

# **Provan Ford Site**

**ORANGE COUNTY, NEW YORK**

---

## **Construction Completion Report**

**NYSDEC Site Number: B00127-3**

**Prepared for:**

The City of Newburgh  
83 Broadway  
Newburgh, New York 12550

**Prepared by:**

First Environment, Inc.  
91 Fulton Street  
Boonton, New Jersey 07005

---

**APRIL 2011**



# TABLE OF CONTENTS

1.0 Background and Site Description .....	1
2.0 Summary of Site Remedy .....	2
2.1 Remedial Action Objectives .....	2
2.1.1 Groundwater Raos .....	2
2.1.2 Soil Raos .....	2
2.2 Description of Selected Remedy.....	3
3.0 Interim Remedial Measures, Operable Units, and Remedial Contracts .....	5
3.1 Demolition Activities.....	5
4.0 Description of Remedial Actions Performed.....	6
4.1 Governing Documents .....	6
4.1.1 Site Specific Health & Safety Plan (HASP) .....	6
4.1.2 Quality Assurance Project Plan (QAPP).....	6
4.1.3 Construction Quality Assurance Plan (CQAP).....	7
4.1.4 Soil/Materials Management Plan (S/MMP).....	11
4.1.5 Stormwater Pollution Prevention Plan (SWPP).....	12
4.1.6 Community Air Monitoring Plan (CAMP).....	12
4.1.7 Contractors Site Operations Plans (Sops).....	14
4.1.8 Community Participation Plan (CPP).....	14
4.2 Remedial Program Elements.....	14
4.2.1 Contractors And Consultants .....	14
4.2.2 Site Preparation.....	15
4.2.3 General Site Controls .....	17
4.2.4 Nuisance Controls.....	18
4.2.5 CAMP Results .....	19
4.2.6 Reporting.....	20
4.3 Contaminated Materials Removal.....	21
4.3.1 Soil .....	21
4.3.1.1 Disposal Details.....	22
4.3.1.2 On-Site Reuse .....	23

4.3.2	Groundwater .....	25
4.3.2.1	Disposal Details .....	25
4.3.3	UST.....	26
4.3.3.1	Disposal Details .....	26
4.4	Remedial Performance/Documentation Sampling.....	26
4.4.1	Wash Rack Area Results.....	28
4.4.1.1	BTEX Related Compounds.....	28
4.4.1.2	CVOC Related Compounds .....	29
4.4.1.3	Svocs .....	30
4.4.2	Petroleum Tank Area Results.....	31
4.4.2.1	BTEX Related Compounds.....	31
4.4.2.2	CVOC Related Compounds.....	32
4.4.3	Waste Oil Tank Area Results .....	32
4.4.3.1	BTEX Related Compounds.....	32
4.4.3.2	CVOC Related Compounds.....	33
4.4.4	Quality Assurance/Quality Control (QA/QC) .....	34
4.4.5	Data Usability Summary Reports (Dusrs) .....	35
4.5	Imported Backfill .....	36
4.6	Contamination Remaining at the Site .....	36
4.6.1	Types Of Remaining Contaminants.....	36
4.6.2	Remaining Contamination Areas .....	37
4.6.3	Utilities/Subsurface Structures Affecting Remediation.....	38
4.6.4	Remaining Contamination Vs. Unrestricted Use.....	38
4.7	CAP System .....	39
4.8	Other Engineering Controls .....	39
4.9	Institutional Controls .....	40
4.10	Deviations From the Remedial Action Workplan .....	40
4.10.1	Shift of the WOT Area.....	40
4.11	Final Inspection.....	41
4.12	Remedial Action Cost .....	41

## LIST OF ACRONYMS

Acronym	Definition
1,2-DCA	1,2-Dichloroethane
AST	Aboveground Storage Tank
bgs	below ground surface
BTEX	Benzene, Toluene, Ethyl benzene and Xylene
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CLP	Contract Laboratory Program
CPP	Community Participation Plan
CQAP	Construction Quality Assurance Plan
CVOC	Chlorinated Volatile Organic Compound
DRO	Diesel Range Organics
DUSR	Data Usability Summary Report
EC	Engineering Controls
ELAP	Environmental Laboratory Approval Program
FER	Final Engineering Report
GAC	Granulated Activated Carbon
GRO	Gasoline Range Organics
HASP	Health and Safety Plan
IRM	Interim Remedial Measures
LNAPL	Light Non-Aqueous Phase Liquid
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MTBE	Methyl tert-butyl ether
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Federal Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PM-10	Particulate Matter (10 microns in diameter or smaller)
POG	Protection of Groundwater
ppm	parts per million
PT	Petroleum Tank Area
	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QP	Virgin Quarry Processed Stone

<b>Acronym</b>	<b>Definition</b>
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RD	Remedial Design
RDR	Remedial Design Report
RDWP	Remedial Design Work Plan
ROD	Record of Decision
S/MMP	Soils/Materials Management Plan
SAC	State Assistance Contract
SCG	Standard Criteria or Guidance
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Site Operations Plan
SVI	Soil Vapor Intrusion
SVOC	Semi-Volatile Organic Compounds
SWPPP	Stormwater Pollution Prevention Plan
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TSDF	Transport/Storage/Disposal Facility
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WOT	Waste Oil Tank Area
WR	Wash Rack Area
WWTP	Wastewater Treatment Plant

# **CONSTRUCTION COMPLETION REPORT**

## **1.0 BACKGROUND AND SITE DESCRIPTION**

The City of Newburgh entered into a State Assistance Contract (SAC) with the New York State Department of Environmental Conservation (NYSDEC) in September 2007 to investigate and remediate a three-acre property located in Orange County, Newburgh, New York. The property is in the process of being remediated to restricted residential or commercial use.

The Site is located in the County of Orange, New York and is identified as a portion of Block 3 and Lot 7.1 on the City of Newburgh Tax Map Section 43. The Site is situated on an approximately three-acre parcel bounded by Dickson Street to the north, the Ridgewood Plumbing Supply property to the south, Mill Street to the east, Robinson Avenue to the west, and commercial properties to the northwest (see Figure 1).

An electronic copy of this Construction Completion Report (CCR) with all supporting documentation, along with a picture of the sign identifying the Site as part of the Clean Water Act Environmental Restoration Program, is included as Appendix A.

## **2.0 SUMMARY OF SITE REMEDY**

### **2.1 REMEDIAL ACTION OBJECTIVES**

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this Site. However, as noted, only some of these objectives were addressed in the recent soil remediation activities, which are the focus of this CCR.

#### **2.1.1 Groundwater RAOs**

RAOs for Public Health Protection

- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater. This RAO is the subject of ongoing Soil Vapor Intrusion (SVI) investigation and mitigation activities that have been conducted on site and off site for several years. However, the activities that are the subject of this CCR may indirectly address this RAO by reducing the Volatile Organic Compound (VOC) concentrations within the groundwater.

RAOs for Environmental Protection

- Restore the groundwater aquifer, to the extent practicable, to pre-disposal/pre-release conditions. This RAO will be addressed through future on-site treatment of groundwater as referenced in the February 2009 Remedial Design Work Plan (RDWP).
- Remove the source of groundwater contamination. This RAO is addressed by the remedial actions that are the subject of this CCR, specifically the removal of VOC and Light Non-Aqueous Phase liquid (LNAPL) impacted soils from the Site.

#### **2.1.2 Soil RAOs**

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil. This RAO will be addressed by the site-wide cap to be installed in the future and the associated deed notice to eliminate unmanaged contact with soils once capped, as referenced in the February 2009 RDWP.
- Prevent inhalation of or exposure to contaminants volatilizing from contaminated soil. As referenced in the February 2009 RDWP, this RAO will be addressed in the future by the installation of proper vapor intrusion controls within on-site structures, as necessary.

RAOs for Environmental Protection



- Prevent migration of contaminants that would result in groundwater contamination. This RAO is addressed by the remedial actions which are the subject of this CCR, specifically the removal of VOC and LNAPL impacted soils from the Site.
- Prevent impacts to biota due to ingestion/direct contact with contaminated soil that would cause toxicity or bioaccumulation through the terrestrial food chain. This RAO will be addressed by the site-wide cap to be installed in the future and the associated deed notice to eliminate unmanaged contact with soils once capped.

## **2.2 DESCRIPTION OF SELECTED REMEDY**

The focus of this CCR represents one major component of the overall remediation of the Site, and it was completed in accordance with the remedy selected by the NYSDEC in the Record of Decision (ROD) dated March 2005. The recent remedial actions were a component of the ROD; which specified the removal of VOC and LNAPL impacted soils from three different locations of the Site.

In general, VOC and LNAPL were removed from the Site in accordance with the ROD. Due to project limitations, soils containing one or more VOC constituents in excess of the SCGs remain on site. In addition, some excavated areas were extended based on confirmation sampling during the excavation activities.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Excavation of soil/fill exceeding the Protection of Groundwater (POG) soil cleanup objectives (SCO) listed in Table 1, to a maximum depth of 16.0 feet below ground surface (bgs) and LNAPL recovery from within open excavations.
2. Construction and maintenance of a soil cover system consisting of six inches of pavement, concrete, or equivalent material over the majority of the Site, and in vegetated areas, one to two feet of clean soil underlain by a demarcate barrier, such as a snow fence, to prevent human exposure to remaining contaminated soil/fill remaining at the Site.
3. Installation of a number of groundwater injection wells and periodic treatment of the groundwater on site via in-situ chemical oxidation.
4. Demolition of the building and wash rack on site to allow the soil remediation to be completed.
5. Removal, cleaning, and proper disposal of a previously abandoned 8,000 gallon gasoline Underground Storage Tank (UST).

6. Investigation of the extent of off-site groundwater and vapor contamination necessary to determine the potential need for off-site remedial measures or vapor mitigation measures at off-site buildings.
7. Installation of sub-slab depressurization systems in on-site buildings, as necessary, to address potential infiltration of VOC vapors into indoor air from impacted soil or groundwater. The installation of sub-slab depressurization systems in off-site buildings, as necessary, to address potential infiltration of VOC vapors into indoor air from impacted groundwater.
8. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the Site.
9. Development and implementation of a Site Management Plan for long-term management of remaining contamination as required by the Environmental Easement, which includes plans for (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance, and (4) reporting.
10. Periodic certification of the institutional and engineering controls listed above.

### **3.0 INTERIM REMEDIAL MEASURES, OPERABLE UNITS, AND REMEDIAL CONTRACTS**

#### **3.1 DEMOLITION ACTIVITIES**

Prior to the soil excavation work, which is the focus of this CCR, the building and wash rack formerly located on site were demolished to allow the soil remediation to proceed. The City of Newburgh contracted with Ritter & Paratore Contracting, Inc. to conduct the demolition and related activities. Additional components of this work included the installation of a chain-link fence at the property boundary and abatement of asbestos containing materials (such as floor tiles, pipe insulation, and window glazing). Universal wastes, such as thermostats and light ballasts, as well as an approximately 1,500-gallon fuel oil AST, were also removed from the Site. The removal of the concrete slab floor of the building and associated footings were included in the demolition to facilitate the soil remediation and future site grading. The work began with asbestos abatement on July 19, 2010, and as a result of change orders and related negotiations, it was not completed until September 30, 2010. Photo documentation of the demolition activities is provided in Appendix B.

## **4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED**

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved Remedial Design (RD) for the Provan Ford Site (June, 2010). All deviations from the RD are noted below or in Section 4.10 “deviations from the Remedial Action Work Plan.”

### **4.1 GOVERNING DOCUMENTS**

#### **4.1.1 Site Specific Health & Safety Plan (HASP)**

All remedial work performed under this Remedial Action was in full compliance with governmental requirements, including site and worker safety requirements mandated by the Federal Occupational Safety and Health Administration (OSHA).

Both First Environment, Inc. (First Environment), the project Engineer, and Op-Tech Environmental Services, Inc. (Op-Tech), the Remediation Contractor, prepared site-specific HASPs to address the health and safety of their respective personnel. These documents were submitted to the NYSDEC prior to the initiation of soil remediation activities. The respective HASPs were complied with for all remedial and invasive work performed at the Site.

#### **4.1.2 Quality Assurance Project Plan (QAPP)**

The QAPP was included as Appendix D of the RDWP approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities, and quality assurance/quality control activities designed to achieve the project data quality objectives.

In compliance with the QAPP requirements, all post-excavation and soil reuse samples were submitted to Chemtech, of Mountainside, New Jersey, a New York State Department of Health (NYSDOH) certified Environmental Laboratory Approval Program (ELAP) and Contract Laboratory Program (CLP) laboratory. Since the sample results were used as the basis for decisions that could impact human health, all lab reports were prepared with Category B data validation deliverables. Additionally, a Data Usability Summary Report (DUSR) has been prepared by a third-party verifier, Premier Environmental, Inc. of Merrick, New York, for each report issued by the laboratory.

### **4.1.3 Construction Quality Assurance Plan (CQAP)**

A General Site Remediation Plan, or “Construction Pan,” was submitted by the remediation contractor and approved by the Engineer and NYSDEC. The Construction Plan was submitted in lieu of a Construction Quality Assurance Plan (CQAP), though this document also served to manage performance of the Remedial Action tasks. A description of the observation and testing activities that were to be used to monitor construction quality and confirm that remedial construction was in conformance with the remediation objectives and specifications were previously provided. The Remedial Design Implementation section of the June 2010 Final Remedial Design Report (RDR) for the project and the associated bid request documents within Appendix A of the RDR effectively presented this information. Activities associated with construction quality assurance were implemented as follows:

#### **Responsibilities and Authorities**

Responsibilities and authorizes associated with implementing the soil remediation phase of the project were distributed among two parties: the project owner and its representative (the City of Newburgh and First Environment, respectively), and the contractor implementing the work (Op-Tech and their sub contractors).

As the entity implementing the remedial activities on a daily basis, Op-Tech’s field personnel were responsible for:

- excavating, stockpiling, and loading of soil;
- pumping, treatment, and discharge of groundwater;
- placement and compaction of backfill; and
- general site upkeep, site security, preservation of monitoring wells, and assisting First Environment, as needed, to comply with project requirements.

The main activity subcontracted by Op-Tech to others was the transportation of soils to the disposal facilities. Op-Tech’s subcontractors for this task included Constantine Construction & Farm, Inc. and Fiacco Trucking.

First Environment oversaw the remediation activities on behalf of the City of Newburgh on a daily basis. Accordingly, First Environment's field personnel were responsible for:

- providing general direction to Op-Tech regarding project implementation;
- collecting post-excavation and reuse soil samples;
- implementing the Site Community Air Monitoring Plan (CAMP);
- signing soil disposal manifests on behalf of the City of Newburgh; and
- documenting field activities in the project field books and photo documenting the progress of work.

The main field activity subcontracted by First Environment to others was the surveying of the soil excavation areas and calculation of the excavation volumes for soil to be disposed of as well as reused. These activities were conducted by Stantec of Albany, New York.

NYSDEC provided on-site regulatory oversight of the remedial activities approximately every other work day during the project.

Project management of Op-Tech's operations was conducted by Stephen Kenny whose responsibilities included:

- procurement and delivery of equipment and materials;
- scheduling of personnel;
- management of soil disposal;
- preparation of contractor supplied documentation before and after completion of the work (e.g., contractor's HASP and Manifest documentation);
- providing additional costing, as necessary; and
- coordination of remedial activities with First Environment.

Project management of First Environment's operations was conducted by Michael Richardson whose responsibilities included:

- procurement, delivery, and pickup of glassware and samples;
- scheduling of First Environment and Stantec personnel;
- review of soil sample results, survey results, and Site conditions;

- preparation of Engineer supplied project documentation before and after completion of the work (e.g., change orders, cost projections);
- coordination of remedial activities with Op-Tech;
- communication of project status, results, and costs to the NYSDEC and the City of Newburgh; and
- review of contractor invoices.

Ian MacDougall and Craig Marti, planner and engineer, respectively, for the City of Newburgh, served as the owner representatives for the project. Their responsibilities included:

- tracking project operations;
- processing of contractor and consultant payments; and
- presenting information to the city council to secure change orders and other approvals.

Regulatory project management was conducted by William Bennett of the NYSDEC.

The NYSDEC:

- reviewed analytical results;
- assisted in making determinations on the completeness of excavation and dewatering activities;
- approved of excavated soils for reuse on site; and
- provided overall guidance regarding the project scope.

### **Observations and Tests**

The observations and tests that were used to monitor implementation of the remediation consisted of:

- checking of the excavation area and depth, either by field measurements and comparison to staked areas or by survey of the excavation, to insure the soil scheduled for removal was excavated;
- visual and olfactory observations as well as photoionization detector (PID) readings were utilized to initially determine which soils would be designated for reuse as backfill.

### **Sampling Activities**

Numerous soil and treated groundwater samples were collected over the duration of the remediation.

Post-excavation soil samples were collected at a frequency of one sidewall sample for approximately every 30 feet of excavation perimeter and one base sample for approximately every 1,000 square feet of excavation base. These samples were grab samples collected in unpreserved four-ounce glass jars and analyzed for VOC and/or SVOCs.

Soils designated for reuse as backfill were sampled using the same glassware, but SVOC samples were comprised of composited samples from seven different locations and the overall sample frequency was five VOC and two SVOC samples per 1,200 cubic yards of material. Both post-excavation and reuse soil samples were compared to the POG soil criteria with the NYSDEC making the final determination regarding acceptability after review of the sample results.

Groundwater that had been pumped from excavations and treated was sampled according to the receiving authority's requirements and at a frequency of once for every 40,000 gallons of treated water discharged. Sample results were compared to specific criteria provided by the receiving wastewater treatment plant to ensure compliance before discharge.

### **Project Coordination**

Most project coordination was conducted via telephone calls between the project managers for the Contractor, the Engineer, the NYSDEC, field personnel, and other parties as needed. However, a number of on-site meetings took place throughout the duration of the project to observe the conditions in the field and coordinate remediation activities.

### **Quality Assurance Reporting**

Specific Quality Assurance Reporting requirements were not established prior to the beginning of the work. However, project information was retained or distributed as follows:

- Logs of daily activities were maintained by First Environment in field books to document the work that was occurring on site each work day.
- Analytical data for post-excavation and reuse soil samples was maintained and compiled by First Environment. However, all results were provided to the NYSDEC on a rolling basis as they were received from the lab.



- Soil excavation memos were prepared by the surveyor to document the volume of soil excavated for disposal and excavated for reuse. This information was reviewed and compiled by First Environment.
- Problem identification, evaluation, or acceptance reports were not utilized as a part of this project.
- This CCR will serve as final documentation of the subject remediation activities for this project.

### **Final Documentation Retention Provisions**

The NYSDEC, NYSDOH, the City of Newburgh, as well as the designated document repositories for this project, will receive full copies of the Final CCR.

#### **4.1.4 Soil/Materials Management Plan (S/MMP)**

A specific S/MMP was not developed as part of the remedial design for the soil remediation. Soils and materials management was addressed within the Remedial Design Implementation section of the June 2010 Final RDR for the project and the associated bid request documents within Appendix A of the RDR. The general soil/materials management requirements necessitated that:

- soils to be staged for disposal or reuse were stockpiled in separate stockpile cells;
- stockpile cells were lined with plastic sheeting, bermed, and covered by plastic sheeting;
- soils removed from each of the three excavation areas were stockpiled and sampled for waste classification separately;
- stockpiled soils were inspected during each workday to ensure that the soil was properly contained, and the polyethylene sheeting was resecured or replaced as needed;
- sufficient stockpile cell space was created to accommodate the flow of work and removed after they were no longer needed; and
- when each stockpile was no longer needed, the soils were removed from the Site for off-site disposal, along with the plastic liner material, cover, berm material, and the top six-inches of soil at the base of the stock pile.

The contractor, Op-Tech, adhered to the soils/materials management requirements as outlined in the June 2010 RDR, Section 3.1.1, during the excavation activities. Section 3.1.1 of the June 2010 RDR stated that the soils at the base of the stockpile were to be sampled and analyzed for VOCs once the stockpile was removed from the Site. An inspection of the stockpile

liner and the underlying soils revealed that soils from the stockpiles did not migrate outside of the stockpile cell; therefore, the soils at the base of the stockpiles were not sampled.

#### **4.1.5 Stormwater Pollution Prevention Plan (SWPP)**

The erosion and sediment controls for all remedial construction activities were performed in general conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control and the site-specific Storm Water Pollution Prevention Plan provided to the Engineer and NYSDEC project manager on October 14, 2010.

#### **4.1.6 Community Air Monitoring Plan (CAMP)**

During the soil remediation activities, the CAMP was implemented by monitoring and recording the levels of airborne particulates and VOCs near the perimeter of the property in both the upwind and downwind directions. The general monitoring approach to the CAMP consisted of the following steps:

1. calibration of all monitoring instruments, as appropriate;
2. setting up weather monitoring instruments to determine wind direction and therefore the upwind and downwind monitoring locations of the Site;
3. placing VOC and particulate monitoring instruments in the upwind and downwind locations;
4. monitoring the instrument readings and action level alarms; and
5. responding to action level alarms by adjusting or stopping field operations, as appropriate.

An exceedance of any action level was monitored by setting the instrument alarm level at the respective action levels for particulates and VOCs. The alarm concentration level for both parameters was set based on running 15-minute averages. Instrument alarms were transmitted to the Site personnel via radio which triggered audio signals by hand-held equipment.

#### **VOC Monitoring**

Total concentrations of VOCs were monitored continuously and logged using two MiniRAE 2000 photoionization detector units. The units were calibrated daily with ambient zero air and a span gas of 100 parts per million (ppm) of isobutylene standard. The alarm level for the

instruments was set at the initial action level of 5 ppm for a 15-minute average, assuming a background concentration of 0 ppm.

If the ambient total VOC concentration (15-minute average) at the downwind location exceeded 5 ppm above background but less than 25 ppm, the CAMP required work activities to be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. Work activities could be resumed provided that the total VOC concentration decreased to below 5 ppm over background.

If the ambient total VOC concentration (15-minute average) at the downwind location exceeded 25 ppm at the perimeter of the work area, activities were required to be shut down.

VOC suppression measures considered were covering the source areas with plastic sheeting, soil, or water; and applying odor suppression foam to the source areas.

### **Particulate Monitoring**

Particulate concentrations were monitored continuously and logged using two Thermo PDR-1000 particulate units. The units were capable of measuring the concentration of particulate matter down to less than 10 microns in diameter (PM-10) and averaged results over 15 minutes. The audible alarm was used with the instrument to signal exceedance of the action level. The alarm level for the instruments was set at the initial action level of 100 micrograms per cubic meter (ug/m<sup>3</sup>) for a 15-minute average, assuming a background concentration of 0 ug/m<sup>3</sup>. In addition, fugitive dust migration was also visually monitored during all work activities.

If the downwind PM-10 level was 100 mcg/m<sup>3</sup> greater than background (upwind perimeter) for the 15-minute period or if airborne dust was observed leaving the work area, the CAMP required dust suppression techniques to be employed. Work could continue with dust suppression techniques in use provided that downwind PM-10 levels did not exceed 150 mcg/m<sup>3</sup> above the upwind level and no visible dust migrated from the work area.

If the downwind PM-10 level was detected greater than 150 ug/m<sup>3</sup> above the upwind level, the Camp required the stoppage of work, evaluation of activities, and application of suppression measures. Work could be resumed provided that dust suppression measures and other controls were successful in reducing the downwind PM-10 concentration to within 150 ug/m<sup>3</sup> of the upwind level and in preventing visible dust migration.

Particulate suppression measures considered were misting the particulate source with water, use of particulate suppression materials, and wetting the work area prior to initiating the activities.

### **Weather Monitoring**

For the purpose of determining the upwind and downwind air monitoring locations, wind direction and wind speed were monitored using a Davis Vantage Pro II weather station. The weather station was used to log data at 15 minute to 1 hour intervals.

#### **4.1.7 Contractors Site Operations Plans (SOPs)**

The Remediation Engineer reviewed all plans and submittals for this remedial project (i.e., those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the RDR. All remedial documents were submitted to the NYSDEC and NYSDOH in a timely manner and prior to the start of work.

#### **4.1.8 Community Participation Plan (CPP)**

Prior to the initiation of the soil remediation or building demolition activities at the Site, an Environmental Restoration Program Fact Sheet was issued by the NYSDEC in June of 2010 to neighboring property owners and other interested parties regarding the future work at the Site. No other elements of the CPP were implemented during the remedial activities. An additional factsheet(s) will be distributed to interested parties prior to future remedial activities, as deemed necessary by the NYSDEC.

## **4.2 REMEDIAL PROGRAM ELEMENTS**

### **4.2.1 Contractors and Consultants**

The following list of contractors, subcontractors, and consultants who performed work related to the subject portion of the project along with their associated tasks is provided below.

