP states that surface soil sample # SS-2 showed several metals exceeding SCOs. Should I be concerned about kids using ATVs on the site and being exposed to and tracking contaminants back to their homes?

RESPONSE 21:
See response to comment #9. Section 5.3 of the PRAP was revised to clarify that the potential for trespassers to come into contact with a small area of contaminated surface soils is unlikely based on site conditions.

APPENDIX B

Administrative Record

Administrative Record

Town Line Road Dump Site
State Superfund Project
Town of Springport, Cayuga County New York
Site No. 706007

Proposed Remedial Action Plan for the Town Line Road Dump Site, dated February 2010, prepared by the Department.

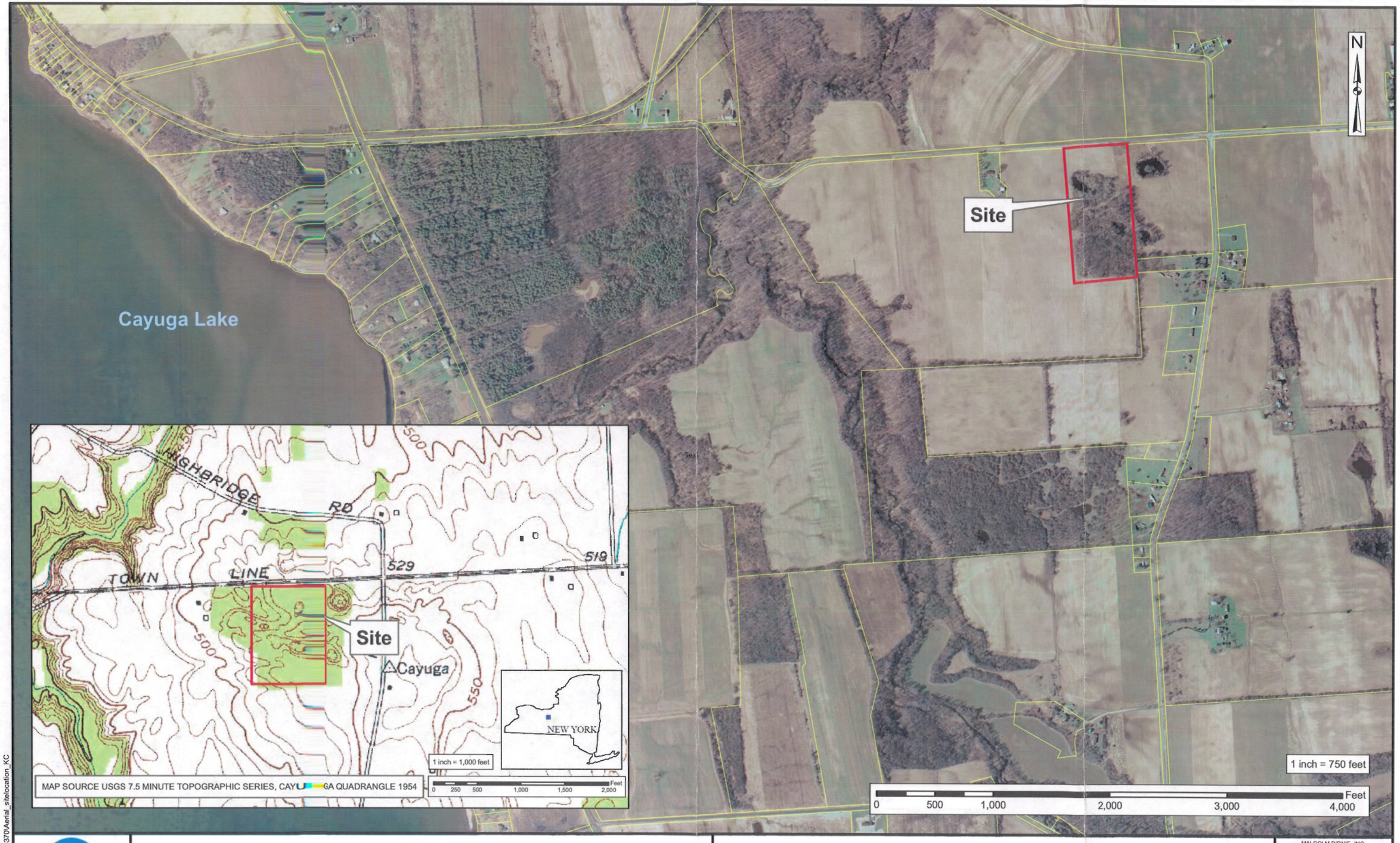
Referral Memorandum dated October 28, 2003 for the Town Line Road Dump Site; Registry No. 706007.

