Appendix A
Investigation Scope of Work

Division of Environmental Remediation

## **Site Investigation - Scope of Work**



# Riverview Industrial Center 5335 River Road Town of Tonawanda Erie County, New York

March 2009

New York State Department of Environmental Conservation Region 9 270 Michigan Avenue

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#### 1.0 SITE INVESTIGATION OBJECTIVES

The overall objective of the Site Investigation is to obtain information sufficient to determine the presence of environmental contamination at the Riverview Industrial Center Site that may deter or prevent future redevelopment.

The specific objectives of this investigation are to:

- evaluate the site to determine if hazardous substances are present,
- determine the nature and extent of contamination at the site, including the presence of asbestos in site buildings;
- evaluate groundwater flow patterns across the site;

These objectives will be determined through a soil boring and test pit program, the analysis of soil, waste, sump water, groundwater, sludge and asbestos samples collected during the Site Investigation. The specific responsibilities of the NYSDEC and its Prime Contractor are given in Section 4.0 of this Scope of Work. The NYSDEC is the lead agency for this investigation.

#### 2.0 SITE DESCRIPTION

The Riverview Industrial Center is a former oil storage facility and is a parcel that is 25.2 acres in size. The site is bordered on the north by River Road and the Niagara River, the south by vacant wooded land and the Enbridge Energy Tonawanda Station, to the east by an abandoned former steel recycling facility and to the west by Riverview Commerce Park. Property uses in the area are typically commercial and recreational. Refer to Figure 1 for location map.

#### 3.0 SITE HISTORY

The Riverview Industrial Center is an abandoned oil storage facility which has remained vacant and underutilized since the early 1990's. Records indicate that the site was utilized for oil storage since 1937 by various owners. The parcel approximates an elongated "C" shape with only the portion abutting River Road having been developed. Refer to Figure 2 for site diagram. The developed portion of the site contains a two story 10,460 sf vacant building, truck loading racks along River Road and one 5,000,000 gallon aboveground oil storage tank. Historical records indicate that there were 10 additional tanks above ground tanks at one time with an estimated combined storage

capacity of 11,8000,000 gallons which were removed around 1994. Earthen berm areas can be identified on site which were the containment structures for the storage tanks. Significant suspected belowground infrastructure exists on site including an oil/water separator at the loading rack area along River Road, an estimated 10,000 gallon heating oil tank adjacent to the building, 2 - 3,000 gallon gasoline/diesel tanks in the north west area of the site, an oil/water separator and 4,000 gallon holding tank for the site sewer located behind the tank farm area. In addition a site drainage system runs down the center of the site and numerous underground piping systems may exist.

#### 4.0 SCOPE OF WORK

To meet the study objectives, an investigation will be completed at the Riverview Industrial Center Site. Activities to be completed during the Site Investigation include the following: (1) a detailed property and topographic survey, (2) a detailed asbestos survey, (3) test pit excavations, (4) soil boring program using direct push methods, (5) monitoring well installation, (6) redeployment of 4 existing site wells and (7) collection of environmental samples for chemical analysis. These activities are described in more detail in the following sections.

The Department will task a Standby Investigation & Remediation Contractor to complete the following activities as part of the proposed Site Investigation:

- subcontract with a surveyor licensed in the State of New York to generate a detailed site map, including topography, and the location of all test pits, soil borings, and existing and new monitoring wells (4.1);
- provide and mobilize a direct-push unit to the site to complete approximately 35 soil borings to 8 feet depth (4.3);
- provide and mobilize equipment to excavate an estimated 25 test pits to a maximum depth of 10′ (4.3):
- provide and mobilize a rotary drill rig to the site to install four monitoring wells with locking caps to a maximum depth of 25 feet (4.4);
- provide a geologist to complete stratigraphic logs and well construction diagrams during the soil boring, test pit and well installation activities;
- collect up to 20 surface soil samples at the direction of the NYSDEC (4.2);

- collect up to 3 surface water samples at the direction of the NYSDEC (4.2);
- collect up to 8 groundwater samples from the existing and new monitoring wells
   (4.4.4);
- collect water, sediment and NAPL (if present) samples from one storm sewer manhole
   at the direction of the NYSDEC (4.5);
- collect water, sediment/sludge and NAPL (if present) from each oil/water separator
   (4.5);
- collected water, sludge and product sample (if present) from each underground storage tank (4.5);
- provide a technician during the site investigation program to collect samples, complete the appropriate paper work, and transport the samples and paper work to the analytical laboratory; and
- provide a technician and appropriate equipment to develop the four existing and four new monitoring wells installed during the Site Investigation.

Specific details of the work to be completed during the Site Investigation, including those activities to be conducted by the Standby Investigation & Remediation Contractor, are described in the following sections.

The project schedule for completion of the required work shall be:

•	Complete site survey	May 15, 2009
•	Complete field work	May 29, 2009
•	Analytical data availability	July 17, 2009
•	Complete Asbestos Survey	July 31, 2009
•	Complete DUSR Aug	gust 14, 2009
•	Submit Final Report	gust 31, 2009

#### 4.1 Detailed Property Survey and Mapping

A detailed map of the Riverview Industrial Center Site does not exist. The Standby Investigation & Remediation Contractor shall retain a surveyor licensed in the State of New York to complete the survey and base map, which should include all structures at and near the site. The base map shall be developed in AutoCAD format (version 2005 or earlier).

Following the completion of the Site Investigation field activities, the surveyor shall be tasked to survey the following:

- horizontal locations and ground surface elevations of all surface soil, soil borings and test pit locations completed during the Site Investigation;
- horizontal locations and vertical elevations of all monitoring wells (new and existing).
  This shall include the ground surface elevation and the elevation of the inner PVC riser of each well.

All soil boring, test pit, sample and well locations shall be added to the base map.

Vertical control shall be established to the nearest  $\pm 0.1$  foot for all ground surface elevations. Monitoring well riser elevations shall be reported to the nearest  $\pm 0.01$  foot. Elevations shall be determined relative to the North American Vertical Datum of 1988 (NAVD 88), with reference made to an existing monument in the vicinity of the site. Horizontal coordinates shall be given in the State Plane East Zone (feet), North American Datum (NAD) of 1983 to an accuracy of  $\pm 0.5$  foot.

At the completion of all surveying activities, the surveyor shall submit the final maps to the NYSDEC in both hard copy and electronic formats (AutoCAD version 2005 or earlier). (when practical) and condition of ACM. The report shall include inspection forms, a figure showing sampling and ACM locations, photographs, and credentials of the inspection personnel.

#### 4.2 Surface Soil and Surface Water Samples

At the direction of the NYSDEC representative, twenty (20) surface soil and five (5) surface water and two (2) sediment samples will be collected from throughout the site to evaluate potential direct contact exposures. The locations of these samples will be determined in the field. Approximate sample locations are indicated on Figure 3. The surface soil and sediment samples will be collected from 0" - 2" depth following the removal of the vegetative cover, if present, and shall be collected prior to implementing the soil boring program to avoid cross contamination.

The surface soil samples shall be collected by with appropriate sampling equipment and placed into laboratory supplied, pre-cleaned sample jars. The jars shall be labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to TestAmerica in Amherst, New York, a NYSDEC contract laboratory. The NYSDEC shall be responsible for obtaining the appropriate sample bottles from the lab. All invoicing from TestAmerica shall be completed in accordance with its Standby Contract with the NYSDEC.

All samples shall be analyzed for Target Compound List (TCL) semivolatile organic compounds, TCL pesticides, TCL PCBs and Target Analyte List (TAL) metals.

#### 4.3 Soil Boring and Test Pit Program

Up to 45 direct push soil borings will be performed in the paved areas of the site, adjacent to the suspected underground tank locations and in the undeveloped area behind and to the south of the site. Up to 22 test pits will be excavated with a back hoe capable of excavating to a depth of 10 feet. Approximate location of the soil borings and test pit locations are shown on Figure 4: the final locations will be field determined by the NYSDEC representative. Based upon visual and/or olfactory evidence, and at the direction of the NYSDEC field representative, additional soil borings or test pits may be completed to help delineate the areal extent of waste materials encountered during the investigation.

The Standby Investigation & Remediation Contractor shall be responsible for identifying and avoiding all underground utility lines in the areas where soil borings are to be completed, and for clearing vegetation to the soil boring locations for drill rig access.

#### **4.3.1** Sample Collection and Analysis

Using direct-push technology, continuous soil cores shall be collected with dedicated acetate liners. The Standby Investigation & Remediation Contractor shall be responsible for opening these liners. Each boring shall be advanced to approximately 8 feet in depth, for the purpose of geologic logging and subsurface soil and/or waste collection. Soil cores shall be screened for organic vapors using a photoionization detector (PID) supplied by the Standby Investigation & Remediation Contractor. If no evidence of contamination is present, a composite sample from the entire length of the soil core shall be collected. Samples shall be collected from every soil boring and test pit. The NYSDEC representative will select approximately 25 samples from the most contaminated interval (based upon instrument readings, visible staining, odors, etc.) for chemical analysis. Additional samples may be collected if multiple or distinct zones of gross contamination are encountered.

Samples shall be collected by the Standby Investigation & Remediation Contractor in consultation with the NYSDEC field representative and placed into laboratory supplied, pre-cleaned sample jars. The jars shall be labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to TestAmerica in Amherst, New York. All invoicing from TestAmerica shall be completed in accordance with its Standby Contract with the NYSDEC.

All samples collected during the soil boring program shall be analyzed for TCL volatile and semivolatile organic compounds, TCL pesticides, TCL PCBs and TAL metals.

#### 4.3.2 Completion of the Soil Boring and Test Pit Program

Upon completion of the soil boring and test pit program, the Standby Investigation & Remediation Contractor shall backfill each soil boring with excavated soil from the sample location. To the extent possible, the Standby Investigation & Remediation Contractor shall also restore the Site to conditions similar to those encountered prior to the start of the investigation. All excess material from the samples shall be spread on the ground surface near each boring, unless gross contamination is encountered; these samples shall be containerized in 55-gallon drums for later disposal. The Standby Investigation & Remediation Contractor shall supply the drums if needed.

#### 4.3.3 Geologic Logging

All geologic logging shall be completed by a geologist employed by the Standby Investigation & Remediation Contractor. At the completion of the Site Investigation field activities, the Standby Investigation & Remediation Contractor shall computer generate these logs and submit them to the NYSDEC in both hard copy and electronic formats.

#### 4.4 Groundwater Monitoring Wells

One of the objectives of the Site Investigation is to evaluate groundwater flow patterns across the site and assess overburden groundwater quality. To accomplish this objective, four (4) bedrock monitoring wells shall be installed during the investigation at the approximate locations shown on Figure 5. These locations, however, may be modified during the investigation based upon site conditions and access restrictions.

The Standby Investigation & Remediation Contractor shall be responsible for identifying and avoiding all underground utility lines in the areas where monitoring wells are to be installed, and for clearing vegetation to the well locations for drill rig access.

#### 4.4.1 Well Construction

The groundwater monitoring wells shall be installed by advancing 6¼-inch diameter augers with continuous split spoon sampling. All wells shall be constructed of 2" diameter threaded/flush joint Schedule 40 PVC screen (10 slot), threaded bottom plugs, and flush-threaded PVC riser pipe. The wells shall be constructed with 10-feet long screens spanning the saturated thickness of the water bearing zone encountered. An appropriately graded silica sand filter pack shall be placed around the screen and extend to approximately 2' above the screen. A 2' thick seal of bentonite pellets shall be placed above the filter pack, followed by a cement/5% bentonite grout mixture to grade. The bentonite pellets shall be allowed to hydrate prior to placing the cement/bentonite grout. The wells shall be completed by mounting a locking cap to the casing.

#### 4.4.2 Geologic Logging and Well Construction Diagrams

All geologic logging shall be completed by a geologist employed by the Standby Investigation & Remediation Contractor. The geologist shall also be responsible for completing well construction diagrams. At the completion of the Site Investigation field activities, the Standby Investigation & Remediation Contractor shall computer generate these logs and diagrams, and submit them to the NYSDEC in both hard copy and electronic formats.

#### 4.4.3 Well Development

Each newly installed monitoring well and the existing wells shall be developed, to the extent practicable, by bailing or pumping. A minimum of 10 well volumes shall be removed during well development, with the purged water monitored for pH, temperature, conductivity and turbidity. The purged water shall be containerized until appropriate disposal determinations are made. These data will be recorded on Well Development Logs. If it appears that turbidity, pH, and conductivity are stabilizing and will benefit from further development, additional well volumes shall be purged. All well development activities shall be completed by the Standby Investigation & Remediation Contractor. At the completion of the Site Investigation field activities, the Standby Investigation & Remediation Contractor shall computer generate the Well Development Logs and submit them to the NYSDEC in both hard copy and electronic formats. The existing monitoring wells construction diagram are found in Attachment A.

#### 4.4.4 Sample Collection and Analysis

Groundwater samples shall be collected from each of the monitoring wells installed during the Site Investigation and the 4 (four) existing monitoring wells. Prior to sampling, the wells shall be purged of at least three (3) well volumes, with the purged water monitored for pH, temperature, conductivity and turbidity. If it appears that turbidity, pH, and conductivity are stabilizing and will benefit from further purging, additional well volumes shall be purged. If the turbidity is greater than 50 NTU after purging, the well shall be sampled for all parameters except metals, which shall be collected within 24 hours after the completion of purging. This technique is intended to reduce the amount of suspended sediment in the metals sample. All purging activities shall be completed by the contractor personnel with dedicated disposable bailers, a submersible pump de-coned between well locations, or other appropriate purging method.

The groundwater samples shall be collected with dedicated disposable bailers and placed into laboratory supplied, pre-cleaned sample jars. The jars shall be labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to TestAmerica in Amherst, New York. The NYSDEC shall be responsible for obtaining the appropriate sample bottles from the lab. All invoicing from TestAmerica shall be completed in accordance with its Standby Contract with the NYSDEC.

All samples shall be analyzed for TCL volatile and semivolatile organic compounds, TCL pesticides, TCL PCBs and TAL metals.

#### 4.5 Oil/Water Separators, Site Sewer & Underground Storage Tanks

Two oil/water separators, a central site sewer and four underground storage tanks are thought to exist on site. Seven (7) water sediment/sludge and NAPL (if present) samples shall be collected from oil/water separators, site sewer and underground storage tanks. The approximate locations of the oil/water separators are shown on Figure 6.

The water, sediment/sludge and NAPL samples shall be collected with appropriate sampling equipment and placed into laboratory supplied, pre-cleaned sample jars. The jars shall be labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to TestAmerica in Amherst, New York. The NYSDEC shall be responsible for obtaining the appropriate sample bottles from the lab. All invoicing from TestAmerica shall be completed in accordance with its Standby Contract with the NYSDEC.

All samples shall be analyzed for TCL volatile organic compounds, TCL semivolatile organic compounds, TCL pesticides, TCL PCBs and TAL metals. Any NAPL samples collected will also be analyzed for petroleum identification.

#### 4.6 Health & Safety

It is anticipated that all field work can be performed in Level D personal protective equipment with Level C backup. All field work shall be conducted in accordance with the Health and Safety Plan included in Appendix B plus the contractor requirements. The Standby Investigation & Remediation Contractor shall provide appropriate personal protective equipment (PPE) suitable for working in and around contaminated liquids, wastes and soils. No confined space entry will be allowed.

All field personnel shall be informed of the location of the hospital listed in Appendix B, and be made aware of the list of emergency contacts contained therein. Field supervisory personnel shall become thoroughly familiar with the route to the hospital.

The Standby Investigation & Remediation Contractor shall be responsible for clearly delineating the work area to prevent unauthorized access. During all intrusive activities, continuous air monitoring shall be conducted for organic vapors by the Standby Investigation & Remediation Contractor to determine the necessity to upgrade personal protective equipment. The contractor shall also comply with the NYS DOH Community Air Monitoring Plan (CAMP) during all intrusive activities. The CAMP is included in Appendix C.

#### 4.7 **Decontamination**

The direct-push vehicle and sampling equipment shall be decontaminated prior to the implementation of any field activities. Reusable sampling equipment shall also be decontaminated between sampling locations. Decontamination wastes, used PPE, sampling equipment and garbage generated during the project shall be bagged and removed from the site at the end of each work day.

#### 4.8 Data Usability Summary Report (DUSR)

Following the receipt of the sampling data, a Data Usability Summary Report (DUSR) shall be prepared by an Environmental Scientist having a Bachelors Degree in a relevant natural or physical science or field of engineering and also having experience in environmental sampling, analysis and data review. The DUSR provides a thorough evaluation of analytical data without the

costly and time consuming process of third party data validation. The primary objective of the DUSR is to determine whether or not the data, as presented, meets the site specific criteria for data quality and data use. The Standby Investigation & Remediation Contractor shall retain an individual qualified to complete a DUSR.

The NYSDEC will provide the contractor with the data. The DUSR is developed by reviewing and evaluating the analytical data packages. During the course of this review the following questions must be asked and answered:

- is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?
- have all holding times been met?
- do all QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?
- have all data been generated using established and agreed upon analytical protocols?
- does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?
- have the correct data qualifiers been used?

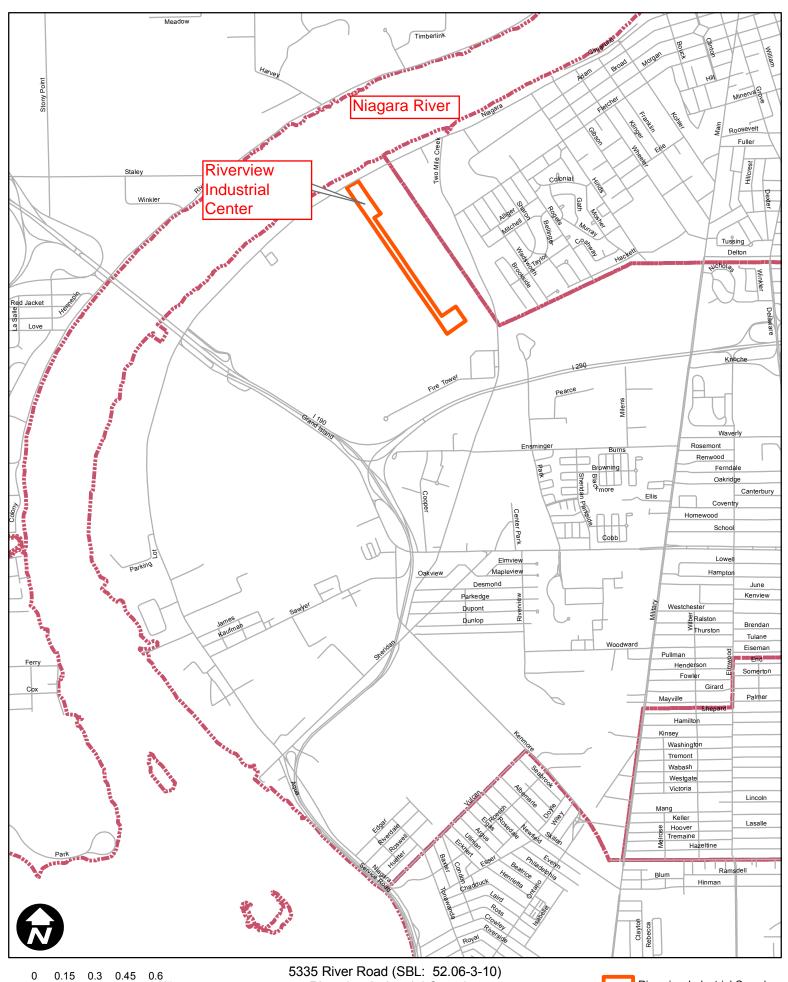
Any Quality Control exceedances must be numerically specified in the DUSR with the corresponding QC summary sheet from the data package attached to the DUSR. All data that would be rejected by the EPA Region 2 Data Validation Guidelines must also be rejected in the DUSR.

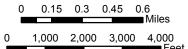
Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples and the analytical parameters. Data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data shall be discussed. The DUSR shall also include recommendations on resampling/reanalysis. All data qualifications must be documented following the NYSDEC ASP (1995 revision) guidelines.

### 4.9 Report Preparation

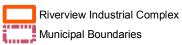
Following the completion of field activities, NYSDEC personnel shall prepare a Site Investigation Report that details the results of the investigation. The report shall include, at a minimum, the following:

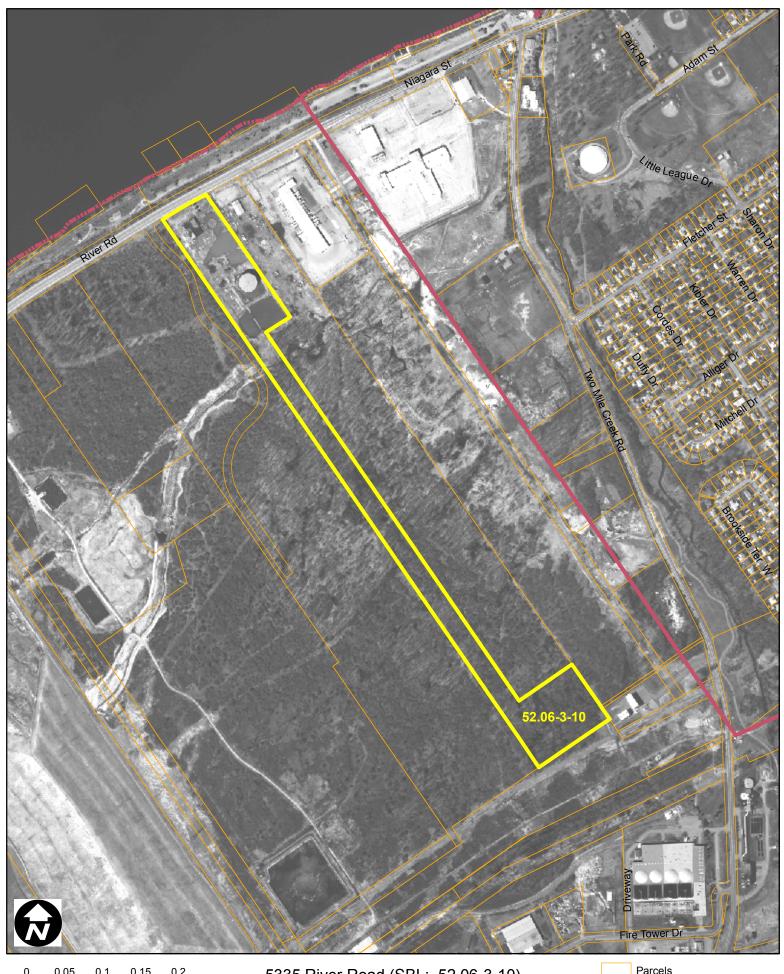
- Executive Summary and Introductory sections;
- a Geology and Hydrogeology section that describes the regional and site geology and hydrogeology;
- an Investigation Results section that describes the findings of the Site Investigation, including a summary of the analytical results obtained from various environmental media;
- a References section that contains a list of references utilized or cited in the report;
   and
- boring logs, well construction diagrams, analytical data and the DUSR shall be incorporated into the SI Report as appendices.