Contractors:

1. Ritter & Paratore Contracting, Inc. (Ritter) – Building demolition, aboveground tank and universal waste disposal. Ritter’s subcontractors included:
  - i. Target Group of Central NY – Asbestos abatement,
  - ii. Brady Fence – Fence installation.
2. Op-Tech – Soil excavation, excavation dewatering, groundwater treatment and disposal, backfill placement and compaction, UST removal and disposal. Op-Tech’s subcontractors included:
  - i. Constantine Construction & Farm, Inc. – Transportation of soil to disposal facilities,
  - ii. Fiacco Trucking – Transportation of soil to disposal facilities.

First Environment is the environmental consulting company working for the City to implement the remaining environmental investigation and remediation activities required at the Site. Bernard T. Delaney, president of First Environment, is the certifying Engineer of Record. The work performed by First Environment generally included oversight of field activities, sample collection, CAMP implementation, coordination of project activities for all contractors and direct subcontractors, contract and change order facilitation, invoice review, review of results/information, and consultation with the City and the NYSDEC. First Environment’s subcontractors included:

- i. Quality Environmental Solutions & Technologies (QuES&T) – third-party oversight of asbestos abatement activities, additional asbestos sampling;
- ii. Stantec – survey of soil excavations, preparation of volume calculation and survey drawings;
- iii. Chemtech – laboratory conducting analysis of all post-excavation and reuse soil samples; and
- iv. Premier Environmental, Inc. – preparation of DUSR reports.

#### **4.2.2 Site Preparation**

Site preparation activities began prior to the soil remediation, during the building and wash rack demolition phase of the work. Before any on-site activities were initiated, a utility markout was conducted by the various utilities that had serviced the site. A chain-link fence was

then installed around the perimeter of the property and minor clearing and grubbing was conducted along the fence path as needed. Silt fence and hay bales were then installed near the chain-link fence along the southern and eastern property line to mitigate erosion control.

A pre-construction meeting for the soil remediation phase of the project was held with the NYSDEC, City of Newburgh, First Environment, and Op-Tech on October 14, 2010.

No specific agency permits were required for the work, although several plans or documents were required from the selected soil remediation contractor to be submitted, as per the June 2010 RDR, for review and approval by the agency and Engineer. These documents consisted of:

- HASP (approval by Engineer only),
- Construction Work Plan with Detailed Schedule,
- Construction Quality Control Plan,
- Permit Profile of Treatment Storage and/or Disposal Facility,
- Borrow Source(s) Information,
- Stormwater Pollution Prevention Plan, and
- specifications to address all major work tasks such as waste excavation, dewatering, and erosion and sedimentation control, etc.

Documentation of agency approvals required by the RDR is included in Appendix C. Non-agency permits relating to the soil remediation project were not required. However, the City of Newburgh did issue the authorization for the discharge of treated groundwater into the combined sewer system and for First Environment to sign manifests on behalf of the city. Copies of these authorization letters are provided in Appendix D.

All SEQRA requirements were achieved during this Remedial Action. No substantive compliance requirements for attainment of applicable natural resource or other permits were required during this Remedial Action.

Op-Tech began mobilization of equipment to the Site in late October 2010. Major equipment brought to the Site over the course of the project consisted of:

- excavator;
- loader;
- end dump;
- high capacity groundwater pump and associated hoses;
- groundwater treatment system components consisting of three 21,000-gallon liquid storage tanks, bag filters, and two granulated activated carbon (GAC) units;
- vibratory roller; and
- office/equipment trailer.

No additional clearing or grubbing was conducted by Op-Tech. A truck wash was installed at the Site entrance along Mill Street during their mobilization. The truck wash was constructed by excavating a long, shallow rectangular depression, lining it with plastic sheeting, and then backfilling it with riprap. The excavated soil was used to create berms on the sides of the truck wash; which were then covered by the sheeting. The silt fence, hay bales, and chain-link fence were left in place after the completion of demolition activities and maintained throughout the soil remediation.

A NYSDEC-approved project sign has been erected at the project entrance and remained in place during all phases of the Remedial Action.

#### **4.2.3 General Site Controls**

Site Security was established by the installation of a six-foot tall chain-link fence that surrounded the property. All gates were chained and padlocked at the end of each workday, and keys were maintained by the City, First Environment, and the contractor.

Job site records of field activities were documented daily by First Environment field personnel in the field books on site. Waste disposal manifest records were maintained by contractors.

Soil erosion and sediment were controlled via the previously cited measures and were adjusted/reinforced as needed during the work.

On-site equipment remained on site for its required duration of the work and was decontaminated prior to leaving the Site. Any residual waste that was generated during the soil remediation, which was not sent to one of the two soil disposal facilities, was removed by the contractor as municipal waste.

Soils were screened to either assist in the determination of the need for disposal, the possibility of reuse, or to assist in locating points from which to collect post-excavation samples. Soils were screened via olfactory and visual observation, as well as PID readings. Soils visibly impacted by product, emitting chemical or product odors, or registering PID reading over approximately 10 ppm were excluded from reuse. These soils were typically removed for disposal when they were identified within the planned excavation. Post-excavation soil samples were collected biased towards excavation side wall and base locations where visual and olfactory indications of product were present and/or PID reads were most elevated. In some instances, PID readings at sample locations ranged within the hundreds, and at one or two sample locations the thousands of parts per million.

Stockpiling of materials was generally conducted as discussed above in Section 4.1.4 regarding the S/MMP.

Only three problems of note were encountered with respect to site controls. Regarding site security, a window of one of the vehicles on site was broken, though nothing was stolen, and some miscellaneous trash bags were dumped on site. Regarding site records, the contractor did not consistently retain the backfill material manifest documentation during the work and had to request this documentation from the backfill supplier upon completion of the work.

#### **4.2.4 Nuisance Controls**

Due to prolonged sub-freezing temperatures during most of the remediation when trucks were actively entering and leaving the Site, truck washing and dust control measures could not be implemented as planned.



Due to the open topography of the Site and lack of any structures to obstruct the wind, the typical air circulation on site did not allow for the buildup of odors to the point where they needed to be mitigated.

The routing of off-site trucks depended on the type of vehicle. Waste disposal transport trucks generally drove to the soil stockpile or adjacent to a specific excavation to be loaded prior to leaving the Site. Service trucks for equipment refueling and portable lavatory maintenance would drive directly to the unit to be served and then off site. In general, truck traffic, inclusive of on-site vehicles, was localized to the central and northern portions of the eastern side of the Site.

#### **4.2.5 CAMP Results**

The review of the CAMP monitoring results is based on the available data at the end of the project. Due to a problem in the transferring and/or storage of the results, not all data was available for review. The available data was spread out over the course of the project and is believed to be representative of Site conditions over the project duration.

The background concentration of VOCs at the Site during the soil remediation activities was typically 0.0 ppm. The background particulate concentrations at the Site were typically less than 0.05 mg/m<sup>3</sup> during the same period. The monitored particulate and VOC concentrations downwind of the field activities, but near the Site boundaries, were in general relatively low and well below the respective action levels. There were instances when particulate or VOC concentrations in the immediate vicinity of the excavation activities were elevated. However, because of the distances between the work areas and the Site boundaries, elevated concentrations near the work area attenuated substantially by the time VOCs or particulates reached the Site boundaries. There were several momentary instances when the particulate or VOC readings at the Site boundaries were above ambient background concentrations, but the duration of any elevated readings were typically much shorter than the 15-minute time weighted average interval because of the variable wind direction and the relative short duration of the emissions from the sources.

There was one instance, on December 8, 2010, where the recorded monitoring data indicated particulate concentrations above the action level concentration for an extended period of time during that workday. However, it was noted at the time that, based on the actual site conditions, i.e., the lack of dust, the persistently high readings were due to instrument malfunction. On a few occasions when an instrument(s) did not appear to be working properly, the field personnel made a reasonable effort to diagnose and correct the problem with the assistance of the equipment vendor or simply replace of the defective unit(s).

The following dates were identified where the 15-minute average reading for the downwind particulate concentration registered above the action level and instrument error may not have been the cause: November 4, 16 and 17, December 7, 15 and 17, 2010. However, across all of these instances, the total duration that the readings exceeded the action level ranged from just one minute on December 4, 2010 to one 15-minute interval on December 15, 2010 to less than an hour and a half throughout the afternoon of December 7, 2010. It is believed these events were associated with days of increased dust mobilized from the ground surface by truck traffic or wind. Due to the subfreezing winter temperatures during much of the work, water could not be utilized to mitigate the dust without generating an ice safety hazard. However, there were no complaints regarding dust by surrounding tenants or property owners. No instances were identified where the 15-minute average VOC concentration, monitored at the downwind station, exceeded the action level when the PID instrument was operating properly. The daily minimum and maximum 15-minute time weighted average values for the two monitoring stations are summarized in Table 2.

There were 20 days during the excavation activities that the CAMP data were not recorded, which are noted in Table 2. Copies of all field notes and electronic air monitoring data files relating to the CAMP will be provided under a separate cover.

#### **4.2.6 Reporting**

Official daily and monthly reports were not proposed as part of the RDR; therefore, daily records of general activities were maintained by First Environment in the Site field book, while CAMP specific notes were maintained by First Environment in a designated CAMP field book.

General field notes for days when soil samples were collected are included in electronic format in Appendix E.

A digital photo log of the remedial activities is included in electronic format in Appendix B. Photographs are organized in folders by date and start with the demolition of the building, which was contracted and conducted separately from the soil remediation activities.

### **4.3 CONTAMINATED MATERIALS REMOVAL**

Soils, groundwater, and one 8,000-gallon UST were the three contaminated media removed from the Site during this phase of the remediation. The UST was previously emptied and administratively closed. In addition, this UST was removed from within one of the planned soil excavation areas; therefore, its removal did not result in additional investigation activities. Each media is discussed separately below.

The general SCOs for the remediation are the NYCRR Part 375-6 Protection of Groundwater (POG) Standards. A list of the SCOs for the contaminants of concern for this project is provided in Table 1.

The goal of the remedial activities was the removal of source material contributing to groundwater contamination. A figure depicting the location of original sources, which mainly consist of previously removed USTs, and the planned areas where excavations were to be performed is shown in Figure 2. Figure 2 also illustrates the location of the 8,000-gallon UST that was removed during this remedial action.

#### **4.3.1 Soil**

VOC and LNAPL impacted soils were removed from the three different predetermined areas outlined in the ROD and RDR. These source areas consisted of the Wash Rack (WR) area, Petroleum Tank (PT) area, and the Waste Oil Tank (WOT) area. Figure 3 illustrates each of the original planned excavation areas delineated with a solid line. The actual excavation areas, identified with a dashed line, and the approximate excavation depths, both based on information provided by the surveyor, are also included in Figure 3. All excavated areas were backfilled to grade once they were determined to be complete.

#### **4.3.1.1 Disposal Details**

Soil excavation activities occurred on site between November 4, 2010 and January 5, 2011; while soil disposal took place between November 16, 2010 and January 14, 2011. A total of 10,250 tons of soil were transported off site by Constantine Construction & Farm, Inc. and Fiacco Trucking for proper disposal at either the town of Colonie Landfill or TPS Technologies Soil Recyclers of New York (also known as Deep Green). Transporter and disposal facility license or permit numbers are provided in Table 3. Table 4 shows the total quantities of soil removed from the Site and the respective disposal locations.

Waste classification samples were collected by Op-Tech from each excavation area and analyzed for full Toxicity Characteristic Leaching Procedure (TCLP) analysis as well as gasoline and diesel range organics (GRO and DRO). Samples collected from the PT and WOT areas were also analyzed for polychlorinated biphenyls (PCBs). Three grab samples were collected from various locations of the WR area and analyzed individually. One composite sample was analyzed from each of the PT and WOT areas. These composite samples were comprised of soils from three different locations within the PT area and four different locations within the WOT area. A summary of the samples collected to characterize the waste, and associated analytical results, are summarized on Table 5. In general, GRO and DRO were the major constituents detected in each area, with concentrations of GRO ranging from approximately 100 to 400 ppm and DRO ranging from approximately 2,600 to 6,300 ppm. Only five other individual analytes were detected out of all the samples, and they were only present at concentrations near the minimum detection limit. However, Aroclor 1260 was detected at 0.195 ppm in the WOT sample. As a result of this finding, soils removed from the WOT area could not be disposed of at the Colonie Landfill and were disposed of at the Deep Green Facility.

All soil from the WR area was disposed of at the Colonie Landfill. However, as a result of disposal timing issues, a portion of the soil from the PT area was also disposed of at the Deep Green facility (even though it was not required to be).

Although the tonnage of soil disposed of from each area was not tracked specifically, the soil disposal volumes calculated by the surveyor for the WR, PT, and WOT areas were as

follows: 3,191 cubic yards (cyds), 2,588 cyds, and 497 cyds, respectively. Soil disposal, reuse, and total excavation volumes, based on the surveyor's calculations, are provided in Table 6. The surveyor's calculations were automatically generated using a computer-generated model. A printout of the data from the model and memorandums from the surveyor confirming the calculated soil quantities are provided as Appendix F.

Letters from Applicants to disposal facility owners and acceptance letters from disposal facility owners were not required as part of the RDR. However, permit profiles of the treatment, storage, and/or disposal facilities, as well as waste haulers used, are provided in Appendix G.

Manifests and bills of lading are included in electronic format in Appendix H.

#### **4.3.1.2 On-Site Reuse**

The top layer of soil in each excavation area was field-screened for staining, odor, and elevated PID readings during excavation to determine its potential for reuse as backfill. Soils that did not appear to be impacted by VOCs or LNAPL, based on the field-screening approach discussed in Section 4.2.3, were placed in separate reuse stockpiles segregated by WR, PT, and WOT area. Once sufficient potential reuse material was available from each excavation, grab VOC and composite SVOC samples were collected based on the predetermined reuse sampling frequency requirements. One VOC grab sample was collected for every 240 cyds of material; and one composite SVOC sample was collected, compiled from seven locations, for every 600 cyds. Sample results were provided to the NYSDEC for approval on a rolling basis as they became available by the laboratory.

The locations within each excavation where soil was salvaged for reuse are illustrated in Figure 4. The depths indicated in this figure illustrate the range of the bottom depth of the reuse layer (e.g., the northeast-most corner of the WOT area is labeled "6'-12'" indicating that reuse material was obtained from 0 to 6.0 feet bgs at a minimum and 0 to 12.0 feet bgs at a maximum within that area). Within the WR area, soil was reusable down to a maximum depth of seven feet in one location, while in other areas no soil was suitable for reuse. A large portion of the PT area was also deemed unusable for reuse, while the northern portion of the excavation was usable down to a maximum depth of three feet. The WOT had the deepest section of reuse down to

approximately 12 feet in the northeastern portions of the excavation, although no reuse material was recovered from the southern portion of the excavation.

As presented in Table 6, approximately 480 cyds, 140 cyds, and 340 cyds of reuse material were recovered from the WR, PT, and WOT areas, respectively. VOC and SVOC analytical results for the reuse samples are provided in Tables 7 and 8. All VOC results were below the SCOs. Four SVOCs were identified at concentrations above the POG criteria within soils recovered from the PT and/or WOT areas. Sample RU-WOTSV-1 revealed concentrations of benzo(a) anthracene at 9.0 ppm, benzo(a) fluoranthene at 9.6 ppm, benzo(k) fluoranthene at 3.7 ppm and chrysene at 8.5 ppm, which were above their respective POG values of 1.0 ppm, 1.7 ppm, 1.7 ppm, and 1.0 ppm, respectively. Sample RU-PTSV-1 revealed concentrations of benzo(a) anthracene at 1.3 ppm, benzo(a) fluoranthene at 1.7 ppm, and chrysene at 1.3 ppm, just at or above their respective POG values.

Given the values did not exceed the SCOs for contaminants of concern in groundwater, and under the provision that all reuse backfill would be placed starting approximately three or four feet above the level of groundwater observed in the excavations, these soils were approved for reuse by the NYSDEC.

Soils reused as backfill on site were only placed within the WR and WOT excavations. The PT area was backfill entirely with virgin quarry processed stone (QP), also known as “Item 4.” Figure 5 provides general vertical profiles of the backfill layers as installed within each excavation area.

In order to promote favorable compaction throughout the depth of the excavations and provide better surface conditions when finished, the excavations were backfilled in the following manner. In general, QP was placed in the bottom of each excavation in varying thicknesses up to the level of groundwater. Additional QP was then added for another three or four feet, and then compacted. All the soils to be reused within the excavation were then placed on top of the QP and compacted in approximately one-foot lifts. The remainder of the excavation was then backfill with QP compacted in approximately one-foot lifts.

### **4.3.2 Groundwater**

VOC and LNAPL impacted groundwater was removed from the WR and WOT areas to facilitate the excavation of soil and to remove this impacted media itself. Approximately 90,000 and 30,000 gallons of groundwater were removed from the WR and WOT area excavations, respectively, for a total of just under 120,000 gallons. Due to concerns over generating excessive amounts of groundwater, given the large amount pumped from the first excavation, and given that another deeper excavation (the WOT area) had to be completed after the PT area, an excavation approach which did not include dewatering was employed within the PT area. The excavation was extended to approximately two feet below the final groundwater level; however, the soil removed was conducted rapidly and systematically from one end to another before the working excavation area was significantly submerged by water. In addition, soil “berms” were left in place to retain the water, as necessary, from entering the working excavation area. The berms were later removed before or during backfilling.

#### **4.3.2.1 Disposal Details**

Dewatering of excavations began in the WR area on November 10, 2010 and ended in the WOT area on January 3, 2011. The groundwater removed from the excavations was treated (using the temporary on-site groundwater treatment system) and discharged. The temporary on-site treatment system, constructed and operated by Op-Tech, filtered the groundwater via bag filters prior to passing it through two activated carbon units. The effluent was monitored with a totalizing flow meter prior to discharging to a storm drain located on site. The treated groundwater ultimately discharged to the City of Newburgh wastewater treatment plant (WWTP). There, the water was further remediated by the full treatment process at the WWTP.

Approval to discharge the treated groundwater was granted by the City, as documented in the November 16, 2010 letter included in Appendix D. This letter also discussed the requirement to collect samples every 40,000 gallons for a specific set of chemical analysis. It also presented the daily maximum limit for certain analytes. Analytical results for the treated water were submitted to and approved by the City of Newburgh WWTP. The laboratory results for these reports are provided in Appendix I.

No manifests were generated for the treatment and disposal of groundwater; however, the system totalizer readings were documented at the beginning, end, and throughout the treatment process. The initial and final readings were 4,496 and 124,250 gallons, respectively, resulting in 119,754 gallons being treated and discharged.

### **4.3.3 UST**

One 8,000 gallon UST located in the north west corner of the WR area, as illustrated in Figure 2, was removed during the beginning of the WR area excavation. The UST previously held fuel oil but had been emptied and was administratively closed for several years awaiting the demolition of the wash rack directly above it to allow for its safe removal. There were some indications of product or impacted soil in the area of the UST; however, these soils did not appear to be more impacted than the WR area in general.

#### **4.3.3.1 Disposal Details**

On November 4, 2010 the UST was removed from the ground. Prior to the tank being removed, approximately 100 gallons of liquid was vacuumed from the tank and disposed of by Alban Tank as non-hazardous liquid (fuel oil). The Bill of Lading for liquid disposal is provided in Appendix H.

A small amount of residual solid material was removed from the tank on November 8, 2010, before its interior was cleaned. The residual material removed from the tank was added to soils from the WR area already designated for disposal. The tank appeared to be in good condition and no holes were identified before it was crushed and removed from the Site as steel scrap for recycling. Specific manifest documentation was not created for the shipment of the scrap steel to the local recycler.

## **4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING**

Post-excavation soil samples were collected at a frequency of one sidewall sample for approximately every 30 feet of excavation perimeter and one base sample for approximately every 1,000 square feet of excavation base. Samples were biased to locations where field screening of soils revealed elevated PID readings or other indications of impact, e.g., staining or petroleum odor were observed.



Tables and figures summarizing all end-point sampling are included in Tables 9 through 12 and Figures 6 and 7, respectively, and all exceedances of the SCOs are highlighted. In instances where a sample was re-analyzed at a diluted concentration and compounds were detected above the SCOs in the original analysis and a subsequent dilution(s), the compound specific concentration from the appropriate analysis (diluted or undiluted) is presented in a boxed cell on the tables. Within the data tables presented in the figures, the appropriate diluted and undiluted results for a sample have been combined into a single results column. A summary of post-excavation sample results is discussed by area below.

Prior to a discussion of sample results, it should be noted that the sample depths presented in Tables 9 through 12 and Figure 6 and 7 are based on the sample depths as measured in the field at the time of sampling. These are the same depths as listed in the chain-of-custody submitted to the laboratory with the samples. These depths are not based on the excavation bottom depth information provided by the surveyor, as reflected in Figure 3.

The bottom of the excavation was not specifically surveyed in the location of each sample, but during the data assessment process a depth based on a review of the surveyor's surface and bottom elevations in the vicinity of each sample was determined. In some instances the field measured sample depth was deeper than the depth determined from the review of the survey information. Two potential reasons have been identified for this discrepancy. The measurements initially taken in the field simply may not have been as accurate in measuring the sample depth due to difficulties in properly accessing and measuring the excavation base. In addition, the surveyor's measurements were typically made one or more days after those taken at the time of sampling, and in some instances, it is known the soils from the side walls sloughed into the excavation within that time interval. However, the surveyor made efforts to compensate for sloughing by surveying the excavation base depth beyond the slough material, to the extent possible. For simplicity and consistency, all sample results referenced in this report will refer to the depth as determined in the field in feet bgs (e.g., 10.5 to 11.0). However, the soil reuse and disposal excavation volumes are based on the data generated by the surveyor's depth information.

An adjustment was made to the size and location of the WOT area excavation. Based on an assessment of Site conditions after reuse material was removed from the area initially staked out by the surveyor (the “initial planned excavation area” noted on Figure 2), the excavation was shifted to the south and slightly east. The adjusted area is noted on Figure 2 as the “corrected planned excavation area.” The reason for this modification is fully discussed in Section 4.10 Deviations from the Remedial Action Work Plan.

#### **4.4.1 Wash Rack Area Results**

A total of 14 sidewall and 7 base post-excavation samples were collected from the WR area and analyzed for VOCs. Of these samples, one base and three sidewall samples were also analyzed for SVOCs. An additional four sidewall samples were collected but were not analyzed as these samples were collected at locations where the excavation was extended either horizontally or vertically. Once the extended excavation was completed, additional sidewall samples were collected and analyzed as the final post-excavation samples.

All VOC and SVOC results were compared to the POG standard as the applicable SCO. Based on this review, the results from sample locations WR-S-1 (11.5 to 12.0), WR-S-5 (16.5 to 17.0), WR-S-7 (16.5 to 17.0), WR-S-8 (16.0 to 16.5), WR-S-14 (10.0 to 10.5 and 10.5 to 11.0), WR-S-15 (10.5 to 11.0), WR-B-1 (18.0 to 18.5) and WR-B-2 (17.0 to 17.5) did not reveal any detectable concentrations of VOCs in excess of the SCOs. Additionally, samples WR-S-9 (16.5 to 17.0) and WR-B-5 (14.5 to 15.0) only exhibited exceedances of the POG standard by 0.05 ppm and 0.017 ppm, respectively, for benzene and 1,2-chloroethane. The remaining samples exhibited exceedances of primarily chlorinated VOCs (CVOCs) or benzene, ethyl benzene, toluene, and xylene (BTEX).

##### **4.4.1.1 BTEX Related Compounds**

Sample WR-S-6 (16.0 to 16.5), located on the southwest corner of the planned WR Area excavation perimeter, revealed three VOCs in excess of the applicable SCOs. Ethyl benzene, toluene and total xylenes were identified at concentrations of 10 ppm, 1.5 ppm, and 20.9 ppm, respectively, which were in excess of their POG standards of 1 ppm, 0.7 ppm, and 1.6 ppm, respectively. Additionally, the total VOC concentration of 55.5 ppm for the sample exceeded the

10 ppm project specific guidance value. Based on these results, the WR excavation was extended to the southwest approximately 10 feet and sample WR-S-6RE was collected along the sidewall at the same depth interval, 16.0 to 16.5 feet bgs, as sample WR-S-6. The results for toluene and total xylenes from the new sample were lower, with concentrations of non-detectable and 7.17 ppm respectively, however, the concentrations of ethyl benzene and total VOCs increased to 17 ppm and 99 ppm, respectively. Due to the depth of the excavation, and in an effort to control costs, this area of the excavation was not extended further. This decision was discussed with and approved by the DEC.

Benzene was identified in excess of the 0.06 ppm POG standard at two sample locations WR-S-10 (14.5 to 15.0) and WR-B-6 (14.0 to 14.5) at estimated concentrations of 0.17 ppm and 0.78 ppm, respectively.