"Phase I Investigation of the Town Line Road Dumpsite" January 1990, Recra Environmental Inc.

"Phase II Investigation – Town Line Road Dumpsite; Site No. 706007" July 1993, URS Consultants, Inc.

"Project Management and Remedial Investigation/Feasibility Study Work Plan; Town Line Road Dump Site (HW 7-06-007) Springport, New York" February 2008, Malcolm Pirnie, Inc.

"Remedial Investigation/Feasibility Study; Town Line Road Dump Site (HW 7-06-007) Springport, New York" September 2009, Malcolm Pirnie, Inc.



M:\GIS\MOD\0266370\Aerial_sitelocation_KC

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

TOWN LINE ROAD DUMP

WORK ASSIGNMENT # D-004439-16

SITE LOCATION

MALCOLM PIRNIE, INC.

JUNE 2009

FIGURE 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

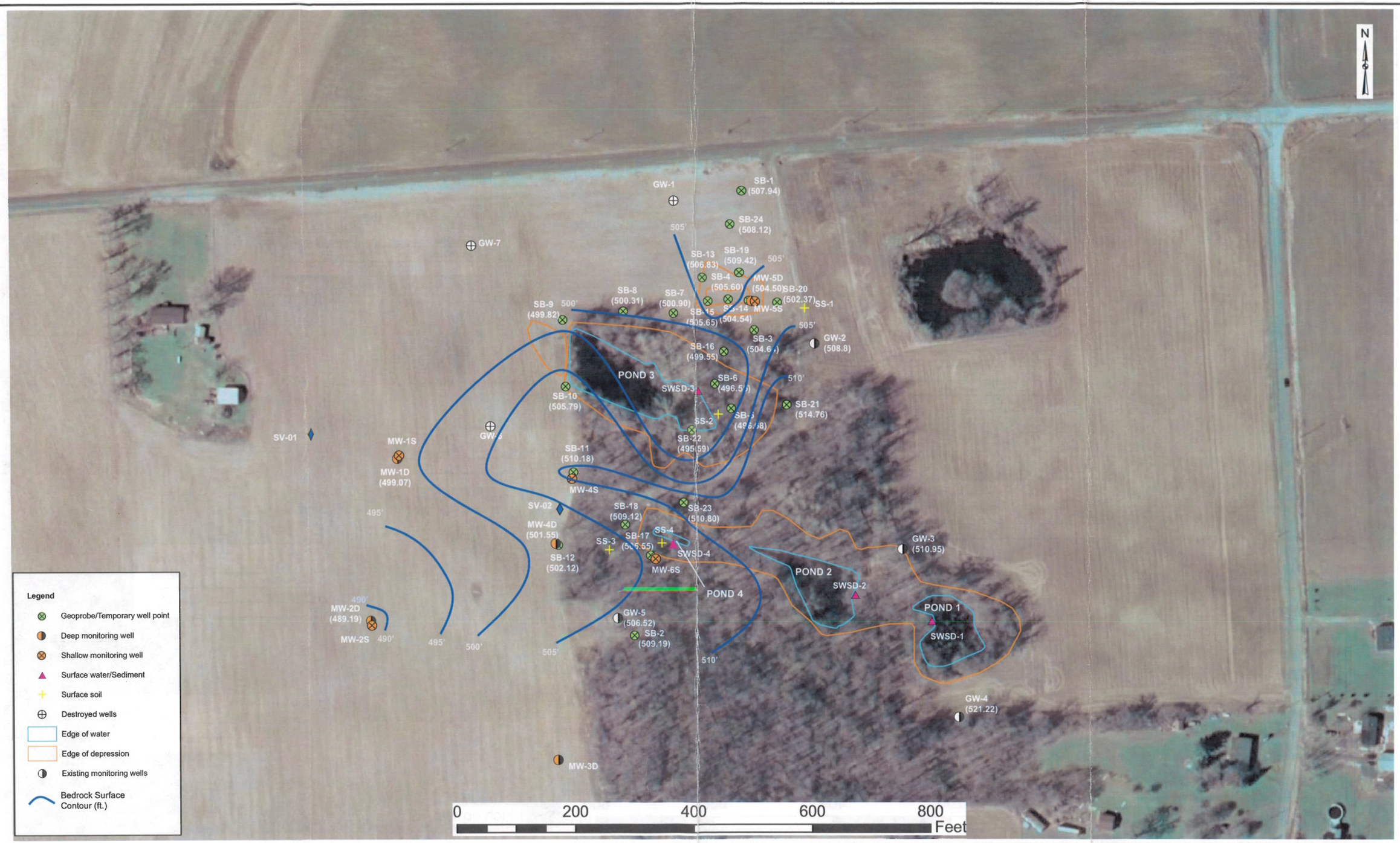
TOWN LINE ROAD DUMP

WORK ASSIGNMENT #D-004439-16

SAMPLING LOCATIONS

October 2009

FIGURE 2



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