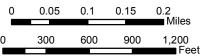




5335 River Road (SBL: 52.06-3-10)
Riverview Industrial Complex
Town of Tonawanda, NY 14150
Figure 1 Location Map

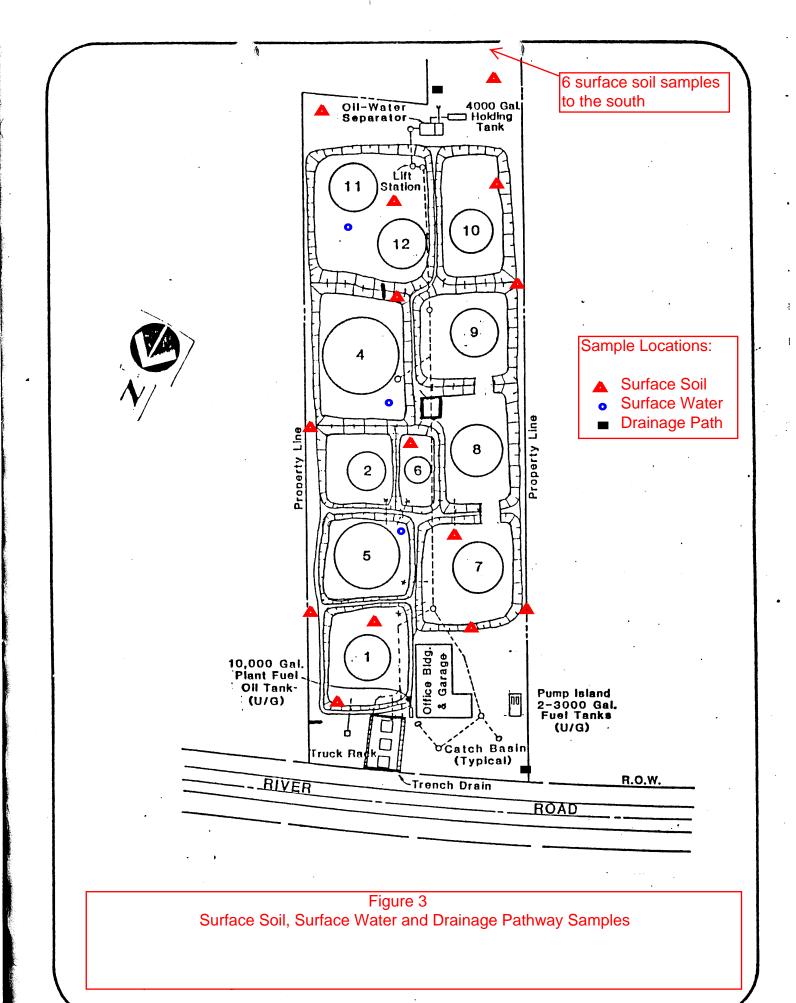


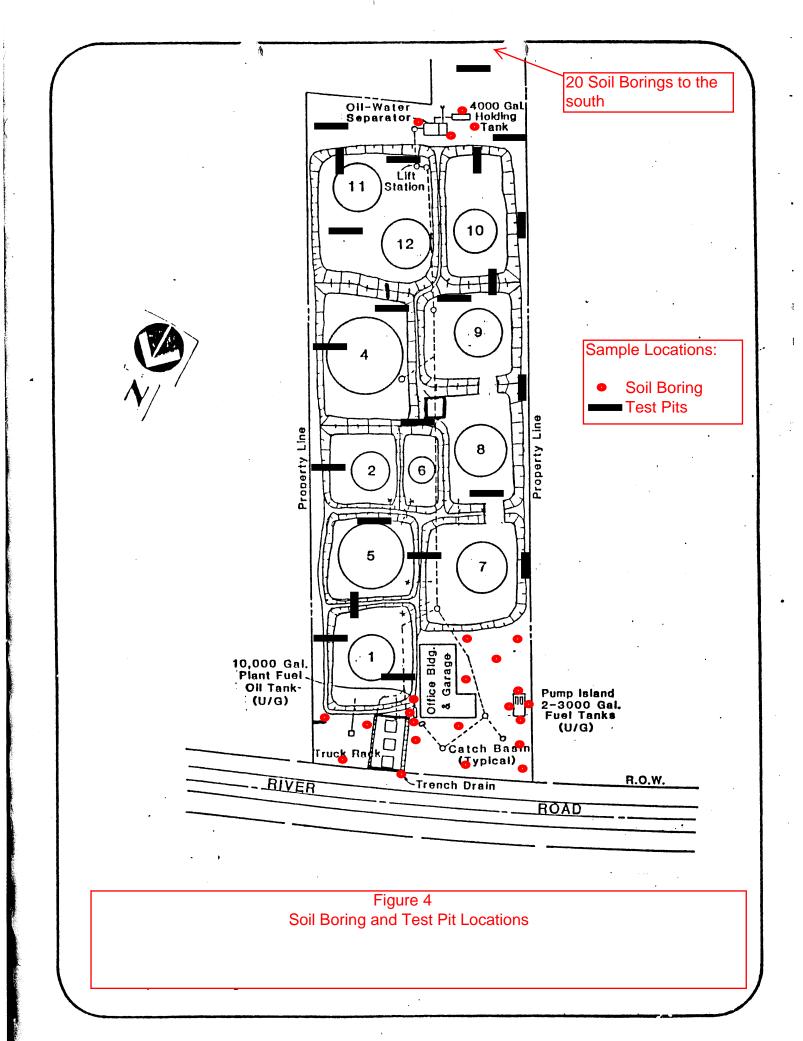


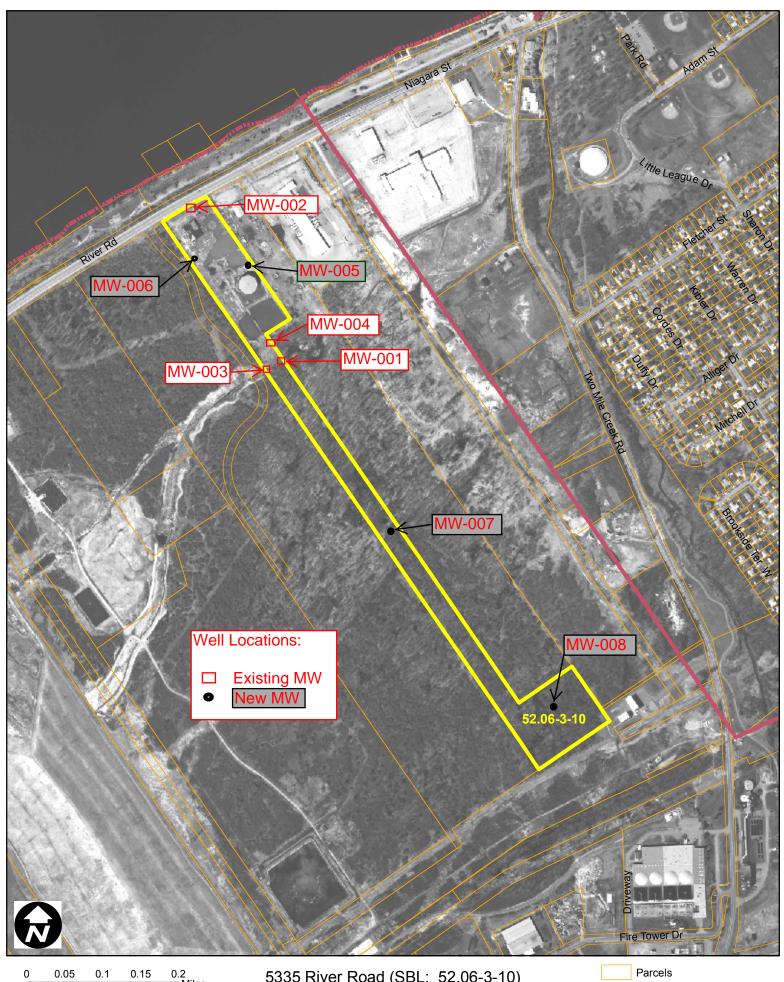


5335 River Road (SBL: 52.06-3-10)
Riverview Industrial Complex
Figure 2 Site Features Map





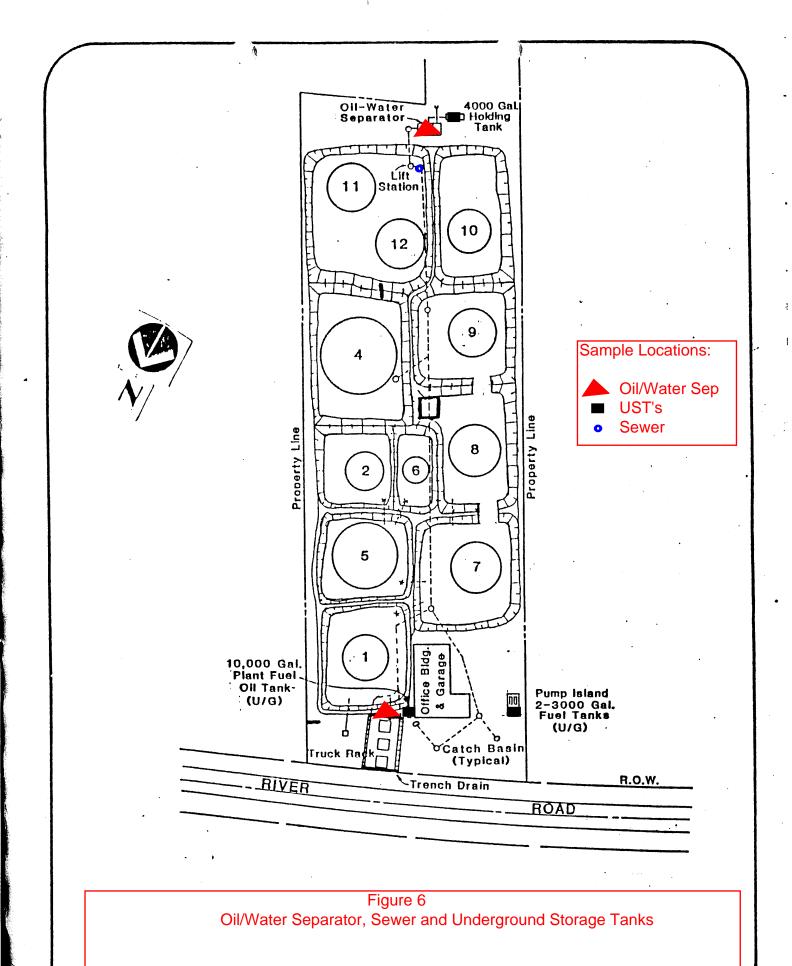




0 0.05 0.1 0.15 0.2 Miles 0 300 600 900 1,200 Feet

5335 River Road (SBL: 52.06-3-10)
Riverview Industrial Complex
Figure 5: Monitoring Well Locations





# Appendix A

**Existing Monitoring Well Construction Details** 

GROUND WATER MONITORING WELLS.



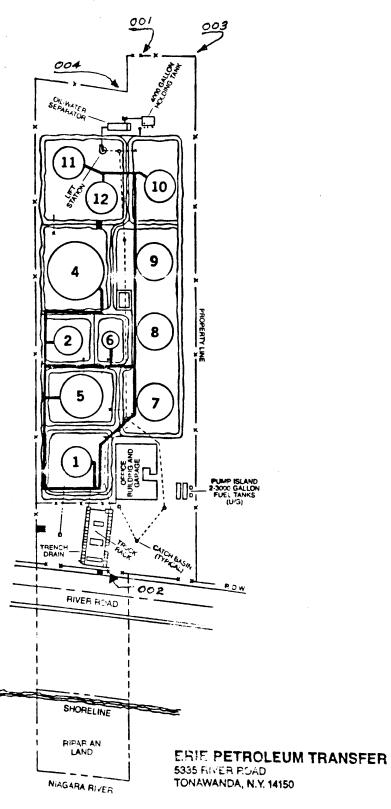


FIGURE 1: TYPICAL MONITORING WELL

WELL - 001

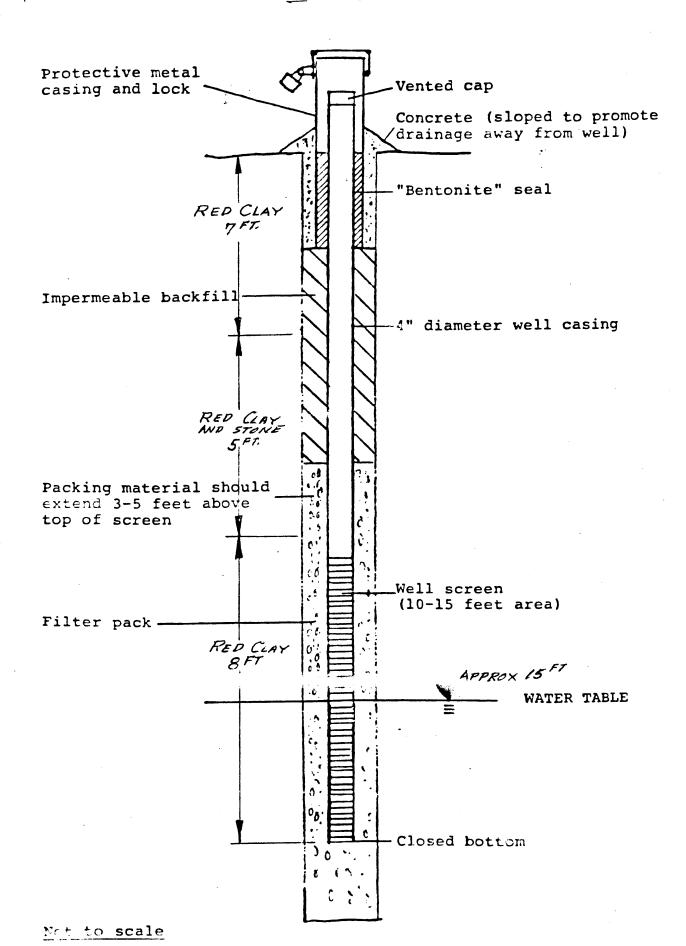


FIGURE 1: TYPICAL MONITORING WELL

WELL - OOZ

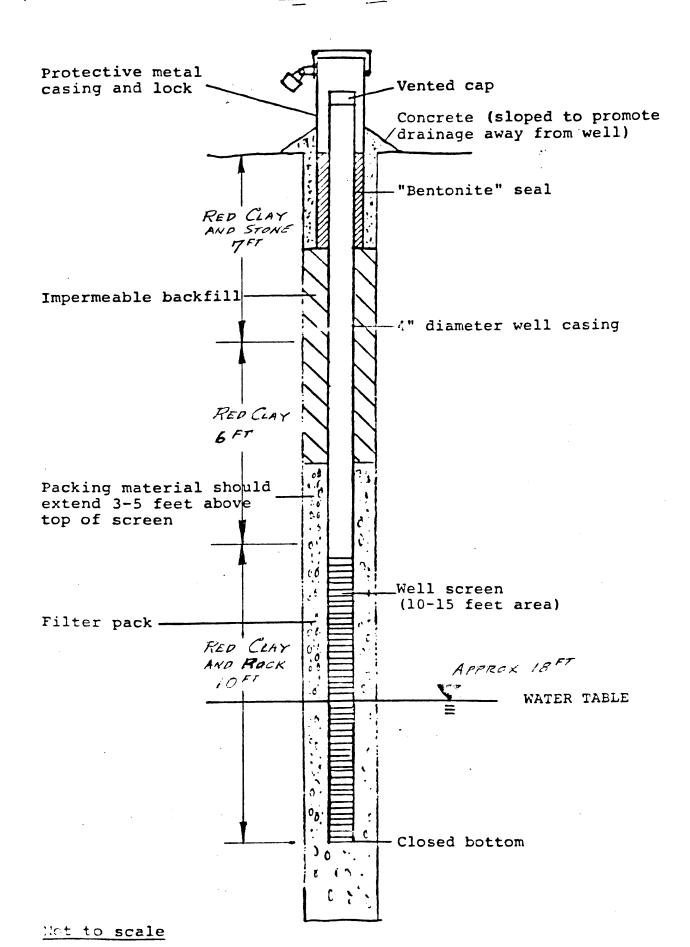


FIGURE 1: TYPICAL MONITORING WELL

WELL - 003

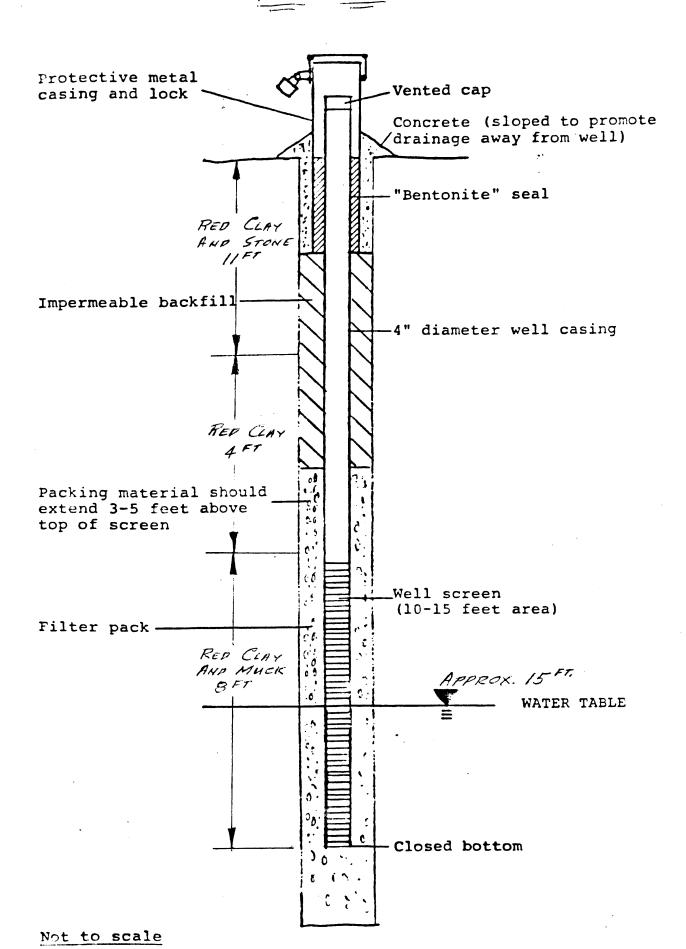
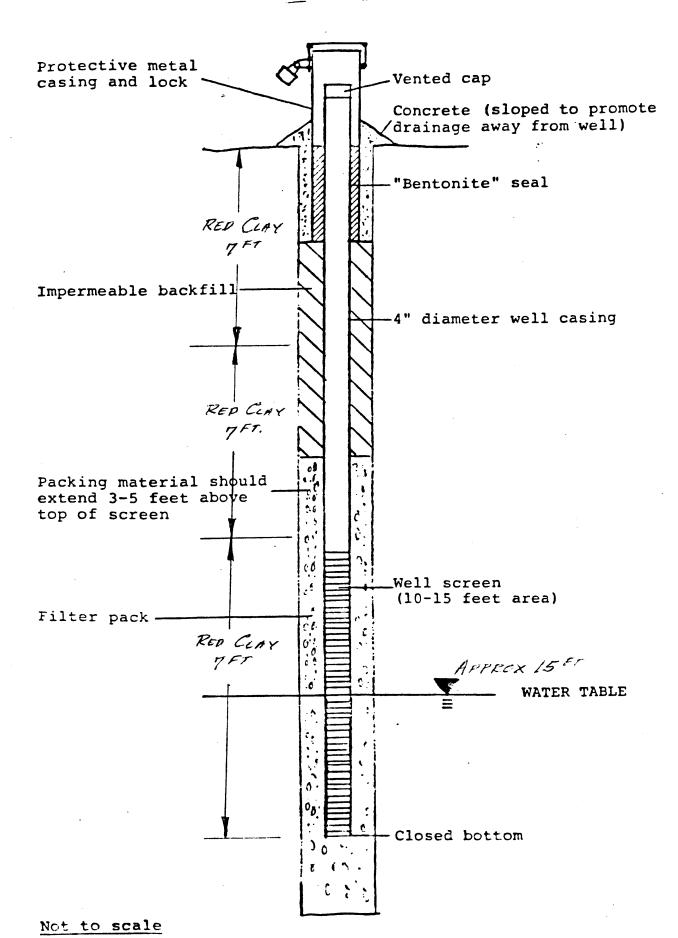


FIGURE 1: TYPICAL MONITORING WELL

WELL - 004



# Appendix B

**Health and Safety Plan** 

#### APPENDIX B

#### **HEALTH AND SAFETY PLAN**

This Health and Safety Plan was developed for use by all personnel involved in the Site Investigation of the Riverview Industrial Center Site. This plan provides only general guidance that should be supplemented by the Standby Investigation & Remediation contractor's corporate Health and Safety Plan.

#### **General Health and Safety Guidelines**

All work should be conducted in accordance with standard health and safety procedures for hazardous waste site work. All Personnel must have the 40-hour HAZWOPER training certification as required by 29 CFR 1910.120, and maintain this training by taking the annual 8-hour Refresher Course. The Standby Investigation & Remediation contractor shall provide, as necessary, appropriate personal protective equipment (PPE) suitable for working in and around contaminated liquids, wastes and soils. The Standby Investigation & Remediation contractor shall supply a photoionization detector (PID) for monitoring organic vapors, which shall be utilized to determine the necessity to upgrade PPE requirements.

It is anticipated that all field work can be performed in Level D personal protective equipment: steel toe shoes/boots, hard hat and latex gloves. The Standby Investigation & Remediation contractor shall ensure that sufficient personal protective equipment is available for all personnel prior to entering the exclusion zone. All appropriate PPE shall be donned, used and removed as described in the 40-hour training course. Air monitoring shall be conducted with a PID. An air-purifying respirator must be worn whenever there are sustained organic vapor concentrations of 5 ppm or above in the breathing zone.

#### **Emergency Telephone Numbers**

This section includes a list of emergency telephone numbers for use by all personnel involved in the Site Investigation.

Erie County Sheriff's Department	(716) 662-5554
Emergency Services	911
Kenmore Mercy Hospital	(716) 447-6131
Poison Control Center	(800) 222-1222
National Response Center	(800) 424-8802
Chemical Manufacturers Association Chemical Referral Center	(800) 262-8200
NYSDEC Region 9: Gregory Sutton	(716) 851-7220
NYSDOH Western Regional Office: Matthew Forcucci	(716) 847-4500
Underground Facilities Protective Org. (UFPO)	(800) 962-7962

#### **Medical Assistance**

The primary source of medical assistance during the Site Investigation of the Riverview Industrial Site is the following:

• Kenmore Mercy Hospital

2950 Elmwood Ave

Kenmore, New York 14217

Emergency Department: (716) 447-6131

This hospital is located approximately 1 mile east of the site. All personnel shall be familiar with the location of this hospital and know how to get there from the site. Directions to the hospital are given on the following page.

## **Appendix C**

## New York State Department of Health Community Air Monitoring Plan

#### Appendix 1A

#### New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

#### Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

#### VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for

an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

#### Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m³) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

# **Appendix D**

**Sample Collection Schedule** 

	Riverview Ind	ustrial Center San	nple Schedule
Media	Required Samples	Matrix	Analysis Required
Surface Soil	22	soil	TCL Semi-volatiles TAL Metals Pesticides PCBs
Surface Water	5	water	TCL Semi-volatiles TAL Metals Pesticides PCBs
Sub-Soil (soil borings and test pits)	25	soil	TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs
Groundwater	8	water	TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs
Oil/Water Separator	2	Water	TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs
		Sediment	TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs
		NAPL	TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs Petroleum Identification

Site Sewer	1	Water	TCL Volatiles
Site Sewer	1	vv ater	TCL Semi-volatiles
			TAL Metals
			Pesticides
			PCBs
		Sediment	TCL Volatiles
		Sedifficit	TCL Semi-volatiles
			TAL Metals
			Pesticides
			PCBs
		NAPL	TCL Volatiles
			TCL Semi-volatiles
			TAL Metals
			Pesticides
			PCBs
			Petroleum Identification
	l l		
Underground	4	Water	TCL Volatiles
	4	Water	TCL Volatiles TCL Semi-volatiles
Storage	4	Water	
	4	Water	TCL Semi-volatiles
Storage	4	Water	TCL Semi-volatiles TAL Metals
Storage	4	Water Sediment	TCL Semi-volatiles TAL Metals Pesticides
Storage	4		TCL Semi-volatiles TAL Metals Pesticides PCBs
Storage	4		TCL Semi-volatiles TAL Metals Pesticides PCBs TCL Volatiles
Storage	4		TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles
Storage	4		TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals
Storage	4		TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides
Storage	4	Sediment	TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs
Storage	4	Sediment	TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles
Storage	4	Sediment	TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles
Storage	4	Sediment	TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals Pesticides PCBs  TCL Volatiles TCL Semi-volatiles TAL Metals

Appendix B Investigation Report



#### SITE INVESTIGATION REPORT

Riverview Industrial Center Former Petroleum Distribution Terminal 5335 River Road Tonawanda, New York NYSDEC Spill #915225

#### PREPARED FOR:

#### **NYSDEC**

270 Michigan Avenue Buffalo, New York 14203

Report Date: March 4, 2010

#### OP-TECH ENVIRONMENTAL SERVICES INC.

500 Commerce Drive Amherst, New York 14228 (716) 525-1962

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#### **EXECUTIVE SUMMARY**

OP-TECH Environmental Services (OP-TECH) completed a Site Investigation at the Riverview Industrial Center located at 5335 River Road in Tonawanda, New York. This work was completed for Region 9 of the New York State Department of Environmental Conservation (NYSDEC). The Riverview Industrial Center is a former oil storage facility located on a 25.2 acre parcel of land off River Road. Property uses in the vicinity are typically commercial and recreational. The parcel is long and narrow, oriented northwest-southeast with wider portions of the parcel located on the northern and southern ends of the parcel.

The Riverview Industrial Center is an abandoned bulk oil storage facility which has remained vacant and underutilized since the early 1990's. Records indicate that the site was utilized for oil storage since 1937 by various owners. Only the portion of the property abutting River Road was developed. The developed portion of the site contained a two story 10,460 square foot vacant building, truck loading racks along River Road and one 5,000,000 gallon aboveground oil storage tank. Historical records indicate that there were 10 additional above ground tanks (ASTs) at one time with an estimated combined storage capacity of 11,800,000 gallons which were removed around 1994. Earthen berm areas were utilized onsite as containment structures for the above ground storage tanks. Most of this infrastructure has been removed by successive demolition events; however significant belowground infrastructure reportedly exists on site including an oil/water separator, underground piping and underground storage tanks (USTs).

The overall objective of the Site Investigation was to collect enough surface and subsurface information to evaluate the presence/absence of environmental contamination at the Riverview Industrial Center that could influence future development of the property. The following investigative activities were completed to evaluate site conditions and meet the objectives of the Work Plan:

- Preparation of a detailed property and topographic survey;
- Completion of soil borings to a depth of approximately eight feet using direct push technology;
- Completion of test pit excavations to a depth of approximately 10 feet in order to assess and quantify subsurface soil quality;
- Installation of new groundwater monitoring wells using a geotechnical drill rig equipped with hollow stem augers (HSAs);
- Reinstallation of one existing site well;
- Completion of stratigraphic logs and well construction diagrams for soil borings, test pits and installed groundwater monitoring wells;
- Collection of surface soil samples at the direction of the NYSDEC;
- Collection of surface water samples at the direction of the NYSDEC;
- Collection of groundwater samples from existing and new groundwater monitoring wells;
- Collect water, sediment and non-aqueous phase liquid (NAPL) samples from one storm sewer manhole at the direction of the NYSDEC:
- Collect water sediment/sludge and NAPL (if present) from each oil/water separator; and
- Collect water, sludge and product (if present) from each underground storage tank.

This field work was completed with geologists, hydrogeologist, technicians, laborers, drillers, and driller's assistants supplied by OP-TECH and CME Associates.

Twenty-two surface soil samples, four surface water and five sediment samples were collected at locations specified by the NYSDEC.

Forty-six direct push boring locations were advanced to a depth of approximately eight feet below ground surface across the site resulting in the collection of 25 soil samples for chemical analysis. Twenty-one test pits were excavated at locations primarily in the north half of the property. Nine soil samples were collected from the test pits for chemical analysis.

Four new groundwater monitoring wells were also installed at the site resulting in four soil samples for chemical analysis. In addition, groundwater samples were subsequently collected for analysis from the three existing site wells, the four new wells and one replacement well.

Water, sediment and NAPL samples were also collected from the oil/water separator, site sewer, the catch basin manhole, the mechanics pit, and five storage tanks.

Once the analytical results were received from the analytical laboratory, a data usability summary report (DUSR) was completed on the data to review data deficiencies, analytical protocol deviations and general quality control with respect to the data package.

Surface soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals. Review of the results from 22 surface soil samples indicates that VOCs were detected at low levels in only three of 22 samples; SVOCs were detected in most of the surface soils samples up to 73,760 micrograms per kilogram at SS-3. Pesticide concentrations in site surface soils ranged from non-detect at 12 of 22 locations, up to 230 micrograms per kilogram at SS-1. PCBs were detected in three of 22 samples, while metals detected in the surface soil samples were generally similar to eastern USA background concentrations.