The only other detected exceedances of POG standard for non-chlorinated VOCs were for 2-butanone (0.12 ppm) and acetone (0.05 ppm) in samples WR-S-11 (14.5 to 15.0) and WR-B-3 (14.5 to 15.0). 2-butanone was detected marginally above standard at concentrations of 0.33 ppm and 0.26 ppm, while acetone was detected at concentrations of 0.097 ppm and 0.17 ppm, respectively. Acetone is known to be a common laboratory contaminant.

#### **4.4.1.2 CVOC Related Compounds**

CVOCs were detected at concentrations in excess of the POG standards in eight of the 21 VOC samples collected from the WR Area. All of these detections were identified inside the footprint of the former building on site and in approximately the southern two thirds of that portion of the excavation. Each sample, except for WR-S-12BETA (*the WR-S-12 sample was recollected from the same location to allow for the collection of the Matrix Spike and Matrix Spike Duplicate samples, and was renamed WR-S-12BETA*), which was collected from 12.5 to 13.0 feet bgs, was collected from 14.0 to 14.5 feet or 14.5 to 15.5 feet bgs based on field measurements. These eight samples revealed total VOC concentrations between 10.2 ppm and 80.9 ppm and total CVOCs concentrations between 8.9 ppm and 76 ppm, respectively.

Of the four CVOC compounds detected above the POG standard, cis-1,2-dichloroethene (cis-1,2-DCE) was consistently detected at the highest concentration and overall percentage of

the VOC total. Cis-1,2-DCE was detected in excess of its 0.25ppm POG standard within samples WR-B-3, WR-B-4, WR-B-6, WR-B-7, WR-S-10, WR-S-11, WR-S-12BETA, and WR-S-13 at concentrations of 8.7 ppm, 54 ppm, 33 ppm, 7.1 ppm, 58 ppm, 8.1 ppm, 57 ppm, and 12 ppm, respectively. The average cis-1,2-DCE concentration within these samples was 70 percent of the of the total VOC concentration and 74 percent of the total CVOC concentration. Given cis-1,2-DCE is a known breakdown product of chlorinated compounds such as TCE and tetrachloroethene, this high cis-1,2-DCE fraction of the total VOCs and CVOCs is indicative of natural attenuation through reductive dechlorination.

1,2-dichloroethane (1,2-DCA) was the next highest CVOC in terms of concentration. It was also identified above its POG standard of 0.02 ppm within each of the eight samples with CVOC exceedances listed above. However, 1,2-DCA concentrations ranged only from 0.21 ppm in sample WR-B-3 to 18 ppm in sample WR-S-10, with an average concentration of 5.8 ppm within these eight samples.

Vinyl chloride was detected above its POG standard of 0.02 ppm within five of the eight samples with CVOC exceedances. Vinyl chloride concentrations ranged only from 0.028 ppm in sample WR-S-11 to 3.9 ppm in sample WR-S-13, with an average concentration of 0.847 ppm within these five samples.

The final CVOC identified above its POG standard of 0.47 ppm, was trichloroethene (TCE) which was only detected above standard at concentrations of 3.6 ppm within sample WR-B-7 and 6.1 ppm in sample WR-B-6.

#### **4.4.1.3 SVOCs**

No detectable concentrations of SVOCs above the POG standard were identified in samples WR-S-1, WR-S-5, WR-S-9, and WR-B-1. Total SVOC concentrations for the above-mentioned samples were 54.77 ppm, 0.86 ppm, 54.35 ppm, and 0.3 ppm, respectively; all well below the site-specific criteria of 500 ppm. These four samples were collected during the initial soil remediation activities, and given the low concentrations observed and the fact the goal of the soil excavation activities was the removal of VOC and LNAPL impacted soil, no additional post-excavation samples from the WR, PT, or WOT areas were analyzed for SVOCs. This was

discussed with and approved by the NYSDEC. However, soils to be reused were still analyzed for SVOCs, as planned.

#### **4.4.2 Petroleum Tank Area Results**

A total of 11 sidewall and 5 base post-excavation samples were collected from the PT area. These samples were analyzed for VOCs and compared to the POG standard. Based on this review, the results from samples PT-S-1 (14.5 to 15.0), PT-S-3 (14.5 to 15.0), PT-S-5 (14.5 to 15.0), PT-S-6 (12.0 to 12.5), PT-S-7 (13.0 to 13.5), PT-B-2 (15.0 to 15.5), PT-B-3 (14.5 to 15.0), PT-B-4 (15.0 to 15.5), and PT-B-5 (15.0 to 15.5) revealed no detectable concentrations of specific VOCs in excess of the SCOs. The remaining samples exhibited exceedances of primarily BTEX compounds with only two samples exhibiting CVOC concentrations in excess of the POG standard.

##### **4.4.2.1 BTEX Related Compounds**

Four of the five samples exhibiting concentrations of BTEX compounds in excess of the POG standard were located along the eastern side wall of the excavation and consisted of samples PT-S-2 (8.5 to 9.0), PT-S-8 (13.0 to 13.5), PT-S-9 (11.5 to 12.0), and PT-S-10 (11.5 to 12.0). Ethylbenzene was identified in each of these samples at concentrations of 1.1 ppm, 2.9 ppm, 4.7 ppm, and 1.9 ppm, respectively. The overall concentration of VOCs present in these samples was relatively low, with total VOC concentrations identified at 13.1 ppm, 7.5 ppm, 22.9 ppm, and 15.2 ppm, respectively.

Xylenes and benzene were detected in sidewall samples at concentrations above the POG standard. Samples PT-S-2 (8.5 to 9.0), PT-S-8, and PT-S-9 revealed total xylene concentrations of 2.4 ppm, 2.6 ppm, and 15.1 ppm, while sample PT-S-2 (8.5 to 9.0) revealed a benzene concentration of 1.3 ppm.

Sample PT-B-1 (14.5-15.0) was the only non-sidewall sample that exhibited concentrations in excess of the POG standard. This sample revealed benzene and toluene at concentrations of 2.1 ppm and 11.0 ppm, respectively. Sample PT-B-1 also revealed the only detection of methyl tert-butyl ether (MTBE) in excess of its 0.93 ppm POG standard. MTBE

was detected at an estimated concentration of 1.1 ppm within sample PT-B-1. Total VOCs were identified in PT-B-1 at a concentration of 14.2 ppm.

The only other non-BTEX or CVOC related exceedance for a specific constituent occurred within sample PT-S-2 (10.0 to 10.5) where acetone was detected at a concentration of 0.17 ppm. As previously discussed, acetone is known to be a common laboratory contaminant. Sample PT-S-7 did not identify any specific analytes above the POG standard but its total VOC concentration of 21.96 ppm did exceed the 10 ppm project specific guidance.

#### **4.4.2.2 CVOC Related Compounds**

CVOCs were detected at concentrations above the POG standard in only two of 16 VOC samples collected from the PT area. Sample PT-S-2 (8.5 to 9.0), located at the southern edge of the PT area excavation, revealed an estimated cis-1,2-DCE concentration of 0.36 ppm. Sample PT-S-4 (14.5 to 15.0), located at the western-most edge of the PT area excavation, identified 1,2-DCA, cis-1,2-DCE, and TCE above the POG standard at concentrations of 8.3 ppm, 4.8 ppm, and 0.91 ppm, respectively. The total VOC concentration for PT-S-4 was equal to the total CVOC concentration of 14.0 ppm.

#### **4.4.3 Waste Oil Tank Area Results**

A total of 12 sidewall and 4 base post-excavation samples were collected from the WOT area. These samples were analyzed for VOCs and compared to the POG standard. Based on this review, the results from samples: WOT-S-1 (10.0 to 10.5), WOT-S-2 (15.0 to 15.5), WOT-S-3 (14.0 to 14.5), WOT-S-4 (11.0 to 11.5), WOT-S-5 (12.0 to 12.5), WOT-S-6 (5.0 to 5.5), WOT-S-7 (15.5 to 16.0), WOT-S-8 (12.0 to 12.5), WOT-B-1 (15.0 to 15.5), WOT-B-2 (15.0 to 15.5), and WOT-B-3.1 (12.5 to 13.0) did not reveal any detectable concentrations of VOCs in excess of the SCOs. The remaining samples exhibited exceedances for primarily CVOCs. Only 2 of the 16 samples exhibited exceedances of the POG standard for non-CVOCs, all of which were BTEX compounds.

##### **4.4.3.1 BTEX Related Compounds**

Samples WOT-S-3 (10.0 to 10.5) and WOT-B-3 (12.0 to 12.5) were centrally located within the final limits of the WOT area excavation and were the only two samples that revealed BTEX compounds at concentrations above standard. Sample WOT-S-3 (10.0 to 10.5) revealed

ethylbenzene, toluene, and total xylene concentrations of 3.7 ppm, 4.8 ppm, and 21.3 ppm, respectively. In addition, total VOCs were identified at a concentration of 259 ppm. Sample WOT-B-3 revealed ethyl-benzene and total xylene concentrations of 32 ppm, 110 ppm, and 161 ppm, respectively, in addition to benzene which was identified at a concentration of 2.6 ppm. Total VOCs were identified at a concentration of 3,005.4 ppm (based on the value from the second dilution sample).

#### **4.4.3.2 CVOC Related Compounds**

CVOCs were detected at concentrations above the POG standard in 5 of 16 VOC samples collected from the WOT area. However, three of these samples, located along sidewalls or former sidewalls, revealed only minor CVOC exceedances.

Sample WOT-S-1 (14.5 to 15.0), located along the southeastern edge of the “corrected planned excavation area,” revealed a cis-1,2-DCE concentration of 0.67 ppm and no other exceedances. Sample WOT-S-4 (13.5 to 14.0), located along the southwestern edge of the “corrected planned excavation area,” revealed a cis-1,2-DCE concentration of 2.0 ppm and a TCE concentration of 1.3 ppm. Sample WOT-S-9 (9.5 to 10.0), located along the northwestern interface between soil reuse and disposal excavations, revealed a cis-1,2-DCE concentration of 3.6 ppm, a vinyl chloride concentration of 4.2 ppm, and a total VOC concentration of 12.2 ppm.

Sample WOT-S-3 (10.0 to 10.5) revealed the following CVOC concentrations in excess of the POG standard: 1,1,1-TCA (5.8 ppm), cis-1,2-DCE (2.3 ppm), tetrachloroethene (170 ppm), and TCE (74 ppm). WOT-B-3 (12.0 to 12.5), located approximately eight feet away, also identified several CVOC concentrations in excess of the POG standard as follows: 1,1,1-TCA (130 ppm), 1,1-dichloroethene (10 ppm), cis-1,2-DCE (7.9 ppm), tetrachloroethene (1,300 ppm), and TCE (1,400 ppm).

Sample WOT-B-3 (12.0 to 12.5) contained some opaque black product, believed to be waste oil, within the material collected. A localized impacted area of approximately one square foot at the base of the excavation was identified and removed with the excavator for sampling, (which resulted in sample WOT-B-3). The excavation was not vertically extended in this area,

however, it was noted that the localized area of impact was effectively removed and only minor amounts of impacted material remained.

Approximately two feet of material was removed below the location of sample WOT-S-3 (10.0 to 10.5) when the final portion of the WOT area was excavated. In addition, sample WOT-B-3 (14.0 to 14.5) was collected in the same horizontal location as sample WOT-S-3 (10.0 to 10.5), but from approximately four feet deeper, and did not identify any constituents above standard.

#### **4.4.4 Quality Assurance/Quality Control (QA/QC)**

All post-excavation and soil reuse VOC and SVOC samples were collected and analyzed in general conformance with the project QAPP. Soil samples were collected from the excavator directly into laboratory supplied, unpreserved, and dedicated four or eight ounce glass jars. Samples were properly labeled and submitted to the analytical laboratory under chain-of-custody requirements within the allowable holding time. Samples were either refrigerated or maintained on ice prior to submittal to the laboratory.

Two duplicate field samples and three sets of matrix-spike (MS) and matrix-spike duplicate (MSD) samples were collected throughout the work. Analytical results from field duplicates of samples PT-B-2 (15.0 to 15.5) and WOT-B-3 (12.0 to 12.5) indicated fairly good agreement between the original sample and the duplicate, considering dilution effects. MS and MSD samples were collected to fulfill Category B deliverable requirements; however, individual MS and MSD samples were not collected for each set of samples that resulted in a separate laboratory report. Due to the large number of samples and their expedited turnaround times, many laboratory reports needed to be generated throughout the remediation to address all the samples. In light of this, a reduced number of project-specific MS and MSD samples were collected, though the laboratory analyzed batch MS/MSD samples to meet Category B requirements.

All field instruments designed to be field calibrated, namely the PID meters used for field screening of soils and air monitoring, were calibrated daily.



#### 4.4.5 Data Usability Summary Reports (DUSRs)

DUSRs were prepared by a third-party verifier, Premier Environmental, for all data generated in this remedial performance evaluation program. These DUSRs are included in Appendix J and associated raw laboratory data is provided electronically in Appendix K.

A separate DUSR was prepared for each laboratory analytical report. A review of the DUSRs revealed that for each analytical report, the laboratory provided a complete data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package. Additionally, all data reported agrees with the raw data provided in the final laboratory report. In general, the various QA/QC requirements for sample holding times and the calibration and tuning of gas chromatograph/mass spectroscopy equipment, etc. were met.

Based on the DUSRs, some of the data qualifiers from some sample runs did need to be adjusted in light of the surrogate recoveries, or results being out of range due to dilution. However, across all laboratory reports, the modified data qualifiers that resulted from the DUSRs were typically one of two types. The majority of modifications were instances where almost all analytes for a specific sample were reported as non-detect and the quantitation limit was very low, approximately 0.005 ppm, and the DUSR recategorized them as “UJ.” This recategorization indicated the analyte was not detected but the reported quantitation limit was only approximate. The second general instance, which occurred less frequently, happened when QC criteria could not be met for a few specific analytes within one or more specific samples.

Neither of the above modifications to data qualifiers is interpreted to document exceedances of the POG standard that did not otherwise exist. For a few specific samples, data qualifiers for CVOC results were assessed in a DUSR as “J”, approximate, when they were either not qualified or qualified as diluted by the lab. This occurred mainly in samples WR-S-13, WOT-B-3, and WOT-S-9 but typically for analytes that were already at a concentration well above the POG standard. Therefore, overall, the modified qualifiers are not anticipated to appreciably impact the soil analytical results submitted in this report.

## **4.5 IMPORTED BACKFILL**

Based on the surveyed volumes of soil removed from the Site for disposal, including some small volumes measured/calculated by First Environment when surveying was not practicable, a total of 6,276 cyds of imported backfill were utilized within the three excavations. All backfill was virgin QP/Item 4 obtained from Tilcon New York, Inc.'s Clinton Point Quarry facility located in New Hamburg, New York. Chemical analytical results were not obtained for the backfill given the material was approved by the NYSDEC as virgin fill under the DER-10 section 5.4 (e) 5. i. requirements for backfill. Approval documentation, via email correspondence with the NYSDEC on October 15, 2010, is provided in Appendix C. It was noted that 11 percent of material passed the size 80 sieve instead of 10 percent or less, but the DEC was made aware of this prior to approval of the material as virgin fill. The Site locations where imported backfill and reuse soil were placed at the Site are shown in Figure 5. The general approach to the backfilling activities have been discussed in Section 4.3.1.2 and the specific layering of materials within each area is illustrated in the vertical profiles provided in Figure 5.

Table 13 summarizes the tonnage of backfill material delivered to the Site based on the material weigh tickets, totaling 11,086 tons. Electronic copies of the weigh tickets for backfill are provided in Appendix L. Assuming a compacted density of approximately 120 pounds per cubic foot, based on information obtained from the material supplier, the approximate volume on the backfill once compacted would be 6,843 cyds.

## **4.6 CONTAMINATION REMAINING AT THE SITE**

### **4.6.1 Types of Remaining Contaminants**

Contaminated materials remaining on site consist primarily of subsurface soils impacted by VOC and minor amounts of residual product; SVOC impacted surface soils; and potentially, VOC impacted groundwater. A new round of groundwater data should be collected to evaluate the effectiveness of the soil remediation. SVOC impacted surface soil and VOC impacted groundwater will be addressed in the future by a site-wide cover and the injection of chemical oxidants, respectively, as outlined in the ROD, and are not the subject of this report. Contaminated material remaining on site, associated with this phase of the remediation, consists

of impacted subsurface soil where VOC concentrations remain above the POG standard adjacent to and below the WR, PT, and WOT excavation volumes. A specific demarcation layer was not installed to note the boundaries of these volumes; however, the transition from imported backfill and native undisturbed material establishes the overall vertical and horizontal limits of each excavation.

#### **4.6.2 Remaining Contamination Areas**

The specific areas where contamination remains can be determined from Figure 6, which presents all VOC post-excavation results for each excavation area. With respect to the WR area, contamination generally remains at depth along the southern and eastern sidewalls and southern two thirds of the base of the excavation within the building footprint. With respect to the PT area, contamination generally remains at depth along the northeastern sidewall; the western-most end of the excavation; and one centrally located area of the base of the excavation. Contamination also remains at approximately 8.0 to 9.0 feet bgs at the southern-most point of the PT excavation. With respect to the WOT area, contamination generally remains at depth along the southern sidewall and within a central/north-central location of the final excavation area.

Areas where higher levels of contamination remain on site consist of the southern to central portion of the WR area, between samples WR-S-10, WR-S-12 BETA, and WR-B-6 and the central/north-central area of the WOT area near sample WOT-B-3. Again, it is noted that some of the material in the WOT-S-3 (10.0 to 10.5) location was later removed as the excavation progressed.

All post-excavation sample results were provided to the NYSDEC once they became available from the analytical laboratory, and based on site conditions as well as project cost considerations, some soils with VOC concentrations in excess of the SCOs were left in place as documented. Some of the site conditions considered included the sample location and contaminant concentration, as well as the depth-to-groundwater. A majority of the post-excavation samples were collected at depth below the groundwater levels eventually observed in the excavations, although at the time of sample collection the sample were rarely if ever collected through standing water.

### **4.6.3 Utilities/Subsurface Structures Affecting Remediation**

No active utility lines or subsurface infrastructure are present at the Site other than an out-of-service oil/water separator located at the southern end of the Site and its associated drain line which runs east to the sewer system. Neither utility lines nor subsurface infrastructure had any effect on the remedial activities.

### **4.6.4 Remaining Contamination vs. Unrestricted Use**

With respect to VOC concentrations, the POG soil standard is almost identical to the unrestricted use standard. The only differences are that the unrestricted use standards for hexachlorobenzene and total xylenes are 0.33 ppm and 0.26 ppm, respectively, whereas the POG standards are 3.2 ppm and 1.6 ppm. Since hexachlorobenzene is not a common contaminant of concern nor specifically targeted for this project; and it was not analyzed for during the sample analysis, it has not been identified above either standard. Given the 1.34 ppm difference between the POG and unrestricted use standards for xylene, there are only nine samples where the xylene concentration exceeded the unrestricted use standard and did not exceed the POG. Of these there are only three that did not already exceed a POG standard for any other compound or a total VOC concentration of 10 ppm. The three samples in question were WR-S-14 (10.0 to 10.5 and 10.5 to 11.0) and WR-B-2 (17.0 to 17.5).

With respect to SVOCs, the post-excavation samples did not reveal any exceedance when compared to the POG or unrestricted use standards.

In light of the minor differences between the two standards as they relate to the VOC results of this project, Tables 9 through 12 and Figure 6 and 7 summarize the results of all soil samples remaining at the Site after completion of Remedial Action that exceed the Track 1 (unrestricted) SCOs. These results are presented in shaded cells (darker for POG and lighter for unrestricted use) within each table and noted on the figures by sample points shown in color.

Sample results that are not shaded in Tables 9 through 12 represent samples that meet the unrestricted use standard. Sample locations illustrated by solid black points on Figures 6 and 7 similarly represent samples meeting the unrestricted use standard. As such, Tables 9 through 12

and Figures 6 and 7 summarize the results of all soil samples remaining at the Site after completion of the remedial actions that meet the SCOs for unrestricted use of the Site.

Since contaminated soil, and potentially contaminated groundwater/soil vapor, remains beneath the Site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls (ECs/ICs) are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the Site Management Plan (SMP) approved by the NYSDEC.

#### **4.7 CAP SYSTEM**

Exposure to remaining contamination in soil/fill at the Site will be prevented by cover system and institutional controls at the Site. The design of the cover system has not yet been established but will be provided in the future. An Excavation Work Plan, which outlines the procedures required in the event the cover system and/or underlying residual contamination are disturbed, will also be provided in the future SMP.

#### **4.8 OTHER ENGINEERING CONTROLS**

Since remaining contaminated soil source material, groundwater/soil vapor exists beneath the Site, Engineering Controls (EC) are required to protect human health and the environment. The following primary Engineering Control element is anticipated to be installed as part of the project. Due to the potential presence of the vapor intrusion into any future buildings on site, a sub-slab depressurization system will need to be installed within any new buildings that are to be constructed on site and occupied. The design of this system will be provided under separate cover as site redevelopment progresses.

Procedures for monitoring, operating, and maintaining the sub-slab depressurization system will be provided in the Operation and Maintenance Plan in Section 4 of the SMP. The Monitoring Plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

## **4.9 INSTITUTIONAL CONTROLS**

The Site remedy requires that an environmental easement be placed on the property to (1) implement, maintain, and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and (3) limit the use and development of the Site to commercial or restricted residential uses only.

The environmental easement for the Site will be executed by the Department and filed with the Orange County Clerk once it is completed.

## **4.10 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN**

### **4.10.1 Shift of the WOT Area**

In the process of developing the RDR for the soil remediation, it was determined that the excavation areas on site had to be adjusted to compensate for a discrepancy in the scale of the figure vs. the actual size and location of site features/field measurements. As a result of this, the depiction of some of the on-site features needed to be adjusted. In particular, the location of the former waste oil USTs and associated excavation needed to be revised. Accordingly, the former waste oil tanks, which were shown to be almost centered on monitoring well MW-3, are depicted in the RDR to be further north and slightly west of where they had been shown. When this adjustment was made to these site features, a determination was also made that the WOT area excavation would need to be shifted so it remained centered on the former waste oil tanks and their associated excavation.

Based on the adjusted WOT area location as presented in the RDR, the WOT area was staked out by the surveyor and excavation of reuse material began within this area. During this work, it was noted that the depth of usable overburden material was deeper than anticipated in the northern and western ends of the excavation, down to 10 feet at the deepest point. However, soils in the southern end of the excavation only appeared to be reusable down to approximately three feet. In light of this development, it was believed that the location of the WOT area excavation was intended to be centered on MW-3, not the location of the former USTs as presented in the RDR. Based on this determination and the observed field conditions, the

excavation area was adjusted back to its original size and location relative to MW-3. The NYSDEC was made aware of the adjustment.

#### **4.11 FINAL INSPECTION**

A final inspection of the Site was conducted with First Environment and the contractor, Op-Tech, on the final day of the excavation activities. All stockpiled soils had been either removed from the Site for off-site disposal or reused as backfill and all materials used as stockpile cells had been removed. As such, the work completed at the Site and the final condition of the Site was consistent with the project requirements as stated in the June 2010 RDR.

#### **4.12 REMDIAL ACTION COST**

The final cost of the soil remediation work executed by Op-Tech, including all soil and groundwater disposal costs, was \$933,488.45. The last two payment applications submitted to the City of Newburgh outlining the breakdown of the costs is provided in Appendix M.