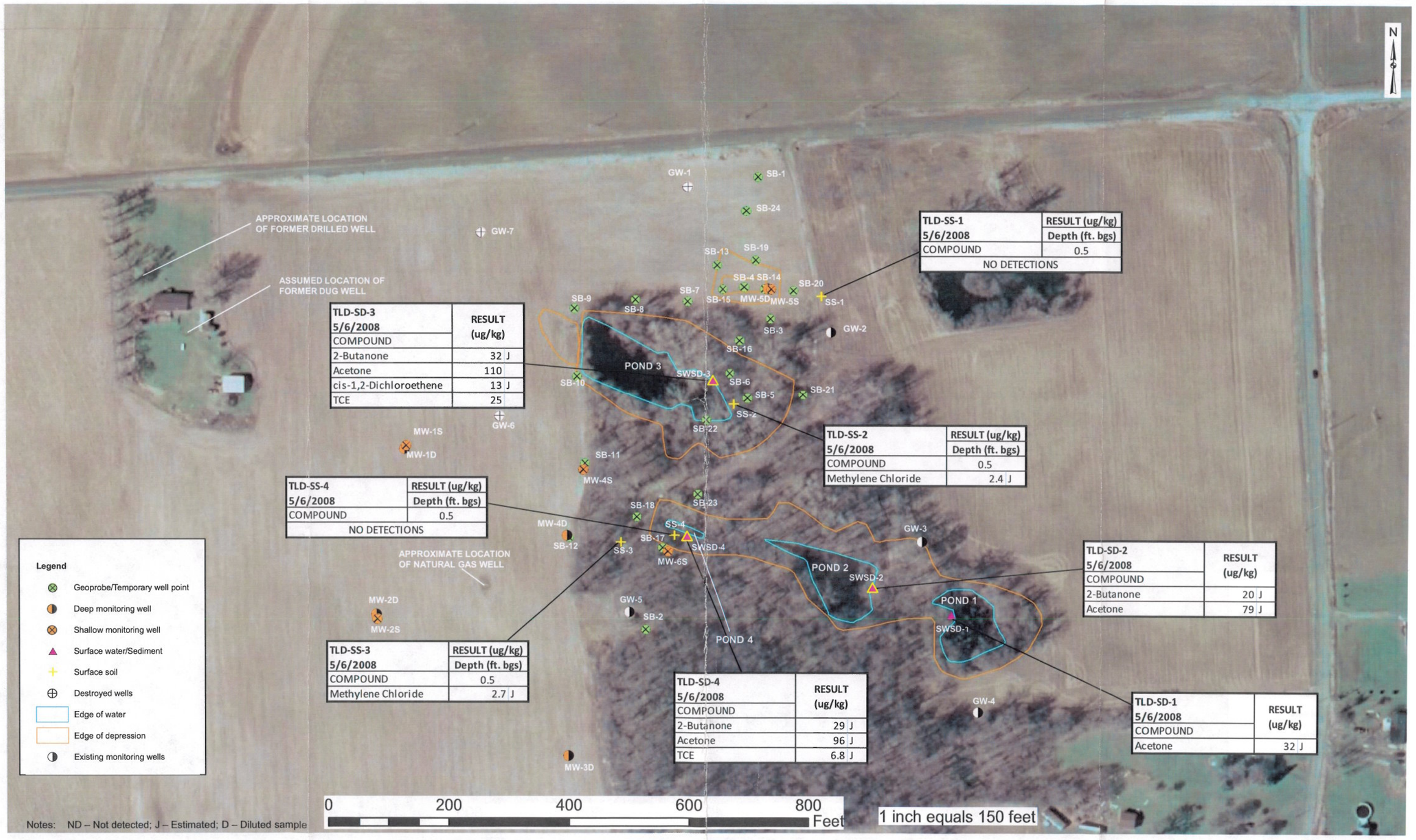
TOWN LINE ROAD DUMP

WORK ASSIGNMENT #D-004439-16

BEDROCK SURFACE CONTOUR MAP

OCTOBER 2009

FIGURE 3



TLD-SD-3 5/6/2008	RESULT (ug/kg)
COMPOUND	
2-Butanone	32 J
Acetone	110
cis-1,2-Dichloroethene	13 J
TCE	25

TLD-SS-1 5/6/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	0.5
NO DETECTIONS	

TLD-SS-2 5/6/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	0.5
Methylene Chloride	2.4 J

TLD-SS-4 5/6/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	0.5
NO DETECTIONS	

TLD-SS-3 5/6/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	0.5
Methylene Chloride	2.7 J

TLD-SD-2 5/6/2008	RESULT (ug/kg)
COMPOUND	
2-Butanone	20 J
Acetone	79 J

TLD-SD-4 5/6/2008	RESULT (ug/kg)
COMPOUND	
2-Butanone	29 J
Acetone	96 J
TCE	6.8 J

TLD-SD-1 5/6/2008	RESULT (ug/kg)
COMPOUND	
Acetone	32 J

Notes: ND – Not detected; J – Estimated; D – Diluted sample

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TOWN LINE ROAD DUMP