Surface water samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Review of the results from four samples indicates that VOCs were detected at three sample locations; no SVOCs were detected; pesticides were detected in three of the four surface water samples; and no PCBs were detected.

Soil samples from the soil borings, were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Review of the results from 24 samples showed VOCs were detected in 17 of 24 samples; SVOCs were detected in 18 samples; pesticides were detected at nine of 24 samples; PCBs were detected in 2 of 24 samples; and metals were detected in all soils samples at concentrations which are similar to eastern USA background concentrations.

Soil samples from the test pits were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Review of the results from eight samples indicates the presence of VOCs from low to high concentrations in all samples; SVOCs detections in six of eight test pit samples; pesticide were detected in five test pit samples; PCB detections in five samples; and metals were detected in all samples at concentrations which are similar to eastern USA background concentrations.

Soil samples from the monitoring wells were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Review of the results from four samples indicates that VOCs were detected in only one of the four soil samples analyzed; SVOCs ranged from non-detect at MW-007, to 565 micrograms per kilogram at MW-005. Pesticides and PCBs were not detected in soil samples from the newly installed monitoring wells; and metals were detected at concentrations which are similar to eastern USA background concentrations.

Groundwater samples from the existing and newly installed monitoring wells were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. VOCs were not detected in four of the eight wells. VOC detections in the other four groundwater samples ranged from 0.53 to 7.13 micrograms per liter. SVOCs were detected in only one groundwater sample (MW-008) at a low concentration (3.1 micrograms per liter). Pesticides were detected in five of the eight groundwater samples at very low concentrations (0.020 to 0.135 micrograms per liter), while PCBs

were not detected in any of the eight groundwater samples. Six metals exceeded were detected at concentrations exceeding TOG 1.1.1 guidance for groundwater.

Non-aqueous phase liquid (NAPL) waste That was sampled had high levels of VOCs and SVOCs; no pesticides or PCBs, and low concentrations of a number of metals. The NAPL waste samples were identified as #2 and #4 fuel oil.

Aqueous samples from the oil/water separator, the sewer line and the mechanics pit showed no VOCs were present. SVOCs were detected in aqueous samples from manhole -2 and the mechanics pit. Low concentrations of pesticides were detected in the oil/water separator and manhole -1; and PCBs were also detected in the manhole -1 aqueous sample. Various metals were detected in all four samples from this group.

General site sediment samples and sediment from the catch basin sample were analyzed for VOCs, SVOCs, pesticides, PCBs and metals. The results indicate varying concentrations of VOCs, SVOCs, pesticides, and PCBs with metal generally similar to eastern USA background concentrations.

In general, the northern one-quarter of the site shows impacts from historic operations, whereas results from the chemical analysis of samples collected from the "neck" and southern block of the site shows few environmental impacts.

#### 1.0 INTRODUCTION

OP-TECH was contracted by Region 9 of the NYSDEC to complete a Site Investigation at the Riverview Industrial Center located at 5335 River Road, in the Town of Tonawanda, Erie County, New York. A Work Plan dated March, 2009 was provided by NYSDEC for OP-TECH to implement. A site walk through was completed in April, 2009; investigative field work started on May 4, 2009, and was completed on August 26, 2009. This report provides a summary of the field methods, the sample analytical methods, and the sample analytical results collected as part of this investigation. Per the NYSDEC's request, there are no conclusions or recommendations with this report, only presentation of the field methods and the analytical data.

#### 2.0 SITE DESCRIPTION

The Riverview Industrial Center is a former oil storage facility located on a 25.2 acre parcel off River Road. The site is bordered on the north by River Road and the Niagara River. To the south are vacant wooded land and the Enbridge Energy Tonawanda Station; to the east is an abandoned steel recycling facility; and to the west is Riverview Commerce Park. Property uses in the vicinity are typically commercial and recreational. (Figure 1).

The parcel is long and narrow, oriented northwest-southeast with wider portions of the parcel on the north and south ends that are connected by "narrow neck". The northern portion of the parcel is approximately 300 feet wide by approximately 1,000 feet in length; the central neck is approximately 150 feet wide and 3150 feet long; while the southern portion of the parcel is approximately 450 feet long and 600 feet wide.

#### 3.0 SITE HISTORY

The Riverview Industrial Center is an abandoned oil storage facility which has remained vacant and underutilized since the early 1990's. Records indicate that the site was utilized for oil storage since 1937 by various owners. The parcel approximates an elongated "C" shape with only the portion abutting River Road having been developed. The developed portion of the site contains a two story 10,460 square foot vacant building, truck loading racks along River Road and one 5,000,000 gallon aboveground oil storage tank. Historical records indicate that there were 10 additional above ground tanks (ASTs) at one time with an estimated combined storage capacity of 11,800,000 gallons which were removed around 1994. Earthen berm areas were utilized onsite as containment structures for the above ground storage tanks.

Significant suspected belowground infrastructure exists on site including an oil/water separator and piping in the loading rack area along River Road, an estimated 10,000 gallon heating oil tank adjacent to the building, 2 - 3,000 gallon gasoline/diesel tanks in the north west area of the site, an oil/water separator and 4,000 gallon holding tank for the site sewer located behind the tank farm area near the creek. In addition a site drainage system reportedly runs down the center of the site and numerous underground piping systems may also exist.

#### 4.0 SITE INVESTIGATION OBJECTIVES

The overall objective of the Site Investigation was to collect enough surface and subsurface information to evaluate the presence/absence of environmental contamination at the Riverview Industrial Center that could influence future development of the property. Specific objectives of the investigation included:

- Site evaluation to determine if hazardous substances are present;
- Determine the nature and extent of contamination at the site; and

• Evaluate groundwater quality and flow patterns.

These objectives were accomplished through completion of a soil boring and text pit program, collection of surface soil samples, installation of groundwater monitoring wells, collection and analysis of surface soil, subsurface soil, waste, sump water, surface water, groundwater, and sludge samples.

#### 5.0 SCOPE OF WORK

The following investigative activities were completed to evaluate site conditions and meet the objectives of the Work Plan:

- Preparation of a detailed property and topographic survey;
- Completion of soil borings to a depth of approximately eight feet using direct push technology;
- Completion of test pit excavations to a depth of approximately 10 feet in order to assess and quantify subsurface soil quality;
- Installation of new groundwater monitoring wells using a geotechnical drill rig equipped with hollow stem augers (HSAs);
- Reinstallation of one existing site well;
- Completion of stratigraphic logs and well construction diagrams for soil borings, test pits and installed groundwater monitoring wells;
- Collection of surface soil samples at the direction of the NYSDEC;
- Collection of surface water samples at the direction of the NYSDEC;
- Collection of groundwater samples from existing and new groundwater monitoring wells;
- Collect water, sediment and NAPL samples from one storm sewer manhole at the direction of the NYSDEC:
- Collect water sediment/sludge and NAPL (if present) from each oil/water separator; and
- Collect water, sludge and product (if present) from each underground storage tank.

This field work was completed with geologists, hydrogeologist, technicians and laborers drillers, and driller's assistants supplied by OP-TECH and CME Associates. The following sections of this report provide a detailed description of the activities that were required to complete this work.

#### 5.1 Detailed Property Survey and Mapping.

William Schutt and Associates, a New York State Licensed Surveyor was retained to construct a base map with all site structures (Figure 2 and 3). Included on this map are:

- Horizontal locations and ground surface elevations of all surface soil location, soil borings, and test pit locations that were completed during the Site Investigation; and
- Horizontal locations and vertical elevations of all monitoring wells (new and existing), including ground surface elevation and the elevation of the inner PVC riser for each well.

In addition, NYSDEC requested a topographic map to be developed for the front or northern part of the property. This map is attached as Figure 4.

Vertical control was established to the nearest +/- 0.1 foot for all ground surface elevations, as well as for well riser elevations relative to the North American Vertical Datum of 1988 (NAVD 88), with reference made to an existing monument in the vicinity of the site. Horizontal coordinates are in the State Plane East Zone (feet), North American Datum (NAD) of 1983 to an accuracy of +/- 0.5 foot.

#### 5.2 Surface Soil and Surface Water Samples

On May 15 through May 29, 2009, twenty-two surface soil, four surface water and five sediment samples were collected at locations specified by the NYSDEC. Surface soil locations are denoted in the text, on report tables and on report figures as "SS" samples. Surface soils were collected as grab samples from ground surface to a depth of approximately two inches directly into clean glassware supplied by the contract laboratory.

Surface water samples were also collected at locations specified by the NYSDEC and are denoted in the text, on report tables, and on report figures as "SW" samples.

Sediment samples were also collected at locations specified by the NYSDEC and are denoted in the text, on report tables, and on report figures as "SED" samples.

Once collected, these samples were placed in clean glassware provided by the contract laboratory, labeled with a unique sample identification code (i.e., SS-X. SW-X or SED-X), packed in a cooler with ice, and shipped under chain-of-custody control to the contract laboratory. These samples were analyzed for Target Compound List (TCL) semivolatile organic compounds (SVOCs), TCL pesticides, TCL PCBs and Target Analyte List (TAL) metals. Table 1 provides a list of the surface soil and surface water samples.

#### 5.3 Soil Boring and Test Pit Program

From May 4 through May 7, 2009, forty-six direct push soil borings were advanced at the site. Twenty-one soil borings were advanced in the north area, 15 soil borings were advanced in the "neck" of the property, and six soil borings were advanced in the southern property block (Figure 2). Soil boring locations were selected by the NYSDEC and sample locations are annotated as SB-1 through SB-25, and B-1 through B-21. Soil borings were advanced with a Geoprobe® Model 6610DT unit to depths of approximately eight feet, and several to 12 feet. Continuous sample cores of overburden were collected using a MacroCore barrel with clean dedicated acetate liners. Sample cores were screened for organic vapors using a photoionization detector (PID). If no evidence of contamination was present, then a composite soil sample from the entire length of the soil core was collected. Recovered soil samples were characterized with respect to predominant soil type (i.e., gravel, sand, silt, clay) color, and relative moisture content (i.e., moist, wet, saturated). This information was then placed in the field book so that geologic logs of subsurface materials could be generated. Samples for chemical analysis were not collected from each boring. Table 1 provides a list of the soil boring samples, and the soil boring logs are attached as Appendix A.

Twenty-one test pits were excavated at the locations shown on Figures 2 and 3 using a Case 580L tire mounted back hoe. Test pits were excavated to a depth of approximately 10 feet below ground surface at locations selected by the NYSDEC. A test pit log was sketched for each test pit to describe general subsurface conditions, and to describe to location of sampling points prior to pit closure. Samples for chemical analysis were not collected from all test pits. Table 1 provides a list of the test pit samples, and the test pit logs are attached as Appendix B.

To the extent possible, soil cores and test pit spoils were placed back into the borings or test pits, and/or spread on the ground surface near each boring or test pit.

Twenty-five soil samples were collected from the soil borings; eight soil samples and one water sample were collected from the test pits for chemical analysis, based on PID readings, the presence of visible staining, and odors. Soil samples were placed in clean glassware provide by the contract laboratory using protocols previously discussed, and were analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs and TAL metals.

Samples were placed in clean glassware provided by the contract laboratory, labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to the contract laboratory.

#### 5.4 Groundwater Monitoring Wells

Four new groundwater monitoring wells were installed at the locations shown on Figure 2. A CME 55 track mounted drill rig was used to install the wells to a depth of approximately 30 feet below ground surface. The wells were installed with 4 ¼ inch hollow stem augers (HSAs) along with continuous split spoon sampling. Table 2 provides a summary of the groundwater monitoring well numbers and construction information. Boring logs for the groundwater monitoring wells are attached as Appendix C.

The wells were constructed of two inch diameter threaded flush joint schedule 40 PVC screen with 0.010 inch slots, threaded bottom plugs, and flush-threaded PVC riser pipe. Well screens were 10.0feet spanning the saturated thickness of the water bearing zone encountered. A filter pack consisting of #2 silica sand was placed in the annular space between the well screen and the borehole to approximately two feet above the well screen. A two foot thick bentonite seal comprised of bentonite pellets was then placed above the filter pack. The bentonite pellets were then allowed to hydrate. Once hydrated, a 5% bentonite-cement grout was placed in the annular space to the ground surface. An above ground protective casing with a locking cap was then in cement at the surface to protect each well at the surface. Well construction diagrams are also attached to the boring logs in Appendix C.

Newly installed groundwater monitoring wells that could be accessed by truck were developed using a "Vac" truck. The well contents were evacuated, and the wells were then allowed to recharge. This process was repeated multiple times until the water clarity was good. More remote wells were hand developed using bailers. Well development water was containerized in 55-gallon drums pending analytical results. The four existing site groundwater monitoring wells were also developed for sampling. Existing site wells were also "jetted" with compressed air to loosen sediment that had settled to the bottom of the well and compacted. During this process, one of the existing wells (MW-2) was noted to be damaged. This well was subsequently decommissioned with a Dietrich 120 truck mounted drill and replaced with monitoring well MW-2R. MW-003 could not be entered and is collapsed at 17.0 feet. Well development information ism summarized on Table 2A.

Once developed, the four existing site groundwater monitoring wells and the four newly installed wells were sampled using dedicated bailers. Three well volumes of water were removed prior sample collection. Groundwater samples were placed in clean glassware supplied by the contract laboratory. The jars were labeled with a unique sample identification code, packed on ice in a cooler and shipped to the contract laboratory under chain-of-custody control. Groundwater samples were analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs and TAL metals.

#### 5.5 Oil/Water Separators, Site Sewer and Underground Storage Tanks

One oil/water separator, one catchment basin manhole, a central site storm sewer, four USTs, one AST, and the mechanic's pit were sampled as part of field investigative activities (Figure 3). Four water (OWS-1, MH-1, MH-2, and T-4 NAPL); two sediment/sludge sample (SS-1, mechanic's pit) and five NAPL samples (T-1 through T-5) were collected as part of this task, which are described on Table 1.

Tanks 1 and 2 (estimated at 4,000 gallons each) are USTs located along the western property boundary approximately 150 to 200 feet south of River Road between soil borings SB-2 and SB-8. Tank 3 (estimated at 10,000 gallons) is also a UST located along the east side of the former building near soil boring SB-21. Tank 4 is also a UST (estimated at 12,000 gallons), and is located due west of the oil/water separator between borings

SEPNW and SEPSE. Tank 5 was an above ground storage tank (AST) at the southeast corner of the former building that has been removed.

Samples were placed in clean glassware and shipped to the contract laboratory using the same sampling protocols used for other sample collection events. Samples were analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, and TAL metals. NAPL samples were also analyzed for petroleum identification.

#### 5.6 Suspected Drum Area and Tank 10 Lagoon Sampling

During late July and early August, AST #4 (a 5,000,000 tank) was decommissioned and removed from the site. During post removal grading activities, a suspected drum burial area was uncovered by the excavation contractor. This was further investigated on August 26, 2009, when six test trenches were excavated to investigate the area AST just south of AST #4. Several drums were uncovered in the test trenches that were excavated (Figure 3). In addition, groundwater with free product entered Test Trench 3. Soils from test trenches were left piled at the site and a sample was collected for disposal purposes. Soil sample analyses include TCLP benzene, TCLP lead, flashpoint, total petroleum hydrocarbons (TPH) and pH for disposal purposes.

The tank 10 lagoon was also investigated on August 26, 2009 to characterize sediment quality. One sediment sample was collected using a backhoe from the location shown on Figure 3. The sediment sample was given a unique sample identification codes (L10-1), and was analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, PCBs and TAL metals. The addendum report along with analytical results for these samples is also provided as an addendum to this report (Appendix E).

#### **6.0 SAMPLE ANALYSIS**

A total of 89 investigative samples were collected as part of this project. For each sampling event, the same protocols were followed:

- Dedicated or clean sampling equipment was used to collect each sample so that cross contamination could not take place;
- Each sample was given a unique sample identification code;
- Each sample was placed in clean glassware provided by the contract laboratory, then placed in a cooler and packed on ice;
- Coolers were shipped to the contract laboratory to undergo the respective analytical procedure; and
- All samples were shipped using chain-of-custody protocols.

Test America in Amherst, New York provided all analytical services for the soil, sediment, sludge, surface water, groundwater and NAPL samples that were collected as part of this project.

#### 7.0 DATA USABILITY SUMMARY REPORT (DUSR)

Once the analytical results were received for Test America, a data usability summary report (DUSR) was completed to determine whether or not the data meets the specific criteria for data quality by USEPA Region 2 Data Validation Guidelines. Data deficiencies, analytical protocol deviations and quality control problems were identified and the effect on the data was discussed. The DUSR was completed and has already been forwarded to the NYSDEC under separate cover.

#### 8.0 FINDINGS AND RESULTS

#### 8.1 Geology

Based on observations collected during the installation of monitoring wells, the completion of soil borings and tests pits, subsurface conditions across the site are variable. The site can be roughly broken into two separate parts spatially, with the small stream in the middle of the site located south of monitoring wells MW-001 and MW-004 and north of MW-007.

Northern Quarter. The area north of the stream is dominated by fill materials especially noted in the former above ground storage tank area as documented in test pit logs, and select direct push boring logs. The subsurface in this area was a non-homogeneous mixture of gravels, sands clays and silts. The areas where the test pits were completed were likely reworked to create the berm system that is present on site, with a number of test pits (TP-4, TP-5, TP-6, TP-12, TP-16, TP-18 and TP-19) showing evidence of petroleum impacts. PID readings in these test pits ranged from non-detects (below 10 ppm) to 1,000+ ppm at TP-10 at a depth of 10 feet below grade. Just north of the small creek is reportedly an area where construction and demolition debris was buried and covered with a veneer of topsoil.

Direct push soil borings labeled "SB" borings were completed north of the small creek and the former AST dike areas. Soils in these borings were primarily a mixture of clays and silts with several notable areas of sediment with different composition as follows: SB-5 and SB-6 contained areas of silty sand at 1 to 5 feet below grade and SB-7, which had silty sand located at 5 to 9 feet below grade. Boring SB-12 is predominantly sand between 1 and 10 feet below grade. There are other sandy clay areas in borings SB-19 through SB-21 at depths ranging between 1 and 12 feet below grade.

In the northernmost portion of the site, elevated PID readings above site background were observed in borings SB-1, SB-5, SB-7 through SB-10, SB-13 and 14, and SB-16 through SB-19.

Southern Three Quarters of the Site. In the area south of the small creek, soils are dominated by clays and silts. Direct push borings labeled "B"s were advanced in this area. Borings B-4 through B-10 and B-17 through B-21 were primarily sandy silts and clays. The remaining borings consist of silty clays and clayey silts with reduced amounts of sand. There were no elevated PID results from soil borings in this area of the site.

Bedrock was not encountered in any of the groundwater monitoring wells that were installed. Thus, bedrock exists at a depth greater than 32 feet below grade.

#### 8.2 Hydrogeology

Depth to groundwater was highly variable across the site, and was encountered as deep as 29.04 feet at MW-006, to a shallow depth of 5.12 feet at MW-2R (Table 2). Depth to groundwater exceeded 25 feet at two locations (MW-006 and MW-007), but in general was less than 10 feet below grade. Groundwater elevations ranged from 555.16 feet at MW-007, to a high of 592.89 feet at MW-008. Groundwater elevations are highest in the southern portion of the site (MW-008 and MW-009), and slope northward to the central area of the site, where the groundwater elevation is 555.16 feet at MW-007. Groundwater elevations then generally increase toward the northern end of the site to between 567.15 feet at MW-006, to 579.31 feet at MW-004. MW-005 at 556.05 feet and MW-002 at 591.46 are exceptions to this general trend.

#### 8.3 Site Infrastructure

During August 2009, most of the infrastructure on the northern developed portion of the site was razed. The two story 10,460 square foot vacant building, truck loading racks along River Road and the 5,000,000 gallon aboveground oil storage tank were all decommissioned. The USTs are still in place at this time, as are the earthen berm areas that were utilized onsite as containment structures for the above ground storage tanks.

#### 8.4 Surface Soil Sample Analytical Results

VOC concentrations in surface soils were non-detect in 19 of 22 samples, with VOCs detected in samples SS-1, SS-5 and SS-11 up to 67.1 micrograms per kilogram. Acetone in SS-11 exceeded the Part 375 soil cleanup objective (SCO) for unrestricted use.

SVOC concentrations in surface soil samples are summarized on Table 3B. SVOC concentrations in site surface soils ranged from non-detect at two locations (SS-5 and SS-15), up to 19 SVOCs detected in the other site surface soil samples at concentrations up to 73,760 micrograms per kilogram at SS-3. Seven SVOCs exceeded the Part 375 SCO for unrestricted use.

Pesticide concentrations in site surface soils are summarized on Table 3C. Pesticide concentrations in site surface soils ranged from non-detect at 12 of 22 locations, up to 230 micrograms per kilogram at SS-1. Except for 1.8 micrograms per kilogram at SS-2, all pesticide values were estimated values. However, two pesticides exceeded the Part 375 SCO for unrestricted use.

PCB concentrations in site surface soils are summarized on Table 3D. PCB concentrations in site surface soils ranged from non-detect at 20 of 22 locations, to 100.0 micrograms per kilogram at SS-2. There were no exceedances of the Part 375 SCO for unrestricted use.

Metals concentrations in site surface soils are summarized on Table 3E, and generally are similar to eastern USA background concentrations.

#### 8.5 Surface Water Sample Analytical Results

VOC concentrations in site surface water samples are summarized in Table 4A. VOCs were not detected in sample SW-1, but were detected in the other three surface water samples at estimated (J) values. Detections were below TOGS 1.1.1 Guidance values.

SVOC concentrations in surface water samples are summarized on Table 4B. There were no SVOCs detected in the four surface water samples.

Pesticide concentrations in site surface water are summarized on Table 4C. Pesticides were not detected in surface water sample SW-1, but were detected at estimated (J) values in three of the four surface water samples at up to 0.074 micrograms per liter. All detections were below TOG 1.1.1 guidance values.

PCB concentrations in site surface water are summarized on Table 4D. There were no PCBs detected in the four surface water samples collected.

Metals concentrations in site surface water are summarized on Table 4E.

#### 8.6 Boring Sample Analytical Results

VOC concentrations in soil borings are summarized on Table 5A. VOC concentrations in the 24 soil boring samples ranged from non-detect at seven locations, up to 31,194 micrograms per kilogram at SB-18 (1-4). Acetone, benzene, ethylbenzene and total xylenes exceeded Part 375 SCOs for unrestricted use at seven locations.

SVOC concentrations (summarized on Table 5B) in soil boring samples ranged from non-detect at six locations, up to 138,240 micrograms per kilogram at SB-1 (1-4). Benzo(a)pyrene and chrysene exceeded Part 375 SCOs for unrestricted use at SB-16.

Pesticide concentrations (summarized on Table 5C) in soil boring samples ranged from non-detect in nine of 24 samples, up to 8.1 micrograms per kilogram at SB-18 (1-4). There were no exceedances of Part 375 SCOs for unrestricted use.

PCB concentrations (summarized on Table 5D) in soil boring samples ranged from non-detect at 22 of 24 locations, up to 29.0 micrograms per kilogram at SB-12 (1-3). There were no exceedances of the Part 375 SCOs for unrestricted use.

Metals concentrations are summarized on Table 5E, and generally are similar to eastern USA background concentrations.

#### 8.7 Monitoring Well Soil Sampling Results

VOC concentrations (summarized on Table 5A) in soil samples from the four new monitoring wells ranged from non-detect at MW-005, MW-006, MW-007, to 1.2 micrograms per kilogram at MW-008 with no exceedance of Part 375 SCOs for unrestricted use.

SVOC concentrations in soil samples from the four new monitoring wells (summarized on Table 5B) ranged from non-detect at MW-007, to 565.0 micrograms per kilogram at MW-005 with no exceedance of Part 375 SCOs for unrestricted use..

Pesticides were not detected in soils samples from the four new monitoring wells (summarized on Table 5C).

PCBs were also not detected in soil samples from the four new monitoring wells (summarized on Table 5D).

Metals concentrations in soil samples from the four new monitoring wells are summarized on Table 5E and generally are similar to eastern USA background concentrations.

#### 8.8 Test Pit Sample Results

All eight soil samples and one water sample from test pits had detections of VOCs. The water sample (WS4P) had a total concentration of VOCs of 1,505.80 micrograms per liter. VOCs in test pit soil samples ranged from a low concentration of 26.0 micrograms per kilogram at TP-6P, to a high concentration of 223,710.0 micrograms per kilogram at TP-21. Acetone, benzene, ethylbenzene, toluene and total xylenes were detected at concentrations above Part 375 SCOs for unrestricted use.

SVOC concentrations in the eight test pit soil samples(summarized on Table 5B) ranged from non-detect at TP-4 and TP-6B, up to 134,540 micrograms per kilogram at test pit TP-21. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and naphthalene were detected in TP-21 at

concentrations that exceeded Part 375 guidance for unrestricted use, while naphthalene was detected in TP-6 above Part 375 SCOs for unrestricted use.

Pesticide concentrations in the eight test pit soil samples (summarized on Table 5C) ranged from non-detect at three locations, to 509.0 micrograms per kilogram at test pit TP-6. There were no exceedances of part 375 SCOs for unrestricted use.

PCB concentrations in soil samples from the eight test pit samples (summarized on Table 5D) ranged from non-detect at five locations, up to 20,000.0 micrograms per kilogram at TP-6, which exceeds the Part 375 SCOs for unrestricted use.

Metals concentrations in soil samples from the 21 test pits are summarized on Table 5E and generally are similar to eastern USA background concentrations.

#### 8.9 Groundwater Sample Results

VOC concentrations in groundwater samples from the four new monitoring wells and four existing wells (summarized on Table 6A) ranged from non-detect in four of the eight wells sampled, to 7.13 micrograms per liter at MW-007. None of the VOCs detected were BTEX compounds. Only two VOCs were detected below TOGS 1.1.1 groundwater guidance values.

SVOC concentrations in groundwater samples from the eight wells sampled (summarized on Table 6B) were not detected in seven of the eight wells. Only one SVOC was detected at a J value of 3.1 micrograms per liter in MW-008 below the TOGS 1.1.1 groundwater guidance value.