## **LIST OF TABLES**

1. Soil Cleanup Objectives (SCOs) for the Project
2. CAMP Summary Data
3. Waste Hauler and Disposal Facility Permit Information
4. Off-site Soil Disposal Volumes and Facilities
5. Waste Characterization Samples Results by Excavation Area
6. Off-site Soil Disposal, Reuse, and Total Excavation Volumes
7. Reuse Material Sample Results (VOCs)
8. Reuse Material Sample Results (SVOCs)
9. Petroleum Tank Area Post Excavation Sampling Results (VOCs)
10. Wash Rack Area Post-Excavation Sampling Results (VOCs)
11. Wash Rack Area Post-Excavation Sampling Results (SVOCs)
12. Waste Oil Tank Area Post-Excavation Sampling Results (VOCs)
13. Imported Backfill Tonnages and Summary



## **LIST OF FIGURES**

1. Site Location Map
2. Site Plan
3. Excavation Areas & Depths
4. Soil Reuse Source Locations & Depth Range
5. Backfill Locations & Profiles
6. Post-Excavation Soil Analytical Results (VOCs)
7. Post-Excavation Soil Analytical Results (SVOCs)

## **LIST OF APPENDICES**

- A. Digital Copy of the CCR (CD)
- B. Project Photo Log (CD) [Demolition and Soil Remediation]
- C. NYSDEC Approvals of Substantive Technical Requirements
- D. Non-agency Approvals and Permits
- E. Soil Remediation Field Notes [for dates of sample collection]
- F. Surveyor's Soil Volume Calculation Documents
- G. Waste Hauler and Disposal Facility Permits
- H. Waste Manifests & Bills of Lading (CD)
- I. Treated Groundwater Analytical Results
- J. DUSRs for All Endpoint Samples (CD)
- K. Raw Analytical Laboratory Data Reports (CD)
- L. Imported Backfill Material Documentation (CD)
- M. Soil Remediation Contractor Final Payment Request Applications

**TABLE 1**  
**Applicable Soil Clean-up Objectives from NYCCR Part 375-6**  
**Protection of Groundwater (POG) from 6 NYCRR PART 375-6**  
**PROVAN FORD SITE, SAC No. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Contaminant	CAS Number	Protection of Public Health Commercial	Protection of Groundwater
<b>Semivolatiles</b>			
Acenaphthene	83-32-9	500b	98
Acenaphthylene	208-96-8	500b	107
Anthracene	120-12-7	500b	1,000c
Benz(a)anthracene	56-55-3	5.6	1f
Benzo(a)pyrene	50-32-8	1f	22
Benzo(b)fluoranthene	205-99-2	5.6	1.7
Benzo(g,h,i)perylene	191-24-2	500b	1,000c
Benzo(k)fluoranthene	207-08-9	56	1.7
Chrysene	218-01-9	56	1f
Dibenz(a,h)anthracene	53-70-3	0.56	1,000c
Fluoranthene	206-44-0	500b	1,000c
Fluorene	86-73-7	500b	386
Indeno(1,2,3-cd)pyrene	193-39-5	5.6	8.2
m-Cresol	108-39-4	500b	0.33e
Naphthalene	91-20-3	500b	12
o-Cresol	95-48-7	500b	0.33e
p-Cresol	106-44-5	500b	0.33e
Pentachlorophenol	87-86-5	6.7	0.8e
Phenanthrene	85-01-8	500b	1,000c
Phenol	108-95-2	500b	0.33e
Pyrene	129-00-0	500b	1,000c
<b>Volatiles</b>			
1,1,1-Trichloroethane	71-55-6	500b	0.68
1,1-Dichloroethane	75-34-3	240	0.27
1,1-Dichloroethene	75-35-4	500b	0.33
1,2-Dichlorobenzene	95-50-1	500b	1.1
1,2-Dichloroethane	107-06-2	30	0.02f
cis-1,2-Dichloroethene	156-59-2	500b	0.25
trans-1,2-Dichloroethene	156-60-5	500b	0.19
1,3-Dichlorobenzene	541-73-1	280	2.4
1,4-Dichlorobenzene	106-46-7	130	1.8
1,4-Dioxane	123-91-1	130	0.1e
Acetone	67-64-1	500b	0.05
Benzene	71-43-2	44	0.06
Butylbenzene	104-51-8	500b	12
Carbon tetrachloride	56-23-5	22	0.76
Chlorobenzene	108-90-7	500b	1.1
Chloroform	67-66-3	350	0.37
Ethylbenzene	100-41-4	390	1
Hexachlorobenzene	118-74-1	6	3.2
Methyl ethyl ketone	78-93-3	500b	0.12
Methyl tert-butyl ether	1634-04-4	500b	0.93
Methylene chloride	75-09-2	500b	0.05
n-Propylbenzene	103-65-1	500b	3.9
sec-Butylbenzene	135-98-8	500b	11
tert-Butylbenzene	98-06-6	500b	5.9

<b>Contaminant</b>	<b>CAS Number</b>	<b>Protection of Public Health Commercial</b>	<b>Protection of Groundwater</b>
Tetrachloroethene	127-18-4	150	1.3
Toluene	108-88-3	500b	0.7
Trichloroethene	79-01-6	200	0.47
1,2,4-Trimethylbenzene	95-63-6	190	3.6
1,3,5-Trimethylbenzene	108-67-8	190	8.4
Vinyl chloride	75-01-4	13	0.02
Xylene (mixed)	1330-20-7	500b	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).

NS=Not specified. See Technical Support Document (TSD).

Footnotes:

a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

b The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

c The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

d The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

f For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

g This SCO is derived from data on mixed isomers of BHC.

h The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

i This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

j This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

**TABLE 2**  
**CAMP Summary Data - 15-minute Time Averaged Data**  
**PROVAN FORD SITE, SAC No. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Date	Dust Monitor-1 (Particulates - $\mu\text{g}/\text{m}^3$ )		DW	PID-1 (VOCs - ppm)		Dust Monitor-2 (Particulates - $\mu\text{g}/\text{m}^3$ )		DW	PID-2 (VOCs - ppm)		Notes
<b>CAMP Response Levels</b>	<b>100 <math>\mu\text{g}/\text{m}^3</math></b>			<b>5 ppm</b>		<b>100 <math>\mu\text{g}/\text{m}^3</math></b>			<b>5 ppm</b>		
	Max	Min		Max	Min	Max	Min		Max	Min	
11/4/2010	604	0	x	0.6	0.0	365	36		--	--	Unit 2 PID Instrument was giving high readings triggering false alarm, Pine Environmental was contacted for replacement instrument.
11/8/2010	108	0	x	2.3	0.0	221	0		--	--	Unit 2 PID instrument was not used, Pine Environmental delivered replacement instrument.
11/9/2010	18	1	x	3.6	0.0	316	7		0.8	0.0	
11/10/2010	38	2	x	2.6	0.0	439	0		--	--	Unit 2 PID battery went dead.
11/16/2010	162	59		4.3	0.0	253	0	x	0.1	0.0	
11/17/2010	169	10	x	0.5	0.0	48	0		6.0	0.9	
11/18/2010	--	--	x	0.9	0.0	--	--		--	--	Dust monitor units were giving error messages that were not going away after restarting them, and Unit 2 PID instrument wouldn't calibrate correctly. Pine Environmental was contacted for replacements
11/19/2010	--	--		1.1	0.0	--	--		--	--	Dust monitor units and Unit 2 PID instrument weren't recording readings although no error messages were present.
11/22/2010	--	--		0.3	0.0	--	--		--	--	Dust monitor units and Unit 2 PID instrument weren't recording readings although no error messages were present.
11/23/2010	--	--		0.1	0.0	--	--		--	--	Dust monitors weren't recording readings although no error messages were present. Unit 2 PID battery read 7.6 volts and wouldn't turn or charge, Pine Environmental was contacted.
11/29/2010	--	--		--	--	--	--		--	--	Dust monitors and Unit 1 PID instrument weren't recording readings although no error messages were present. Unit 2 PID kept shutting off because wouldn't charge.
11/30/2010	--	--		--	--	--	--		--	--	Dust monitors and Unit 1 PID instrument weren't recording readings although no error messages were present. Unit 2 PID kept shutting off because wouldn't charge, Pine was contacted about issue being unresolved and issued a new unit.
12/1/2010	1	0	x	--	--	22	0		--	--	Unit 1 PID instrument wasn't recording readings but no error messages were present. Unit 2 PID battery low because didn't hold overnight charge.
12/2/2010	81	24	x	2.4	0.0	21	9		--	--	Unit 2 mobile PID instrument wasn't recording readings but no error messages occurred.
12/3/2010	131	27		0.3	0.0	39	7	x	0.8	0.0	
12/6/2010	522	29		0.8	0.0	105	4	x	2.2	0.0	
12/7/2010	98	42		0.2	0.0	470	8	x	2.1	0.0	
12/8/2010	119	19		0.3	0.0	652	24	x	2.5	0.0	
12/9/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/10/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/13/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/14/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/15/2010	85	0.042		0.5	0.0	158	12	x	2	0.0	
12/16/2010	104	0.053		0.3	0.0	60	14	x	10.7	0.0	
12/17/2010	735	0.035		1.1	0.0	296	0	x	2.5	0.0	
12/20/2010	--	--		1.1	0.0	88	35	x	0.8	0.0	
12/21/2010	35	7		0.3	0.0	110	12	x	0.1	0.0	

Date	Dust Monitor-1 (Particulates - $\mu\text{g}/\text{m}^3$ )		DW	PID-1 (VOCs - ppm)		Dust Monitor-2 (Particulates - $\mu\text{g}/\text{m}^3$ )		DW	PID-2 (VOCs - ppm)		Notes
<b>CAMP Response Levels</b>	<b>100 <math>\mu\text{g}/\text{m}^3</math></b>			<b>5 ppm</b>		<b>100 <math>\mu\text{g}/\text{m}^3</math></b>			<b>5 ppm</b>		
	Max	Min		Max	Min	Max	Min		Max	Min	
12/22/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/23/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/28/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/29/2010	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
12/30/2010	124	28	x	0.1	0.0	103	26		0.1	0.0	
1/3/2011	116	6	x	0.4	0.0	42	5		0.8	0.0	
1/4/2011	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
1/5/2011	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
1/6/2011	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
1/7/2011	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
1/11/2011	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
1/13/2011	--	--		--	--	--	--		--	--	Dust monitor units and PID instruments weren't recording readings although no error messages were present.
1/14/2011	91	7	x	0.6	0.0	71	9		0.4	0.0	

Notes: -- = Data not recorded  
DW = Downwind placement  
PID = Photoionization Detector  
VOCs = Volatile Organic Compounds  
ppm = parts per million  
 $\mu\text{m}^3$  = micrograms per cubic meter

**TABLE 3**  
**Transporter and Disposal Facility Permit Information**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

	<b>Transporters</b>		<b>Disposal Facilities</b>	
	Constantine Construction and Farm Inc.	Fiacco Trucking	Town of Colonie Landfill	TPS Technologies Soil Recyclers of New York (a.k.a Deep Green)
Permit Number	4A-597	4A-503	4-0126-00033/00001	3-3348-00150-00001-0
Effective Date	4/6/2010	10/27/2010	1/14/2008	3/20/2006
Expirations Date	4/5/2011	10/26/2011	12/31/2017	3/19/2011

**TABLE 4  
SOIL DISPOSAL SUMMARY  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

<b>Date Loaded</b>	<b>Facility</b>	<b>Number of Trucks</b>	<b>Tonnage</b>	<b>Project Tonnage</b>
11/16/2010	Colonie	13	466.94	466.94
11/17/2010	Colonie	15	555.97	1022.91
11/18/2010	Colonie	9	325.52	1348.43
11/19/2010	Colonie	11	382.81	1731.24
11/23/2010	Colonie	11	350.04	2081.28
11/24/2010	Colonie	10	333.10	2414.38
11/30/2010	Colonie	13	468.71	2883.09
12/3/2010	Colonie	14	482.36	3365.45
12/6/2010	Colonie	13	453.82	3819.27
12/7/2010	Colonie	17	622.16	4441.43
12/8/2010	Colonie	21	766.48	5207.91
12/9/2010	Colonie	26	893.33	6101.24
12/10/2010	Colonie	17	603.43	6704.67
12/15/2010	Colonie	18	615.59	7320.26
12/16/2010	Colonie	13	463.20	7783.46
12/17/2010	Colonie	12	449.34	8232.80
12/20/2010	Colonie	5	182.88	8415.68
12/21/2010	Colonie	4	149.70	8565.38
12/22/2010	Colonie	2	67.67	8633.05
12/30/2010	Colonie	1	20.68	8653.73
1/4/2011	Deep Green	20	460.77	9114.50
1/13/2011	Deep Green	28	615.88	9730.38
1/14/2011	Deep Green	22	498.60	10228.98
1/14/2011	Colonie	1	19.05	10248.03

<u>Colonie Subtotal</u>	<u>246</u>	<u>8672.78</u>
<u>Deep Green Subtotal</u>	<u>70</u>	<u>1575.25</u>
<b>Totals</b>	<b>316</b>	<b>10248.03</b>



**TABLE 5**  
**Soil Waste Classification Results**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Sample		(1) Wash Rack Area	(2) Wash Rack Area	(3) Wash Rack Area	Petroleum Tank Area	Waste Oil Tank Area
Lab Sample Number		JA60658-1	JA60658-2	JA60658-3	JA61277-2	JA61277-1
Date		11/2/2011	11/2/2011	11/2/2011	11/9/2011	11/9/2011
	Units					
<b>TPH-GRO</b>	mg/kg	208	420	82.6	110	115
<b>TPH-DRO</b>	mg/kg	6340	6450	2590	5550	6220
<b>PCBs</b>						
Aroclor 1016	mg/kg	NA	NA	NA	0.012 U	0.012 U
Aroclor 1221	mg/kg	NA	NA	NA	0.022 U	0.022 U
Aroclor 1232	mg/kg	NA	NA	NA	0.011 U	0.011 U
Aroclor 1242	mg/kg	NA	NA	NA	0.012 U	0.012 U
Aroclor 1248	mg/kg	NA	NA	NA	0.0065 U	0.0067 U
Aroclor 1254	mg/kg	NA	NA	NA	0.0083 U	0.0085 U
Aroclor 1260	mg/kg	NA	NA	NA	0.013 U	0.195
Aroclor 1268	mg/kg	NA	NA	NA	0.0074 U	0.0077 U
Aroclor 1262	mg/kg	NA	NA	NA	0.0066 U	0.0068 U
<b>VOCs - TCLP</b>						
Benzene	mg/l	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
2-Butanone (MEK)	mg/l	0.0081 U	0.0081 U	0.0081 U	0.0081 U	0.0081 U
Carbon tetrachloride	mg/l	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Chlorobenzene	mg/l	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Chloroform	mg/l	0.0012 U	0.0012 U	0.0194	0.0012 U	0.0012 U
1,4-Dichlorobenzene	mg/l	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U
1,2-Dichloroethane	mg/l	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0047 J
1,1-Dichloroethene	mg/l	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/l	0.0013 U	0.0036 J	0.0013 U	0.0013 U	0.0013 U
Trichloroethene	mg/l	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Vinyl chloride	mg/l	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
<b>SVOCs (ABN) - TCLP</b>						
2-Methylphenol	mg/l	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U
3&4-Methylphenol	mg/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol	mg/l	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
2,4,5-Trichlorophenol	mg/l	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
2,4,6-Trichlorophenol	mg/l	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
1,4-Dichlorobenzene	mg/l	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
2,4-Dinitrotoluene	mg/l	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
Hexachlorobenzene	mg/l	0.0037 U	0.0037 U	0.0037 U	0.0037 U	0.0037 U
Hexachlorobutadiene	mg/l	0.0037 U	0.0037 U	0.0037 U	0.0037 U	0.0037 U
Hexachloroethane	mg/l	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
Nitrobenzene	mg/l	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Pyridine	mg/l	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U
<b>Pesticide - TCLP</b>						
gamma-BHC (Lindane)	mg/l	0.000011 U	0.000011 U	0.000011 U	0.000011 U	0.000011 U
Chlordane	mg/l	0.00079 U	0.00079 U	0.00079 U	0.00079 U	0.00079 U
Endrin	mg/l	0.000031 U	0.000031 U	0.000031 U	0.000031 U	0.000031 U
Heptachlor	mg/l	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
Heptachlor epoxide	mg/l	0.000016 U	0.000016 U	0.000016 U	0.000016 U	0.000016 U
Methoxychlor	mg/l	0.000068 U	0.000068 U	0.000068 U	0.000068 U	0.000068 U
Toxaphene	mg/l	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U
<b>Herbicides - TCLP</b>						
2,4-D	mg/l	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
2,4,5-TP (Silvex)	mg/l	0.00018 U	0.00018 U	0.00018 U	0.00018 U	0.00018 U
<b>Metals - TCLP</b>						
Arsenic	mg/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Barium	mg/l	1 U	1 U	1 U	1 U	1 U
Cadmium	mg/l	0.005 U	0.005 U	0.005 U	0.0053	0.005 U
Chromium	mg/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Lead	mg/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Mercury	mg/l	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Selenium	mg/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Silver	mg/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

**TABLE 6**  
**Excavated Soil Volumes**  
**PROVAN FORD SITE, SAC No. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Excavation Area	Soil Volume by Final Disposition						
	Reuse			Disposal			Total
	Measured by Stantec	Measured by FE *	total	Measured by Stantec	Adjustment based on FE Measurements*	total	
	(cuyds)	(cuyds)	(cuyds)	(cuyds)	(cuyds)	(cuyds)	(cuyds)
Wash Rack	348	133	481	3,324	-133	3,191	3,672
Petroleum Tank	87	50	137	2,638	-50	2,588	2,725
Waste Oil Tank	220	119	339	616	-119	497	836
Total	655	302	957	6,578	-302	6,276	7,233

\* Some reuse volumes were measured by First environment in the field due to time constraints. These volumes were typically within an area of soil that Stantec would later measure as a volume of soil excavated and disposed of. As such the First Environment calculated volumes needed to be added to the reuse total and subtracted from the Stantec measured disposal volume

**TABLE 7**  
**Reuse Soil Sample VOC Results**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Sample Soil Source Area Lab Sample Number Depth Conc. Date	Protection of Ground Water (mg/kg)	RU-WRV-1		RU-WRV-2		RU-WRV-3		RU-PTV-1		RU-WOTV-1		RU-WOTV-2	
		Washrack		Washrack		Washrack		Petroleum Tank		Wast Oil Tank		Wast Oil Tank	
		B4222-01		B4275-15		B4450-02		B4601-02		B4450-01		C1051-02	
		NA		NA		NA		NA		NA		NA	
		mg/lkg		mg/lkg		mg/lkg		mg/lkg		mg/lkg		mg/lkg	
		11/10/2010		11/23/2010		12/7/2010		12/16/2010		12/7/2010		1/5/2011	
1,1,1-Trichloroethane	0.68	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
1,1-Dichloroethane	0.27	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
1,1-Dichloroethene	0.33	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
1,2-Dichlorobenzene	1.1	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
1,2-Dichloroethane	0.02	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
1,3-Dichlorobenzene	2.4	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
1,4-Dichlorobenzene	1.8	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
2-Butanone	0.12	0.027	U	0.027	U	0.03	U	0.028	U	0.027	U	0.029	U
Acetone	0.05	0.027	U	0.027	U	0.03	U	0.028	U	0.027	U	0.029	U
Benzene	0.06	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Carbon Tetrachloride	0.76	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Chlorobenzene	1.1	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Chloroform	0.37	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
cis-1,2-Dichloroethene	0.25	0.013		0.013		0.031		0.0057	U	0.0055	U	0.0058	U
Ethyl Benzene	1	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
m/p-Xylenes	NS	0.011	U	0.011	U	0.012	U	0.011	U	0.011	U	0.012	U
Methyl tert-butyl Ether	0.93	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Methylene Chloride	0.05	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
o-Xylene	NS	0.002	J	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Tetrachloroethene	1.3	0.03		0.0055	U	0.0022	J	0.0057	U	0.0055	U	0.0028	J
Toluene	0.7	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
trans-1,2-Dichloroethene	0.19	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Trichloroethene	0.47	0.0055	U	0.0055	U	0.0059	J	0.0057	U	0.0055	U	0.011	
Vinyl Chloride	0.02	0.0055	U	0.0055	U	0.006	U	0.0057	U	0.0055	U	0.0058	U
Total Xylenes	1.6	0.002	J	0.011	U	0.012	U	0.011	U	0.011	U	0.012	U
Total Concentration *	10	0.045		0.013		0.0391		0		0		0.0138	
Total TICs *	NS	1.57				0.11		0.07		0.04			

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of POGS.**

**0.0055 = Detected concentration is in excess of Protection of Groundwater Standards (POGS).**

Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

**TABLE 8**  
**Reuse Soil Sample SVOC Results**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Sample Soil Source Area Lab Sample Number Depth Date	Protection of Ground Water (mg/kg)	Unrestricted Use (mg/kg)	RU-WRSV-1		RU-WRSV-1RE**		RU-PTSV-1		RU-WOTSV-1		RU-WOTSV-1RE**	
			Washrack		Washrack		Petroleum Tank		Wast Oil Tank		Wast Oil Tank	
			B4450-03		B4450-03RE		B4601-03		B4450-05		B4450-05RE	
			NA		NA		NA		NA		NA	
			mg/lkg		mg/lkg		mg/lkg		mg/lkg		mg/lkg	
			12/7/2010		12/7/2010		12/16/2010		12/8/2010		12/8/2010	
Acenaphthene	98	20	0.39	U	0.39	U	0.11	J	3.7	U	0.49	J
Acenaphthylene	107	100	0.39	U	0.39	U	0.2	J	2.6	J	3	J
Anthracene	1,000	100	0.39	U	0.39	U	0.38		2.4	J	2.6	J
Benzo(a)anthracene	1	1	0.39	U	0.39	U	<b>1.3</b>		<b>9</b>		<b>9.8</b>	
Benzo(a)pyrene	22	1	0.39	U	0.39	U	<b>1.4</b>		<b>8</b>		<b>9</b>	
Benzo(b)fluoranthene	1.7	1	0.39	U	0.39	U	<b>1.7</b>		<b>9.6</b>		<b>11</b>	
Benzo(g,h,i)perylene	1,000	100	0.39	U	0.39	U	1		5.3		5.7	
Benzo(k)fluoranthene	1.7	0.80	0.39	U	0.39	U	0.59		<b>3.7</b>		<b>3.8</b>	
Chrysene	1	1	0.39	U	0.39	U	<b>1.3</b>		<b>8.5</b>		<b>9.8</b>	
Dibenz(a,h)anthracene	1,000	0.33	0.39	U	0.39	U	0.24	J	<b>1.1</b>	J	<b>1.2</b>	J
Fluoranthene	1,000	100	0.39	U	0.39	U	2.7		17		19	
Fluorene	386	30	0.39	U	0.39	U	0.17	J	1.1	J	1.3	J
Indeno(1,2,3-cd)pyrene	8.2	0.50	0.39	U	0.39	U	<b>0.87</b>		<b>4.8</b>		<b>5.3</b>	
Naphthalene	12	12	0.39	U	0.39	U	0.057	J	3.7	U	3.7	U
Phenanthrene	1,000	100	0.39	U	0.39	U	1.2		9.1		10	
Pyrene	1,000	100	0.39	U	0.39	U	2		16		18	
<b>Total Concentration *</b>	500	-	0.294		0.279		16.082		98.2		109.99	
<b>Total TICs *</b>	NS	-	1.2				6.21		32.8			

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected concentration is in excess of Unrestricted Use Standard only**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\* Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close, initial results may be used.