WORK ASSIGNMENT #D-004439-16

SUMMARY OF VALIDATED SURFACE SOIL/SEDIMENT VOLATILE ORGANIC COMPOUNDS SAMPLING RESULTS

OCTOBER 2009

FIGURE 4

TLD-SB-15 4/24/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	5
Acetone	40 J
Cyclohexane	48
Ethyl Benzene	550 J
Isopropylbenzene	40
m/p-Xylenes	660 J
Methylcyclohexane	490 J
o-Xylene	460 J
Toluene	25
Trichloroethene	9.7 J

TLD-SB-19 8/7/2008	RESULT (ug/kg) Depth (ft. bgs)		
COMPOUND	4	15	20
1,1,2-Trichlorotrifluoroethane	ND	ND	15
cis-1,2-Dichloroethene	ND	ND	210 J
Methylene Chloride	ND	2.8 J	ND
Tetrachloroethene	ND	27 J	95 J
Trichloroethene	ND	860 J	2800 J

TLD-SB-24 8/7/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	20	24
Methylene Chloride	2.4 J	ND

TLD-SB-01 4/21/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	16
NO DETECTIONS	

TLD-SB-04 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	22
Carbon Disulfide	1.5 J
cis-1,2-Dichloroethene	55
PCE	1.7 J
TCE	49