Pesticide concentrations in groundwater samples from the eight wells sampled (summarized on Table 6C) ranged from non-detect in three of the eight wells up to 0.135 micrograms per liter at MW-005. Endosulfan at MW – 005 exceeded the TOGS 1.1.1 groundwater guidance value.

PCBs were not detected in any of the eight groundwater samples that were analyzed.

Metals concentrations in groundwater samples from the four new monitoring wells and four existing wells are summarized on Table 6E. Six metals exceeded the TOGS 1.1.1. groundwater guidance values.

#### 8.10 Underground Storage Tank Samples

Seven VOC were detected in UST NAPL waste samples (summarized on Table 7A) consisting mostly of benzene, hexane, toluene and xylene compounds. Ten SVOCs were also detected in UST NAPL samples (summarized on Table 7B). Pesticides were not analyzed for in the NAPL samples and there were no PCBs found in the NAPL samples (Table 7D). Metals concentrations in UST NAPL samples are summarized on Table 7E.

Material identification testing on the NAPL samples revealed the following:

- Sample T-1 NAPL is from #2 fuel oil;
- Sample T-2 NAPL is from #4 fuel oil;
- Sample T-3 NAPL is from #2 fuel oil;
- Sample T-4 NAPL is from #4 fuel oil; and
- Sample T-5 NAPL is from #4 fuel oil.

#### 8.11 Oil/Water Separator, Site Sewer, Mechanics Pit

VOCs were not detected in water samples from the oil/water separator, site sewer and mechanics pit (summarized on Table 8A).

SVOC concentrations in water samples from the oil/water separator, site sewer and mechanics pit (summarized on Table 8B) ranged from non-detect in the oil/water separator and manhole 2, up to 22.36 micrograms per liter in manhole 1 and 2.9 micrograms per liter at the mechanics pit. All values were estimated (J) values. Four SVOCs exceeded TOGS 1.1.1 water guidance values at MH-1.

Gamma chlordane was the only pestici8de detected in this sample set at values below TOGS 1.1.1 guidance values (Table 8C).

PCB concentrations in water samples from the oil/water separator, site sewer and mechanics pit were non-detect in OWS-1, MH-2 and the mechanics pit. PCB concentrations in MH-1 were 0.33 micrograms per kilogram as an estimated (J) value (summarized on Table 8D).

Metals concentrations in water samples from the oil/water separator, site sewer and mechanics pit are summarized on Table 8E.

#### 8.12 Sediment Samples, Outflow and Catch Basin Samples

VOC concentrations in sediment samples from this group (summarized on Table 9A) were non-detect in sample SED-3-OF (the outflow), and up to 492.5 micrograms per kilogram in the SED-2 sample. Total VOCs in the other samples in this category ranged from 5.2 micrograms per kilogram at SED-4 (estimated J value) to 492.5 micrograms per kilogram in the SED-2 sample.

SVOC concentrations in sediment samples from this group of samples (summarized on Table 9B) ranged from 374 micrograms per kilogram at SED-5, to 1,054,300 micrograms per kilogram at SED-2. Most of the samples required dilution to attain usable values and are reported as estimated (J) values.

Pesticide concentrations in sediment samples from this group (summarized on Table 9C) were non-detect at SED-3-OF and SED-5, but ranged from 3.8 micrograms per kilogram at SED-4 up to 142 micrograms per kilogram at SED-6.

PCB concentrations in sediment samples from this group were non-detect at SED-3-OF, SED-5, SED-6 and SS-1. PCB concentrations were 46 micrograms per kilogram at SED-4, and 290 micrograms per kilogram at SED-2 (Table 9D).

Metals concentrations in sediment samples from this group are summarized on Table 9E, and were generally similar to eastern USA background levels.

#### 9.0 ANALYTICAL REPORTS

Analytical laboratory reports from Test America, the contract laboratory, have been forwarded to the NYSDEDC in advance of this report (Appendix D).

#### 10.0 SUMMARY

The site investigation for the Riverview Industrial Center was completed in accordance with the NYSDEC Work Plan dated March of 2009. OP-TECH completed this work at the direction of NYSDEC Region 9 personnel. Chemical analysis of samples was completed by Test America, under direct contract to the NYSDEC. Sample results indicate impacts from historic operations on the northern half of the property, with few impacts on the southern half of the property, south of the small creek that crosses the property.

The DUSR and additional sampling completed the last week of August was forwarded to the NYSDEC under separate cover.

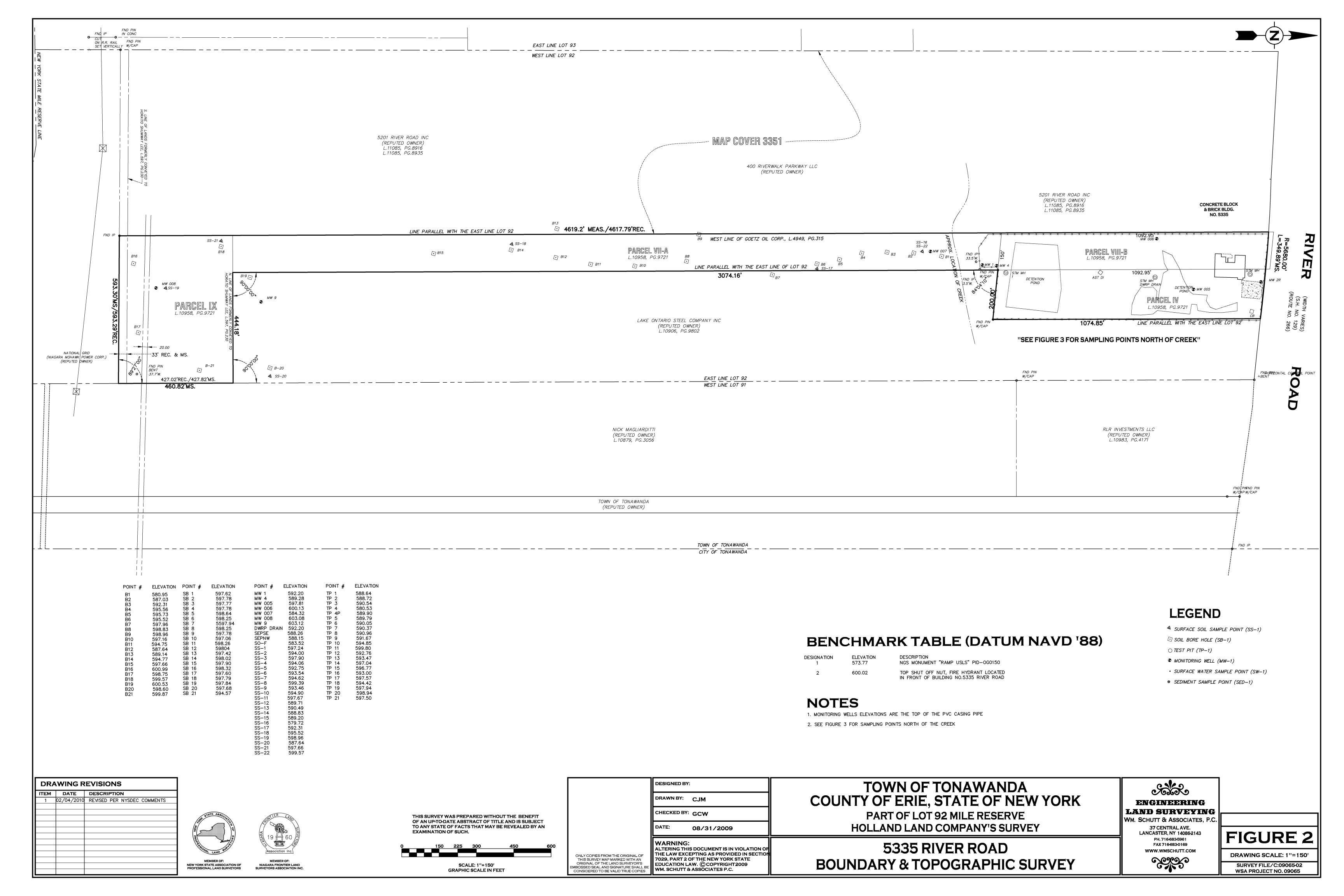
## **FIGURES**

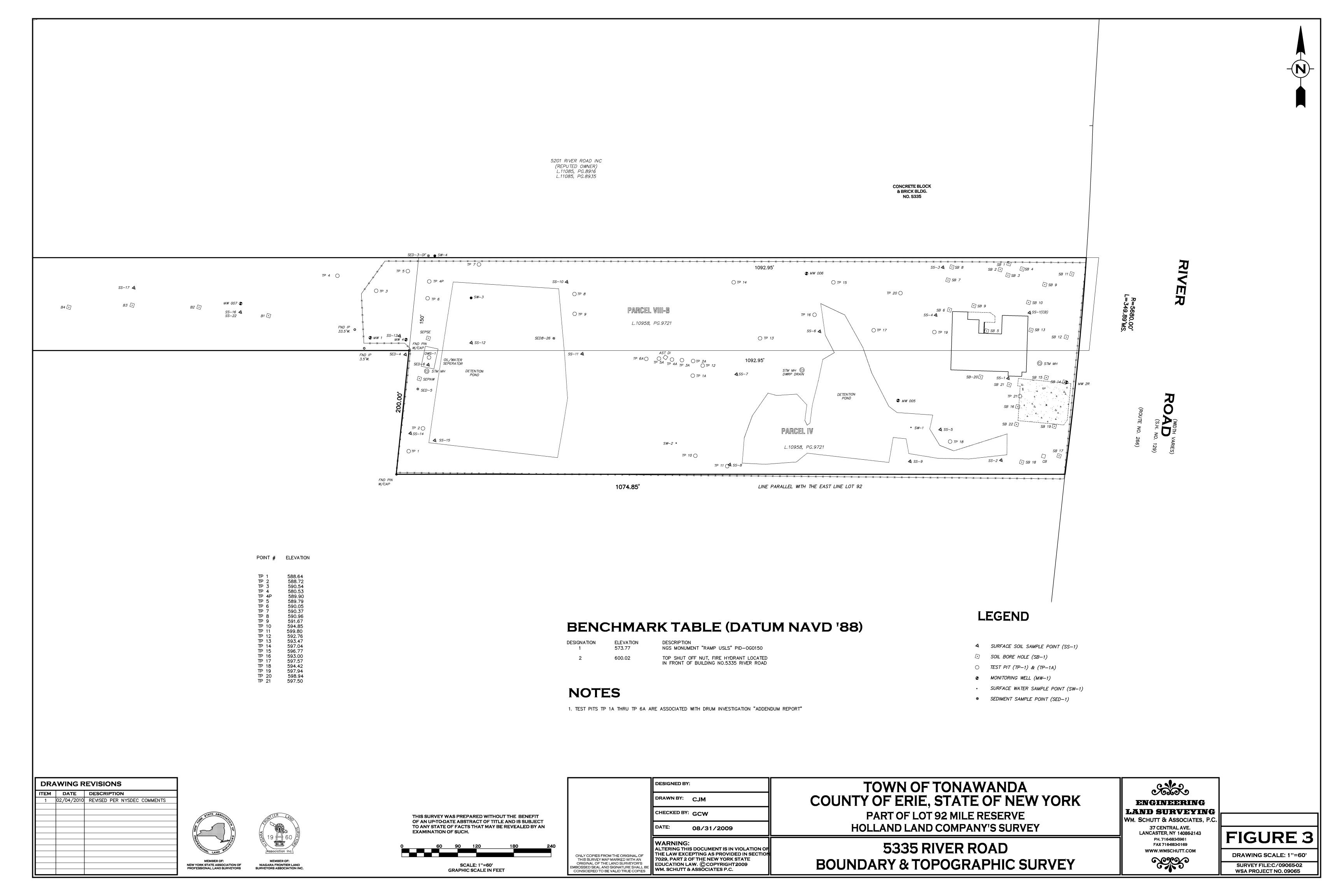


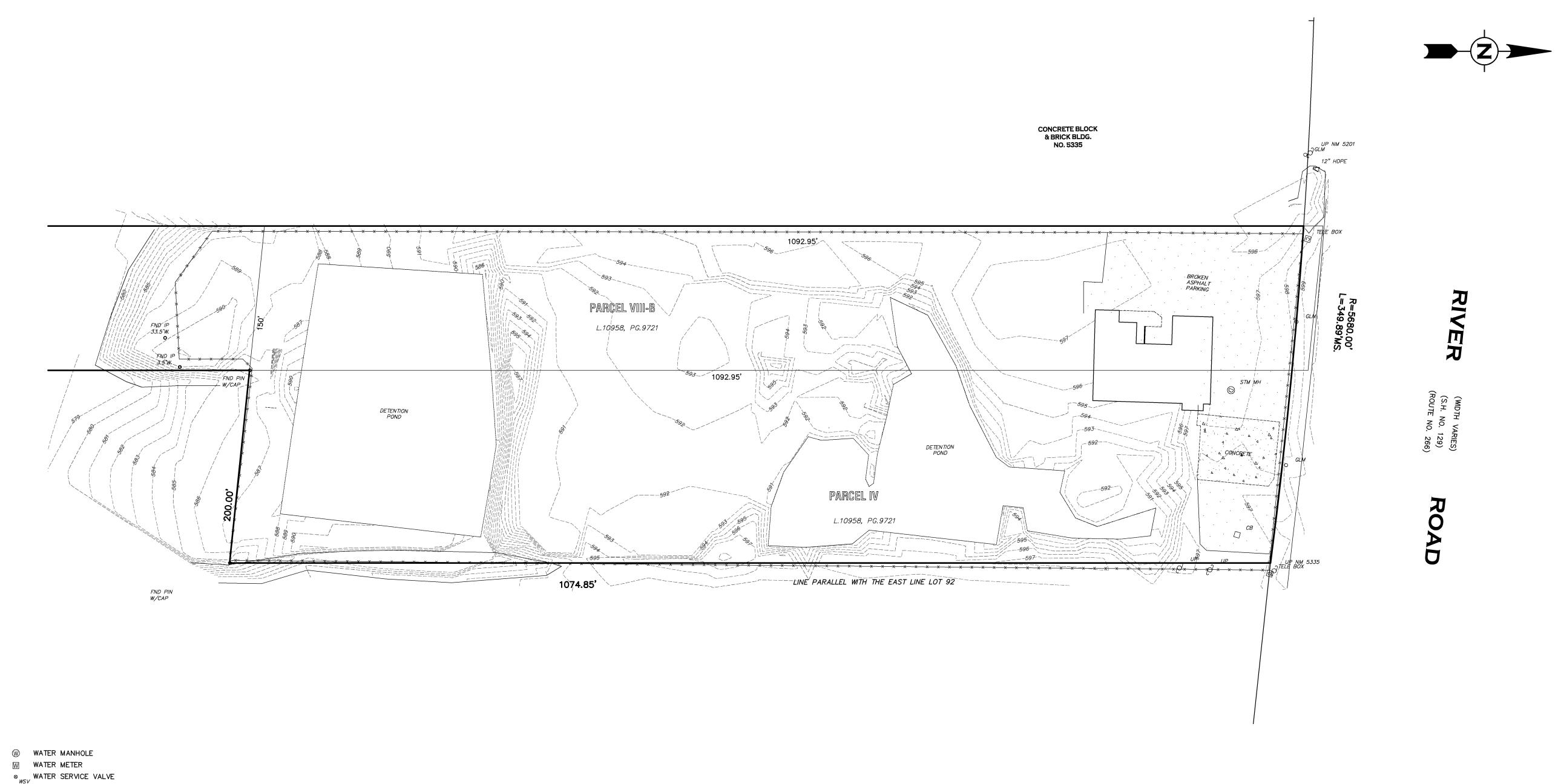
0 0.05 0.1 0.15 0.2 Miles 0 300 600 900 1,200 Feet 5335 River Road (SBL: 52.06-3-10) Riverview Industrial Complex

Figure 1: Site Location Map

Parcels
Riverview Industrial Complex
Municipal Boundaries







# **LEGEND**

- BM BENCHMARK

  BOL BOLLARD

  CB CATCH BASIN

  CO CLEANOUT

  COMMUNICATIONS BOX

  COMMUNICATIONS MANHOLE

  COLM COMMUNICATIONS MARKER

  CVT COMMUNICATIONS VAULT

  CONIFEROUS SHRUB

  CONIFEROUS TREE

  CUT

  DECIDUOUS SHRUB
- □ CUT
   □ DECIDUOUS SHRUB
   □ DECIDUOUS TREE
   □ DRILL/AUGER HOLE

ANTENNA/DISH

© ELECTRIC METER

☐ END SECTION

© FILLER CAPS

© ELECTRIC MANHOLE

- © FILLER CAPS

  °<sub>FP</sub> FLAG POLE

  <sup>™</sup> FLOOD LIGHT
- © GAS MANHOLE

  © GAS METER

  ® GSVGAS SERVICE VALVE
- © GAS VALVE

  SOUTH WIRE

HANDICAP PARKING

- A<sub>HYD</sub>HYDRANT ○ PROPERTY MONUMENT
- □v MAILBOX

  ⚠ MONUMENT AS DESCRIBED

  ○OLMOIL LINE MARKER
- P PHONE BOOTH
  > PIPE OUTLET

  •POSTPOST

  PVT POWER VAULT
- RAILROAD CONTROL BOX
  S SANITARY SEWER MANHOLE
  SCUPPER
- SIGN (SINGLE POLE)
  SIGN (DOUBLE POLE)
  SIGN (TRIPLE POLE)
- SIGNAL POLESIGNAL POLE (WITH TRAFFIC
- UTILITY BOX)

  STORM SEWER MANHOLE

  TRAFFIC CONTROL BOX

  TRAFFIC PULLBOX
- UNKNOWN MANHOLE

  UTILITY BOX

  UTILITY POLE

  UTILITY POLE WITH LIGHT

- WATER SERVICE VA

  WATER SERVICE VA

  WELL

  WELL

  YARD DRAIN
  - BERM

    CENTERLINE OF ROAD

    CENTERLINE OF DITCH

    FENCE (CHAINLINK)

    FENCE (WOOD)

    GAS MAIN

    GUIDE RAIL (BOX BEAM)

    GUIDE RAIL (W BEAM)

    OVERHEAD WIRES

    LOT LINE

    PARCEL LINE

    RIGHT OF WAY LINE

    SANITARY SEWER LINE

    STORM SEWER LINE

UNDERGROUND CONDUIT

UNDERGROUND ELECTRIC

# BENCHMARK TABLE (DATUM NAVD '88)

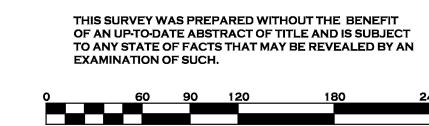
DESIGNATION	ELEVATION	DESCRIPTION
1	573.77	NGS MONUMENT "RAMP USLS" PID-OG0150
2	600.02	TOP SHUT OFF NUT, FIRE HYDRANT LOCATED IN FRONT OF BUILDING NO.5335 RIVER ROAD

MONITORING WELLS ELEVATIONS ARE THE TOP OF THE PVC CASING PIPE

DRAWING REVISIONS										
ITEM	DATE	DESCRIPTION								







**GRAPHIC SCALE IN FEET** 

T ECT 'AN	
<u>2</u> 40	
	ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MAP MARKED WITH AN

DESIGNED BY:	
DRAWN BY:	CJM
CHECKED BY:	GCW
DATE:	08/31/2009
WARNING:	S DOCUMENT IS IN VIOLATION OF

THE LAW EXCEPTING AS PROVIDED IN SECTION

7029, PART 2 OF THE NEW YORK STATE

EDUCATION LAW. © COPYRIGHT 2009

WM. SCHUTT & ASSOCIATES P.C.

# TOWN OF TONAWANDA COUNTY OF ERIE, STATE OF NEW YORK PART OF LOT 92 MILE RESERVE

PART OF LOT 92 MILE RESERVE HOLLAND LAND COMPANY'S SURVEY

5335 RIVER ROAD BOUNDARY & TOPOGRAPHIC SURVEY



FIGURE 4

1"=60"

SURVEY FILE:C/09065-04
WSA PROJECT NO. 09065

# **TABLES**

# **TABLE 1: RIVERVIEW INDUSTRIAL CENTER SAMPLE SCHEDULE**

								Aı	nalysis Requir	ed	
Media	Identifier	Date	Matrix	Туре	# of Locations	# Samples	VOCs	SVOCs	PEST	PCBs	Metals
Surface Soil	SS-1 to SS-22	5/15/2009	Solid	Grab	22	22	Х	Х	Х	Х	Х
Tables 3A-3D											
	SW-1	5/18/2009	Water	Grab			Х	Х	Х	Х	Х
<b>Surface Water</b>	SW-2	5/18/2009	Water	Grab	4	4	Х	Х	Х	Х	Х
Tables 4A-4D	SW-3	518/2009	Water	Grab	]		Х	Х	Х	Х	Х
	SW-4	5/29/2009	Water	Grab			Х	Х	Х	Х	Х
	SB-1 (1-3)	5/4/2009	Solid	Grab			Х	Х	Х	Х	Х
	SB-2 (1-2)	5/4/2009	Solid	Grab	]		Х	Х	Х	Х	Х
	SB -5 (0-2)	5/6/2009	Solid	Grab	1		Х	Х	Х	Х	Х
	SB-5	5/4/2009	Solid	Composite	1		Х	Х	Х	Х	Х
	SB-6 (1-4)	5/4/2009	Solid	Composite	]		Х	Х	Х	Х	Х
	SB-7 (1-3)	5/4/2009	Solid	Grab			Х	Х	Х	Х	Х
	SB-8 (0-4)	5/4/2009	Solid	Composite			Х	Х	Х	Х	Х
	SB-8D (5-9)	5/4/2009	Solid	Composite			Х	Х	Х	Х	Х
	SB-9 (1-4)	5/4/2009	Solid	Composite			Х	Х	Х	X	Х
	SB-12 (1-3)	5/4/2009	Solid	Grab			Х	Х	Х	Х	Х
	SB-13 (1-5)	5/4/2009	Solid	Composite			Х	Х	Х	Х	Х
<b>Soil Boring Samples</b>	SB-14 (1-4)	5/4/2009	Solid	Composite	21 SB locations		Х	Х	Х	Х	Х
	SB-15 (1-4)	5/4/2009	Solid	Composite	& 21 B locations	25	Х	Х	Х	X	Х
Tables 5A-5E	SB-16 (1-4)	5/5/2009	Solid	Composite	Total = 42 Locations		Х	Х	Х	X	Х
	SB-17 (1-4)	5/5/2009	Solid	Composite			Х	Х	Х	Х	Х
	SB-17 (4-5)	5/5/2009	Solid	Composite			Х	Х	Х	X X X X X X X X X X X X X X X X X X X	Х
	SB-18 (1-4)	5/5/2009	Solid	Composite			Х	Х	Х	X	Х
	SB-22 (4-6) SB-21	5/5/2009	Solid	Grab			Х	Х	Х	X	Х
	B-1 (0-2)	5/6/2009	Solid	Grab			Х	Х	Х	Х	Х
	B-1 (4-6)	5/7/2009	Solid	Grab			Х	Х	Х	X	Х
	B-2 (0-2)	5/6/2009	Solid	Grab			Х	Х	Х	X	Х
	B-2 (4-7)	5/5/2009	Solid	Composite			Х	Х	Х	Х	Х
	B-7 (1-4)	5/6/2009	Solid	Composite			Х	Х	Х	Х	Х
	B-13 (0-4)	5/5/2009	Solid	Composite			Х	Х	Х	Х	Х
	B-15 (0-4)	5/6/2009	Solid	Composite			Х	Χ	Х	Х	Х
Monitoring Well	MW-005 (8-10)	5/8/2009	Solid	Grab			Х	Х	Х	Х	Х
Soil Samples	MW-006 (2-4)	5/8/2009	Solid	Grab	4	4	Х	Х	Х	Х	Х
-	MW-007 (5-9)	5/11/2009	Solid	Grab			Х	Х	Х	Х	Х
Tables 5A-5E	MW-8 (14-16)	5/13/2009	Solid	Grab	]		Х	Х	Х	Х	Х

# **TABLE 1: RIVERVIEW INDUSTRIAL CENTER SAMPLE SCHEDULE (Continued)**

									nalysis Requir		
Media	Identifier	Date	Matrix	Туре	# of Locations	# Samples	VOCs	SVOCs	PEST	PCBs	Metal
	TP-3	5/11/2009	Solid	Grab			X	X	X	Χ	X
	TP-4	5/11/2009	Solid	Grab			Х	Х	Х	Х	X
	WS4P	5/14/2009	Water	Grab			Х	Х	Х	Х	X
Test Pits	TP-6	5/11/2009	Solid	Grab			Х	X	Х	Х	X
	TP-6B	5/11/2009	Solid	Grab	21	9	Х	X	Х	Х	Х
Tables 5A-5E	TP-10	5/12/2009	Solid	Grab			Х	X	Х	Х	Х
	TP-13	5/12/2009	Solid	Grab			X	X	X	Х	Х
	TP-19	5/14/2009	Solid	Grab			X	X	X	Х	Х
	TP-21	5/14/2009	Solid	Grab			X	X	Х	Х	Х
	MW-1	6/13/2009	Water	Grab			Х	Х	Х	Х	Х
	MW-2R	6/13/2009	Water	Grab			Х	Х	Х	Х	Х
Groundwater	MW-3	6/13/2009	Water	Grab			Х	Х	Х	Х	Х
Samples	MW-4	6/13/2009	Water	Grab	7		Х	Х	Х	Х	Х
-	MW-005	6/13/2009	Water	Grab	8	8	Х	Х	Х	Х	Х
Tables 6A-6E	MW-006	6/13/2009	Water	Grab			Х	Х	Х	Х	Х
	MW-007	6/12/2009	Water	Grab			Х	Х	Х	Х	Х
	MW-008	6/12/2009	Water	Grab			Х	Х	Х	Х	Х
	Dup-13	6/13/2009	Water	Grab			Х	Х	Х	Х	Х
Oil/Water Separator	OWS-1	5/18 & 5/21	Water	Grab	1	1	Х	Х	Х	Х	Х
Table 8A-8E		-,									
Site Sewer	MH-1	5/15 & 5/21	Water	Grab	2	2	Х	Х	Х	Х	X
Tables 8A-8E	MH-2	5/19/2009	Water	Grab			Х	Х	Х	Х	Х
	T-1 NAPL	5/19/2009	Waste	Grab			Х	Х	Х	Х	Х
USTs	T-2 NAPL	5/19/2009	Waste	Grab	-		X	X	X	X	X
00.10	T-3 NAPL	5/19/2009	Waste	Grab	-		X	X	X	X	X
Tables 7A-7F	T-4 NAPL	5/19/2009	Waste	Grab	5	6	X	X	X	X	X
10010377171	T-4 NAPL	5/18/2009	Water	Grab	<b>-</b>	Ĭ	X	X	X	X	X
	T-5 NAPL	5/19/2009	Waste	Grab	-		X	X	X	X	X
Mechanics Pit	Mechanics Pit	5/18/2009	Water	Grab	1	1	X	X	X	X	X
Tables 8A-8E	IVIECTIATICS FIL	3/10/2003	vvater	Grab	┥	_		^		^	<del>                                     </del>
TUDICS OA-OL	SED-2	5/13/2009	Solid	Grab				Х	Х		X
Cadimont Camples	SED-3-OF	5/18/2009	Solid	Grab	-		X	X	X	X	X
Sediment Samples						_				1	+
Tables OA OF	SED-4	5/18/2009	Solid	Grab	5	5	X	X	X	X	X
Tables 9A-9E	SED-5	5/18/2009	Solid	Grab	-		X	X	X	X	X
0	SED-6	5/18/2009	Solid	Grab		1 .	X				X
Catch Basin Tables 9A-9E	SS-1 (Catch Basin)	5/13/2009	Solid	Grab	1	1	Х	Х	Х	Х	X
Tank 10 Lagoon	Tank 10 Sed	8/29/2009	Solid	Grab	1	1	Х	Х	Х	Х	Х

Total # Samples

89

OP-TECH 8/31/2009

#### Table 2: Monitoring Well Information Riverview Industrial Center

Well #	Ground	Top of PVC	Stick Up	Depth to	Elevation	Well Depth	Top Well	Bottom Well	Groundwate
	Elevation	Elevation		Groundwater	Groundwater		Screen	Screen	Elevation
					from PVC				from Grad
MW-001	587.08	591.36	4.28	11.21	580.15	21.2			575.87
MW-2R	596.58	596.93	0.35	5.12	591.81	32**	583.81	32	591.46
MW-003	NC	NC		NC	NC	17.2***			
MW-004	585.54	588.44	2.9	6.23	582.21	22.5			
MW-005	566.17	569.97	3.8	10.12	559.85	32.55	551.85	30	556.05
MW-006	596.19	599.29	3.1	29.04	570.25	33	562.25	30	567.15
MW-007	580.18	583.48	3.3	25.02	558.46	32.43	550.46	30	555.16
MW-008	599.64	602.24	2.6	6.75	595.49	32.5	587.49	30	592.89
MW-009	599.38	602.28	2.9	6.83	595.45	22.5			592.55

#### Notes:

WL= Water Level

NC= Not Collected

All wells purged via Vacuum truck except as noted below.