TABLE 9  
Petroleum Tank Area VOC  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number Field Measured Sample Depth (ft) Conc. Date	Protection of Ground Water (mg/kg)	PT-S-1	PT-S-2	PT-S-2	PT-S-3	PT-S-4	PT-S-4DL	PT-S-5	PT-S-6	PT-S-7	PT-S-8
		B4450-12	B4450-13	B4450-04	B4450-09	B4450-10	B4450-10DL	B4450-15	B4450-17	B4450-20	B4450-21
		14.5-15	8.5-9	10-10.5	14.5-15	14.5-15	14.5-15	14.5-15	12-12.5	13-13.5	13-13.5
		mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg
		12/10/2010	12/10/2010	12/8/2010	12/9/2010	12/9/2010	12/9/2010	12/10/2010	12/15/2010	12/15/2010	12/15/2010
1,1,1-Trichloroethane	0.68	0.0064 U	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
1,1-Dichloroethane	0.27	0.0064 U	<b>0.67</b> U	0.0066 U	0.0053 U	0.11	2.6 U	0.0064 U	0.0065 U	0.58 U	<b>0.65</b> U
1,1-Dichloroethene	0.33	0.0064 U	<b>0.67</b> U	0.0066 U	0.0053 U	0.11	2.6 U	0.0064 U	0.0065 U	0.58 U	<b>0.65</b> U
1,2-Dichlorobenzene	1.1	0.0064 U	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
1,2-Dichloroethane	0.02	0.0064 U	<b>0.67</b> U	0.0066 U	0.0012 J	<b>4.2</b> E	<b>8.3</b> D	0.0064 U	0.0065 U	0.58 U	<b>0.65</b> U
1,3-Dichlorobenzene	2.4	0.0064 U	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
1,4-Dichlorobenzene	1.8	0.0064 U	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
2-Butanone	0.12	0.009 J	<b>3.4</b> U	0.0089 J	0.027 U	0.032 U	13 U	0.032 U	0.032 U	<b>2.9</b> U	<b>3.3</b> U
Acetone	0.05	0.041	<b>3.4</b> U	<b>0.17</b>	0.027 U	0.017 J	13 U	0.018 J	0.01 J	<b>2.9</b> U	<b>3.3</b> U
Benzene	0.06	0.046	<b>1.3</b>	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0032 J	0.0065 U	<b>0.58</b> U	<b>0.65</b> U
Carbon Tetrachloride	0.76	0.0064 U	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
Chlorobenzene	1.1	0.0064 U	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
Chloroform	0.37	0.0064 U	<b>0.67</b> U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	<b>0.58</b> U	<b>0.65</b> U
cis-1,2-Dichloroethene	0.25	0.0064 U	<b>0.36</b> J	0.0066 U	0.0089	<b>4.7</b> E	<b>4.8</b> D	0.0015 J	0.0065 U	<b>0.58</b> U	<b>0.65</b> U
Ethyl Benzene	1	0.051	<b>1.1</b>	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.73	<b>2.9</b>
Methyl tert-butyl Ether	0.93	0.023	0.28 J	0.04	0.0053 U	0.0091	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
Methylene Chloride	0.05	0.0032 J	<b>0.67</b> U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0022 J	0.0065 U	0.58 U	<b>0.65</b> U
Tetrachloroethene	1.3	0.01	0.67 U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	0.65 U
Toluene	0.7	0.093	0.64 J	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	0.58 U	<b>0.65</b> U
trans-1,2-Dichloroethene	0.19	0.0064 U	<b>0.67</b> U	0.0066 U	0.0053 U	0.0065 U	2.6 U	0.0064 U	0.0065 U	<b>0.58</b> U	<b>0.65</b> U
Trichloroethene	0.47	0.012	<b>0.67</b> U	0.0066 U	0.0053 U	<b>0.54</b> E	<b>0.91</b> JD	0.0064 U	0.0065 U	<b>0.58</b> U	<b>0.65</b> U
Vinyl Chloride	0.02	0.0064 U	<b>0.67</b> U	0.0066 U	0.0053 U	0.018	2.6 U	0.0064 U	0.0065 U	<b>0.58</b> U	<b>0.65</b> U
Total Xylenes	1.6	0.188	<b>2.4</b>	0.013 U	0.011 U	0.013 U	5.2 U	0.013 U	0.013 U	<b>0.75</b> J	<b>2.6</b>
Total Concentration *	10	0.48	<b>13.11</b>	0.22	0.01	9.72	<b>14.01</b>	0.02	0.01	<b>21.96</b>	7.53
Total TICs *	NS	2.83	153.41	9.61	-	0.19	-	-	-	81.28	62.27

Data qualifiers as listed below

- U = Not detected at reported minimum detection limit.
- J = Estimated value. Result was less than the specified detection limit.
- B = Analyte was found in the blank as well as the sample.
- E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
- D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

Indicates the appropriate value to use when one or more dilution analysis was performed

NYSDEC Site Specific Guidance

TABLE 9  
 Petroleum Tank Area VOC  
 PROVAN FORD SITE, SAC NO. C303491  
 ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number Field Measured Sample Depth (ft) Conc. Date	Protection of Ground Water (mg/kg)	PT-S-9	PT-S-10	PT-B-1	PT-B-1DL	PT-B-2	PT-B-3	PT-B-4	PT-B-5	DUP(PT-B-2)
		B4601-4	B4601-5	B4450-11	B4450-11DL	B4450-06	B4450-14	B4450-16	B4601-01	B4450-07
		11-11.5	11.5-12	14.5-15	14-14.5	15-15.5	14.5-15	15-15.5	15-15.5	15-15.5
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		12/17/2010	12/17/2010	12/10/2010	12/10/2010	12/9/2010	12/10/2010	12/15/2010	12/16/2010	12/9/2010
1,1,1-Trichloroethane	0.68	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
1,1-Dichloroethane	0.27	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
1,1-Dichloroethene	0.33	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
1,2-Dichlorobenzene	1.1	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
1,2-Dichloroethane	0.02	0.59 U	0.57 U	0.0064	2.4 U	0.0045 J	0.0057 U	0.0027 J	0.0064 U	0.0022 J
1,3-Dichlorobenzene	2.4	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
1,4-Dichlorobenzene	1.8	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
2-Butanone	0.12	3 U	2.9 U	0.03 U	12 U	0.028 U	0.029 U	0.035 U	0.032 U	0.028 U
Acetone	0.05	3 U	2.9 U	0.47	12 U	0.0067 J	0.029 U	0.035 U	0.032 U	0.0076 J
Benzene	0.06	0.59 U	0.57 U	2 E	2.1 JD	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Carbon Tetrachloride	0.76	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Chlorobenzene	1.1	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Chloroform	0.37	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
cis-1,2-Dichloroethene	0.25	0.59 U	0.57 U	0.006 U	2.4 U	0.017	0.0011 J	0.0097	0.0064 U	0.0043 J
Ethyl Benzene	1	4.7	1.9	0.006 U	2.4 U	0.0056 U	0.001 J	0.007 U	0.0064 U	0.0055 U
Methyl tert-butyl Ether	0.93	0.59 U	0.57 U	1.5 E	1.1 JD	0.0056 U	0.0057 U	0.007 U	0.0015 J	0.0055 U
Methylene Chloride	0.05	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Tetrachloroethene	1.3	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Toluene	0.7	0.59 U	0.57 U	3.6 E	11 D	0.0056 U	0.0012 J	0.007 U	0.0064 U	0.0055 U
trans-1,2-Dichloroethene	0.19	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Trichloroethene	0.47	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Vinyl Chloride	0.02	0.59 U	0.57 U	0.006 U	2.4 U	0.0056 U	0.0057 U	0.007 U	0.0064 U	0.0055 U
Total Xylenes	1.6	15.07	0.46 J	0.012 U	4.9 U	0.011 U	0.00393 J	0.014 U	0.013 U	0.011 U
Total Concentration *	10	22.86	15.16	7.61	14.20	0.03	0.01	0.01	0.00	0.01
Total TICs *	NS	128.51	111.59	30.13	-	-	0.11	-	0.11	-

Data qualifiers as listed below

- U = Not detected at reported minimum detection limit.
- J = Estimated value. Result was less than the specified detection limit.
- B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

☐ Indicates the appropriate value to use when one or more dilution analysis was performed

NYSDEC Site Specific Guidance

TABLE 10  
Work Rack Area VOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number Field Measured Sample Depth Conc. Date	Protection of Ground Water (mg/kg)	WR-S-1		WR-S-1DL		WR-S-5		WR-S-6		WR-S-6DL		WR-S-6RE		WR-S-6REDL		WR-S-7		WR-S-7**		WR-S-8	
		B4222-02		B4222-02DL		B4275-01		B4275-03		B4275-03DL		B4372-03		B4372-03DL		B4275-04		B4275-04RE		B4275-05	
		11.5-12		11.5-12		16.5-17		16-16.5		16-16.5		16-16.5		16-16.5		16.5-17		16.5-17		16-16.5	
		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date		11/9/2010		11/9/2010		11/16/2010		11/17/2010		11/17/2010		11/30/2010		11/30/2010		11/18/2010		11/18/2010		11/18/2010	
1,1,1-Trichloroethane	0.68	0.0054	U	0.53	U	0.0057	U	0.48	E	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
1,1-Dichloroethane	0.27	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
1,1-Dichloroethene	0.33	0.0054	U	0.53	U	0.0057	U	0.17		5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
1,2-Dichlorobenzene	1.1	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
1,2-Dichloroethane	0.02	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
1,3-Dichlorobenzene	2.4	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
1,4-Dichlorobenzene	1.8	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
2-Butanone	0.12	0.027	U	2.7	U	0.028	U	0.029	U	29	U	2.8	U	28	U	0.029	U	0.029	U	0.027	U
Acetone	0.05	0.027	U	2.7	U	0.028	U	0.029	U	29	U	2.8	U	28	U	0.029	U	0.029	U	0.027	U
Benzene	0.06	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Carbon Tetrachloride	0.76	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Chlorobenzene	1.1	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Chloroform	0.37	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
cis-1,2-Dichloroethene	0.25	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.096	J	5.6	U	0.0058	U	0.0057	U	0.0055	U
Ethyl Benzene	1	0.047		0.53	U	0.0057	U	3	E	10	D	16	E	17	D	0.0058	U	0.0057	U	0.0055	U
Methyl tert-butyl Ether	0.93	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Methylene Chloride	0.05	0.0054	U	0.53	U	0.0023	J	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0026	J	0.0055	U
Tetrachloroethene	1.3	0.0054	U	0.53	U	0.0057	U	0.014		5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Toluene	0.7	0.0016	J	0.53	U	0.0057	U	1	E	1.5	JD	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
trans-1,2-Dichloroethene	0.19	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Trichloroethene	0.47	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Vinyl Chloride	0.02	0.0054	U	0.53	U	0.0057	U	0.0058	U	5.8	U	0.56	U	5.6	U	0.0058	U	0.0057	U	0.0055	U
Total Xylenes	1.6	0.0229		1.1	U	0.011	U	8.2	E	20.9	JD	7.17		7.9	JD	0.012	U	0.011	U	0.011	U
Total Concentration *	10	0.9015		1.31		0.0023		18.474		55.3		82.766		99		0.0043		0.0071		0	
Total TICs *	NS	5.95		-		1.41		44.19		-		281.83		-		1.63		-		0.76	

Data qualifiers as listed below  
 U = Not detected at reported minimum detection limit.  
 J = Estimated value. Result was less than the specified detection limit.  
 B = Analyte was found in the blank as well as the sample.  
 E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.  
 D = Result has been obtained from the analysis of a secondary dilution of the sample.  
**Bold = Non-detect concentration is in excess of the POGS.**  
**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**  
**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**  
 Indicates the appropriate value to use when one or more dilution analysis was performed  
 \*NYSDEC Site Specific Guidance  
 \*\*Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close initial results may be used.

**TABLE 10**  
**Work Rack Area VOC Results**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

Sample Lab Sample Number Field Measured Sample Depth Conc. Date	Protection of Ground Water (mg/kg)	WR-S-9	WR-S-9DL	WR-S-10	WR-S-10DL	WR-S-11	WR-S-11DL	WR-S-12BETA	WR-S-12BETADL	WR-S-13	WR-S-13DL
		B4275-06	B4275-06DL	B4275-09	B4275-09DL	B4275-10	B4275-10DL	B4275-12	B4275-12DL	B4372-02	B4372-02DL
		16.5-17	16.5-17	14.5-15	14.5-15	14.5-15	14.5-15	12.5-13	12.5-13	14-14.5	14-14.5
		mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg
		11/18/2010	11/18/2010	11/22/2010	11/22/2010	11/22/2010	11/22/2010	11/23/2010	11/23/2010	11/30/2010	11/30/2010
1,1,1-Trichloroethane	0.68	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
1,1-Dichloroethane	0.27	0.04	5.6 U	0.65 U	5.2 U	0.083	0.59 U	0.11 J	5.1 U	0.088	0.66 U
1,1-Dichloroethene	0.33	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
1,2-Dichlorobenzene	1.1	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
1,2-Dichloroethane	0.02	0.0055 U	5.6 U	<b>27 E</b>	<b>18 D</b>	<b>2.7 E</b>	<b>8.2 D</b>	<b>0.68</b>	5.1 U	<b>1.3 E</b>	<b>11 D</b>
1,3-Dichlorobenzene	2.4	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
1,4-Dichlorobenzene	1.8	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
2-Butanone	0.12	0.028 U	28 U	3.2 U	26 U	0.33	3 U	3.2 U	26 U	0.033 U	3.3 U
Acetone	0.05	0.028 U	28 U	3.2 U	26 U	0.097	3 U	3.2 U	26 U	0.012 J	3.3 U
Benzene	0.06	0.11	5.6 U	0.17 J	5.2 U	0.0021 J	0.59 U	0.64 U	5.1 U	0.0039 J	0.66 U
Carbon Tetrachloride	0.76	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
Chlorobenzene	1.1	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
Chloroform	0.37	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
cis-1,2-Dichloroethene	0.25	0.0055 U	5.6 U	<b>73 E</b>	<b>58 D</b>	<b>6.3 E</b>	<b>8.1 D</b>	<b>22 E</b>	<b>57 D</b>	<b>2.5 E</b>	<b>12 D</b>
Ethyl Benzene	1	1.1 E	0.89 JD	0.65 U	5.2 U	0.0014 J	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
Methyl tert-butyl Ether	0.93	0.0055 U	5.6 U	0.65 U	5.2 U	0.0075	0.59 U	0.64 U	5.1 U	0.037	0.66 U
Methylene Chloride	0.05	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
Tetrachloroethene	1.3	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
Toluene	0.7	0.045	5.6 U	0.65 U	5.2 U	0.0081	0.59 U	0.07 J	5.1 U	0.0067 U	0.66 U
trans-1,2-Dichloroethene	0.19	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.64 U	5.1 U	0.0067 U	0.66 U
Trichloroethene	0.47	0.0055 U	5.6 U	0.65 U	5.2 U	0.006 U	0.59 U	0.072 J	5.1 U	0.0067 U	0.66 U
Vinyl Chloride	0.02	0.0055 U	5.6 U	0.65 U	5.2 U	0.028	0.59 U	0.1 J	5.1 U	0.20 E	3.9 D
Total Xylenes	1.6	1.54 E	1.2 JD	1.3 U	10 U	0.0059 J	1.2 U	0.37 J	10 U	0.013 U	1.3 U
Total Concentration *	10	5.845	6.51	101.87	76	9.7113	17.8	25.302	57	5.9409	26.9
Total TICs *	NS	19.34	-			0.41		0.85		0.108	

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

☐ Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\*Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close initial results may be used.



TABLE 10  
Work Rack Area VOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number	Protection of Ground Water (mg/kg)	WR-S-14	WR-S-14	WR-S-15	WR-B-1	WR-B-2	WR-B-2DL	WR-B-3	WR-B-3DL	WR-B-4	WR-B-4DL
		B4372-05	B4450-08	B4372-07	B5275-02	B4275-07	B4275-07DL	B4275-08	B4275-08DL	B4275-11	B4275-11DL
Field Measured Sample Depth		10-10.5	10.5-11.0	10.5-11	18-18.5	17-17.5	17-17.5	14.5-15	14.5-15	14.5-15	14.5-15
Conc.		mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg
Date		12/2/2010	12/2/2010	12/3/2010	11/16/2010	11/18/2010	11/18/2010	11/22/2010	11/22/2010	11/22/2010	11/22/2010
1,1,1-Trichloroethane	0.68	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
1,1-Dichloroethane	0.27	0.033 U	0.57 U	0.002 J	0.0056 U	0.0056 U	5.6 U	0.058	0.57 U	0.12 J	4.7 U
1,1-Dichloroethene	0.33	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0036 J	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
1,2-Dichlorobenzene	1.1	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
1,2-Dichloroethane	0.02	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.27 E	0.21 JD	6.8	14 D
1,3-Dichlorobenzene	2.4	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
1,4-Dichlorobenzene	1.8	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
2-Butanone	0.12	0.16 U	2.9 U	0.03 U	0.028 U	0.028 U	28 U	0.26	2.9 U	3 U	24 U
Acetone	0.05	0.16 U	2.9 U	0.015 J	0.028 U	0.028 U	28 U	0.17	2.9 U	3 U	24 U
Benzene	0.06	0.033 U	0.57 U	0.0024 J	0.0056 U	0.0056 U	5.6 U	0.041	0.57 U	0.59 U	4.7 U
Carbon Tetrachloride	0.76	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Chlorobenzene	1.1	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Chloroform	0.37	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
cis-1,2-Dichloroethene	0.25	0.011 J	0.57 U	0.012	0.0056 U	0.02	5.6 U	9.4 E	8.7 D	25 E	54 D
Ethyl Benzene	1	0.21	0.4 J	0.026	0.0028 J	0.25 E	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Methyl tert-butyl Ether	0.93	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0096	0.57 U	0.59 U	4.7 U
Methylene Chloride	0.05	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Tetrachloroethene	1.3	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Toluene	0.7	0.036	0.57 U	0.0016 J	0.0056 U	0.026	5.6 U	0.0049 J	0.57 U	0.59 U	4.7 U
trans-1,2-Dichloroethene	0.19	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Trichloroethene	0.47	0.033 U	0.57 U	0.003 J	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Vinyl Chloride	0.02	0.033 U	0.57 U	0.0061 U	0.0056 U	0.0056 U	5.6 U	0.0064 U	0.57 U	0.59 U	4.7 U
Total Xylenes	1.6	0.79	1.03 J	0.048	0.0043 J	0.82 E	1.51 JD	0.0022 J	1.1 U	0.27 J	2.9 JD
Total Concentration *	10	1.387	2.4	0.1976	0.0294	2.7896	5.31	10.571	10.21	34.09	80.9
Total TICs *	NS	19.26	41.4	3.4692	0.68	13.4		0.14		1.12	

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

☐ Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\*Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close initial results may be used.

TABLE 10  
Work Rack Area VOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number	Protection of Ground Water (mg/kg)	WR-B-5	WR-B-6	WR-B-6DL	WR-B-7	WR-B-7DL
		B4372-01	B4372-04	B4372-04DL	B4372-06	B4372-06DL
Field Measured Sample Depth		14.5-15	14-14.5	14-14.5	14-14.5	14-14.5
Conc.		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date		11/30/2010	12/2/2010	12/2/2010	12/3/2010	12/3/2010
1,1,1-Trichloroethane	0.68	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
1,1-Dichloroethane	0.27	0.0062 U	0.091	3.2 U	0.034	0.62 U
1,1-Dichloroethene	0.33	0.0062 U	0.041	3.2 U	0.011	0.62 U
1,2-Dichlorobenzene	1.1	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
1,2-Dichloroethane	0.02	<b>0.037</b>	<b>0.78 E</b>	<b>1.5 JD</b>	<b>0.22</b>	<b>0.33 JD</b>
1,3-Dichlorobenzene	2.4	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
1,4-Dichlorobenzene	1.8	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
2-Butanone	0.12	0.031 U	0.032 U	16 U	0.031 U	3.1 U
Acetone	0.05	0.031 U	0.0082 J	16 U	0.01 J	3.1 U
Benzene	0.06	0.0062 U	<b>0.31 E</b>	<b>0.78 JD</b>	0.02	0.62 U
Carbon Tetrachloride	0.76	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
Chlorobenzene	1.1	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
Chloroform	0.37	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
cis-1,2-Dichloroethene	0.25	0.036	<b>8.8 E</b>	<b>33 D</b>	<b>5.6 E</b>	<b>7.1 D</b>
Ethyl Benzene	1	0.0062 U	0.001 J	3.2 U	0.0061 U	0.62 U
Methyl tert-butyl Ether	0.93	0.0042 J	0.0073	3.2 U	0.003 J	0.62 U
Methylene Chloride	0.05	0.0062	0.004 J	3.2 U	0.0061 U	0.62 U
Tetrachloroethene	1.3	0.0062 U	0.0065 U	3.2 U	0.0061 U	0.62 U
Toluene	0.7	0.0062 U	0.0037 J	3.2 U	0.0066	0.62 U
trans-1,2-Dichloroethene	0.19	0.0062 U	0.025	3.2 U	0.0055 J	0.62 U
Trichloroethene	0.47	0.0062 U	<b>1.9 E</b>	<b>6.1 D</b>	<b>1.5 E</b>	<b>3.6 D</b>
Vinyl Chloride	0.02	0.0062 U	<b>0.17</b>	3.2 U	<b>0.035</b>	0.62 U
Total Xylenes	1.6	0.012 U	0.007 J	6.5 U	0.0055 J	1.2 U
Total Concentration *	10	0.0954	<b>12.16</b>	<b>41.38</b>	7.4562	<b>11.03</b>
Total TICs *	NS	0.2	0.008		0.0012	

Data qualifiers as listed below

0.017

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

☐ Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\*Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close initial results may be used.

TABLE 11  
Wash Rack Area SVOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number	Protection of Ground Water (mg/kg)	Unrestricted Use (mg/kg)	WR-S-1		WR-S-1		WR-S-1		WR-S-5		WR-S-9		WR-S-9DL		WR-S-9DL2		WR-B-1	
			B4222-02	B4222-02DL	B4222-02DL2	B4275-01	B4275-06	B4275-06DL	B4275-06-DL2	B4275-02								
Field Measured Sample Depth (ft)			11.5-12	11.5-12	11.5-12	16.5-17	16.5-17	16.5-17	16.5-17	16.5-17	16.5-17	16.5-17	16.5-17	18-18.5				
Conc.			mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg	mg/lkg
Date			11/9/2010	11/9/2010	11/9/2010	11/16/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/16/2010				
Acenaphthene	98	20	0.27 J	0.33 JD	14 UD	0.37 U	0.89		1.7 JD	1.7 JD	0.37 U							
Acenaphthylene	107	100	0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Acetophenone	NS		0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Anthracene	1,000	100	0.2 J	0.1 JD	14 UD	0.37 U	0.61		1.2 JD	1.3 JD	0.37 U							
Atrazine	NS		0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Benzaldehyde	NS		0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Benzo(a)anthracene	1	1	0.35 U	0.71 UD	14 UD	0.37 U	0.1 J		1.8 UD	9.2 UD	0.37 U							
Benzo(a)pyrene	22	1	0.35 U	0.71 UD	14 UD	0.37 U	0.058 J		1.8 UD	9.2 UD	0.37 U							
Benzo(b)fluoranthene	1.7	1	0.35 U	0.71 UD	14 UD	0.37 U	0.082 J		1.8 UD	9.2 UD	0.37 U							
Benzo(g,h,i)perylene	1,000	100	0.35 U	0.71 UD	14 UD	0.37 U	0.047 J		1.8 UD	9.2 UD	0.37 U							
Benzo(k)fluoranthene	1.7	0.8	0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Chrysene	1	1	0.35 U	0.71 UD	14 UD	0.37 U	0.14 J		1.8 UD	9.2 UD	0.37 U							
Dibenz(a,h)anthracene	1,000	0.33	0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Fluoranthene	1,000	100	0.1 J	0.093 JD	14 UD	0.37 U	0.45		0.57 JD	9.2 UD	0.37 U							
Fluorene	386	30	0.55	0.56 JD	14 UD	0.37 U	2.2		3.7 D	4 JD	0.37 U							
Indeno(1,2,3-cd)pyrene	8.2	0.5	0.35 U	0.71 UD	14 UD	0.37 U	0.37 U		1.8 UD	9.2 UD	0.37 U							
Naphthalene	12	12	0.35 U	0.71 UD	14 UD	0.37 U	2.8		1.9 D	1.8 JD	0.37 U							
Phenanthrene	1,000	100	1.5	1.4 D	14 UD	0.37 U	7.8 E		8.9 D	9.1 JD	0.37 U							
Pyrene	1,000	100	0.15 J	0.14 JD	14 UD	0.37 U	1.2		0.86 JD	9.2 UD	0.37 U							
<b>Total Concentration.</b>	500	-	54.77	53.423	49.4	0.86	43.277		54.35	52.4	0.3							
<b>Total TICs</b>	NS	-	25.68			5.54	15.76				0.78							

Data qualifiers as listed below

- U = Not detected at reported minimum detection limit.
- J = Estimated value. Result was less than the specified detection limit.
- B = Analyte was found in the blank as well as the sample.
- E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
- D = Result has been obtained from the analysis of a secondary

**Bold = Non-detect concentration is in excess of POGS.**

**Bold = Detected concentration is in excess of Protection of Groundwater Standards (POGS).**

☐ Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\*Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close initial results may be used.