TLD-SB-14 4/23/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	10.5	24.5
1,1,2-Trichlorotrifluoroethane	ND	13
1,2-Dichlorobenzene	4 NJ	ND
Acetone	ND	11 J
Carbon Disulfide	ND	20 J
cis-1,2-Dichloroethene	ND	120 J
Tetrachloroethene	1.7 J	ND
Toluene	ND	15 J
trans-1,2-Dichloroethene	ND	30 J
Trichloroethene	11 J	24,000 J

TLD-SB-13 4/23/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	15.5
TCE	38

TLD-SB-07 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	8
NO DETECTIONS	

TLD-SB-08 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	6
NO DETECTIONS	

TLD-SB-09 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	8
TCE	3.1 J

TLD-SB-20 8/7/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	20	23
Methylene Chloride	ND	2.6 J
Tetrachloroethene	1.5 J	ND
Trichloroethene	130	78

TLD-SB-03 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	13.5
TCE	8.8 J

TLD-SB-10 4/23/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	10	20
cis-1,2-Dichloroethene	11 J	7.3 J
trans-1,2-Dichloroethene	1.7 J	ND
TCE	7.5 J	5.9 J

TLD-SB-11 4/23/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	13
cis-1,2-Dichloroethene	8.1 J
Methylene Chloride	11 J
TCE	57 J

TLD-SB-06 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	5
NO DETECTIONS	

TLD-SB-16 4/24/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	11.5
cis-1,2-Dichloroethene	3.2 J
Trichloroethene	64

TLD-SB-23 8/7/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	20	22
cis-1,2-Dichloroethene	72	74
Methylene Chloride	4 J	3.4 J
Tetrachloroethene	4.4 J	2.2 J
Trichloroethene	890 J	1800 J

TLD-SB-05 4/22/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	20
1,1,2-Trichlorotrifluoroethane	93
Carbon Disulfide	2.1 J
cis-1,2-Dichloroethene	83
PCE	2.3 J
trans-1,2-Dichloroethene	6.9 J
TCE	1,200 J

TLD-SB-21 8/7/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	12	16
1,1,2-Trichlorotrifluoroethane	ND	3.4 J
Acetone	ND	12 J
Carbon Disulfide	ND	9 J
cis-1,2-Dichloroethene	ND	1.8 J
Methylene Chloride	ND	7 J
Trichloroethene	11 J	1600 J

TLD-SB-12 4/23/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	17
NO DETECTIONS	

TLD-SB-18 4/24/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	24.5
1,1,2-Trichlorotrifluoroethane	4.2 J
cis-1,2-Dichloroethene	40 J
Tetrachloroethene	2.2 J
trans-1,2-Dichloroethene	3.2 J
Trichloroethene	3,800 J

TLD-SB-02 4/21/2008	RESULT (ug/kg) Depth (ft. bgs)
COMPOUND	9.5
NO DETECTIONS	

TLD-SB-17 4/24/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	13.5	25.5
Acetone	ND	14 J
Carbon Disulfide	ND	16
cis-1,2-Dichloroethene	3.2 J	5,700 J
Ethyl Benzene	ND	6.9 J
m/p-Xylenes	ND	4.5 J
o-Xylene	ND	2.7 J
Toluene	ND	69 J
trans-1,2-Dichloroethene	ND	830 J
Trichloroethene	39	15,000 J

TLD-SB-22 8/7/2008	RESULT (ug/kg) Depth (ft. bgs)	
COMPOUND	10	18
1,1,2-Trichlorotrifluoroethane	ND	18
1,2,4-Trichlorobenzene	2.9 J	ND
1,2-Dichlorobenzene	12 J	ND
2-Butanone	17 J	ND
Acetone	83	20 NJ
Carbon Disulfide	ND	5.8 J
cis-1,2-Dichloroethene	16	180
Methylene Chloride	ND	4.4 J
Tetrachloroethene	5.8 J	ND
trans-1,2-Dichloroethene	ND	15
Trichloroethene	31	1000 J
Vinyl Chloride	3.2 J	ND