MW-3 well bocked at 17.2 feet.

MW-8 -0.25 gallons purged.

MW-9-28 gallons purged.

<sup>\*=</sup> Depth from top of casing, predevelopment

<sup>\*\*=</sup>Reinstalled depth, Flush to grade roadbox.

<sup>\*\*\*=</sup>Obstructed well.

<sup>\*\*\*\*\* =</sup> pressure noted on the well cap at time of gaugung/sampling.

# OP-TECH 3/3/2010

# Table 2a: Monitoring Well Development Information Riverview Industrial Center

Well #		Developme	nt/Surging		Depth to	3 Well Volumes	Gallons	
	Vacuumed	Flushed	Surged	Repeated	Groundwater	Volumes	Removed	
MW-1	Yes	Yes	Yes	4 times	11.69	20.6 Gallons	20.7	
	~ 40 gals	25 gallons		100 gallons				
MW-2	Damaged	NA	NA	NA				
					D	amaged - Not Sam	pled	
MW - 2R	NA	NA	Attem	pted 10	1.62'	13.78 Gallons	13.8	
			well vo	olumes				
MW-3	Yes	Yes	Yes	4 times				
	~ 40 gals	25 gallons		100 gallons	Damaged - Not Sampled			
MW-4	Yes	Yes	Yes	4 times	6.9'	9.73 Gallons	25	
	~ 40 gals	25 gallons		100 gallons				
MW-005	NA	NA	Attem	pted 10	7.0'	12.5 Gallons	14.7	
			well vo	olumes				
MW-006	NA	NA	Attem	pted 10	25.3'	3.69 Gallons	3.75	
			well vo	olumes				
MW-007	NA	NA	Attem	pted 10	23.72	4.26	Not Available	
			well vo	olumes				
MW-008	NA	NA	Attem	pted 10	32.1	0.19	0.25	
			well vo	olumes				
MW-9					5.9'	8.1 Gallons	6.5 (Dry)	

# DATA QUALIFIERS AND DEFINITIONS

	Blank areas indicate a non-detect
В	Analyte was detected in the associated Method Blank
B1	Analyte was detected in the associated method blank. Analyte concentration in the sample is
	greater than 10x the concentration found in the method blank.
C-01	To reduce matrix interference, the sample extract has undergone sulfuric acid clean-up, method 3665A,
	which is specific to hydrocarbon contamination.
C-04	To reduce matrix interference, the sample extract has undergone florisil clean-up, method 3620B.,
	which is specific to non-polar compound contamination.
CF6	Results confirmed by reanalyses.
D02	Dilution required due to sample matrix effects.
D03	Dilution required due to excessive foaming.
D04	Dilution required due to high levels of non-target compounds.
D08	Dilution required due to high concentration of target analyte(s)
D10	Dilution required due to sample color.
Е	Concentration exceeds the calibration range and therefore is semi-quantative.
H4	Sample was extracted past holding time, but analyzed within analysis holding time.
J	Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method
	Detection Limit (MDL). Concentrations within this range are estimated.
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
	Analyte not detected, data not impacted.
L1	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
L2	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.
L4	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below the acceptance
	limits. A low bias to sample results is indicated.
L5	Analyte recovery outside of specified criteria. Individual analyte criteria exceedences allowed for
	multi-component analyses without disqualification of data per NELAC Standard, DOD QSM and/or
	AFCEE QAPP.
M1	The MS and/or MSD were outside the acceptance limits due to sample matrix interference. See Blank
	Spike (LCS).
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference.
	See Blank Spike (LCS).
M11	The MS and/or MSD were above the acceptance limits.
M12	The MS and/or MSD were below the acceptance limits. See calibration verification. (CCV)
M7	The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS)
M8	The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike
	recovery information. See Blank Spike (LCS).
N1	See case narrative.
P11	Sample was not sufficiently preserved at time of collection. Sample pH is >2
QFL	Florisil clean-up (EPA 3620) performed on extract.
QSU	Sulfur (EPA 3660) clean-up performed on extract.
R2	The RPD exceeded the acceptance limit.
R10	The RPD between the primary and confirmatory analysis exceeded 40%. Per method 8000B, the
C.C	lower value was reported due to apparent chromatographic problems.
S6 T10	Sediment present.
71 71	Sample had an adjusted final volume during extraction due to extract matrix and/or viscosity.

Surrogate recovery was above the acceptance limits. Data not impacted.

**Z**2

- Z3 The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.
- Due to sample matrix effects, the surrogate recovery was outside acceptance limits. Secondary surrogate recovery was within the acceptance limits.
- Z6 Surrogate recover was below acceptance limits.
- ZX Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- NR Any inclusion of NR indicates that the project specific requirements do not require reporting estimated values below the laboratory reporting limit.



Table 3A: Surface Soil Samples Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY 14150

Soil Sample ID		SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12
Date	Part 375 Unrestricted Use	05/15/09	5/15/2009	5/15/2009	5/15/2009	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/2009	5/15/2009	5/15/2009
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Acetone	50	< 30	< 26	< 31	< 32	< 33	< 40	< 30	< 30	< 27	< 33	50	< 27
Cyclohexane	NL	3.2 J	< 5.1	< 6.2	< 6.4	< 6.7	< 8.1	< 6.0	< 6.0	< 5.4	< 6.6	<6.5	< 5.5
Ethylbenzene	1000	3.6 J	< 5.1	< 6.2	< 6.4	< 6.7	< 8.1	< 6.0	< 6.0	< 5.4	< 6.6	< 6.5	< 5.5
Methylene Chloride	50	3.2 J	< 5.1	< 6.2	< 6.4	1.6 J	< 8.1	< 6.0	< 6.0	< 5.4	< 6.6	7.8	< 5.5
Methylcyclohexane	NL	24	< 5.1	< 6.2	< 6.4	< 6.7	< 8.1	< 6.0	< 6.0	< 5.4	< 6.6	< 6.5	< 5.5
Toluene	700	3.1 J	< 5.1	< 6.2	< 6.4	< 6.7	< 8.1	< 6.0	< 6.0	< 5.4	< 6.6	< 6.5	< 5.5
Xylenes, Total	260	30	< 10	< 12	< 13	< 13	< 16	< 12	< 12	< 11	< 13	< 13	< 11

#### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.
All units are micrograms per kilogram (ug/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J -Analyte



Table 3A: Surface Soil Samples Volatile Organic Compounds Riverview Industrial Center 5335 River Rd. Tonawanda, NY 14150

Soil Sample ID		SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22
Date	Part 375 Unrestricted Use	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009
Matrix		Solid									
Acetone	50	< 31	< 31	< 34	< 35	< 34	< 39	< 36	< 38	< 37	< 35
Cyclohexane	NL	< 6.2	< 6.1	< 6.8	< 6.9	< 6.8	< 7.8	< 7.2	< 7.7	< 7.4	< 7.1
Ethylbenzene	1000	<6.2	< 6.1	< 6.8	< 6.9	< 6.8	< 7.8	< 7.2	< 7.7	< 7.4	< 7.1
Methylene Chloride	50	<6.2	< 6.1	< 6.8	< 6.9	< 6.8	< 7.8	< 7.2	< 7.7	< 7.4	< 7.1
Methylcyclohexane	NL	<6.2	< 6.1	< 6.8	< 6.9	< 6.8	< 7.8	< 7.2	< 7.7	< 7.4	< 7.1
Toluene	700	<6.2	< 6.1	< 6.8	< 6.9	< 6.8	< 7.8	< 7.2	< 7.7	< 7.4	< 7.1
Xylenes, Total	260	< 12	< 12	< 14	< 14	< 14	< 16	< 14	< 15	< 15	< 14

#### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are micrograms per kilogram (ug/kg)
NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J -Analyte



## Table 3B: Surface Soil Samples Semi-Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Part 375	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12
Date	Unrestricted	05/15/09	5/15/2009	5/15/2009	5/15/2009	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/2009	5/15/2009	5/15/2009
Matrix	Use	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
2-Methylnaphthalene	NL	17000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
4-Methylphenol	NL	< 2000	< 1800	< 4100	< 4400	< 450	< 2700	< 400	< 2000	< 370	< 4400	450	<370
Acenaphthene	20000	< 1000	< 910	370D,J	300D,J	< 230	< 1400	< 210	< 1000	< 190	130D,J	< 230	< 190
Acetophenone	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Anthracene	100000	< 1000	< 910	1100D,J	450D,J	< 230	< 1400	< 210	< 1000	< 190	420D,J	< 230	< 190
Benzaldehyde	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Benzo(a)anthracene	1000	< 1000	39D,J	6400D	1500D,J	< 230	60D,J	< 210	71D,J	11J	2300D	< 230	11J
Benzo(a)pyrene	1000	< 1000	< 910	6600D	1200D,J	< 230	< 1400	< 210	81D,J	< 190	2400D	< 230	< 190
Benzo(b)fluoranthene	1000	< 1000	< 910	7900D	1600D,J	< 230	< 1400	11J	100D,J	< 190	2800D	< 230	9.7J
Benzo(g,h,i)perylene	100000	< 1000	< 910	5200D	880D,J	< 230	< 1400	< 210	83D,J	< 190	1900D,J	< 230	< 190
Benzo(k)fluoranthene	800	< 1000	< 910	3400D	710D,J	< 230	< 1400	< 210	51D,J	< 190	1300D,J	< 230	< 190
Biphnyl	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Bis-(2 chloroethoxy) methane	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Bis-(2-ethylhexyl) phthalate	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Carbazole	NL	< 1000	< 910	510D,J	360D,J	< 230	< 1400	< 210	< 1000	< 190	170D,J	< 230	< 190
Chrysene	1000	< 1000	< 910	6300D	1400D,J	< 230	< 1400	< 210	87D,J	< 190	2400D	< 230	< 190
Dibenzo(a,h)anthracene	330	< 1000	< 910	1300D,J	260D,J	< 230	< 1400	< 210	< 1000	< 190	460D,J	< 230	< 190
Dibenzofuran	NL	< 1000	< 910	110D,J	190D,J	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Diethyl phthalate	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Di-n-butyl-phthalate	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Di-n-octyl-phthalate	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Fluoranthene	100000	480J	< 910	13000D	3300D	< 230	< 1400	13J	110D,J	< 190	4600D	< 230	< 190
Fluorene	30000	6000	< 910	280D	180D,J	< 230	< 1400	< 210	< 1000	< 190	140D,J	< 230	< 190
Indeno(1,2,3-cd)pyrene	500	< 1000	< 910	4400D	750D,J	< 230	< 1400	< 210	75D,J	< 190	1600D,J	< 230	< 190
Naphthalene	12000	< 1000	< 910	< 2100	190D,J	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
N-nitrosdiphenylamine	NL	< 1000	< 910	< 2100	< 2300	< 230	< 1400	< 210	< 1000	< 190	< 2300	< 230	< 190
Phenanthrene	100000	7800	< 910	4900D	2800D	< 230	< 1400	11J	73D <b>,</b> J	< 190	1900D,J	< 230	< 190
Pyrene	100000	1300	< 910	11000D	2600D	< 230	< 1400	< 210	110D,J	7.9J	3800D	< 230	10Ј

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

Concentrations within this range are estimated.

D02 -Dilution required due to sample matrix effects.

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).



## Table 3B: Surface Soil Samples Semi-Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Part 375 Unrestricted Use	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22
Date		5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009
Matrix		Solid									
2-Methylnaphthalene	NL	12J	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
4-Methylphenol	NL	< 430	< 2100	< 460	< 470	< 2300	< 2700	< 2500	< 2500	< 2500	< 480
Acenaphthene	20000	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Acetophenone	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Anthracene	100000	< 220	83D,J	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Benzaldehyde	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Benzo(a)anthracene	1000	25J	83D,J	< 240	20Ј	82D,J	130D,J	270D,J	110D,J	64D,J	33J
Benzo(a)pyrene	1000	28J	89D,J	< 240	22J	100D,J	150D,J	350D,J	120D,J	< 1300	33J
Benzo(b)fluoranthene	1000	37J	140D,J	< 240	25J	140D,J	190D,J	430D,J	120D,J	< 1300	42J
Benzo(g,h,i)perylene	100000	40J	100D,J	< 240	22J	99D,J	160D,J	370D,J	120D,J	< 1300	22J
Benzo(k)fluoranthene	800	11J	< 1100	< 240	9.5J	< 1200	87D,J	110D,J	58D,J	< 1300	< 250
Biphnyl	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Bis-(2 chloroethoxy) methane	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Bis-(2-ethylhexyl) phthalate	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Carbazole	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Chrysene	1000	24J	160D,J	< 240	16J	85D,J	140D,J	250D,J	86D,J	66D,J	34J
Dibenzo(a,h)anthracene	330	12J	< 1100	< 240	< 240	< 1200	< 1400	76D,J	< 1300	< 1300	< 250
Dibenzofuran	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Diethyl phthalate	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Di-n-butyl-phthalate	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Di-n-octyl-phthalate	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Fluoranthene	100000	40J	110D,J	< 240	28J	130D,J	190D,J	380D,J	120D,J	< 1300	53J
Fluorene	30000	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Indeno(1,2,3-cd)pyrene	500	23J	< 1100	< 240	17J	78D,J	140D,J	260D,J	81D,J	< 1300	< 250
Naphthalene	12000	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
N-nitrosdiphenylamine	NL	< 220	< 1100	< 240	< 240	< 1200	< 1400	< 1300	< 1300	< 1300	< 250
Phenanthrene	100000	< 220	64D,J	< 240	20Ј	73D,J	110D,J	200D,J	75D,J	< 1300	32J
Pyrene	100000	33J	110D,J	< 240	23J	100D,J	170D,J	370D,J	130D,J	< 1300	41J

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

D02 -Dilution required due to sample matrix effects.

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



# Table 3C: Surface Soil Samples Pesticides Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Part 375	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12
Date	Unrestricted	05/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	05/15/09	5/15/09
Matrix	Use	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
4,4'-DDT	3.3	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
4-4'-DDD	3.3	< 200	1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
4-4'-DDE	3.3	< 200	< 1.8	< 21	0.89J	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Aldrin	5	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
alpha-BHC	20	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
alpha-Chlordane	94	< 200	< 1.8	< 21	1.4J	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
beta-BHC	36	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	1.2J	< 19
Chlordane	NL	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 22	< 19
delta-BHC	40	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	1.1J	< 1.9	< 23	< 2.2	< 19
Dieldrin	5	< 200	0.67J	< 21	< 2.1	< 2.3	0.93J	0.67J	< 2.0	< 1.9	7.7D,QFL,J	< 2.2	< 19
Endosulfan I	2400	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Endosulfan II	2400	66D,QFL,J	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Endosulfan Sulfate	2400	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Endrin	14	120D,QFL,J	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Endrin aldehyde	NL	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Endrin Ketone	NL	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
gamma BHC (Lindane)	100	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
gamma- Chlorodane	NL	44D,QFL,J	< 1.8	< 21	1.2J	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	0.94J	< 19
Heptachlor	42	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Heptachlor epoxide	NL	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Methoxychlor	NL	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19
Toxaphene	NL	< 200	< 1.8	< 21	< 2.1	< 2.3	< 2.7	< 2.0	< 2.0	< 1.9	< 23	< 2.2	< 19

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

- B Analyte was detected in the associated Method Blank
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- D10 Dilution required due to sample color.
- QFL Florisil clean-up (EPA 3620) performed on extract.
- QSU Sulfur (EPA 3660) clean-up performed on extract.



# Table 3C: Surface Soil Samples Pesticides Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Part 375	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22
Date	Unrestricted	5/15/09	05/15/09	05/15/09	05/15/09	05/15/09	05/15/09	5/15/09	5/15/09	5/15/09	5/15/09
Matrix	Use	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
4,4'-DDT	3.3	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
4-4'-DDD	3.3	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
4-4'-DDE	3.3	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aldrin	5	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
alpha-BHC	20	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
alpha-Chlordane	94	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
beta-BHC	36	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Chlordane	NL	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
delta-BHC	40	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Dieldrin	5	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Endosulfan I	2400	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Endosulfan II	2400	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Endosulfan Sulfate	2400	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Endrin	14	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Endrin aldehyde	NL	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Endrin Ketone	NL	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
gamma BHC (Lindane)	100	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
gamma- Chlorodane	NL	< 22	< 21	< 23	< 24	< 24	< 27	5.3D,J	12QFL,J	< 25	< 24
Heptachlor	42	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Heptachlor epoxide	NL	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Methoxychlor	NL	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Toxaphene	NL	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

- B Analyte was detected in the associated Method Blank
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- D10 Dilution required due to sample color.
- QFL Florisil clean-up (EPA 3620) performed on extract.
- QSU Sulfur (EPA 3660) clean-up performed on extract.



## Table 3D: Surface Soil Samples Polychlorinated Biphenyls Riverview Industrial Center 5335 River Road Tonawanda, Ny

Soil Sample ID	D	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11
Date	Part 375 Unrestricted Use	05/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aroclor-1016	100	< 20	< 18	< 21	< 21	< 23	< 27	< 20	< 20	< 19	< 23	< 22
Aroclor-1221	100	< 20	< 18	< 21	< 21	< 23	< 27	< 20	< 20	< 19	< 23	< 22
Aroclor-1232	100	< 20	< 18	< 21	< 21	< 23	< 27	< 20	< 20	< 19	< 23	< 22
Aroclor-1242	100	< 20	< 18	< 21	< 21	< 23	< 27	< 20	< 20	< 19	< 23	< 22
Aroclor-1248	100	< 20	< 18	< 21	< 21	< 23	< 27	< 20	< 20	< 19	< 23	< 22
Aroclor-1254	100	< 20	< 18	< 21	< 21	< 23	< 27	< 20	< 20	< 19	< 23	< 22
Aroclor-1260	100	< 20	100	< 21	< 21	< 23	< 27	< 20	< 20	< 19	35	< 22

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)



Table 3D: Surface Soil Samples Polychlorinated Biphenyls Riverview Industrial Center 5335 River Road Tonawanda, Ny

Soil Sample ID	D	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22
Date	Part 375 Unrestricted Use	5/15/09	5/15/09	05/15/09	05/15/09	05/15/09	05/15/09	05/15/09	5/15/09	5/15/09	5/15/09	5/15/09
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aroclor-1016	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aroclor-1221	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aroclor-1232	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aroclor-1242	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aroclor-1248	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aroclor-1254	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24
Aroclor-1260	100	< 19	< 22	< 21	< 23	< 24	< 24	< 27	< 25	< 25	< 25	< 24

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)



# Table 3E: Surface Soil Samples Metals Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Part 375	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12
Date	Unrestrict	05/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09	5/15/09
Matrix	ed Use	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aluminum (mg/kg)	NL	8890	10000	5340	13700	8400	17100	10000	11100	16300	11100	12700	7920
Antimony (mg/kg)	NL	< 17.7	< 15.3	0.7J	< 20.4	< 20.3	< 23.7	< 19.0	< 19.7	< 19.2	< 19.7	< 21.1	< 17.5
Arsenic (mg/kg)	13	2.6	4.0	3.7	4.9	4.6	6.4	2.9	3.3	4.1	3.8	4.1	2.1J
Barium (mg/kg)	350	70.6	83.9	46.3	111	221	130	83.4	87.0	123	97.4	96.2	61.3
Beryllium (mg/kg)	7.2	0.451	0.520	0.952	1.01	0.671	0.859	0.542	0.553	0.767	0.997	0.633	0.402
Cadmium (mg/kg)	2.5	0.201J	0.211	0.646	0.461	0.182J	0.106J	< 0.253	0.071J	< 0.256	1.24	0.191J	0.056J
Calcium (mg/kg)	NL	33100	17700	241000D	50800	44400	33300	8700	39000	4170	122000D	34000	26800
Chromium (mg/kg)	NL	11.9	14.3	10.5	19.8	17.6	23.5	13.4	17.3	21.0	15.1	17.4	11.3
Cobalt (mg/kg)	NL	8.72	8.31	3.24	9.98	10.8	12.3	7.57	9.18	12.5	5.91	10.3	6.57
Copper (mg/kg)	50	120	16.2	14.8	29.0	22.7	24.3	14.9	24.9	20.1	16.9	18.6	13.4
Iron (mg/kg)	NL	13200	16500	8720	21700	32700	28400	16000	19300	25000	13400	21100	12100
Lead (mg/kg)	63	22.9	39.6	21.0	33.4	75.9	26.2	17.8	18.3	12.1	24.1	16.6	11.3
Magnesium (mg/kg)	NL	12600	7110	10700	14600	22300	13400	5520	12000	6210	10900	12000	9270
Manganese (mg/kg)	1600	385	492	386	534	403	737	313	487	737	668	652	322
Mercury (mg/kg)	0.18	0.0131J	0.0284	0.0234	0.0229J	0.0296	0.0389	0.0224J	0.0285	0.0124J	0.0550	0.0152J	0.0153J
Nickel (mg/kg)	30	17.2	17.7	11.9	24.9	17.6	28.9	15.7	21.8	30.8	15.9	22.5	15.3
Potassium (mg/kg)	NL	1540	1350	949	2690	1040	2670	1250	1890	1730	1670	1820	1410
Selenium (mg/kg)	3.9	< 4.7	< 4.1	< 5.2	< 5.5	< 5.4	< 6.3	< 5.1	< 5.2	< 5.1	< 5.3	< 5.6	< 4.7
Silver (mg/kg)	2	< 0.589	< 0.511	< 0.651	< 0.682	< 0.678	< 0.790	< 0.632	< 0.655	< 0.640	< 0.657	< 0.702	< 0.584
Sodium (mg/kg)	NL	129J	103J	191	220	129J	170J	119J	151J	85.1J	224	132J	143J
Thallium (mg/kg)	NL	< 7.1	< 6.1	< 7.8	0.4J	< 8.1	< 9.5	0.6J	< 7.9	< 7.7	< 7.9	< 8.4	< 7.0
Vanadium (mg/kg)	NL	15.2B	19.4B	8.79B	25.2B	15.8B	31.6B	20.0B	20.9B	28.3B	16.4B	24.2B	15.5B
Zinc (mg/kg)	109	212B	112B	71.9B	95.7B	85.7B	99.7B	64.6B	90.8B	69.1B	79.4B	86.0B	47.5B

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (mg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

B - Analyte was detected in the associated Method Blank

D08 - Dilution required due to high concentration of target analyte(s)

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Me

Concentrations within this range are estimated.