TABLE 12  
Waste Oil Tank Area VOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number Field Measured Sample Depth (ft) Conc. Date	Protection of Ground Water (mg/kg)	WOT-S-1		WOT-S-1		WOT-S-1DL		WOT-S-2		WOT-S-3		WOT-S-3DL		WOT-S-3		WOT-S-4		WOT-S-4		WOT-S-4DL	
		B4601-08		B4601-07		B4601-07DL		B4601-09		B4601-11		B4601-11DL		B4601-10		B4601-15		B4601-14		B4601-14DL	
		10-10.5		14.5-15		14.5-15		15-15.5		10-10.5		10-10.5		14-14.5		11-11.5		13.5-14		13.5-14	
		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010		12/22/2010	
1,1,1-Trichloroethane	0.68	0.0062	U	0.0062	J	0.63	U	0.0064	U	<b>5.8</b>		31	U	0.0061	U	0.0064	U	0.087		0.61	U
1,1-Dichloroethane	0.27	0.0062	U	0.0027	J	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.0049	J	0.61	U
1,1-Dichloroethene	0.33	0.0062	U	0.0023	J	0.63	U	0.0064	U	<b>0.2</b>	J	31	U	0.0061	U	0.0064	U	0.0064		0.61	U
1,2-Dichlorobenzene	1.1	0.0062	U	0.0063	U	0.63	U	0.0064	U	0.097	J	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
1,2-Dichloroethane	0.02	0.0062	U	0.0063	U	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
1,3-Dichlorobenzene	2.4	0.0062	U	0.0063	U	0.63	U	0.0064	U	0.62	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
1,4-Dichlorobenzene	1.8	0.0062	U	0.0063	U	0.63	U	0.0064	U	0.62	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
2-Butanone	0.12	0.031	U	0.031	U	3.1	U	0.032	U	<b>3.1</b>	U	160	U	0.031	U	0.032	U	0.031	U	3.1	U
Acetone	0.05	0.031	U	0.031	U	3.1	U	0.032	U	<b>3.1</b>	U	160	U	0.031	U	0.032	U	0.031	U	3.1	U
Benzene	0.06	0.0062	U	0.0063	U	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.001	J	0.61	U
Carbon Tetrachloride	0.76	0.0062	U	0.0063	U	0.63	U	0.0064	U	0.62	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
Chlorobenzene	1.1	0.0062	U	0.0063	U	0.63	U	0.0064	U	0.62	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
Chloroform	0.37	0.0062	U	0.0063	U	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
cis-1,2-Dichloroethene	0.25	0.0062	U	<b>0.48</b>	E	<b>0.67</b>	D	0.0064	U	<b>2.3</b>		31	U	0.0061	U	0.0064	U	<b>1.7</b>	E	<b>2</b>	D
Ethyl Benzene	1	0.0062	U	0.0047	J	0.63	U	0.0064	U	<b>3.7</b>		31	U	0.0061	U	0.0064	U	0.0013	J	0.61	U
Methyl tert-butyl Ether	0.93	0.0062	U	0.0063	U	0.63	U	0.0064	U	0.62	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
Methylene Chloride	0.05	0.0062	U	0.0063	U	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
Tetrachloroethene	1.3	0.0062	U	0.0063	U	0.63	U	0.0064	U	<b>130</b>	E	<b>170</b>	D	0.0061	U	0.0064	U	0.0054	J	0.61	U
Toluene	0.7	0.0062	U	0.0028	J	0.63	U	0.0064	U	<b>4.8</b>		31	U	0.0061	U	0.0064	U	0.0085		0.61	U
trans-1,2-Dichloroethene	0.19	0.0062	U	0.0063	U	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
Trichloroethene	0.47	0.0043	J	0.0016	J	0.63	U	0.0064	U	<b>70</b>	E	<b>74</b>	D	0.0019	J	0.0064	U	<b>0.9</b>	E	<b>1.3</b>	D
Vinyl Chloride	0.02	0.0062	U	0.0038	J	0.63	U	0.0064	U	<b>0.62</b>	U	31	U	0.0061	U	0.0064	U	0.0061	U	0.61	U
Total Xylenes	1.6	0.012	U	<b>0.0081</b>	J	1.3	U	0.013	U	<b>21.3</b>		<b>15</b>	JD	0.012	U	0.013	U	<b>0.0024</b>	J	1.2	U
Total Concentration*	10	0.0043		0.5208		0.67		0		<b>240.17</b>		<b>259</b>		0.0019		0		2.7375		3.3	
Total TICs *	NS			0.01						86.77						0.07		0.02			

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\* Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close, initial results may be used.

TABLE 12  
Waste Oil Tank Area VOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number	Protection of Ground Water (mg/kg)	WOT-S-5	WOT-S-6	WOT-S-7	WOT-S-8	WOT-S-9	WOT-S-9RE**	WOT-B-1	WOT-B-2	WOT-B-3	WOT-B-3DL
		B4601-16	B4601-13	B4601-17	C1051-05	C1051-09	C1051-09RE	B4601-06	B4601-12	C1051-01	C1051-01
Field Measured Sample Depth (ft)		12-12.5	5-5.5	15.5-16	12-12.5	9.5-10	9.5-10	15-15.5	15-15.5	12-12.5	12-12.5
Conc.		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date		12/22/2010	12/22/2010	12/22/2010	1/5/2011	1/6/2011	1/6/2011	12/22/2010	12/22/2010	1/5/2011	1/5/2011
1,1,1-Trichloroethane	0.68	0.0063 U	0.0057 U	0.59 U	0.0014 J	0.59 U	0.59 U	0.0065 U	0.0062 U	130 E	180 ED
1,1-Dichloroethane	0.27	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
1,1-Dichloroethene	0.33	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	16 E	10 D
1,2-Dichlorobenzene	1.1	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.24 J	5.5 U
1,2-Dichloroethane	0.02	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
1,3-Dichlorobenzene	2.4	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
1,4-Dichlorobenzene	1.8	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
2-Butanone	0.12	0.032 U	0.029 U	3 U	0.029 U	3 U	3 U	0.033 U	0.031 U	2.7 U	27 U
Acetone	0.05	0.032 U	0.029 U	3 U	0.006 J	3 U	3 U	0.033 U	0.031 U	2.7 U	27 U
Benzene	0.06	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	2.6	5.5 U
Carbon Tetrachloride	0.76	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
Chlorobenzene	1.1	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.11 J	5.5 U
Chloroform	0.37	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
cis-1,2-Dichloroethene	0.25	0.0063 U	0.0057 U	0.59 U	0.0088	3.6	4.3	0.0065 U	0.0062 U	7.9	11 D
Ethyl Benzene	1	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.43 J	0.58 J	0.0065 U	0.0062 U	28 E	32 D
Methyl tert-butyl Ether	0.93	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
Methylene Chloride	0.05	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
Tetrachloroethene	1.3	0.0063 U	0.0057 U	0.59 U	0.0028 J	0.13 J	0.17 J	0.0065 U	0.0062 U	480 E	800 ED
Toluene	0.7	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.4 J	0.49 J	0.0065 U	0.0062 U	310 E	110 D
trans-1,2-Dichloroethene	0.19	0.0063 U	0.0057 U	0.59 U	0.0057 U	0.59 U	0.59 U	0.0065 U	0.0062 U	0.55 U	5.5 U
Trichloroethene	0.47	0.0063 J	0.0038 J	0.59 U	0.021	0.24 J	0.32 J	0.0065 U	0.0062 U	2100 E	1600 ED
Vinyl Chloride	0.02	0.0063 U	0.0057 U	0.59 U	0.0057 U	4.2	4.5	0.0065 U	0.0062 U	0.55 U	5.5 U
Total Xylenes	1.6	0.013 U	0.011 U	1.2 U	0.011 U	1.36 J	1.81 J	0.013 U	0.012 U	101 E	161 D
Total Concentration*	10	0	0.0038	2.1	0.04	12.12	14.22	0	0	3183.7	2910.6
Total TICs *	NS			54.73		52.69		0.01		240.17	

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\* Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close, initial results may be used.

TABLE 12  
Waste Oil Tank Area VOC Results  
PROVAN FORD SITE, SAC NO. C303491  
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Sample Lab Sample Number	Protection of Ground Water (mg/kg)	WOT-B-3DL2		WOT-B-3.1		WOT-DUP(WOT-B-3)		WOT-DUPDL		WOT-DUPDL2	
		C1051-01DL2		C1051-08		C1051-04		C1051-04DL		C1051-04DL2	
Field Measured Sample Depth (ft)		12-12.5		12-12.5		12-12.5		12-12.5		12-12.5	
Conc.		mg/lkg		mg/lkg		mg/lkg		mg/lkg		mg/lkg	
Date		1/5/2011		1/5/2011		1/5/2011		1/5/2011		1/5/2011	
1,1,1-Trichloroethane	0.68	<b>130</b>	D	0.0012	J	<b>100</b>	E	<b>160</b>	ED	<b>71</b>	D
1,1-Dichloroethane	0.27	55	U	0.0062	U	<b>0.54</b>	U	5.4	U	54	U
1,1-Dichloroethene	0.33	55	U	0.0062	U	<b>11</b>	E	<b>8.1</b>	D	54	U
1,2-Dichlorobenzene	1.1	55	U	0.0062	U	0.2	J	5.4	U	54	U
1,2-Dichloroethane	0.02	55	U	0.0062	U	<b>0.54</b>	U	5.4	U	54	U
1,3-Dichlorobenzene	2.4	55	U	0.0062	U	0.54	U	5.4	U	54	U
1,4-Dichlorobenzene	1.8	55	U	0.0062	U	0.54	U	5.4	U	54	U
2-Butanone	0.12	270	U	0.031	U	<b>2.7</b>	U	27	U	270	U
Acetone	0.05	270	U	0.031	U	<b>2.7</b>	U	27	U	270	U
Benzene	0.06	55	U	0.0062	U	<b>1.9</b>		0.71	JD	54	U
Carbon Tetrachloride	0.76	55	U	0.0062	U	0.54	U	5.4	U	54	U
Chlorobenzene	1.1	55	U	0.0062	U	0.087	J	5.4	U	54	U
Chloroform	0.37	55	U	0.0062	U	<b>0.54</b>	U	5.4	U	54	U
cis-1,2-Dichloroethene	0.25	<b>8.4</b>	JD	0.0069		<b>5.4</b>		<b>8.7</b>	D	<b>5.4</b>	JD
Ethyl Benzene	1	<b>22</b>	JD	0.0062	U	<b>22</b>	E	<b>29</b>	D	<b>11</b>	JD
Methyl tert-butyl Ether	0.93	55	U	0.0062	U	0.54	U	5.4	U	54	U
Methylene Chloride	0.05	55	U	0.0062	U	<b>0.54</b>	U	5.4	U	54	U
Tetrachloroethene	1.3	<b>1300</b>	D	0.0037	J	<b>380</b>	E	<b>800</b>	ED	<b>790</b>	D
Toluene	0.7	<b>42</b>	JD	0.0062	U	<b>230</b>	E	<b>86</b>	D	<b>27</b>	JD
trans-1,2-Dichloroethene	0.19	55	U	0.0062	U	<b>0.54</b>	U	5.4	U	54	U
Trichloroethene	0.47	<b>1400</b>	D	0.022		<b>1700</b>	E	<b>1500</b>	ED	<b>890</b>	D
Vinyl Chloride	0.02	55	U	0.0062	U	<b>0.54</b>	U	5.4	U	54	U
Total Xylenes	1.6	<b>103</b>	JD	0.012	U	<b>84</b>	E	<b>147</b>	D	<b>63</b>	JD
Total Concentration*	10	<b>3005.4</b>		0.0338		<b>2540.597</b>		<b>2745.3</b>		<b>1857.4</b>	
Total TICs *	NS					206.61					

Data qualifiers as listed below

U = Not detected at reported minimum detection limit.

J = Estimated value. Result was less than the specified detection limit.

B = Analyte was found in the blank as well as the sample.

E = Analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.

D = Result has been obtained from the analysis of a secondary dilution of the sample.

**Bold = Non-detect concentration is in excess of the POGS.**

**Bold = Detected xylene concentration is in excess of Unrestricted Use Standard**

**Bold = Detected concentration is in excess of Protection of Groundwater Standard (POGS).**

Indicates the appropriate value to use when one or more dilution analysis was performed

\*NYSDEC Site Specific Guidance

\*\* Indicates that the sample was run again due to the recovery of standards being out of range. When initial results and rerun results are close, initial results may be used.

**TABLE 13**  
**Imported Backfill Weigh Ticket Summary from Tilcon**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

<b>Ticket No.</b>	<b>Date</b>	<b>Time</b>	<b>Net Tons</b>
21071147	12/30/2010	6:41	36.30
21071533	1/14/2011	6:21	39.81
21071548	1/14/2011	7:52	37.47
21071551	1/14/2011	8:02	37.36
21071562	1/14/2011	9:31	24.82
21071563	1/14/2011	9:34	40.04
21071565	1/14/2011	9:38	37.94
21071576	1/14/2011	11:04	37.15
21071587	1/14/2011	12:44	38.16
21071600	1/14/2011	14:14	37.79
21071366	1/6/2011	9:05	34.36
21071372	1/6/2011	11:04	34.7
21071380	1/6/2011	12:29	35.11
21071386	1/6/2011	14:00	35.56
21071387	1/6/2011	14:03	37.53
21071388	1/6/2011	14:40	36.91
21071356	1/6/2011	8:08	35.65
21071345	1/6/2011	6:06	36.38
21071382	1/6/2011	12:35	36.98
21071374	1/6/2011	11:08	36.02
21071367	1/6/2011	9:37	37.56
21071357	1/6/2011	8:10	38.04
21071346	1/6/2011	6:09	37.62
21071344	1/5/2011	14:49	24.44
21071286	1/4/2011	14:17	23.8
21071274	1/4/2011	12:31	24.59
21071262	1/4/2011	11:04	24.21
21071249	1/4/2011	9:15	25.36
21071242	1/4/2011	7:51	25.32
21071237	1/4/2011	6:23	25.32
21071233	1/3/2011	14:33	25.43
21071230	1/3/2011	13:14	34.3
21071227	1/3/2011	13:00	38.35
21071224	1/3/2011	11:50	36.83
21071222	1/3/2011	11:40	37.01
21071221	1/3/2011	11:03	23.16
21071216	1/3/2011	9:45	36.79
21071215	1/3/2011	9:39	37.81
21071209	1/3/2011	8:14	96.88
21071207	1/3/2011	7:59	66.37
21071206	1/3/2011	7:56	36.8
21071201	12/30/2010	15:04	25.13
21071197	12/30/2010	13:57	35.99
21071195	12/30/2010	13:51	36.49
21071194	12/30/2010	13:47	23.19
21071193	12/30/2010	13:45	36.04
21071192	12/30/2010	13:37	26.99
21071189	12/30/2010	12:27	34.9
21071188	12/30/2010	12:24	25.42
21071187	12/30/2010	12:13	37.78
21071186	12/30/2010	12:09	38
21071187	12/30/2010	11:58	25.48

**TABLE 13**  
**Imported Backfill Weigh Ticket Summary from Tilcon**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

<b>Ticket No.</b>	<b>Date</b>	<b>Time</b>	<b>Net Tons</b>
21071182	12/30/2010	11:06	37.3
21071180	12/30/2010	10:53	25.43
21071179	12/30/2010	10:50	36.99
21071178	12/30/2010	10:47	38.92
21071176	12/30/2010	10:40	37.88
21071171	12/30/2010	9:30	35.96
21071168	12/30/2010	9:22	37.52
21071167	12/30/2010	9:19	37.83
21071166	12/30/2010	9:15	34.66
21071156	12/30/2010	8:02	37.13
21071155	12/30/2010	7:54	37.54
21071154	12/30/2010	7:51	35.08
21071153	12/30/2010	7:48	78.16
21071147	12/30/2010	6:41	36.3
21071141	12/30/2010	6:12	38.72
21071140	12/30/2010	6:09	38.62
21071139	12/30/2010	6:05	35.9
21071099	12/28/2010	15:06	36.38
21071098	12/28/2010	14:24	37.79
21071097	12/28/2010	14:17	37.98
21071095	12/28/2010	13:17	35.83
21071094	12/28/2010	12:54	37.91
21071093	12/28/2010	12:43	37.05
21071090	12/28/2010	11:37	35.41
21071087	12/28/2010	11:23	36.69
21071085	12/28/2010	10:59	37.24
21071083	12/28/2010	9:52	34.74
21071082	12/28/2010	9:46	36.41
21071081	12/28/2010	9:30	36.87
21071078	12/28/2010	8:20	38.07
21071077	12/28/2010	7:53	37.75
21071076	12/28/2010	7:49	36.69
21071074	12/28/2010	6:45	37.58
21071073	12/28/2010	6:21	36.14
21071072	12/28/2010	6:13	34.16
21071071	12/28/2010	6:00	34.91
21071067	12/23/2010	14:10	38.25
21071066	12/23/2010	14:00	37.6
21071065	12/23/2010	14:04	34.68
21071059	12/23/2010	13:41	36.55
21071058	12/23/2010	13:06	34.3
21071048	12/23/2010	12:28	38.38
21071047	12/23/2010	12:22	37.39
21071046	12/23/2010	12:17	35.82
21071045	12/23/2010	12:10	37.62
21071043	12/23/2010	11:35	36.65
21071039	12/23/2010	10:57	37.59
21071038	12/23/2010	10:44	37.43
21071037	12/23/2010	10:41	36.32
21071036	12/23/2010	10:39	35.26
21071029	12/23/2010	10:08	33.95
21071023	12/23/2010	9:22	34.83
21071022	12/23/2010	9:18	36.41
21071021	12/23/2010	9:13	37.38
21071019	12/23/2010	9:07	35.66
21071013	12/23/2010	8:45	33.75
21071008	12/23/2010	8:01	37.25
21071005	12/23/2010	7:56	36.72



**TABLE 13**  
**Imported Backfill Weigh Ticket Summary from Tilcon**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

<b>Ticket No.</b>	<b>Date</b>	<b>Time</b>	<b>Net Tons</b>
21071003	12/23/2010	7:49	37
21070999	12/23/2010	7:31	35.14
21070998	12/23/2010	7:26	35.42
21070987	12/23/2010	6:22	37.28
21070986	12/23/2010	6:19	36.76
21070985	12/23/2010	6:16	39.46
21070983	12/23/2010	6:06	36.21
21070982	12/23/2010	6:03	34.64
21070918	12/23/2010	13:53	37.72
21070914	12/21/2010	13:15	33.64
21070913	12/21/2010	13:12	37.15
21070908	12/21/2010	12:24	37.28
21070904	12/21/2010	11:43	35.8
21070903	12/21/2010	11:30	36.93
21070900	12/21/2010	10:54	37.6
21070896	12/21/2010	10:27	34.82
21070894	12/21/2010	10:23	32.74
21070893	12/21/2010	10:18	23.25
21070890	12/21/2010	9:56	38.5
21070885	12/21/2010	9:29	23.65
21070884	12/21/2010	9:26	37.6
21070883	12/21/2010	9:06	35.45
21070882	12/21/2010	9:02	24.84
21070792	12/21/2010	12:18	37.44
21070791	12/17/2009	12:16	34.56
21070784	12/17/2010	10:57	24.98
21070783	12/17/2010	10:56	33.89
21070779	12/17/2010	10:36	37.36
21070766	12/17/2010	9:32	34.82
21070760	12/17/2010	9:06	37.76
21070749	12/17/2010	8:02	33.93
21070741	12/17/2010	7:22	37.95
21070593	12/14/2010	14:53	36.91
21070592	12/14/2010	14:36	39.01
21070591	12/14/2010	14:31	25.23
21070590	12/14/2010	13:54	37.97
21070588	12/14/2010	13:46	35.13
21070587	12/14/2010	3:12	37.48
21070584	12/14/2010	12:59	25.13
21070579	12/14/2010	11:34	38.3
21070566	12/14/2010	10:03	39.04
21070560	12/14/2010	8:31	36.22
21040546	12/14/2010	6:20	38.34
21070539	12/13/2010	14:43	36.47
21070538	12/13/2010	13:49	37.78
21070533	12/13/2010	13:11	37.52
21070531	12/13/2010	12:53	37.87
21070523	12/13/2010	12:12	35.92
21070520	12/13/2010	11:33	37.37
21070519	12/13/2010	11:22	37.48
21070518	12/13/2010	10:41	34.83
21070514	12/13/2010	10:00	36.77
21070513	12/13/2010	9:55	38.21
21070508	12/13/2010	9:04	36.75
21070504	12/13/2010	8:24	37.7
21070502	12/13/2010	8:19	38.27
21070495	12/13/2010	7:24	35.87
21070492	12/13/2010	6:27	38.05

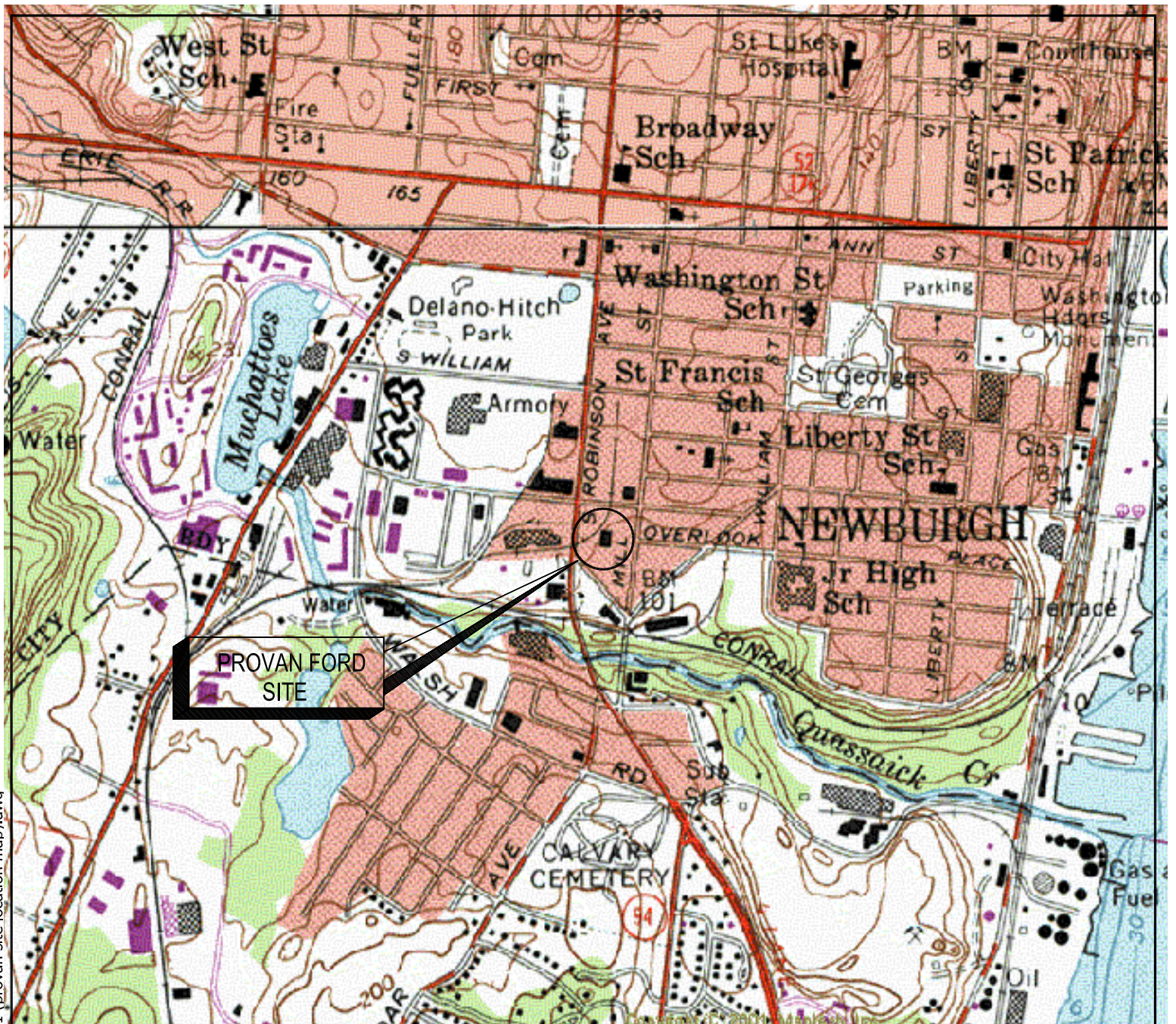
**TABLE 13**  
**Imported Backfill Weigh Ticket Summary from Tilcon**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

<b>Ticket No.</b>	<b>Date</b>	<b>Time</b>	<b>Net Tons</b>
21070488	12/13/2010	6:08	37.72
21070323	12/8/2010	14:46	37.48
21070321	12/8/2010	14:21	33.62
21070320	12/8/2010	14:19	35.02
21070318	12/8/2010	14:05	37.11
21070301	12/8/2010	12:42	34.55
21070283	12/8/2010	11:37	36.15
21070277	12/8/2010	11:13	35.12
21070271	12/8/2010	10:50	38.05
21070260	12/8/2010	9:45	38.66
21070258	12/8/2010	9:33	37.64
21070254	12/8/2010	9:15	37.95
21070240	12/8/2010	8:13	38.29
21070235	12/8/2010	7:48	34.86
21070231	12/8/2010	7:39	37.78
21070225	12/8/2010	6:43	38.07
21070209	12/8/2010	6:08	35.04
21070208	12/8/2010	6:05	37.9
21070206	12/8/2010	15:12	24.9
21070199	12/7/2010	14:09	35.9
21070196	12/7/2010	13:52	23.31
21070181	12/7/2010	12:30	34.27
21070178	12/7/2010	12:12	22.45
21070166	12/7/2010	10:55	35.64
21070156	12/7/2010	9:56	22.06
21070151	12/7/2010	9:22	35.87
21070142	12/7/2010	8:24	24.49
21070134	12/7/2010	7:43	35.2
21070124	12/7/2010	7:04	24.84
21070114	12/7/2010	6:11	37.57
21070110	12/6/2010	15:01	23.55
21070109	12/6/2010	14:56	24.89
21070107	12/6/2010	14:38	24.75
21070106	12/6/2010	14:37	24.97
21070103	12/6/2010	14:26	24.3
21070101	12/6/2010	14:20	22.12
21070092	12/6/2010	13:31	23.31
21070091	12/6/2010	13:29	23.33
21070086	12/6/2010	13:12	24.77
21070084	12/6/2010	13:10	24.09
21070083	12/6/2010	13:10	25.11
21070078	12/6/2010	12:54	24.9
21070077	12/6/2010	12:53	22.03
21070066	12/6/2010	11:58	21.4
21070064	12/6/2010	11:51	20.43
21070063	12/6/2010	11:38	25.18
21070060	12/6/2010	11:29	21.98
21070058	12/6/2010	11:23	24.05
21070055	12/6/2010	11:13	21.77
21070054	12/6/2010	11:12	22.75
21070039	12/6/2010	10:31	22.12
21070036	12/6/2010	10:22	22.21
21070034	12/6/2010	10:13	24
21070032	12/6/2010	9:57	22.88
21070031	12/6/2010	9:55	24.13
21070030	12/6/2010	9:53	21.98
21070029	12/6/2010	9:52	21.62