Legend

- Geoprobe/Temporary well point
- Deep monitoring well
- Shallow monitoring well
- Surface water/Sediment
- Surface soil
- Destroyed wells
- Edge of water
- Edge of depression
- Existing monitoring wells
- Exceeds 6 NYCRR Part 375 Unrestricted Use SCO
- Exceeds 6 NYCRR Part 375 Unrestricted Use SCO and Residential SCO

Notes: ND – Not detected; J – Estimated; D – Diluted sample; N – Tentatively identified

0 200 400 600 800 Feet

1 inch equals 150 feet

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

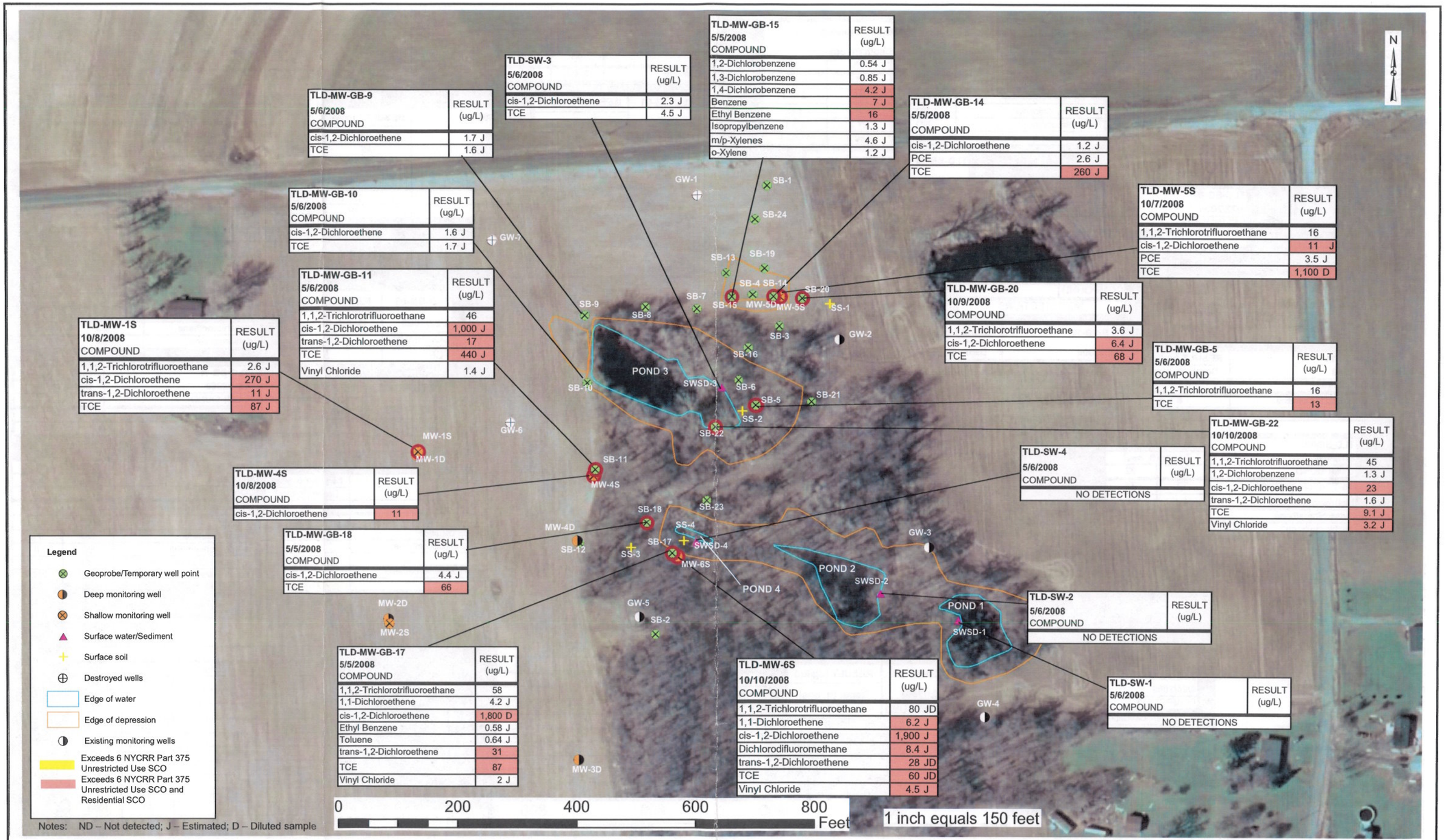
TOWN LINE ROAD DUMP

WORK ASSIGNMENT #D-004439-16

SUMMARY OF VALIDATED SOIL VOC SAMPLING RESULTS

OCTOBER 2009

FIGURE 5



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TOWN LINE ROAD DUMP

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SUMMARY OF VALIDATED OVERBURDEN GROUNDWATER/SURFACE WATER VOC SAMPLING RESULTS

OCTOBER 2009

FIGURE 6

N

APPROXIMATE LOCATION OF FORMER DRILLED WELL

ASSUMED LOCATION OF FORMER DUG WELL

TLD-MW-1D 10/7/2008 COMPOUND	RESULT (ug/L)
1,1,2-Trichlorotrifluoroethane	2.3 J
cis-1,2-Dichloroethene	190
trans-1,2-Dichloroethene	5.6 J
TCE	47

TLD-MW-4D 10/8/2008 COMPOUND	RESULT (ug/L)
1,1,2-Trichlorotrifluoroethane	6.2 J