# Table 3E: Surface Soil Samples Metals Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Part 375	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22
Date	Unrestrict	5/15/09	05/15/09	05/15/09	05/15/09	05/15/09	05/15/09	5/15/09	5/15/09	5/15/09	5/15/09
Matrix	ed Use	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aluminum (mg/kg)	NL	14600	12400	15900	11500	14600	19800	17600	19800	10600	11400
Antimony (mg/kg)	NL	< 21.2	< 17.7	< 22.1	< 20.3	< 22.4	< 24.5	< 23.3	< 23.6	< 22.8	< 22.6
Arsenic (mg/kg)	13	4.7	5.3	11.2	5.8	6.0	7.3	9.0	13.3	6.7B	6.5B
Barium (mg/kg)	350	119	104	68.0	62.0	105	71.4	81.1	103	61.8	64.3
Beryllium (mg/kg)	7.2	0.736	0.809	0.827	0.552	0.765	0.877	0.867	1.16	0.363	0.466
Cadmium (mg/kg)	2.5	< 0.283	0.245	< 0.294	0.216J	0.543	< 0.327	< 0.311	0.195J	0.426	0.502
Calcium (mg/kg)	NL	45400	11900	2460	2070	3230	522	325	888	1960	1880
Chromium (mg/kg)	NL	20.0	20.5	18.2	14.2	18.0	24.1	23.2	24.1	12.9	14.4
Cobalt (mg/kg)	NL	11.3	7.78	11.4	8.00	9.71	17.2	9.89	42.4	6.06	7.84
Copper (mg/kg)	50	20.8	20.4	14.2	13.2	15.6	14.5	13.1	15.5	12.8B	14.1B
Iron (mg/kg)	NL	23200	23700	32400	15900	20800	33700	42200	44800	14400	16100
Lead (mg/kg)	63	23.3	34.4	29.7	36.0	34.5	25.9	26.0	53.6	39.2B	38.6B
Magnesium (mg/kg)	NL	13400	5020	4320	2820	3310	4520	2850	2990	2350	2850
Manganese (mg/kg)	1600	622	776	390	418	1290	1420	709	7510D	400	436
Mercury (mg/kg)	0.18	0.0168J	0.0667	0.0241J	0.0744	0.0974	0.0635	0.121	0.120	0.0926	0.0696
Nickel (mg/kg)	30	25.4	19.3	16.5	17.0	23.9	21.0	18.9	21.8	15.7	17.0
Potassium (mg/kg)	NL	2130	1310	1090	993	1310	1510	1350	1210	806	1000
Selenium (mg/kg)	3.9	< 5.7	< 4.7	< 5.9	< 5.4	< 6.0	< 6.5	0.9J	< 6.3	1.4J	< 6.0
Silver (mg/kg)	2	< 0.707	< 0.590	< 0.736	0.142J	< 0.748	< 0.818	0.126J	0.209J	< 0.760	< 0.754
Sodium (mg/kg)	NL	139J	173	152J	68.9J	86.3J	66.2J	101J	83.0J	65.0J	57.9J
Thallium (mg/kg)	NL	< 8.5	< 7.1	1.0J	< 8.1	< 9.0	< 9.8	< 9.3	1.6J	0.8J	0.9J
Vanadium (mg/kg)	NL	27.5B	20.7B	39.9B	24.4B	30.0B	40.7B	55.3B	64.1B	22.9	24.6
Zinc (mg/kg)	109	82.3B	84.1B	63.9B	90.1B	119B	96.0B	89.3B	128B	85.2B	94.4B

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (mg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

B - Analyte was detected in the associated Method Blank

D08 - Dilution required due to high concentration of target analyte(s)

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Me

Concentrations within this range are estimated.



## **Table 4A: Surface Water Samples Volatile Organic Compounds Riverview Industrial Center** 5335 River Road Tonawanda, NY

Soil Sample ID	TOGs	SW-1	SW-2	SW-3	SW-4
Date	1.1.1	05/18/09	05/18/09	5/18/09	5/29/09
Time	Water Guidance Values for Ambient	10:45	11:10	11:20	8:00
Matrix	and Class D	Water	Water	Water	Water
2-Butanone	50	< 5.0	< 20	< 5.0	< 5.0
2-Methylnapthalene	42	< 1.0	< 4.0	< 1.0	< 1.0
4-Isopropyltoluene	5	< 1.0	< 4.0	< 1.0	< 1.0
4-Methyl-2Pentadone	NL	< 5.0	< 20	< 5.0	< 5.0
Acetone	50	< 1.0	8.8 D03,J	2.7 J	2.3 J
Benzene	10	< 1.0	< 4.0	< 1.0	< 1.0
Carbon disulfide	NL	< 1.0	< 4.0	< 1.0	< 1.0
Chlorobenzene	400	< 1.0	< 4.0	< 1.0	< 1.0
Cyclohexane	NL	< 1.0	< 4.0	< 1.0	< 1.0
Ethylbenzene	5	< 1.0	< 4.0	< 1.0	< 1.0
Isopropylbenzene	23	< 1.0	< 4.0	< 1.0	< 1.0
Methylene Chloride	200	< 1.0	< 4.0	< 1.0	< 1.0
Methylcyclohexane	NL	< 1.0	< 4.0	< 1.0	< 1.0
MtBE	NL	< 1.0	< 4.0	< 1.0	< 1.0
Naphthalene	10	< 1.0	< 4.0	< 1.0	< 1.0
n-Butylbenzene	5	< 1.0	< 4.0	< 1.0	< 1.0
n-propylbenzene	5	< 1.0	< 4.0	< 1.0	< 1.0
sec-Butylbenzene	5	< 1.0	< 4.0	< 1.0	< 1.0
tert-Butylbenzene	5	< 1.0	< 4.0	< 1.0	< 1.0
Toluene	480	< 1.0	2.2 D03,J	< 1.0	< 1.0
Xylenes, Total	5	< 2.0	< 8.0	< 2.0	< 2.0

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per Liter (µg/L).

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

D03 - Dilution required due to excessive foaming



## **Table 4B: Surface Water Samples Semi-Volatile Organic Compounds Riverview Industrial Center** 5335 River Road Tonawanda, NY

Soil Sample ID	TOGs	SW-1	SW-2	SW-3	SW-4
	1.1.1				
Date	Water Guidance	05/18/09	05/18/09	5/18/09	5/29/09
	Values for	10.15	44.40	44.00	2.00
Sample interval (feet)	Ambient and	10:45	11:10	11:20	8:00
Matrix	Class D	Water	Water	Water	Water
2,4 Di MethylPhenol	1000	< 10	< 12	< 9.7	< 12
2-Methylnaphthalene	42	< 10	< 12	< 9.7	< 12
4-Nitrophenol	NL	< 10	< 12	< 9.7	< 12
Acenaphthene	48	< 10	< 12	< 9.7	< 12
Acetophenone	NL	< 10	< 12	< 9.7	< 12
Anthracene	35	< 10	< 12	< 9.7	< 12
Benzaldehyde	NL	< 50	< 62	< 48	< 62
Benzo(a)anthracene	0.23	< 10	< 12	< 9.7	< 12
Benzo(a)pyrene	0.0012	< 10	< 12	< 9.7	< 12
Benzo(b)fluoranthene	0.002	< 10	< 12	< 9.7	< 12
Benzo(g,h,i)perylene	NL	< 10	< 12	< 9.7	< 12
Benzo(k)fluoranthene	0.002	< 10	< 12	< 9.7	< 12
1,1' Biphenyl	5	< 10	< 12	< 9.7	< 12
Bis-(2 chloroethoxy) methane	5	< 10	< 12	< 9.7	< 12
Bis-(2 Ethylhexyl) phthalate	5	< 10	< 12	< 9.7	< 12
Carbazol	NL	< 5.0	< 6.2	< 4.8	< 6.2
Chrysene	0.002	< 10	< 12	< 9.7	< 12
Dibenzo(a,h)anthracene	NL	< 10	< 12	< 9.7	< 12
Dibenzofuran	NL	< 10	< 12	< 9.7	< 12
Diethyl phthalate	50	< 10	< 12	< 9.7	< 12
Di-n-butyl-phthalate	50	< 10	< 12	< 9.7	< 12
Di-n-octyl phthalate	50	< 10	< 12	< 9.7	< 12
Fluoranthene	50	< 10	< 12	< 9.7	< 12
Fluorene	4.8	< 10	< 12	< 9.7	< 12
Indeno(1,2,3-cd)pyrene	0.002	< 10	< 12	< 9.7	< 12
Naphthalene	110	< 10	< 12	< 9.7	< 12
N-nitrosdiphenylamine	50	< 10	< 12	< 9.7	< 12
Phenanthrene	45	< 10	< 12	< 9.7	< 12
Pyrene	42	< 10	< 12	< 9.7	< 12

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per Liter ( $\mu$ g/L). NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations



# Table 4C: Surface Water Samples Pesticides Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	TOGs	SW-1	SW-2	SW-3	SW-4
Date	1.1.1	05/18/09	5/21/09	5/21/09	5/29/09
Depth (ft)	Water Guidance Values for Ambient	10:45	8:45	8:55	8:00
Matrix	and Class D	Water	Water	Water	Water
4,4'-DDT	1x10-5	< 0.048	< 0.048	< 0.049	< 0.057
4-4'-DDD	1x10-5	< 0.048	< 0.048	< 0.049	< 0.057
4-4'-DDE	1x10-5	< 0.048	< 0.048	< 0.049	< 0.057
Aldrin	0.001	< 0.048	< 0.048	< 0.049	< 0.057
alpha-BHC	NL	< 0.048	< 0.048	< 0.049	< 0.057
alpha-Chlordane	NL	< 0.048	< 0.048	< 0.049	< 0.057
beta-BHC	NL	< 0.048	< 0.048	< 0.049	< 0.057
Chlordane	2x10-5	< 0.48	< 0.48	< 0.49	< 0.57
delta-BHC	NL	< 0.048	< 0.048	< 0.049	0.042J
Dieldrin	0.001	< 0.048	< 0.048	< 0.049	< 0.057
Endosulfan I	0.22	< 0.048	< 0.048	< 0.049	< 0.057
Endosulfan II	0.22	< 0.048	< 0.048	< 0.049	< 0.057
Endosulfan Sulfate	0.22	< 0.048	< 0.048	< 0.049	< 0.057
Endrin	0.002	< 0.048	< 0.048	< 0.049	< 0.057
Endrin aldehyde	5	< 0.048	< 0.048	< 0.049	< 0.057
Endrin Ketone	5	< 0.048	< 0.048	< 0.049	< 0.057
gamma BHC (Lindane)	ND	< 0.048	0.028J	0.027J	< 0.057
gamma- Chlorodane	5	< 0.048	< 0.048	0.044J	0.032J
Heptachlor	2x10-4	< 0.048	< 0.048	< 0.049	< 0.057
Heptachlor epoxide	3x10-4	< 0.048	< 0.048	< 0.049	< 0.057
Methoxychlor	35	< 0.048	< 0.048	< 0.049	< 0.057
Toxaphene	6x10-6	< 0.48	< 0.48	< 0.49	< 0.57

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per Liter (µg/L).

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations



# Table 4D: Surface Water Samples Polychlorinated Biphenyls Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	TOGs 1.1.1	SW-1	SW-2	SW-3	SW-4
Date	Water Guidance	05/18/09	05/18/09	5/18/09	5/29/09
Depth (ft)	Values for Ambient	10:45	11:10	11:20	8:00
Matrix	and Class D	Water	Water	Water	Water
Aroclor-1016	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57
Aroclor-1221	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57
Aroclor-1232	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57
Aroclor-1242	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57
Aroclor-1248	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57
Aroclor-1254	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57
Aroclor-1260	1x10-6	< 0.52	< 0.67	< 0.48	< 0.57

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per Liter ( $\mu$ g/L).

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations



## Table 4E: Surface Water Samples Metals Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	TOGs	SW-1	SW-2	SW-3	SW-4
Date	1.1.1 Water Guidance	05/18/09	05/18/09	5/18/09	5/29/09
Depth (ft)	Values for	10:45	11:10	11:20	8:00
Matrix	Ambient and Class D	Water	Water	Water	Water
Aluminum	0.1	1.24	0.641	0.454	1.16
Antimony	0.003	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Arsenic	0.34	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Barium	1	0.0536	0.0428	0.582	0.187
Beryllium	0.003	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Cadmium	0.01	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Calcium	NL	44.4	50.1	33.1	79.1
Chromium	0.05	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Cobalt	NL	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Copper	1	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Iron	0.3	1.21	1.41	0.733	1.58
Lead	0.05	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Magnesium	35	14.0	11.9	13.6	59.6
Manganese	0.6	0.0829	0.261	0.931	0.334
Mercury	0.0000007	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel	0.2	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Potassium	NL	2.26	3.06	1.90	3.45
Selenium	0.02	< 0.0150	< 0.0150	< 0.0150	< 0.0150
Silver	0.1	< 0.0030	< 0.0030	< 0.0030	< 0.0030
Sodium	NL	16.4	10.3	39.7	110
Vanadium	0.19	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Thallium	0.02	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Zinc	5	< 0.0100	< 0.0100	0.0109	0.0206

### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in milligrams per Liter (mg/L).

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations



# Table 5A: Soil Boring & Test Pit Samples Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID		SB-1 1-3	SB-2	SB-5 0-2	SB-5	SB-6 1-4	SB-7	SB-8 0-4	SB-8D 5-9	SB-9 1-4	SB-12 1-3
-	-						-		20 00 0		
Date	Part 375	5/4/09	5/4/09	5/6/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09
Depth (ft)	Unrestricted Use	1-3'	0-2'	0-2'	1-3'	1-4'	1-3'	0-4'	5-9'	1-4'	1-3'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
2-Butanone (μg/kg)	50	< 31	< 32	< 41	< 29	< 32	< 32	< 150	< 32	< 30	15J
2-Methylnapthalene (µg/kg)	42	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
4-Isopropyltoluene (µg/kg)	5	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
4-Methyl-2 pentanone (μg/kg)	NL	< 31	<32	< 41	< 29	< 32	< 32	< 150	< 32	< 30	< 32
Acetone (µg/kg)	50	< 6.2	48	< 8.1	140	140	55	95DJ	88	66	240
Benzene (µg/kg)	10	< 6.2	< 6.1	< 8.1	< 5.9	1.8J	19	< 30	< 6.4	< 6.2	< 6.3
Carbon disulfide (µg/kg)	NL	< 6.2	< 6.1	< 8.1	2.0J	2.4J	< 6.5	8.1DJ	1.8J	< 6.2	4.1J
Chlorobenzene (µg/kg)	400	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
Cyclohexane (µg/kg)	NL	< 6.2	< 6.1	< 8.1	< 5.9	25	3.6J	< 30	< 6.4	< 6.2	< 6.3
Ethylbenzene (µg/kg)	5	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	1.6J	< 30	< 6.4	< 6.2	< 6.3
Isopropylbenzene (µg/kg)	23	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	4.0J	< 30	< 6.4	< 6.2	< 6.3
Methylene Chloride (µg/kg)	200	< 6.2	< 6.1	< 8.1	3.4J	< 6.4	< 6.5	< 30	< 6.4	< 6.2	3.7J
Methylcyclohexane (µg/kg)	NL	< 6.2	< 6.1	< 8.1	< 5.9	11	6.2J	< 30	< 6.4	< 6.2	< 6.3
$MtBE\ (\mu g/kg)$	NL	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
Naphthalene (µg/kg)	10	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
n-Butylbenzene (µg/kg)	5	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
n-propylbenzene (μg/kg)	5	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
sec-Butylbenzene (µg/kg)	5	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
tert-Butylbenzene (µg/kg)	5	< 6.2	< 6.1	< 8.1	< 5.9	< 6.4	< 6.5	< 30	< 6.4	< 6.2	< 6.3
Toluene (µg/kg)	480	< 6.2	< 6.1	< 8.1	< 5.9	1.5J	1.4J	< 30	< 6.4	< 6.2	< 6.3
Xylenes, Total (μg/kg)	5	< 12	< 12	< 18	< 12	5.5J	1.9J	< 59	< 13	< 12	< 13

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per kilogram (µg/kg).

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J -Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



Table 5A: Soil Boring & Test Pit Samples
Volatile Organic Compounds
Riverview Industrial Center
5335 River Road
Tonawanda, NY

Soil Sample ID		CD 12.1.5	CD 14 1 4	CD 15 1 4	CD 161 4	CD 17 1 4	CD 15 1 5	CD 10 1 4	D 10.2	D 1 4 6	D 2 0 2	D 2 4 7	D.7.1.4
Son Sample 1D		SB-13 1-5	SB-14 1-4	SB-15 1-4	SB-16 1-4	SB-17 1-4	SB-17 1-5	SB-18 1-4	B-1 0-2	B-1 4-6	B-2 0-2	B-2 4-7	B-7 1-4
Date	Part 375	5/4/09	5/4/09	5/4/09	5/5/09	5/5/09	5/5/09	5/5/09	5/6/09	5/5/09	5/6/09	5/5/09	5/6/09
Depth (ft)	Unrestricted Use	1-5'	1-4'	1-4'	1-4'	1-4'	1-5'	1-4'	0-2'	4-6'	0-2'	4-7'	1-4'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
2-Butanone (µg/kg)	50	< 32	28J	< 31	< 27	43	< 130	< 140	< 32	< 32	< 33	< 30	< 33
2-Methylnapthalene (µg/kg)	42	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
4-Isopropyltoluene (µg/kg)	5	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
4-Methyl-2 pentanone (µg/kg)	NL	< 32	< 29	< 31	< 27	< 32	< 130	< 140	< 32	< 32	< 33	< 30	< 33
Acetone (µg/kg)	50	53	240	48	56	240	< 27	260D	85	80	< 6.7	29J	< 6.6
Benzene (µg/kg)	10	< 6.3	< 5.8	< 6.2	5.4	4.1J	< 27	640D	< 6.5	11	< 6.7	< 5.9	< 6.6
Carbon disulfide (µg/kg)	NL	2.5J	2.1J	2.6J	2.1J	1.7J	< 27	460D,J	< 6.5	< 6.4	< 6.7	1.4J	< 6.6
Chlorobenzene (µg/kg)	400	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
Cyclohexane (µg/kg)	NL	< 6.3	< 5.8	4.7J	40	82	8.0DJ	6100D	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
Ethylbenzene (µg/kg)	5	< 6.3	< 5.8	< 6.2	< 5.4	1.6J	140D	1700D	< 6.5	170D	< 6.7	< 5.9	< 6.6
Isopropylbenzene (µg/kg)	23	< 6.3	< 5.8	< 6.2	11	17	45D	1100D	< 6.5	38D	< 6.7	< 5.9	< 6.6
Methylene Chloride (µg/kg)	200	5.4J	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
Methylcyclohexane (µg/kg)	NL	< 6.3	< 5.8	3.7J	63	160	14DJ	18000D	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
$MtBE(\mu g/kg)$	NL	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
Naphthalene (µg/kg)	10	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
n-Butylbenzene (µg/kg)	5	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
n-propylbenzene (µg/kg)	5	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
sec-Butylbenzene (µg/kg)	5	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
tert-Butylbenzene (µg/kg)	5	< 6.3	< 5.8	< 6.2	< 5.4	< 6.5	< 27	< 27	< 6.5	< 6.4	< 6.7	< 5.9	< 6.6
Toluene (µg/kg)	480	< 6.3	< 5.8	< 6.2	1.7B,J	2.6B,J	< 27	34D	< 6.5	2.8J	< 6.7	< 5.9	< 6.6
Xylenes, Total (μg/kg)	5	< 13	< 12	4.5J	26	10 <b>J</b>	150D	2900D	< 13	510D	< 13	150	< 13

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per kilogram (µg/kg).

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J -Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



Table 5A: Soil Boring & Test Pit Samples
Volatile Organic Compounds
Riverview Industrial Center
5335 River Road
Tonawanda, NY

Soil Sample ID		B-13 0-4	B-15 0-4	MW-005 8-10	MW-5-9	MW-8 14-16	TP-3	TP-4	WS4P*	TP-6	TP-6B	TP-10	TP-13	TP-19	TP-21
Date	Part 375	5/5/09	5/6/09	5/8/09	5/11/09	5/13/09	5/11/09	5/11/09	5/14/09	5/11/09	5/11/09	5/12/09	5/12/09	5/14/09	5/14/09
Depth (ft)	Unrestricted Use	0-4'	0-4'	8-10'	8-10'	14-16'	NA	5-6'		5-7'	12-14'	6-10'	0-2'	4-6'	1-4'
Matrix	] [	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Water	Solid	Solid	Solid	Solid	Solid	Solid
2-Butanone (µg/kg)	50	< 31	< 34	< 28	< 27	< 30	< 29	< 31	69D	< 35	< 26	12J	< 30	490D,J,B	< 6900
2-Methylnapthalene (µg/kg)	42	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
4-Isopropyltoluene (µg/kg)	5	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
4-Methyl-2 pentanone (μg/kg)	NL	< 31	< 34	< 28	< 27	< 30	< 29	< 31	< 5.0	< 35	< 26	6.3J	< 30	< 31	< 6900
Acetone (µg/kg)	50	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	120	100	60D	< 7.0	26	95	< 6.2	110	< 1400
Benzene (µg/kg)	10	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	1.3J	< 6.2	350D	2000D	< 5.3	< 5.7	< 6.2	< 6.1	820D,J
Carbon disulfide (µg/kg)	NL	< 6.2	< 6.8	< 5.7	< 5.4	1.2J	2.8J	1.5J	< 1.0	1.9J	< 5.3	< 5.7	< 6.2	4.8J	< 1400
Chlorobenzene (µg/kg)	400	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	1.3J	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	15	< 6.1	390D,J
Cyclohexane (µg/kg)	NL	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	9.7	< 6.2	71D	51000D	< 5.3	30	< 6.2	1700D	23000D
Ethylbenzene (µg/kg)	5	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	340D	< 6.2	360D	5900D	< 5.3	5.1J	< 6.2	8.5	14000D
Isopropylbenzene (µg/kg)	23	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	110D	< 6.2	37D	6400D	< 5.3	6	< 6.2	410D	2500D
Methylene Chloride (µg/kg)	200	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	6.5	< 1400
Methylcyclohexane (μg/kg)	NL	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	220D	< 6.2	61D	45000D	< 5.3	110	< 6.2	2700D	19000D
MtBE (µg/kg)	NL	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
Naphthalene (µg/kg)	10	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
n-Butylbenzene (µg/kg)	5	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
n-propylbenzene (µg/kg)	5	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
sec-Butylbenzene (µg/kg)	5	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
tert-Butylbenzene (µg/kg)	5	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	< 5.7	< 6.2	< 1.0	< 7.0	< 5.3	< 5.7	< 6.2	< 6.1	< 1400
Toluene (µg/kg)	480	< 6.2	< 6.8	< 5.7	< 5.4	< 5.9	77D,J	< 6.2	7.8D	21B	< 5.3	< 5.7	62B	1.2J	4000D
Xylenes, Total (μg/kg)	5	< 12	< 14	< 11	< 11	< 12	4200D	< 6.2	490D	770D,J	< 11	66	1.7J	<b>10J</b>	160000

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Analytes only detected in surficial soil samples are listed.

All units are reported in micrograms per kilogram (µg/kg).

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J -Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



## Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Semi-Volatile Organic Compounds Table 5B: Soil Boring & Test Pit Samples

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Soil Sample ID	_	SB-1 1-3	SB-2	SB-5 0-2	SB-5	SB-6 1-4	SB-7	SB-8 0-4	SB-8D 5-9	SB-9 1-4	SB-12 1-3
Date	Part 375 Unrestricted Use	5/4/09	05/05/09	5/6/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09
Sample interval (feet)		1-3'	1-2'	0-2'	1-3'	1-4'	1-3'	0-4'	5-9'	1-4'	1-3'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
2,4 Di MethylPhenol	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
2-Methylphenol	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
2-Methylnaphthalene	NL	< 210	< 210	32J	< 200	< 220	21H,J	9.2H,J	< 220	< 210	< 210
4-Chlorophenyl phenyl ether	NL	< 210	< 210	55J	< 200	< 220	< 220	< 220	< 220	< 210	< 210
4-Methylphenol	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
4-Nitroaniline	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
4-Nitrophenol	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Acenaphthene	20000	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Acenapthylene	100000	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Acetophenone	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Anthracene	100000	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Benzaldehyde	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Benzo(a)anthracene	1000	< 210	< 210	30J	13H,J	< 220	< 220	< 220	< 220	< 210	< 210
Benzo(a)pyrene	1000	11H,J	< 210	29Ј	< 200	< 220	< 220	13H,J	< 220	< 210	< 210
Benzo(b)fluoranthene	1000	15H,J	< 210	36J	< 200	< 220	15H,J	< 220	< 220	< 210	< 210
Benzo(g,h,i)perylene	100000	10H,J	< 210	25J	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Benzo(k)fluoranthene	800	13H,J	< 210	< 290	< 200	< 220	17H,J	< 220	< 220	< 210	< 210
Biphenyl	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Bis-(2 chloroethoxy) methane	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Bis-(2 Ethylhexyl) phthalate	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Butyl benzyl phthalate	NL	< 210	< 210	90J	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Carbazole	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Chrysene	1000	16H,J	8.9H,J	330	9.5H,J	8.9J	< 220	< 220	< 220	< 210	< 210
Dibenzo(a,h)anthracene	330	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Dibenzofuran	NL	< 210	< 210	< 290	< 200	< 220	< 220	13H,J	< 220	< 210	< 210
Diethyl phthalate	NL	< 210	< 210	53J	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Di-n-butyl-phthalate	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Di-n-octyl-phthalate	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Fluoranthene	100,000	9.1H,J	< 210	66J	9.9H,J	< 220	< 220	< 220	< 220	< 210	< 210
Fluorene	100000	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Indeno(1,2,3-cd)pyrene	30000	< 210	< 210	19J	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Naphthalene	500	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
N-Nitrosodi-n-propylamine	12000	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
N-Nitrosodiphenylamine	NL	< 210	< 210	< 290	< 200	< 220	< 220	< 220	< 220	< 210	< 210
Phenanthrene	100000	12H,J	< 210	32J	8.7H,J	< 220	< 220	< 220	< 220	< 210	< 210
Pyrene	100000	< 210	< 210	46J	< 200	< 220	< 220	< 220	< 220	< 210	< 210

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)
NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

- H Sample was extracted past holding time, but analyzed within analysis holding time.
- D Dilution requirted on sample for analysis.



## Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Semi-Volatile Organic Compounds Table 5B: Soil Boring & Test Pit Samples

Soil Sample ID		GD 42.4.5	an at a a	GD 454 4	an aca a	GD 151 1	an 151 5	GD 404.4	GD 44.4	7.100	7.446		2015	7.514
Date		SB-13 1-5	SB-14 1-4	SB-15 1-4	SB-16 1-4	SB-17 1-4	SB-17 1-5	SB-18 1-4	SB-22 4-6	B-1 0-2	B-1 4-6	B-2 0-2	B-2 4-7	B-7 1-4
	Part 375 Unrestricted Use	5/4/09	5/4/09	5/4/09	5/5/09	5/5/2009	5/5/2009	5/5/2009	5/5/2009	05/06/09	05/05/09	5/6/09	5/5/2009	5/6/2009
Sample interval (feet) Matrix		1-5'	1-4'	1-4'	1-4'	1-4'	1-5'	1-4'	4-6'	0-2'	4-6'	0-2'	4-7'	1-4'
	 	Solid	Solid	Solid	Solid	Solid	Solid							
2,4 Di MethylPhenol	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
2-Methylphenol	NL	< 220	< 200	< 210	< 1900	< 220	< 210	150H,D,J	< 210	< 230	< 1100	< 220	< 210	< 230
2-Methylnaphthalene	NL	< 220	< 200	42J	58000D	1900	2000H	6700D	< 210	< 230	240H,D,J	< 220	520H	< 230
4-Chlorophenyl phenyl ether	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
4-Methylphenol	NL	< 220	< 200	< 210	< 1900	< 220	< 210	200H,D,J	< 210	< 230	< 1100	< 220	< 210	< 230
4-Nitroaniline	NL	< 220	< 200	< 210	< 1900	< 220	110H,J	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
4-Nitrophenol	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	120H,J	< 230
Acenaphthene	20000	< 220	< 200	< 210	5500D	100J	110H,J	990H,D,J	< 210	< 230	44D,J	< 220	< 210	< 230
Acenapthylene	100000	< 220	< 200	< 210	< 1900	< 220	< 210	190D,J	< 210	< 230	< 1100	< 220	< 210	< 230
Acetophenone	NL	< 220	< 200	< 210	< 1900	47J	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Anthracene	100000	< 220	< 200	< 210	4300D	27Ј	62H,J	160D,J	< 210	< 230	44D,J	< 220	< 210	< 230
Benzaldehyde	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Benzo(a)anthracene	1000	< 220	< 200	< 210	< 1900	43J	55H,J	350H,D,J	<210	24J	93H,D,J	14J	19H,J	18J
Benzo(a)pyrene	1000	< 220	< 200	< 210	1800D,J	38J	56H,J	< 2100	< 210	25J	78H,D,J	9.5J	13H,J	< 230
Benzo(b)fluoranthene	1000	< 220	< 200	< 210	690D,J	58J	68H,J	170H,D,J	< 210	25J	< 1100	13Ј	10H,J	< 230
Benzo(g,h,i)perylene	100000	< 220	< 200	< 210	1100D,J	28J	48H,J	160H,D,J	< 210	18J	< 1100	< 220	12H,J	< 230
Benzo(k)fluoranthene	800	< 220	< 200	< 210	< 1900	18J	43H,J	< 2100	9.9H,J	23J	< 1100	< 220	12H,J	< 230
Biphenyl	NL	< 220	< 200	< 210	< 1900	21J	140H,J	870H,D,J	< 210	< 230	< 1100	< 220	< 210	< 230
Bis-(2 chloroethoxy) methane	NL	< 220	< 200	< 210	< 1900	< 220	12H,J	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Bis-(2 Ethylhexyl) phthalate	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Butyl benzyl phthalate	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Carbazole	NL	< 220	< 200	< 210	< 1900	< 220	24H,J	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Chrysene	1000	< 220	< 200	< 210	4900D	42J	69H,J	< 2100	< 210	26J	78H,D,J	< 220	14H,J	9.5J
Dibenzo(a,h)anthracene	330	< 220	< 200	< 210	< 1900	< 220	14H,J	< 2100	< 210	10Ј	< 1100	< 220	< 210	< 230
Dibenzofuran	NL	< 220	< 200	< 210	3700D	96J	< 210	290D,J	< 210	< 230	< 1100	< 220	< 210	< 230
Diethyl phthalate	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Di-n-butyl-phthalate	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
Di-n-octyl-phthalate	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	< 210	17J
Fluoranthene	100,000	< 220	< 200	< 210	2700D	84J	170H,J	270H,D,J	< 210	23Ј	99H,D,J	< 220	18H,J	< 230
Fluorene	100000	< 220	< 200	12J	8300D	150J	190H,J	1500H,D,J	< 210	< 230	68H,D,J	< 220	72H,J	< 230
Indeno(1,2,3-cd)pyrene	30000	< 220	< 200	< 210	250D,J	29Ј	41H,J	< 2100	< 210	17Ј	51H,D,J	< 220	8.4H,J	< 230
Naphthalene	500	< 220	< 200	< 210	< 1900	53Ј	480H	2000Н,Д,Ј	< 210	< 230	120D,J	< 220	< 210	< 230
N-Nitrosodi-n-propylamine	12000	< 220	< 200	< 210	< 1900	< 220	89H,J	< 2100	< 210	< 230	< 1100	< 220	< 210	< 230
N-Nitrosodiphenylamine	NL	< 220	< 200	< 210	< 1900	< 220	< 210	< 2100	< 210	< 230	< 1100	< 220	110H,J,L	< 230
Phenanthrene	100000	< 220	< 200	37J	29000D	260	560H	3500H,D	< 210	21J	310H,D,J	9.1J	190H,J	< 230
Pyrene	100000	< 220	< 200	16J	18000D	81J	150H,J	990H,D,J	< 210	22J	93H,D,J	< 220	24H,J	< 230

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)
NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

- H Sample was extracted past holding time, but analyzed within analysis holding time.
- D Dilution requirted on sample for analysis.



## Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Semi-Volatile Organic Compounds Table 5B: Soil Boring & Test Pit Samples

	1		ı	1				ı	ı	1	1	ı	1	1		
Soil Sample ID		B-13 0-4	B-15 0-4	MW-005 8-10	MW-006 2-4	MW-5-9	MW-8 14-16	TP-3	TP-4	WS4P*	TP-6	TP-6B	TP-10	TP-13	TP-19	TP-21
Date	Part 375	5/5/09	5/6/09	5/8/09	5/8/09	5/11/09	05/13/09	05/11/09	05/11/09	05/14/09	5/11/2009	5/11/2009	5/12/2009	5/12/2009	5/14/2009	5/14/2009
Sample interval (feet)	Unrestricted Use	0-4'	0-4'	8-10'	2-4'	8-10'	14-16'	NA	5-6'		5-7'	12-14'	6-10'	0-2'	4-6'	1-4'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Water	Solid	Solid	Solid	Solid	Solid	Solid
2,4 Di MethylPhenol	NL	< 210	< 230	< 190	< 190	< 190	< 200	1700D,J	< 210	< 100	78000D	< 190	< 200	< 1000	27000D	< 960
2-Methylphenol	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
2-Methylnaphthalene	NL	< 210	< 230	< 190	< 190	< 190	9.0J	< 1900	< 210	490D	< 2300	< 190	230	< 1000	< 1100	46000D
4-Chlorophenyl phenyl ether	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
4-Methylphenol	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
4-Nitroaniline	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
4-Nitrophenol	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Acenaphthene	20000	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	20D,J	1300D,J	< 190	< 200	< 1000	960D,J	3500D
Acenapthylene	100000	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Acetophenone	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Anthracene	100000	< 210	< 230	13Ј	< 190	< 190	< 200	99D,J	< 210	< 100	< 2300	< 190	< 200	< 1000	260D,J	2800D,J
Benzaldehyde	NL	< 210	330N	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Benzo(a)anthracene	1000	< 210	22J	50J	23J	< 190	< 200	140D,J	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	3100D,J
Benzo(a)pyrene	1000	< 210	25J	42J	18J	< 190	< 200	80D,J	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	2200D,J
Benzo(b)fluoranthene	1000	< 210	225	55J	23J	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	2900D,J
Benzo(g,h,i)perylene	100000	< 210	19J	26Ј	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	68D,J	970D,J
Benzo(k)fluoranthene	800	< 210	225	15J	11J	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	830D,J
Biphenyl	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	530D,J	< 190	< 200	< 1000	< 1100	1300D,J
Bis-(2 chloroethoxy) methane	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	700D,L,J
Bis-(2 Ethylhexyl) phthalate	NL	< 210	< 230	< 190	170J	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	1300D	790D,J	500D,J
Butyl benzyl phthalate	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Carbazole	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Chrysene	1000	< 210	22J	48J	16J	< 190	< 200	92D,J	< 210	< 100	< 2300	< 190	< 200	< 1000	230	2700D,J
Dibenzo(a,h)anthracene	330	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	310D,J
Dibenzofuran	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	500D,J	< 190	< 200	< 1000	650D,J	2800D,J
Diethyl phthalate	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Di-n-butyl-phthalate	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Di-n-octyl-phthalate	NL	< 210	13J	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
Fluoranthene	100,000	< 210	265	110Ј	35J	< 190	< 200	180D,J	< 210	< 100	200D,J	< 190	< 200	< 1000	240D,J	9700D
Fluorene	100000	< 210	< 230	< 190	< 190	< 190	< 200	190D,J	< 210	21D,J	760D,J	< 190	< 200	< 1000	1100D	5300D
Indeno(1,2,3-cd)pyrene	30000	< 210	14J	25Ј	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	1100DJ
Naphthalene	500	< 210	< 230	< 190	< 190	< 190	< 200	480D,J	< 210	280D	26000D	< 190	250	< 1000	2000D	26000D
N-Nitrosodi-n-propylamine	12000	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	< 100	< 2300	< 190	< 200	< 1000	< 1100	< 960
N-Nitrosodiphenylamine	NL	< 210	< 230	< 190	< 190	< 190	< 200	< 1900	< 210	76D,L,J	3600D	< 190	< 200	< 1000	< 1100	< 960
Phenanthrene	100000	< 210	21J	88J	21J	< 190	< 200	560D,J	< 210	33D,J	< 2300	< 190	< 200	< 1000	2800D	16000D
Pyrene	100000	< 210	25J	93J	31J	< 190	< 200	200D,J	< 210	< 100	700D,J	< 190	< 200	110D,J	680D,J	7500D

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)
NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

- H Sample was extracted past holding time, but analyzed within analysis holding time.
- D Dilution requirted on sample for analysis.



## Table 5C: Soil Boring & Test Pit Samples Pesticides Riverview Industrial Center 5335 River Road Tonawanda, NY

C-21 C1- ID		GD 444																			
Soil Sample ID	Part 375	SB-1 1-3 5/4/09	SB-2	SB-5 0-2	SB-5	SB-6 1-4	SB-7	SB-8 0-4	SB-8D 5-9	SB-9 1-4	SB-12 1-3	SB-13 1-5	SB-14 1-4	SB-15 1-4	SB-16 1-4	SB-17 1-4	SB-17 1-5	SB-18 1-4	SB-22 4-6	B-1 0-2	B-1 4-6
Date Depth'	Unrestricted Use	1-3'	05/05/09	5/6/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/5/09	5/5/2009	5/5/2009	5/5/2009	5/5/2009	05/06/09	05/05/09
Matrix	Ose	Solid	1-2' Solid	0-2' Solid	1-3' Solid	1-4' Solid	1-3' Solid	0-4' Solid	5-9' Solid	1-4' Solid	1-3' Solid	1-5' Solid	1-4' Solid	1-4' Solid	1-4' Solid	1-4' Solid	1-5' Solid	1-4' Solid	4-6' Solid	0-2' Solid	4-6' Solid
MULIA		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
4,4'-DDT	3.3	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
4-4'-DDD	3.3	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
4-4'-DDE	3.3	< 2.1	< 2.1	2.2J	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	1.4J
Aldrin	5	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
alpha-BHC	20	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	1.3J	1.5J	1.5J	< 2.2	< 2.1
alpha-Chlordane	94	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	<2.1	< 2.1	< 2.1	< 2.2	< 2.1
beta-BHC	36	< 2.1	< 2.1	< 2.8	<2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
Chlordane	NL	< 21	< 21	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 370	< 22	< 21	< 21	< 21	< 22	< 21
delta-BHC	40	< 2.1	< 2.1	< 2.8	1.4J	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	1.5J	< 2.1	< 2.2	< 2.1
Dieldrin	5	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
Endosulfan I	2400	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
Endosulfan II	2400	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	0.71J	< 2.1	< 2.2	0.95J
Endosulfan Sulfate	2400	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	<2.1
Endrin	14	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	1.4J	< 2.1	< 2.2	1.1J
Endrin aldehyde	NL	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	<2.1
Endrin Ketone	NL	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
gamma BHC (Lindane)	100	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	1.2	1.4J	< 2.2	< 2.1
gamma- Chlorodane	NL	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	2.2	1.5J
Heptachlor	42	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	<2.1
Heptachlor epoxide	NL	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	< 2.1	< 2.1	< 2.2	< 2.1
Methoxychlor	NL	< 2.1	< 2.1	< 2.8	< 2.0	< 2.1	< 2.2	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.0	< 2.1	< 37	< 2.2	< 2.1	1.8J	< 2.1	< 2.2	< 2.1
Toxaphene	NL	< 21	< 21	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 370	< 22	< 21	< 21	< 21	< 22	< 21

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

 $\label{eq:continuous} J - Analyte \ detected \ at \ a \ level \ less \ than \ the \ Reporting \ Limit \ (RL) \ and \ greater \ than \ or \ equal \ to \ the \ Method \ Detection \ Limit \ (MDL).$ 

Concentrations within this range are estimated.

QFL - Florisil clean-up (EPA 3620) performed on extract.



## Table 5C: Soil Boring & Test Pit Samples Pesticides Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID		B-2 02	B-2 4-7	B-7 1-4	B-13 0-4	B-15 0-4	MW-005 8-10	MW-006 2-4	MW-5-9	MW-8 14-16	TP-3	TP-4	TP-6	TP-6B	TP-10	TP-13	TP-19	TP-21
Date	Part 375	5/6/2009	5/5/2009	5/6/2009	5/5/09	05/06/09	5/8/09	5/8/09	5/11/09	05/13/09	05/11/09	05/11/09	5/11/2009	5/11/2009	5/12/2009	5/12/2009	5/14/2009	5/14/2009
Depth'	Unrestricted Use	0-2'	4-7'	1-4'	0-4'	0-4'	8-10'	2-4'	8-10'	14-16'	NA	5-6'	5-7'	12-14'	6-10'	0-2'	4-6'	1-4'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
4,4'-DDT	3.3	< 2.2	< 2.0	< 2.3	< 2.0	2.8	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	1.4QFL,J	< 43	< 37
4-4'-DDD	3.3	< 2.2	< 2.2	< 2.3	< 2.0	2.0J	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
4-4'-DDE	3.3	2.0J	< 2.2	< 2.3	< 2.0	2.4	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
Aldrin	5	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	3.0QFL	< 2.0	< 43	< 37
alpha-BHC	20	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
alpha-Chlordane	94	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
beta-BHC	36	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
Chlordane	NL	< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	< 230	< 18	< 19	< 20	< 430	< 370
delta-BHC	40	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
Dieldrin	5	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
Endosulfan I	2400	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	1.0QFL,J	< 2.1	22QFL,J	< 1.8	4.5QFL	< 2.0	< 43	< 37
Endosulfan II	2400	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	240QFL	< 1.8	< 1.9	< 2.0	< 43	< 37
Endosulfan Sulfate	2400	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	0.47QFL,J	< 2.0	< 43	< 37
Endrin	14	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	1.5QFL,J	< 2.1	< 23	< 1.8	1.7QFL,J	0.98QFL,J	< 43	< 37
Endrin aldehyde	NL	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
Endrin Ketone	NL	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	< 1.8	< 1.9	< 2.0	< 43	< 37
gamma BHC (Lindane)	100	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	23QFL	< 1.8	3.0QFL	< 2.0	< 43	< 37
gamma- Chlorodane	NL	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	0.81QFL,J	< 2.1	< 23	0.55QFL,J	0.84QFL,J	< 2.0	< 43	< 37
Heptachlor	42	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	84QFL,B	< 1.8	< 1.9	< 2.0	< 43	< 37
Heptachlor epoxide	NL	< 2.2	< 2.2	< 2.3	< 2.0	< 2.3	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	< 23	0.51 OFL,J	0.73QFL,J	< 2.0	< 43	< 37
Methoxychlor	NL	< 2.2	< 2.2	< 2.3	< 2.0	0.75	< 1.9	< 1.9	< 1.8	< 2.0	< 1.9	< 2.1	140QFL	< 1.8	< 1.9	< 2.0	< 43	< 37
Toxaphene	NL	< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 2.0	< 19	< 21	< 230	< 18	< 19	< 20	< 430	< 370

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

Concentrations within this range are estimated.

QFL - Florisil clean-up (EPA 3620) performed on extract.



# Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Polychlorinated Biphenyls Table 5D: Soil Boring & Test Pit Samples

Soil Sample ID		SB-1 1-3	SB-2	SB-5 0-2	SB-5	SB-6 1-4	SB-7	SB-8 0-4	SB-8D 5-9	SB-9 1-4	SB-12 1-3	SB-13 1-5	SB-14 1-4	SB-15 1-4	SB-16 1-4	SB-17 1-4	SB-17 1-5	SB-18 1-4	SB-22 4-6	B-1 0-2	B-1 4-6
Date	Part 375 Unrestricted	5/4/09	05/05/09	5/6/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/5/09	5/5/2009	5/5/2009	5/5/2009	5/5/2009	05/06/09	05/05/09
Depth'	Use	1-3'	1-2'	0-2'	1-3'	1-4'	1-3'	0-4'	5-9'	1-4'	1-3'	1-5'	1-4'	1-4'	1-4'	1-4'	1-5'	1-4'	4-6'	0-2'	4-6'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aroclor-1016	100	< 2.1	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21
Aroclor-1221	100	< 21	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21
Aroclor-1232	100	< 21	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21
Aroclor-1242	100	< 21	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21
Aroclor-1248	100	< 21	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	14QSU,C,J	18C,J	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21
Aroclor-1254	100	< 21	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	< 21	11C,J	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21
Aroclor-1260	100	< 21	< 2.1	< 28	< 20	< 21	< 22	< 21	< 21	< 21	< 21	< 21	< 20	< 21	< 37	< 22	< 21	< 21	< 21	< 22	< 21

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 20

All units are micrograms per kilogram (µg/kg)

QSU - Sulfur (EPA 3660) clean-up performed on extract.

- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- D Dilution requirted on sample for analysis.

B-2 02	B-2 4-7	B-7 1-4	B-13 0-4	B-15 0-4	MW-005 8-10	MW-006 2-4	MW-5-9	MW-8 14-16	TP-3	TP-4	WS4P*	TP-6	TP-6B	TP-10	TP-13	TP-19	TP-21
5/6/2009	5/5/2009	5/6/2009	5/5/09	05/06/09	5/8/09	5/8/09	5/11/09	05/13/09	05/11/09	05/11/09	05/14/09	5/11/2009	5/11/2009	5/12/2009	5/12/2009	5/14/2009	5/14/2009
0-2'	4-7'	1-4'	0-4'	0-4'	8-10'	2-4'	8-10'	14-16'	NA	5-6'		5-7'	12-14'	6-10'	0-2'	4-6'	1-4'
Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Water	Solid	Solid	Solid	Solid	Solid	Solid
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	< 0.50	< 2300	< 18	< 19	< 20	< 21	< 19
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	< 0.50	< 2300	< 18	< 19	< 20	< 21	< 19
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	< 0.50	< 2300	< 18	< 19	< 20	< 21	< 19
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	< 0.50	< 2300	< 18	< 19	< 20	< 21	< 19
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	26QSU	20000QSU,D	< 18	< 19	< 20	< 21	< 19
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	80QSU	< 21	< 0.50	< 2300	< 18	< 19	< 20	46	< 19
< 22	< 20	< 23	< 20	< 23	< 19	< 19	< 18	< 20	< 19	< 21	< 0.50	< 2300	< 18	< 19	< 20	< 21	< 19

## NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg)

- QSU Sulfur (EPA 3660) clean-up performed on extract.

  J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.

  D - Dilution requirted on sample for analysis.



## Table 5E: Soil Boring & Test Pit Samples Metals Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID		SB-1 1-3	SB-2	SB-5 0-2	SB-5	SB-6 1-4	SB-7	SB-8 0-4	SB-8D 5-9	SB-9 1-4	SB-12 1-3	SB-13 1-5	SB-14 1-4
Date	Part 375	5/4/09	5/4/09	5/6/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09	5/4/09
Depth (ft)	Unrestricted Use	1-3'	1-2'	0-2'	1-3'	1-4'	1-3'	0-4'	5-9'	1-4'	1-3'	1-5'	1-4'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aluminum	NI								15800B				
	NL	11300B	13700B	22000B	16900B	15800B	15700B	16700B		17700B	18300B	18300B	11900B
Antimony	NL	< 17.9	< 19.2	< 23.2	< 16.7	< 19.7	< 18.4	< 18.3	< 17.8	< 19.3	< 17.4	< 17.8	< 16.8
Arsenic	13	10.4	7.1	5.5	3.5	4.5	4.7	4.1	4.5	3.4	8.1	3.8	3.1
Barium	350	90.5	112	187	151	129	96.8	119	124B	89.3B	170B	117B	59.2B
Beryllium	7.2	0.520	0.566	1.02	0.877	0.638	0.821	0.699	0.697B	0.683B	0.866B	0.791B	0.428B
Cadmium	2.5	0.517	0.081J	0.318	0.206J	0.226J	0.117J	0.163J	0.331B	0.196Ј,В	0.282B	0.212J,B	0.170J,B
Calcium	NL	38500	2800	24800	36400	39300	2260	9740	7610	1700	26800	2980	1810
Chromium	NL	18.7	18.3	28.7	20.6	19.9	21.5	22.0	22.0B	21.1B	23.3B	20.7B	13.8B
Cobalt	NL	12.5	11.1	14.8	14.8	11.4	12.7	11.9	12.1	12.0B	21.1B	7.40B	7.04B
Copper	50	163	17.6	52.8	52.6	19.2	10.9	17.7	31.5B	11.5B	26.4B	13.8B	8.8B
Iron	NL	46600	24700	31000	23400	21200	29100	29200	24300B	24000B	28900B	24400B	17400B
Lead	63	21.9	10.3	29.4	21.5	10.1	15.5	10.6	11.1	14.6	14.8	17.2	12.5
Magnesium	NL	11500	5240	10500	10200	14100	3420	6680	9710	4640	13300	3660	2900
Manganese	1600	4030D,B	269B	723B	599B	658B	1540B	1430B	612B1,B	355B1,B	1280B1,B	186B1,B	316B1,B
Mercury	0.18	0.0266	0.0169J	0.0461	0.0198J	0.0184J	0.0320	0.0249J	< 0.0249	0.0138J	< 0.0257	0.0221J	0.0146J
Nickel	30	23.5	24.3	33.1	22.3	26.5	15.3	27.7	29.9	19.3	36.4	15.6	12.4
Potassium	NL	2390	2110	3190	3070	2970	1520	2550	2200	1330	2430	1390	878
Selenium	3.9	< 4.8	< 5.1	< 6.2	< 4.5	< 5.3	< 4.9	< 4.9	1.4J,B	1.2J,B	1.0JB	1.5J,B	1.3J,B
Silver	2	< 0.596	< 0.639	0.150J,B	0.102J,B	0.096J,B	0.112J,B	0.114J,B	< 0.594	< 0.644	< 0.580	< 0.594	< 0.558
				,		,	,						
Sodium	NL	205	145J	258	233	199	122J	143J	167	190	196	265	114J
Thallium	NL	< 7.2	< 7.7	< 9.3	< 6.7	< 7.9	< 7.4	< 7.3	0.5J	< 38.6	< 7.0	< 7.1	< 6.7
Vanadium	NL	24.5	23.6	39.6	29.3	26.8	41.0	28.3	26.8B	33.6B	30.5B	31.3B	25.2B
Zinc	109	113B	55.9B	113B	74.4B	59.5B	65.8B	70.3B	75.8B	65.0B	65.2B	54.1B	53.8B

### NOTES

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (mg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

B - Analyte was detected in the associated Method Blank

D08 - Dilution required due to high concentration of target analyte(s)

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

Concentrations within this range are estimated.