**TABLE 13**  
**Imported Backfill Weigh Ticket Summary from Tilcon**  
**PROVAN FORD SITE, SAC NO. C303491**  
**ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION**

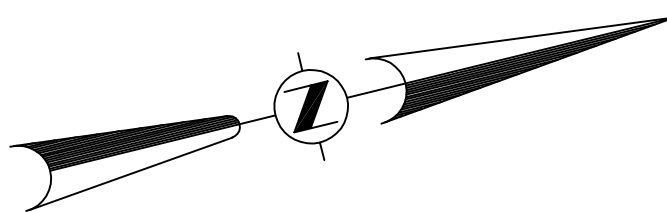
<b>Ticket No.</b>	<b>Date</b>	<b>Time</b>	<b>Net Tons</b>
21070016	12/6/2010	9:01	22.18
21070015	12/6/2010	9:00	23.48
21070005	12/6/2010	8:32	21.99
21070005	12/6/2010	8:31	25.39
21070003	12/6/2010	8:29	23.04
21070002	12/6/2010	8:28	24.62
21070001	12/6/2010	8:27	22.45
21069986	12/6/2010	7:17	24.43
21069985	12/6/2010	7:15	23.65
21069982	12/6/2010	7:08	24.22
21069981	12/6/2010	7:05	24.8
21069979	12/6/2010	7:04	21.06
21069977	12/6/2010	7:00	25.36
21069976	12/6/2010	6:57	24.51
21068187	12/6/2010	11:43	66.06
21070882	12/6/2010	9:02	24.84
21070893	12/21/2010	10:18	23.25
21070913	12/21/2010	13:12	37.15
21070914	12/21/2010	13:15	33.64
21070918	12/21/2010	13:53	37.72
21070982	12/21/2010	6:03	34.64
21070983	12/23/2010	6:06	36.21
21070985	12/23/2010	6:16	39.46
21070986	12/23/2010	6:19	36.76
21070987	12/23/2010	6:22	37.28
21070998	12/23/2010	7:26	35.42
21070999	12/23/2010	7:31	35.14
21071003	12/23/2010	7:49	37
21071005	12/23/2010	7:56	36.72
21071013	12/23/2010	8:45	33.75
21071019	12/23/2010	9:07	35.66
21071021	12/23/2010	9:13	37.38
21071022	12/23/2010	9:18	36.41
21071023	12/23/2010	9:22	34.83
21071029	12/23/2010	10:08	33.95
21071036	12/23/2010	10:39	35.26
21071037	12/23/2010	10:41	36.32
21071038	12/23/2010	10:44	37.43
21071039	12/23/2010	10:57	37.59
21071043	12/23/2010	11:35	36.65
21071045	12/23/2010	12:10	37.62
21071046	12/23/2010	13:17	35.82
21071047	12/23/2010	12:22	37.39
21071048	12/23/2010	12:28	38.38
21071058	12/23/2010	13:06	34.31
21071059	12/23/2010	13:41	36.56
21071065	12/23/2010	14:04	34.68
21071066	12/23/2010	14:06	37.6
21071067	12/23/2010	14:10	38.25
21071071	12/23/2010	6:08	34.91
21071072	12/28/2010	6:13	34.16
21071073	12/28/2010	6:21	36.14
21071074	12/28/2010	6:45	37.58
21071076	12/28/2010	7:49	36.69
21071077	12/28/2010	7:53	37.75
21071078	12/28/2010	8:20	38.07
21071081	12/28/2010	9:30	36.87
21071082	12/28/2010	9:46	36.41



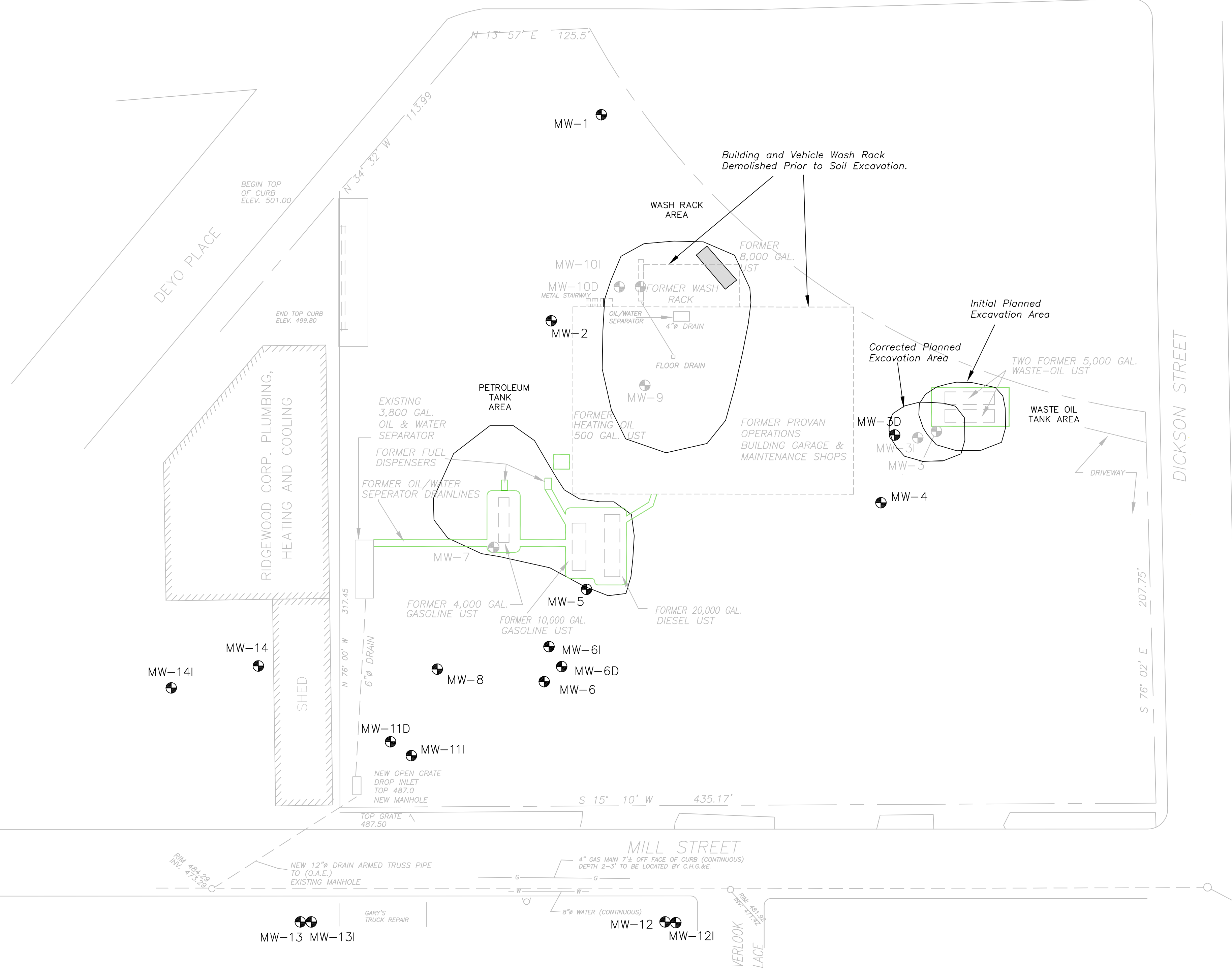


NEWBURGH AND CORNWALL USGS  
 7.5 MIN QUADRANGLES  
 1:24,000, NA DATUM 1927  
 DATED 1957, PHOTO REVISED 1981

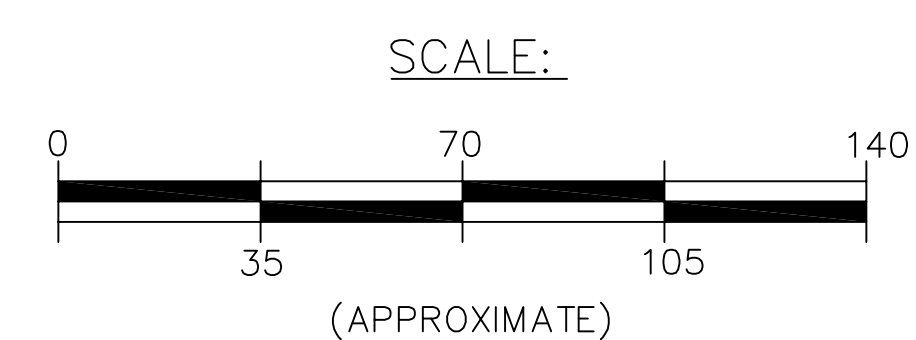
FIGURE 1  
 SITE LOCATION MAP  
 FORMER PROVAN  
 FORD FACILITY  
 NEWBURGH, NEW YORK



ROBINSON STREET



- PLANNED EXCAVATION AREAS
- PREVIOUS EXCAVATION AREAS
- - - PROPERTY LINE
- ▭ 8,000 GALLON UST REMOVED DURING SOIL REMEDIATION
- ▭ FORMER UST REMOVED AS IRM
- ⊕ MW-1 MONITORING WELL
- ⊕ MW-101 MONITORING WELL REMOVED AND/OR ABANDONED PRIOR TO OR DURING EXCAVATION

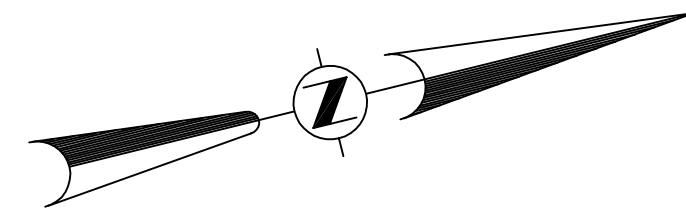


Bernard T. Delaney  
Professional Engineer  
N.Y. Lic. No. 060784-1

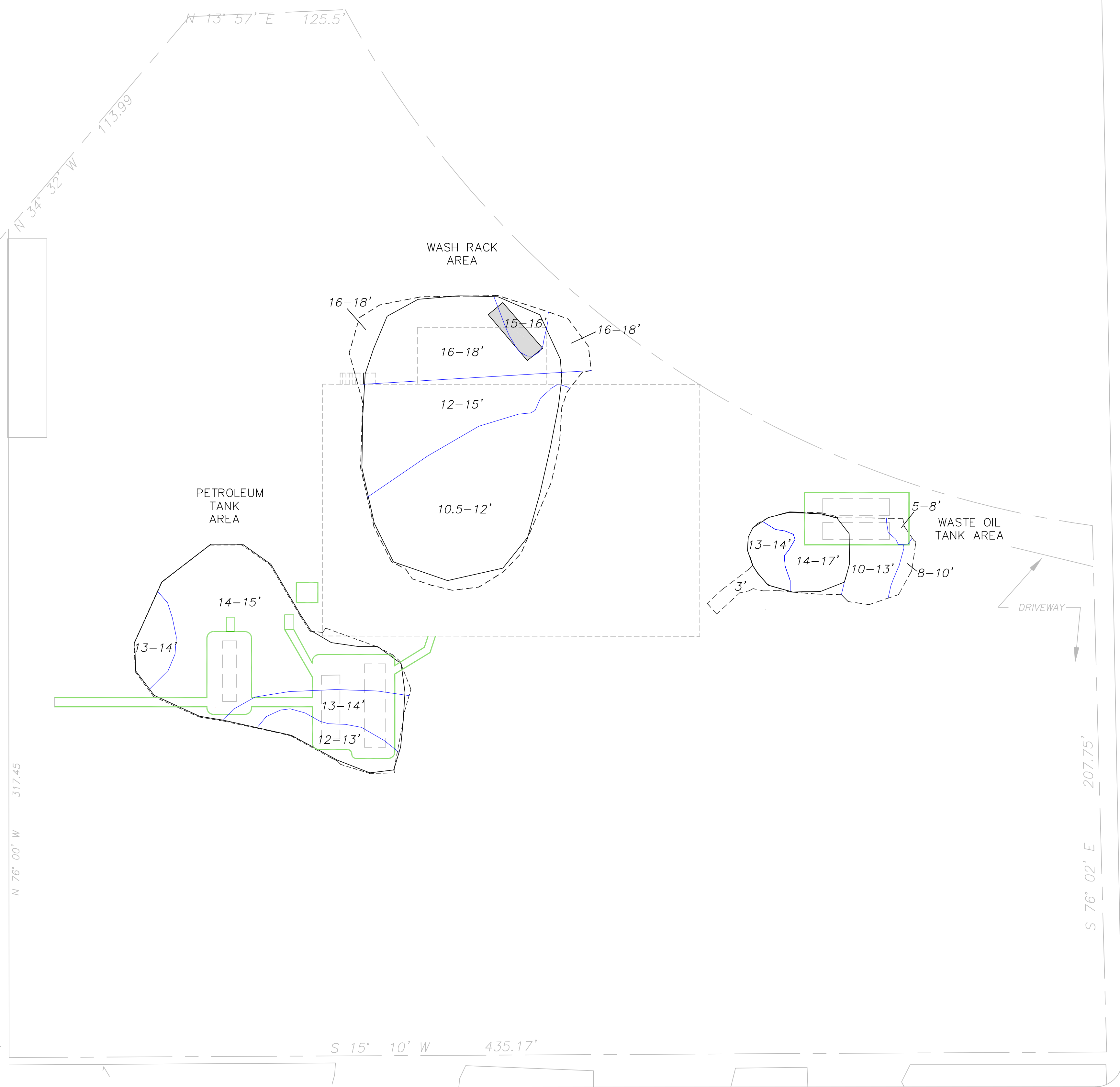
PROVAN FORD			
NEWBURGH	ORANGE COUNTY	NEW YORK	
SITE PLAN			
FIGURE 2	REVISED BY: GBF	DWN BY: HIM	CHK'D BY: MSR
	SCALE: AS SHOWN 4/5/11	03/03/09	4/27/11
<b>FIRST ENVIRONMENT</b>		BOONTON	NEW JERSEY

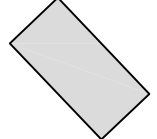



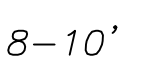
MW-15

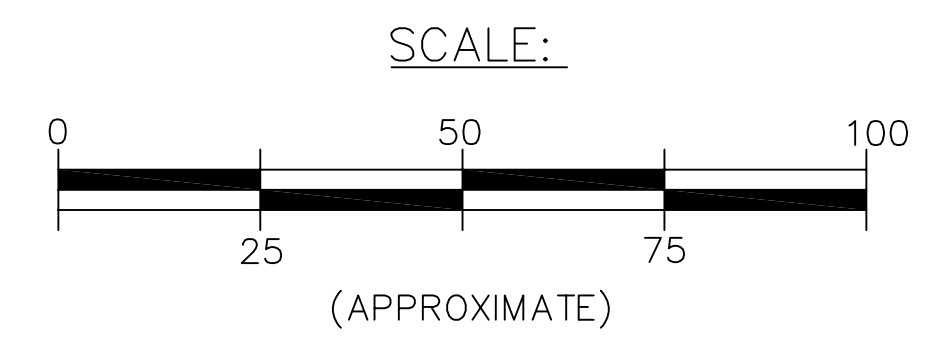
ROBINSON STREET



DEYO PLACE



-  8,000 GALLON UST REMOVED DURING SOIL REMEDIATION
-  PREVIOUS EXCAVATION AREAS
-  PLANNED EXCAVATION AREAS
-  ACTUAL EXCAVATION AREAS
-  DEPTH OF EXCAVATION (BASED ON SURVEY INFORMATION)



Bernard T. Delaney  
Professional Engineer  
N.Y. Lic. No. 060784-1

PROVAN FORD  
NEWBURGH      ORANGE COUNTY      NEW YORK

EXCAVATION AREAS & DEPTHS

FIGURE 3	REVISED BY: GBF	DWN BY: HIM	CHK'D BY: MSR
	SCALE: AS SHOWN		
	4/5/11	03/03/09	4/27/11

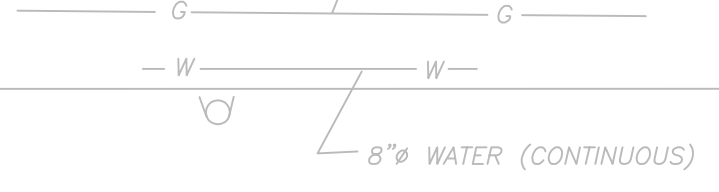


BOONTON      NEW JERSEY

S 15° 10' W 435.17'

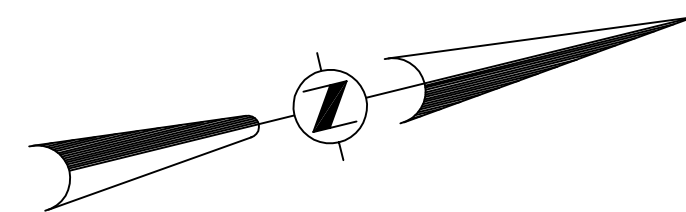
MILL STREET

4" GAS MAIN 7"± OFF FACE OF CURB (CONTINUOUS)  
DEPTH 2-3' TO BE LOCATED BY C.H.G.&E.



GARY'S TRUCK REPAIR

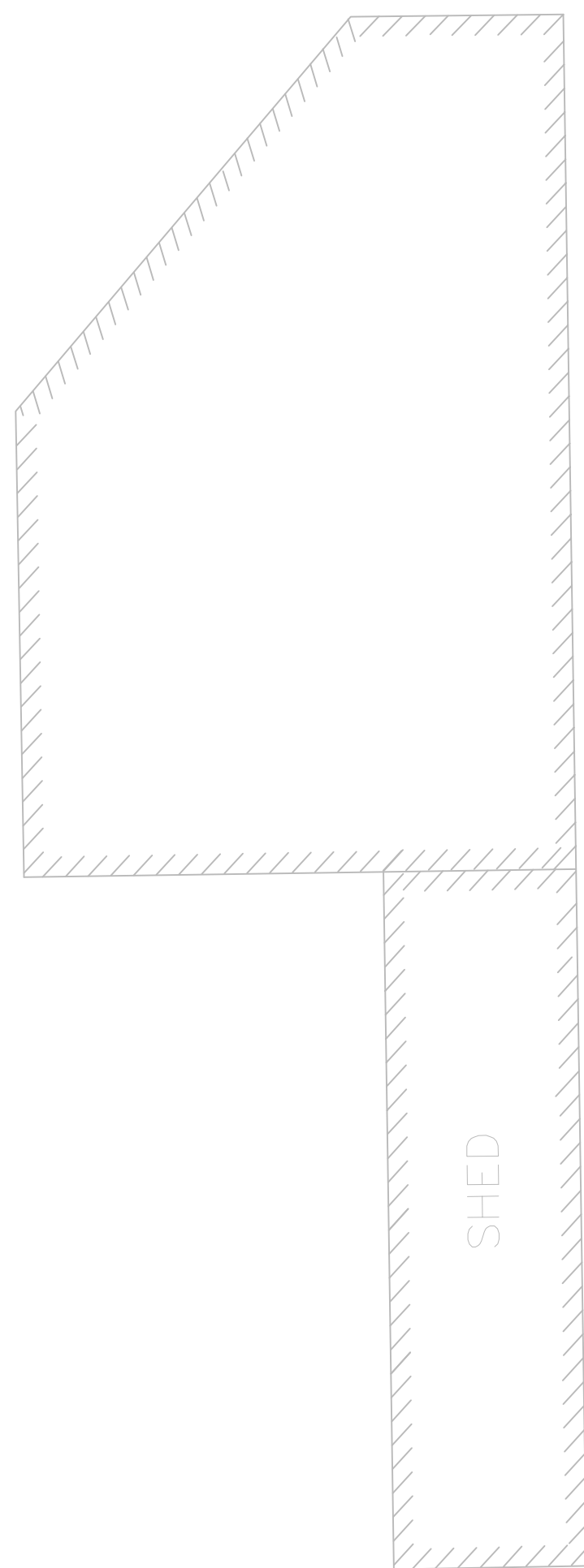
LOOK



ROBINSON STREET

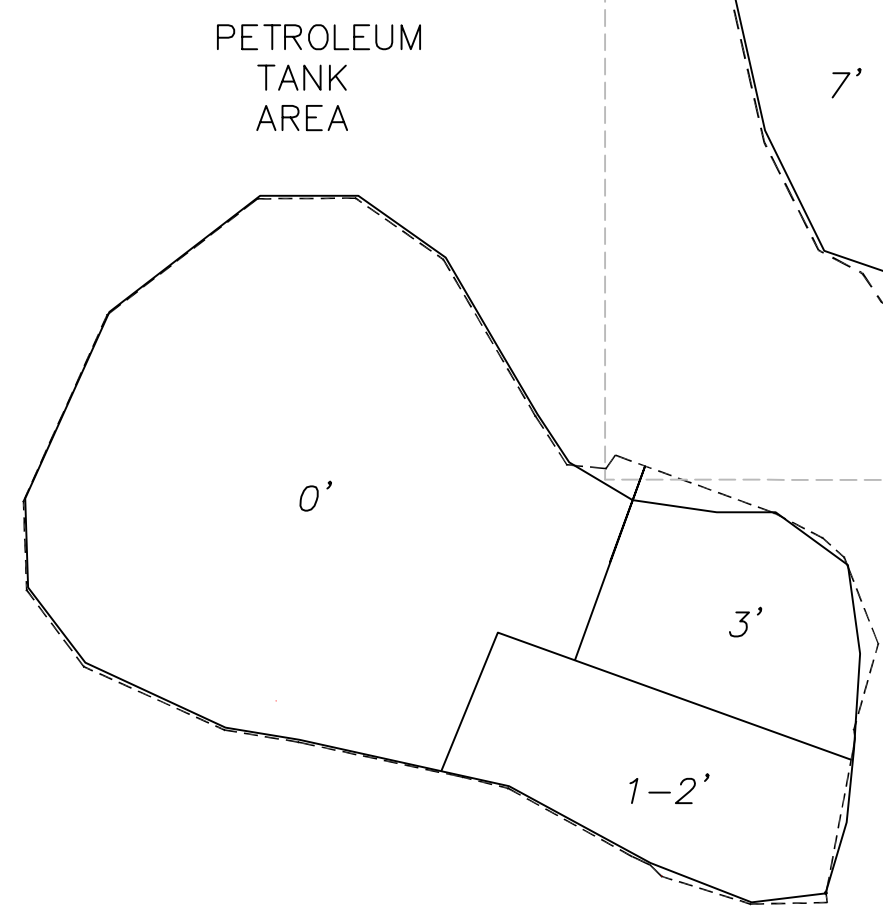
DEYO PLACE

DICKSON STREET



SHED

N 76° 00' W 317.45



PETROLEUM TANK AREA

0'

1-2'

3'

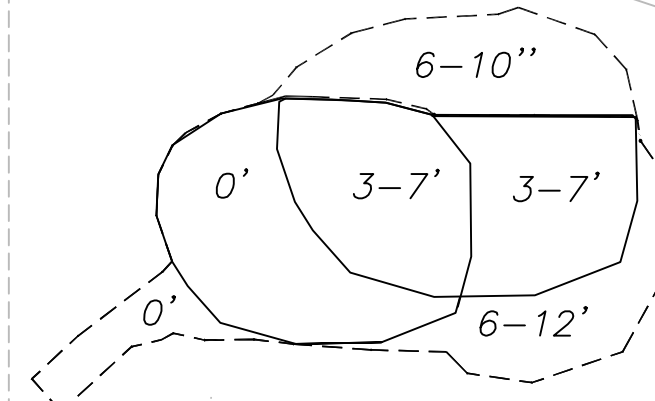
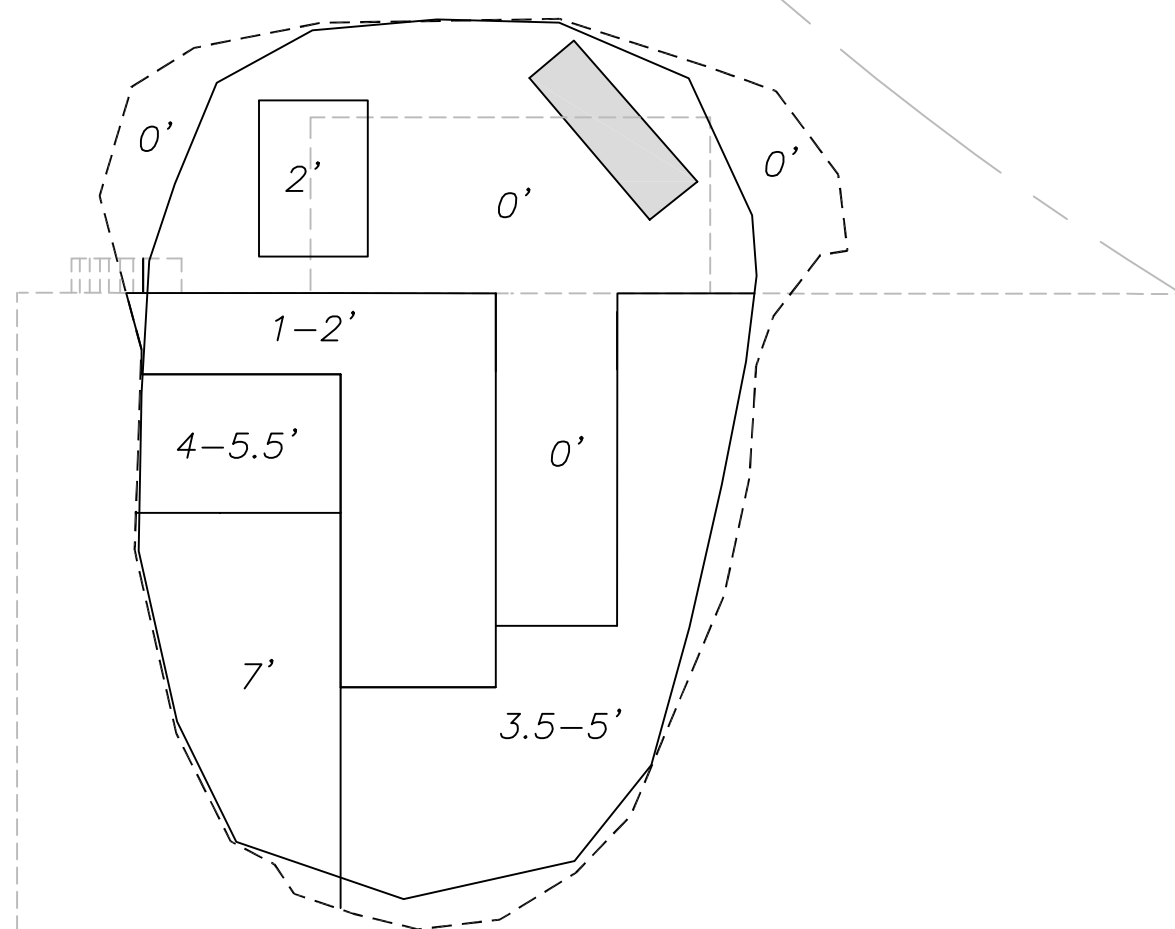
S 15° 10' W 435.17'

MILL STREET

4" GAS MAIN 7± OFF FACE OF CURB (CONTINUOUS)  
DEPTH 2-3' TO BE LOCATED BY C.H.G.&E.