cis-1,2-Dichloroethene	380 J
trans-1,2-Dichloroethene	8.5 JD
TCE	28 JD
Vinyl Chloride	1.8 J

TLD-MW-2D 10/7/2008 COMPOUND	RESULT (ug/L)
NO DETECTIONS	

TLD-MW-5D 10/7/2008 COMPOUND	RESULT (ug/L)
NO DETECTIONS	

TLD-MW-GW-5 10/8/2008 COMPOUND	RESULT (ug/L)
1,1,2-Trichlorotrifluoroethane	1.4 J
cis-1,2-Dichloroethene	150 D
trans-1,2-Dichloroethene	7.1 J
TCE	18 J

TLD-MW-GW-3 10/9/2008 COMPOUND	RESULT (ug/L)
NO DETECTIONS	

TLD-MW-GW-4 10/9/2008 COMPOUND	RESULT (ug/L)
NO DETECTIONS	

GW-1, SB-1, SB-24, GW-7, SB-13, SB-19, SB-4, SB-14, SB-20, SB-9, SB-8, SB-7, SB-15, MW-5D, MW-5S, SS-1, SB-3, GW-2, SB-16, POND 3, SB-10, SWSD-3, SB-6, SB-21, SB-5, SS-2, SB-22, GW-6, MW-1S, MW-1D, SB-11, MW-4S, SB-18, SB-23, SS-4, SB-17, SWSD-4, MW-4D, SB-12, SS-3, MW-6S, GW-3, POND 2, SWSD-2, POND 1, SWSD-1, MW-2D, MW-2S, GW-5, SB-2, APPROXIMATE LOCATION OF NATURAL GAS WELL, POND 4, GW-4, MW-3D

Legend

- Geoprobe/Temporary well point
- Deep monitoring well
- Shallow monitoring well
- Surface water/Sediment
- Surface soil
- Destroyed wells
- Edge of water
- Edge of depression
- Existing monitoring wells
- Exceeds 6 NYCRR Part 375 Unrestricted Use SCO
- Exceeds 6 NYCRR Part 375 Unrestricted Use SCO and Residential SCO

Notes: ND – Not detected; J – Estimated; D – Diluted sample

0 200 400 600 800 Feet

1 inch equals 150 feet

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

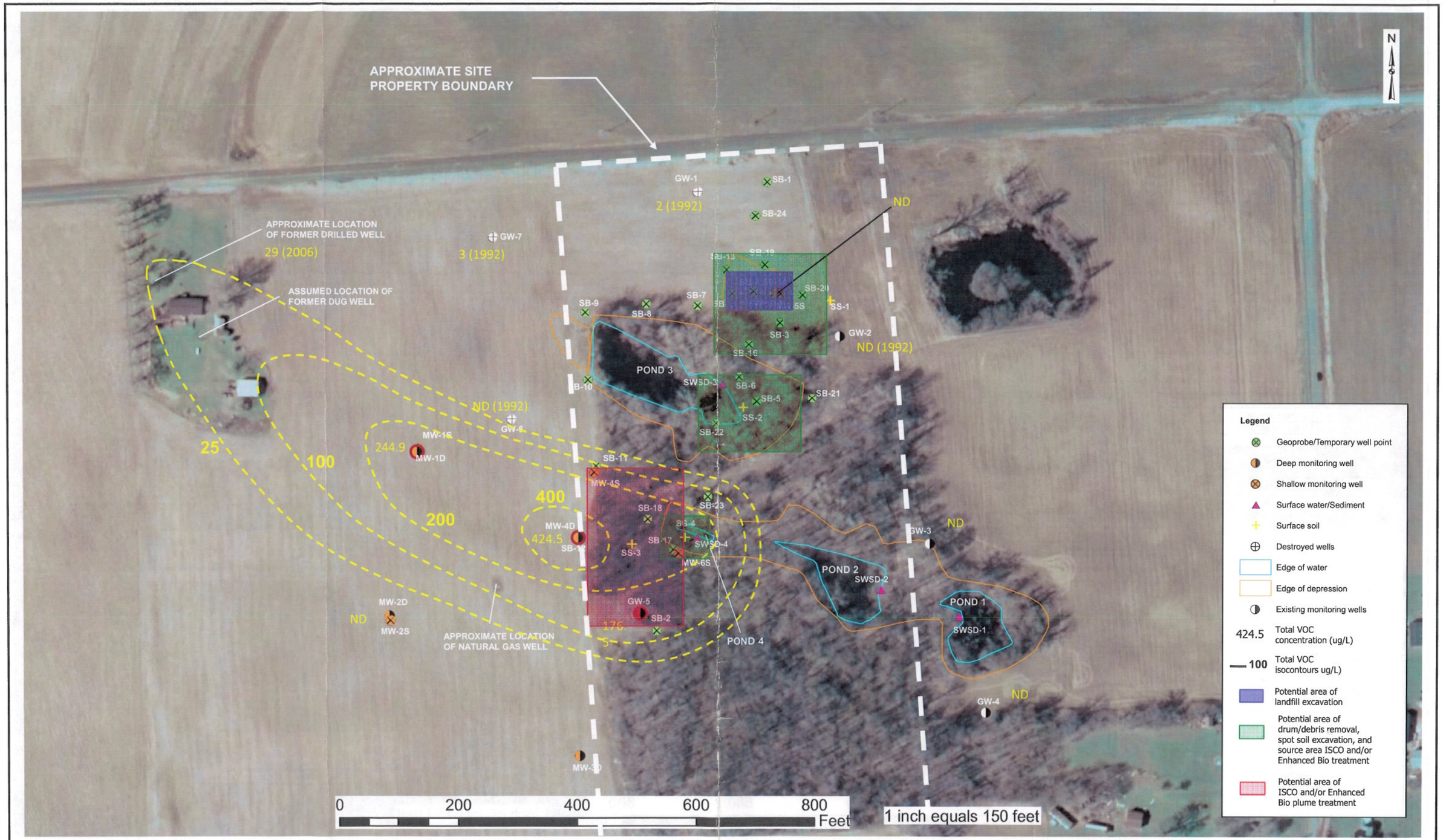
TOWN LINE ROAD DUMP

WORK ASSIGNMENT #D-004439-16

SUMMARY OF VALIDATED BEDROCK GROUNDWATER VOC SAMPLING RESULTS

OCTOBER 2009

FIGURE 7



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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BEDROCK GROUNDWATER WATER VOCs (ppb) AND POTENTIAL REMEDIATION AREAS

January 2010

FIGURE 8