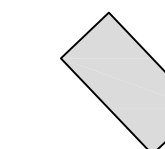
WASH RACK AREA



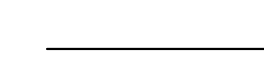
WASTE OIL TANK AREA

DRIVEWAY

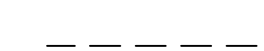
S 76° 02' E 207.75'



8,000 GALLON UST REMOVED DURING SOIL REMEDIATION



PLANNED EXCAVATION AREAS

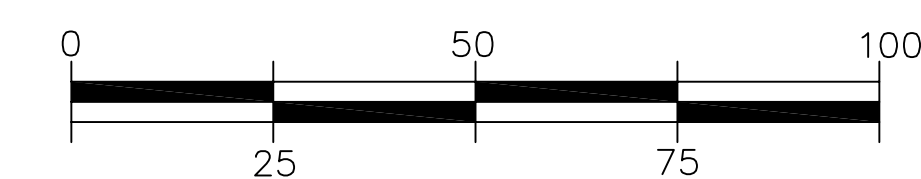


ACTUAL EXCAVATION AREAS

6-12'

BOTTOM DEPTH RANGE OF SOIL EXCAVATED FOR REUSE  
(BASED ON FIELD MEASUREMENTS)

SCALE:



(APPROXIMATE)

Bernard T. Delaney  
Professional Engineer  
N.Y. Lic. No. 060784-1

PROVAN FORD

NEWBURGH ORANGE COUNTY NEW YORK

SOIL REUSE SOURCE LOCATIONS  
& BOTTOM DEPTH RANGE

FIGURE 4	REVISED BY: GBF	DWN BY: HIM	CHK'D BY: MSR
	SCALE: AS SHOWN	03/03/09	4/27/11
	4/5/11		

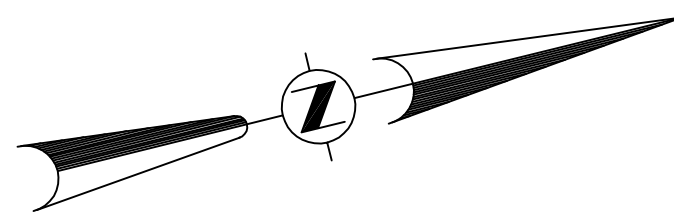
**FIRST ENVIRONMENT**

BOONTON

NEW JERSEY

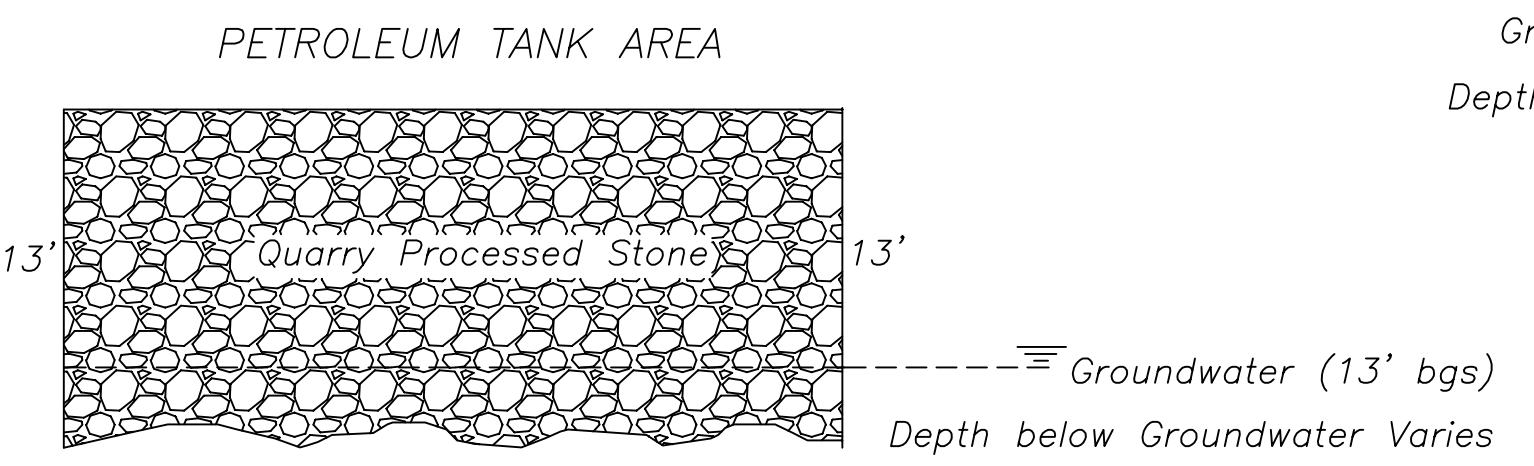
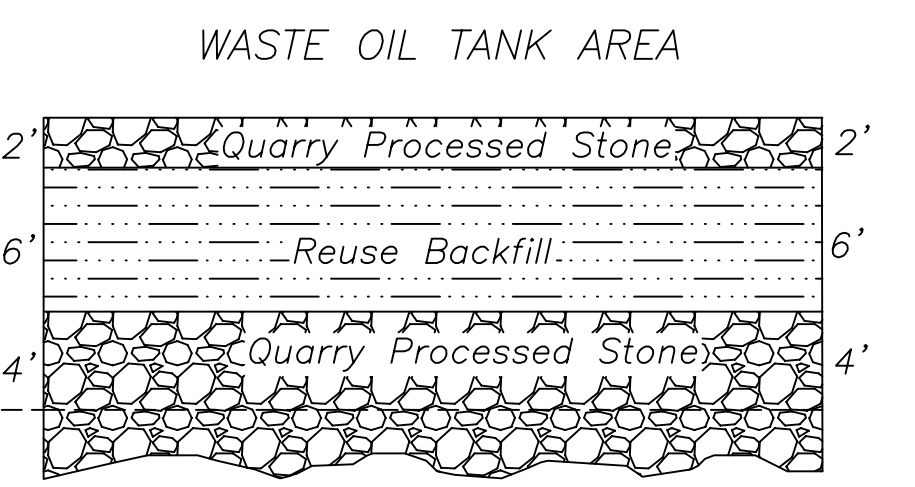
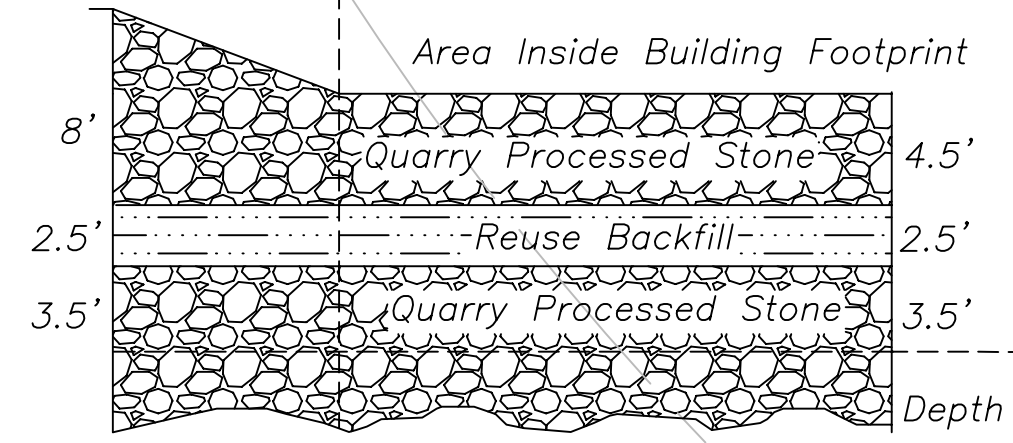
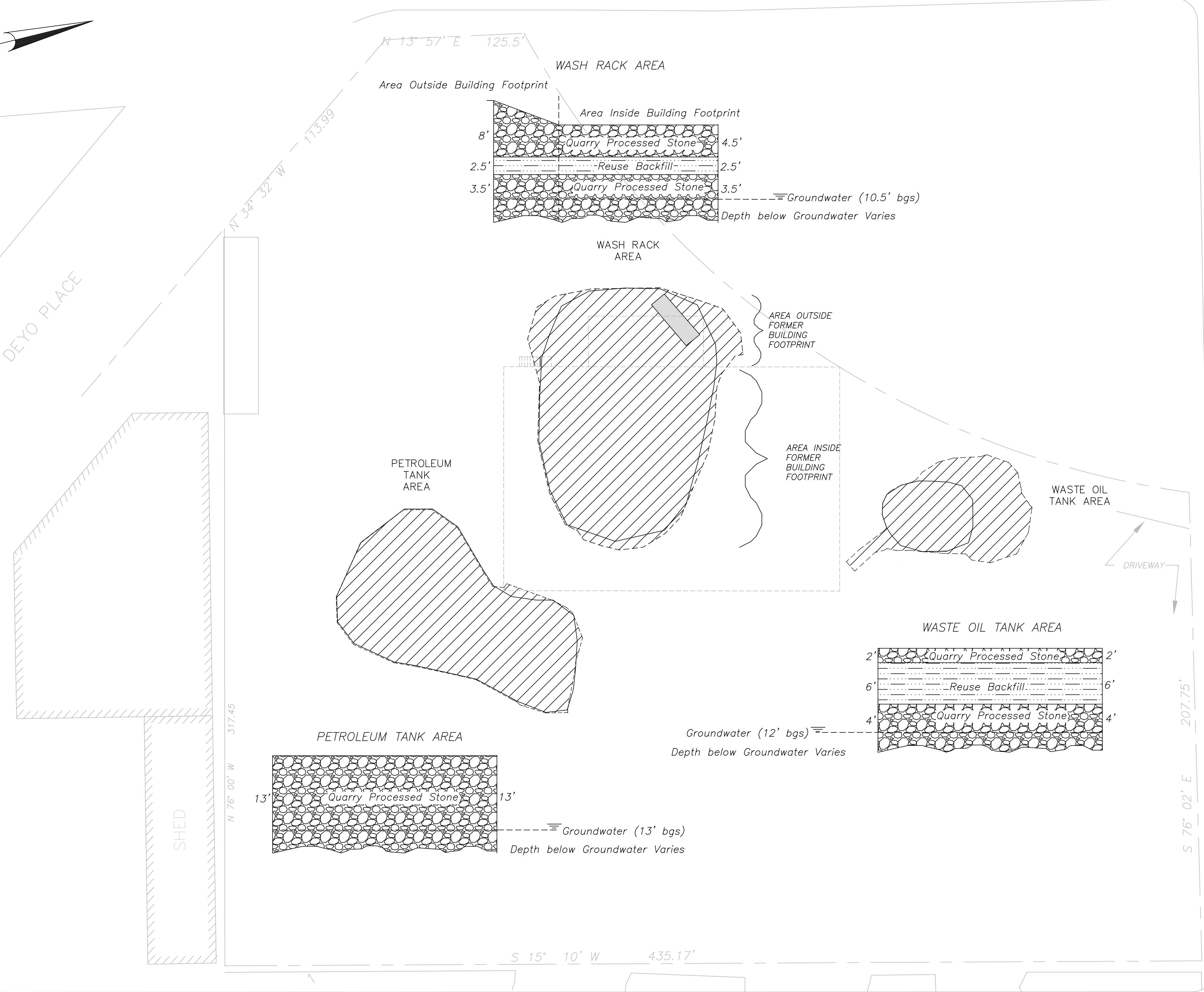


ROBINSON STREET

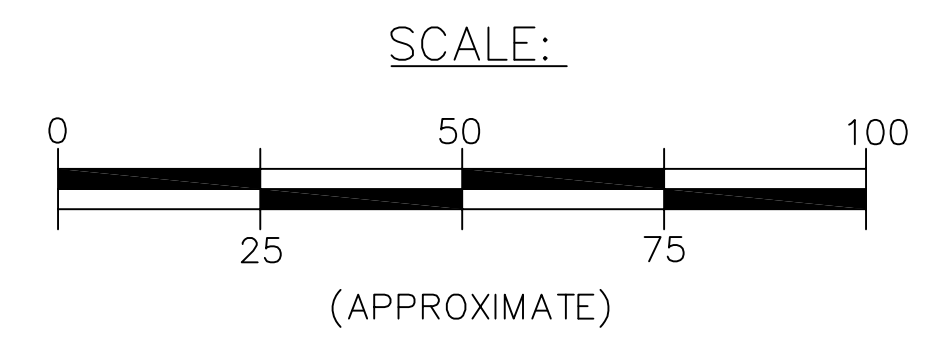


DEYO PLACE

DICKSON STREET



- 8,000 GALLON UST REMOVED DURING SOIL REMEDIATION
- PLANNED EXCAVATION AREAS
- ACTUAL EXCAVATION AREAS
- EXCAVATION AREA CONTAINING BACKFILL



Bernard T. Delaney  
Professional Engineer  
N.Y. Lic. No. 060784-1

PROVAN FORD  
NEWBURGH ORANGE COUNTY NEW YORK

BACKFILL LOCATIONS & PROFILES

FIGURE 5	REVISED BY: GBF	DWN BY: HIM	CHK'D BY: MSR
	SCALE: AS SHOWN 4/5/11	03/03/09	4/27/11

**FIRST ENVIRONMENT**  
BOONTON NEW JERSEY

S 15° 10' W 435.17'

MILL STREET

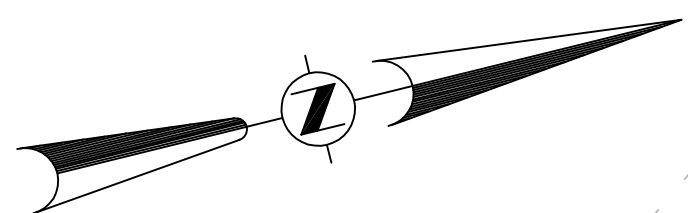
4" GAS MAIN 7"± OFF FACE OF CURB (CONTINUOUS)  
DEPTH 2-3' TO BE LOCATED BY C.H.G.&E.

8"Ø WATER (CONTINUOUS)

GARY'S TRUCK REPAIR

LOOK

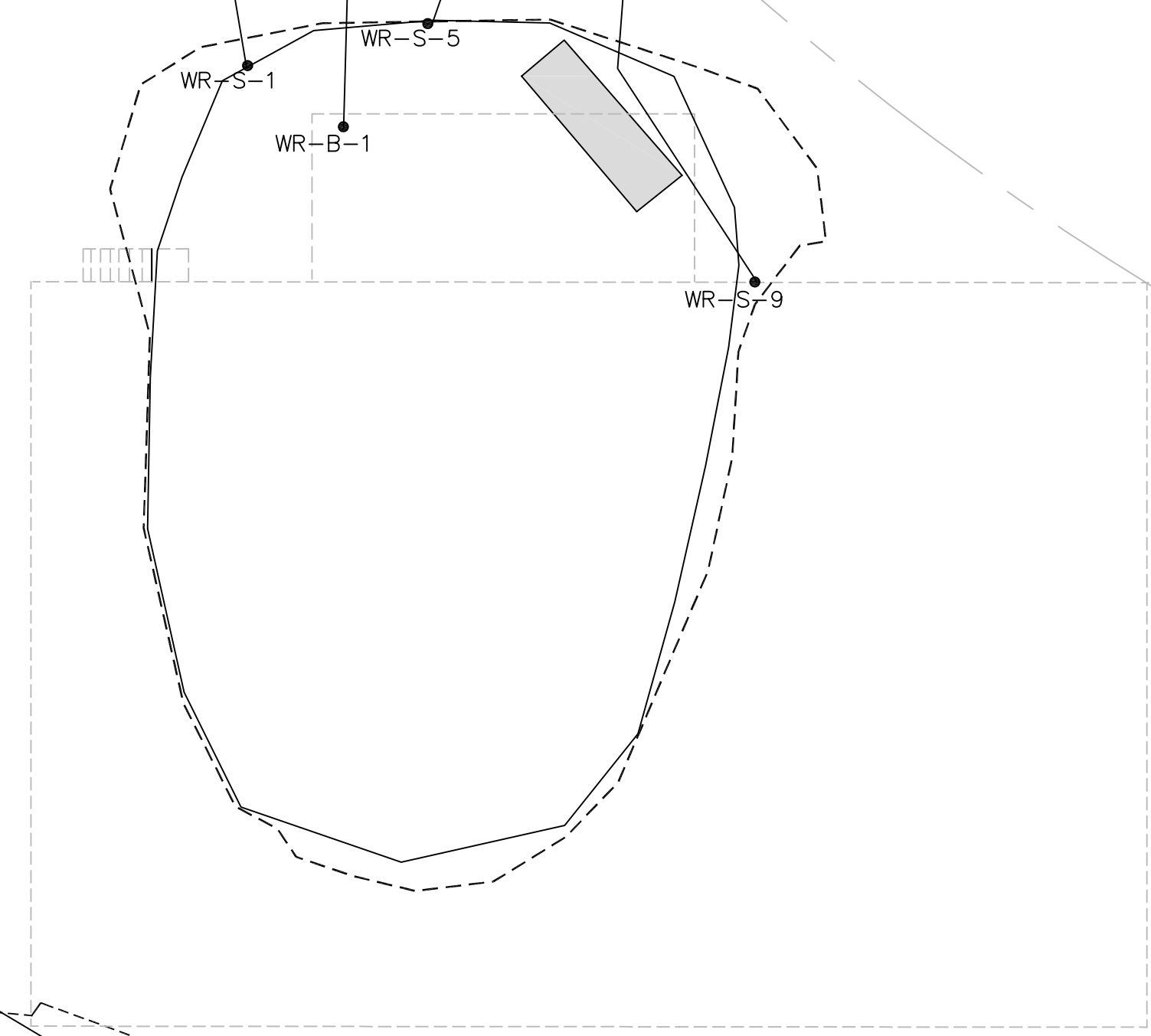




N 13° 57' E 125.5'

Sample Lab Sample Number	Protection of Ground Water (mg/Kg)	WR-S-1	WR-B-1	WR-S-5	WR-S-9
		B4222-02	B4275-02	B4275-01	B4275-06
Field Measured Sample Depth (ft)		11.5-12.0	18.0-18.5	16.5-17.0	16.5-17.0
conc.		mg/kg	mg/kg	mg/kg	mg/kg
Date		11/9/2010	11/16/2010	11/16/2010	11/18/2010
Acenaphthene	98	0.27 J	0.37 U	0.37 U	0.89 J
Acenaphthylene	107	0.35 U	0.37 U	0.37 U	0.37 U
Anthracene	1,000	0.2 J	0.37 U	0.37 U	0.61 J
Benzo(a)anthracene	1	0.35 U	0.37 U	0.37 U	0.1 J
Benzo(a)pyrene	22	0.35 U	0.37 U	0.37 U	0.058 J
Benzo(b)fluoranthene	1.7	0.35 U	0.37 U	0.37 U	0.082 J
Benzo(g,h,i)perylene	1,000	0.35 U	0.37 U	0.37 U	0.047 J
Benzo(k)fluoranthene	1.7	0.35 U	0.37 U <td 0.37 U	0.37 U	
Chrysene	1	0.35 U	0.37 U	0.37 U	0.14 J
Dibenz(a,h)anthracene	1,000	0.35 U	0.37 U	0.37 U	0.37 U
Fluoranthene	1,000	0.1 J	0.37 U	0.37 U	0.45 J
Fluorene	386	0.55 U	0.37 U	0.37 U	2.2 J
Indeno(1,2,3-cd)pyrene	8.2	0.35 U	0.37 U	0.37 U	0.37 U
Naphthalene	12	0.35 U	0.37 U	0.37 U	2.8 J
Phenanthrene	1,000	1.5 J	0.37 U	0.37 U	8.9 D
Pyrene	1,000	0.15 J	0.37 U	0.37 U	1.2 J
Total Concentration	500	54.77	0.3	0.86	52.4 D
Total TICs	NS	25.68	0.78	5.54	15.76

WASH RACK AREA



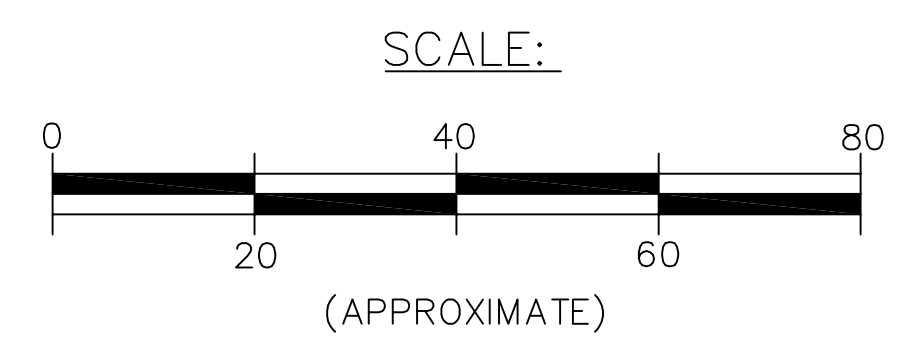
PETROLEUM TANK AREA

WASTE OIL TANK AREA

DRIVEWAY

DICKSON STREET

- 8,000 GALLON UST REMOVED DURING SOIL REMEDIATION
- PLANNED EXCAVATION AREAS
- ACTUAL EXCAVATION AREAS
- WR-S-1 SOIL SAMPLE LOCATION NOT IN EXCESS OF PROTECTION OF GROUNDWATER OR UNRESTRICTED USE STANDARD



Bernard T. Delaney  
Professional Engineer  
N.Y. Lic. No. 060784-1

PROVAN FORD			
NEWBURGH	ORANGE COUNTY	NEW YORK	
POST EXCAVATION SOIL ANALYTICAL RESULTS (SVOCs)			
FIGURE 7	REVISED BY: TSC	DWN BY: HIM	CHK'D BY: MSR
	SCALE: AS SHOWN 4/5/11	03/03/09	4/27/11
<b>FIRST ENVIRONMENT</b>		BOONTON	NEW JERSEY

N 76° 00' W 317.45'

S 76° 02' E 207.75'

SHED