## Table 5E: Soil Boring & Test Pit Samples Metals Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID		SB-15 1-4	SB-16 1-4	SB-17 1-4	SB-17 1-5	SB-18 1-4	SB-22 4-6	B-1 0-2	B-1 4-6	B-2 0-2	B-2 4-7	B-7 1-4	B-13 0-4	B-15 0-4	MW-005 8-10	MW-006 2-4	MW-5-9
Date	Part 375	5/4/09	5/5/09	5/5/09	5/5/09	5/5/09	5/5/09	05/06/09	05/05/09	5/6/09	5/5/2009	5/6/2009	5/5/09	5/6/09	5/8/09	5/8/09	5/11/09
Depth (ft)	Unrestricted Use	1-4'	1-4'	1-4'	1-5'	1-4'	4-6'	0-2'	4-6'	0-2'	4-7'	1-4'	0-4'	0-4'	8-10'	2-4'	8-10'
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Aluminum	NL	21000B	14700B	12300B	12300B	14800B	18700B	13100B	12500B	16400B	15600B	16900B	14800B	24300B	12900B	10600B	9280
Antimony	NL	< 19.6	< 15.4	< 19.9	< 17.1	< 17.2	< 17.4	< 20.2	< 18.3	< 21	< 17.1	< 18.9	< 17.2	< 21.2	< 17.1	< 18.2	< 15.4
Arsenic	13	6.0	3	5.3	4.4	1.7J	3.5	3.9	4.7	4.0	4.0	3.9	3.3	3.9	3.9	4.0	2.2
Barium	350	168B	136B	82.1B	61.9	120	98.5	78.0	79.5	93.3	136	210	60.4B	167	101B	93.2B	62.5
Beryllium	7.2	0.907B	0.850B	0.545B	0.552	0.667	0.608	0.597	0.631	0.686	1.02	1.61	0.505B	1.17	0.609B	0.527B	0.446
Cadmium	2.5	0.248J,B	0.306B	0.400B	0.177Ј	0.143J	0.114J	0.404	0.370	0.125J	0.705	0.185J	0.186J,B	0.134J	0.272B	0.251B	0.084J
Calcium	NL	7290	8640	23900	60600D	15800	2080	23200	1930	983	16300	2070	671	2080	48300	55500	53800
Chromium	NL	25.7B	19.4B	98.2B	16.5	18.0	22.8	15.3	15.6	21.4	17.7	21.7	14.0B	26.7	17.8B	15.5B	13.8
Cobalt	NL	12.6B	9.95B	6.75B	7.33	10.6	9.27	8.61	7.85	8.25	9.94	12.1	5.69B	10.4	8.91B	8.38B	8.09
Copper	50	21.2B	16.7B	21.9B	17.5	12.9	11.4	10.7	10.4	9.8	17.2	19.7	9.0B	15.6	20.1B	16.0B	15.2
Iron	NL	30900B	20500B	27400B	18300	21500	28200	18200	18400	21600	21300	25500	17800B	27600	20200B	18300B	15100
Lead	63	11.2	10.8	32.8	8.0	13.7	12.1	26.1	22.1	11.7	12.8	11.1	14.2	12.1	17.2	8.4	7.1
Magnesium	NL	7000	5680	9130	16300	6400	4510	10600	2740	4060	5880	5420	2330	5570	12600	16500	18300
Manganese	1600	926B1,B	275B1,B	2500B1,B	497B	645B	243B	585B	196B	855B	542B	881B	147B1,B	286B	421B1,B	507B1,B	530
Mercury	0.18	< 0.0104	0.0141J	0.0335	< 0.0248	0.0223J	0.0199J	0.0378	0.0487	0.0461	0.0110J	0.0198J	0.0143J	0.0255J	< 0.0229	< 0.0242	< 0.0222
Nickel	30	33.0	24.7	15.5	19.7	18.4	17.2	15.4	15.0	19.4	25.7	32.1	10.7	30.2	22.8	20.7	18.2
Potassium	NL	2310	1710	1400	3480	2140	1660	1470	1140	1840	1820	1720	1040	1840	1880	2460	2030
Selenium	3.9	1.3J,B	< 4.2	1.3J,B	< 4.6	0.7Ј	< 4.6	0.8J	0.8J	< 5.6	< 4.6	< 5.0	1.8J,B	< 5.7	1.0J,B	0.9J,B	< 4.1
Silver	2	< 0.652	< 0.530	< 0.662	< 0.571	0.108J,B	0.107J,B	0.113J,B	0.178J,B	< 0.700	< 0.570	0.168J,B	< 0.574	0.164J,B	< 0.571	< 0.606	< 0.515
Sodium	NL	153J	149	276	364	171	160J	153J	86.3J	94.3J	105J	81.4J	79.1J	76.3J	159J	231	172
Thallium	NL	< 7.8	0.4J	< 7.9	< 6.9	< 6.9	< 7.0	< 8.1	< 7.3	< 8.4	< 0.3	< 7.6	< 6.9	< 8.5	< 6.9	< 7.3	< 6.2
Vanadium	NL	31.9B	245B	51.9B	22.3	27.1	34.5	27.5	27.6	31.0	23.3	29.8	26.7B	35.5	23.2B	20.2B	17.8
Zinc	109	70.4B	60.7B	86.1B	56.1B	56.6B	54.9B	82.1B	74.0B	80.4B	61.6B	71.8B	64.2B	79.2B	60.2B	58.7B	52.9B

### NOTES

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (mg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

B - Analyte was detected in the associated Method Blank

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

Concentrations within this range are estimated.



## Table 5E: Soil Boring & Test Pit Samples Metals Riverview Industrial Center 5335 River Road Tonawanda, NY

Call Canada ID											
Soil Sample ID		MW-8 14-16	TP-3	TP-4	WS4P*	TP-6	TP-6B	TP-10	TP-13	TP-19	TP-21
Date  Date	Part 375 Unrestricted Use		05/11/09	05/11/09	05/14/09	5/11/2009	5/11/2009	5/12/2009	5/12/2009	5/14/2009	5/14/2009
Depth (ft)		14-16'	NA	5-6'		5-7'	12-14'	6-10'	0-2'	4-6'	1-4'
Matrix		Solid	Solid	Solid	Water	Solid	Solid	Solid	Solid	Solid	Solid
Aluminum	NL	9490	11200	12500	104	14400	8100	10500	969	18200B	1560B
Antimony	NL	< 17.8	< 16.7	< 17.9	< 0.0200	< 19.3	< 15.8	< 17.8	< 90.1	< 18.5	< 16.2
Arsenic	13	3.4	4.1	2.6	0.0336	2.5J	2.6	3.5	1.7J	4.2	3.5
Barium	350	96.7	90.9	136	0.800	123	77.8	94.7	7.47	176	15.0
Beryllium	7.2	1.50	0.604	0.585	0.0040	0.560	0.396	0.527	0.227J	2.22B	0.151J,B
Cadmium	2.5	3.61	0.441	< 0.238	0.0038	0.090J	< 0.237	0.058J	< 0.240	0.483	0.427
Calcium	NL	109000D	17800	2370	300	23500	43100	53000	402000D	124000D	38000
Chromium	NL	24.7	26.1	14.6	0.129	17.8	11.7	17.1	3.90	9.88	2.52
Cobalt	NL	2.35	7.04	5.72	0.0564	6.35	7.23	8.49	0.859	4.19	2.62
Copper	50	2150	20.2	8.2	0.127	17.2	11.8	16.4	3.5	9.2	5.4
Iron	NL	14200	16600	15,900	130	16200	13500	18200	2010	10600	4360
Lead	63	167	28.4	7.6	0.193	24.6	5.1	8.4	3.3	21.4B	61.7B
Magnesium	NL	18200	7,090	3,290	93.5	15300	12500	15900	7250	12600	3560
Manganese	1600	889	357	153	5.11	300	493	478	103	908	201
Mercury	0.18	< 0.0241	0.0822	0.0471	< 0.0236	0.0299	< 0.0217	0.0130J	0.0106Ј	0.0137Ј	0.0206J
Nickel	30	12.7	19.2	14.8	0.144	18.4	16.7	21.1	4.27	9.15	7.62
Potassium	NL	613	1180	1070	20.8	1450	1650	2160	572	1310	269
Selenium	3.9	< 4.8	0.7Ј	< 4.8	< 0.0150	< 5.1	< 4.2	< 4.7	< 24	1.3J	< 4.3
Silver	2	0.208J	0.090J,B	< 0.596	< 0.0030	< 0.644	< 0.528	< 0.593	< 0.600	0.096J,B	0.102J,B
Sodium	NL	496	125J	119Ј	27.6	178J	140Ј	178	67.2J	613	79.8J
Thallium	NL	< 7.1	< 6.7	< 7.2	< 0.0200	< 7.7	< 6.3	< 7.1	< 7.2	< 7.4	< 6.5
Vanadium	NL	7.66	19.9	18.6	0.180	23.4	15.1	20.8	3.08	11.9	3.49
Zinc	109	349B	82.9B	57.1B	0.697	76.2B	44B	66.8B	10.0B	45.6B	283B

### NOTES

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (mg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

B - Analyte was detected in the associated Method Blank

 $\mbox{\bf D08}$  - Dilution required due to high concentration of target analyte(s)

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

Concentrations within this range are estimated.



## Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Volatile Organic Compounds

Table 6A: Groundwater Monitoring Wells

Soil Sample ID	TOGs	MW-1	MW-2R	MW-4	MW-005	MW-006	MW-007	MW-008	MW-9	
Date	1.1.1 NYS Groundwater	06/13/09 Water	06/13/09 Water	06/13/09 Water	06/13/09 Water	06/13/09	6/12/09 Water	6/12/09 Water	06/12/09 Water	
Matrix	Guidance Values					Water				
2-Butanone	50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
2-Methylnapthalene	4.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
4-Isopropyltoluene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
4-Methyl-2Pentadone	NL	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Acetone	50	1.8J	< 1.0	< 1.0	< 1.0	< 1.0	6.6	2.0J	< 1.0	
Benzene	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Carbon disulfide	NL	< 1.0	< 1.0	< 1.0	< 1.0	0.53J	0.53J	0.64J	< 1.0	
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Cyclohexane	NL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Methylene Chloride	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Methylcyclohexane	NL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
MtBE	NL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Naphthalene	10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
n-Butylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
n-propylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Xylenes, Total	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	

### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per Liter  $(\mu g/L)$ 

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).  Concentrations within this range are estimated.									



## Former Gasoline Distribution Terminal 5335 River Road

## Tonawanda, New York

Semi-Volatile Organic Compounds
Table 6B: Groundwater Monitoring Wells

Soil Sample ID	TOGs 1.1.1	MW-1	MW-2R	MW-4	MW-005	MW-006	MW-007	MW-008	MW-9	DUP-13
Date	NYS Groundwater Guidance Values	06/13/09	06/13/09	06/13/09	06/13/09	06/13/09	6/12/09	6/12/09	06/12/09	06/13/09
Matrix	Guidance Values	Water	Water	Water	Water	Water	Water	Water	Water	Water
2,4 Di MethylPhenol	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
2-Methylnaphthalene	4.2	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Acenaphthene	20	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Acetophenone	NL	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Anthracene	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Benzaldehyde	NL	< 48	< 47	< 48	< 47	< 50	< 47	< 57	< 48	< 47
Benzo(a)anthracene	0.002	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Benzo(a)pyrene	ND	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Benzo(b)fluoranthene	0.002	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Benzo(g,h,i)perylene	ND	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Benzo(k)fluoranthene	0.002	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Biphenyl	5	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Bis-(2 chloroethoxy) methane	5	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Bis-(2-ethylhexyl) phthalate	5	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	3.1J	< 9.6	< 9.4
Carbazole	NL	< 4.8	< 4.7	< 4.8	< 4.7	< 5.0	< 4.7	< 5.7	< 4.8	< 4.7
Chrysene	0.002	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Dibenzo(a,h)anthracene	NL	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Dibenzofuran	NL	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Diethyl phthalate	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Di-n-butyl-phthalate	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Di-n-octyl phthalate	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Fluoranthene	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Fluorene	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Indeno(1,2,3-cd)pyrene	0.002	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Naphthalene	10	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
N-nitrosdiphenylamine	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Phenanthrene	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4
Pyrene	50	< 9.5	< 9.4	< 9.5	< 9.4	< 9.9	< 9.4	< 11	< 9.6	< 9.4

### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per Liter (µg/L)

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations





### Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Pesticides

**Table 6C: Groundwater Monitoring Wells** 

Soil Sample ID	TOGs	MW-1	MW-2R	MW-4	MW-005	MW-006	MW-007	MW-008	MW-9	DUP-13
Date	1.1.1 NYS Groundwater	06/13/09	06/13/09	06/13/09	06/13/09	06/13/09	6/12/09	6/12/09	06/12/09	06/13/09
Matrix	<b>Guidance Values</b>	Water	Water	Water	Water	Water	Water	Water	Water	Water
4,4'-DDT (2C)	0.3	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
4-4'-DDD (2C)	0.2	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
4-4'-DDE (2C)	0.2	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Aldrin (2C)	ND	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
alpha-BHC (2C)	NL	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	0.028J	< 0.048	< 0.047
alpha-Chlordane (2C)	NL	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
beta-BHC (2C)	NL	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Chlordane (2C)	0.05	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
delta-BHC (2C)	NL	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Dieldrin (2C)	0.004	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Endosulfan I (2C)	0.009	< 0.048	< 0.047	< 0.047	0.068	< 0.050	< 0.047	< 0.053	< 0.048	0.056
Endosulfan II (2C)	0.009	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Endosulfan Sulfate (2C)	0.009	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Endrin (2C)	ND	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Endrin aldehyde (2C)	5	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Endrin Ketone (2C)	5	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
gamma BHC (Lindane) (2C)	5	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
gamma- Chlorodane (2C)	NL	< 0.048	< 0.047	< 0.047	0.042J	0.020	0.033J	0.021J	0.035J	0.024J
Heptachlor (2C)	0.04	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Heptachlor epoxide (2C)	0.03	< 0.048	< 0.047	< 0.047	0.025J	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Methoxychlor (2C)	35	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047
Toxaphene (2C)	0.06	< 0.048	< 0.047	< 0.047	< 0.047	< 0.050	< 0.047	< 0.053	< 0.048	< 0.047

#### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per Liter  $(\mu g/L)$ 

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).





### Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Metals

**Table 6E: Groundwater Monitoring Wells** 

Soil Sample ID	TOGs	MW-1	MW-2R	MW-4	MW-005	MW-006	MW-007	MW-008	MW-3
Date	1.1.1 NYS Groundwater	06/13/09	06/13/09	06/13/09	06/13/09	06/13/09	6/12/09	6/12/09	06/12/09
Matrix	Guidance Values	Water							
Aluminum	0.1	6.51	1.84	3.94	1.19	6.22	9.31	17.3	1.08
Antimony	0.003	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Arsenic	0.025	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Barium	1	0.180	0.0280	0.0975	0.0356	0.0867	0.154	0.173	0.119
Beryllium	0.003	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Cadmium	0.005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0016	< 0.0010	< 0.0010	< 0.0010
Calcium	NA	149	209	102	95.8	237	73	295	43.4
Chromium	0.05	0.0062	< 0.0040	< 0.0040	< 0.0040	0.0138	0.0151	0.0357	< 0.0040
Cobalt	0.005	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0074	< 0.0040	0.0047	< 0.0040
Copper	0.2	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0225	0.0115	0.0281	< 0.0100
Iron	0.3	6.06	1.88	3.39	1.03	11.6	970	22.8	1.05
Lead	0.025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0053	0.0082	0.0182	< 0.0050
Magnesium	35	84.5	527D	97.1	316	656D	36.1	298	116
Manganese	0.3	0.752	0.430	0.0109	0.251	0.766	0.204	0.474	0.0391
Mercury	0.0007	< 0.0002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Nickel	0.1	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0156	< 0.0100	0.0178	< 0.0100
Potassium	NA	5.09	18.7	3.62	8.30	33.3	15.3	16.0	10.7
Selenium	0.01	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150
Silver	0.05	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030
Sodium	20	13.0	230	16.1	128	203	64.3	180	52.1
Vanadium	0.014	0.0108	< 0.0050	0.0070	< 0.0050	0.0090	0.0168	0.0250	< 0.0050
Thallium	0.0005	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Zinc	2	0.0239	0.0134	0.0155	< 0.0100	0.0248	0.0323	0.0951	< 0.0100

#### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per Liter (mg/L)

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

D - Dilution required for analysis.

DUP-13

06/13/09

Water

1.64

< 0.0200 < 0.0100

0.0431

< 0.0020

< 0.0010

95.1

< 0.0040

< 0.0040

< 0.0100

1.54

< 0.0050

306

0.257

< 0.002 < 0.0100

9.03

< 0.0150

< 0.0030

123

< 0.0050

< 0.0200

< 0.0100



# Former Gasoline Distribution Terminal 5335 River Road Tonawanda, New York Polychlorinated Biphenyls Table 6D: Groundwater Monitoring Wells

Soil Sample ID	TOGs	MW-1	MW-2R	MW-4	MW-005	MW-006	MW-007	MW-008	MW-9	DUP-13
Date	1.1.1 NYS	06/13/09	06/13/09	06/13/09	06/13/09	06/13/09	6/12/09	6/12/09	06/12/09	06/13/09
Matrix	Groundwater	Water	Water	Water	Water	Water	Water	Water	Water	Water
Aroclor-1016	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47
Aroclor-1221	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47
Aroclor-1232	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47
Aroclor-1242	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47
Aroclor-1248	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47
Aroclor-1254	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47
Aroclor-1260	0.09	< 0.48	< 0.47	< 0.47	< 0.47	< 0.50	< 0.47	< 0.53	< 0.48	< 0.47

### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per Liter (µg/L)

NL - Analyte not listed in TOGS (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations



### Table 7A: UST's Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	T-1 NAPL	T-2 NAPL	T-3 NAPL	T-4 NAPL	T-5 NAPL
Date	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09
Matrix	Waste	Waste	Waste	Waste	Waste
Benzene (µg/kg)	8600	< 9700	28000	5300 J	< 4800
Cyclohexane (µg/kg)	74000	< 9700	52000	< 9700	< 4800
Ethylbenzene (µg/kg)	3500 J	< 9700	90000	350000	63000
Isopropylbenzene (µg/kg)	24000	12000	31000	59000	58000
Methylcyclohexane (µg/kg)	240000	120000	160000	18000	< 4800
Toluene (µg/kg)	86000 B	12000 B	140000 B	11000 B	7800 B
Xylenes, Total (µg/kg)	750000	860000	420000	1600000	410000

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram (µg/kg) wet

- B Analyte was detected in the associated Method Blank
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



### Table 7B: UST's Semi-Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	T-1 NAPL	T-1 NAPL (RE-1)	T-2 NAPL	T-3 NAPL	T-3 NAPL (RE-1)	T-4 NAPL	T-5 NAPL	T-5 NAPL (RE-1)
Date	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09
Matrix	Waste	Waste	Waste	Waste	Waste	Waste	Waste	Waste
2,4 Di MethylPhenol (µg/kg)	99000	< 780000	< 36000	79000	< 780000	< 390000	100000	< 850000
2-Methylnaphthalene (µg/kg)	4300000	4100000 D08	79000	4800000	5400000 D08	5800000 D02	5500000	5400000 D08
Acenaphthene (µg/kg)	220000	< 780000	< 36000	< 39000	< 780000	< 390000	360000	< 850000
Benzo(a)pyrene (µg/kg)	< 39000	< 780000	< 36000	< 39000	< 780000	< 390000	< 42000	< 850000
Biphenyl (µg/kg)	510000	< 780000	< 36000	310000	< 780000	< 390000	530000	< 850000
Dibenzofuran (µg/kg)	290000	< 780000	< 36000	< 39000	< 780000	< 390000	360000	< 850000
Fluorene (µg/kg)	430000	< 780000	< 36000	340000	< 780000	550000 D02	500000	< 850000
Naphthalene (µg/kg)	750000	< 780000	< 36000	1300000	1400000 D08	2000000 D02	1600000	1500000 D08
Phenanthrene (µg/kg)	990000	< 780000	< 36000	910000	910000 D08	1300000 D02	2200000	1800000 D08
Pyrene (µg/kg)	110000	< 780000	< 36000	< 39000	< 780000	< 390000	82000	< 850000

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Units for waste are micrograms per kilogram  $(\mu g/kg)$  wet

 $\,$  D02 -Dilution required due to sample matrix effects.

D08 - Dilution required due to high concentration of target analyte(s)



## Table 7C: UST's Pesticides Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	T-1 NAPL	T-2 NAPL	T-3 NAPL	T-4 NAPL*	T-4 NAPL	T-5 NAPL
Date	05/19/09	05/19/09	05/19/09	05/18/09	05/19/09	05/19/09
Matrix	Waste	Waste	Waste	Water	Waste	Waste
4,4'-DDD	Not Analyzed					
4,4'-DDE	Not Analyzed					
4,4'-DDT	Not Analyzed					
Aldrin	Not Analyzed					
alpha-BHC	Not Analyzed					
alpha-Chlordane	Not Analyzed					
beta-BHC	Not Analyzed					
delta-BHC	Not Analyzed					
Dieldrin	Not Analyzed					
Endosuflan I	Not Analyzed					
Endosuflan II	Not Analyzed					
Endosuflan sulfate	Not Analyzed					
Endrin	Not Analyzed					
Endrin aldehyde	Not Analyzed					
Endrin ketone	Not Analyzed					
gamma-BHC (Lindane)	Not Analyzed					
gamma-Chlorodane	Not Analyzed					
Heptachlor	Not Analyzed					
Heptachlor epoxide	Not Analyzed					
Methoxychlor	Not Analyzed					
Toxaphene	Not Analyzed					

### **NOTES:**

Pesticides were not analyzed for NAPL samples



## Table 7D: UST's PCB's Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	T-1 NAPL	T-2 NAPL	T-3 NAPL	T-4 NAPL	T-5 NAPL
Date	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09
Matrix	Waste	Waste	Waste	Waste	Waste
Aroclor-1016	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3
Aroclor-1221	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3
Aroclor-1232	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3
Aroclor-1242	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3
Aroclor-1248	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3
Aroclor-1254	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3
Aroclor-1260	< 2.3	< 1.4	< 1.8	< 1.9	< 2.3

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009. Units for waste are milligrams per kilogram (mg/kg)



## Table 7E: UST's Metals Riverview Industrial Park 5335 River Road Tonawanda, NY

Soil Sample ID	T-1 NAPL	T-2 NAPL	T-3 NAPL	T-4 NAPL	T-5 NAPL
Date	05/19/09	05/19/09	05/19/09	05/19/09	05/19/09
Matrix	Waste	Waste	Waste	Waste	Waste
Arsenic (mg/kg)	0.2 J	< 1.9	< 1.9	< 1.9	< 1.9
Barium (mg/kg)	< 0.461	0.051 J	< 0.470	24.8	< 0.469
Cadmium (mg/kg)	< 0.184	0.057 J	< 0.188	0.174 J	< 0.188
Calcium (mg/kg)	< 46.1	< 48.0	< 47.0	23.8 J	< 46.9
Chromium (mg/kg)	< 0.461	< 0.480	< 0.470	3.09	< 0.469
Copper (mg/kg)	0.1 JB	< 1.0	0.4 JB	0.6 JB	0.5 JB
Iron (mg/kg)	< 9.2	5.4 J	< 9.4	44.5	< 9.4
Lead (mg/kg)	0.2 J	0.4 J	0.1 J	46.6	< 0.9
Manganese (mg/kg)	< 0.2	0.1 J	< 0.2	0.4	< 0.2
Nickel (mg/kg)	< 0.461	< 0.480	< 0.470	0.270 J	< 0.469
Vanadium (mg/kg)	< 0.461	< 0.480	< 0.470	0.408 J	< 0.469
Zinc (mg/kg)	0.5 J	< 1.9	< 1.9	178	< 1.9

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (µg/kg) wet

- B Analyte was detected in the associated Method Blank
- $\begin{tabular}{ll} $J$ Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated. \\ \end{tabular}$



## Table 7F: UST's Material Composition Identification Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	T-1 NAPL	T-2 NAPL	T-3 NAPL	T-4 NAPL	T-5 NAPL
Date	5/19/09	5/19/09	05/19/09	5/19/2009	5/19/2009
Matrix	Waste	Waste	Waste	Waste	Waste
Fuel Oil #2	1000000D	< 10	990000D	< 1400	< 1300
Fuel Oil #4	< 1200	10000	< 1400	890000D	1100000
Fuel Oil # 6	< 1200	< 10	< 1400	< 1400	< 1300
Gasoline	< 480	< 4.2	< 560	< 560	< 510
Kerosene	< 1200	< 10	< 1400	< 1400	<1300
Motor Oil	< 2400	< 21	< 2800	< 2800	< 2600
Other - 1	< 1200	< 10	< 1400	< 1400	< 1300

<sup>\*</sup>Units for waste are milligrams per kilogram (mg/kg)



### Table 8A: Oil/Water Separator & Site Sewer Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, New York

Soil Sample ID	TOGs	OWS-1	MH-1	MH-1	MH-2
Date	1.1.1	05/18/09	05/15/2009	5/21/2009	5/19/2009
Time	Water Guidance Values for Ambient	11:55	10:30	9:30	15:00
Matrix	and Class D	Water	Water	Water	Water
2-Butanone	50	< 5.0	< 5.0	< 5.0	< 5.0
2-Methylnapthalene	42	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	5	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2Pentadone	NL	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	50	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	10	< 1.0	< 1.0	< 1.0	< 1.0
Carbon DiSulfide	NL	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	400	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	NL	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	23	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	200	< 1.0	< 1.0	< 1.0	< 1.0
Methylcyclohexane	NL	< 1.0	< 1.0	< 1.0	< 1.0
MtBE	NL	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	10	< 1.0	< 1.0	< 1.0	< 1.0
n-Butylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
n-propylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	480	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes, Total	5	< 2.0	< 2.0	< 2.0	< 2.0

### NOTES:

All sample analysis performed by Test America (Amherst, New York) in May 2009. Units for liquid are micrograms per Liter  $(\mu g/L)$ 



### Table 8B: Oil/Water Separator & Site Sewer Semi - Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, New York

Soil Sample ID	TOGs	OWS-1	OWS-1	MH-1	MH-1	MH-2	MECH-PIT
Date	1.1.1	05/18/09	05/21/09	05/15/2009	5/21/2009	5/19/2009	5/18/2009
Sample interval (feet)	Water Guidance Values for Ambient	11:55	9:00	10:30	9:30	15:00	10:30
Matrix	and Class D	Water	Water	Water	Water	Water	Water
Benzo(a)anthracene	0.23	< 9.9	< 10	1. <b>7</b> J	< 9.6	< 9.4	< 13.0
Benzo(a)pyrene	0.0012	< 9.9	< 10	2.5J	< 9.6	< 9.4	< 13.0
Benzo(b)fluoranthene	0.002	< 9.9	< 10	3.3J	< 9.6	< 9.4	< 13.0
Bis-(2 ethylhexyl) phthalate	5	< 9.9	< 10	< 11	< 9.6	< 9.4	2.9B,J
Carbazole	NL	< 5.0	< 2.5	0.36J	< 4.8	< 4.7	< 6.5
Chrysene	0.002	< 9.9	< 10	2.6J	< 9.6	< 9.4	< 13.0
Fluoranthene	50	< 9.9	< 10	5.4J	< 9.6	< 9.4	< 13.0
Phenanthrene	45	< 9.9	< 10	2.3J	< 9.6	< 9.4	< 13.0
Pyrene	42	< 9.9	< 10	4.2J	< 9.6	< 9.4	< 13.0

#### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Units for liquid are micrograms per Liter (µg/L)

- B Analyte was detected in the associated Method Blank
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



### Table 8C: Oil/Water Separator & Site Sewer Pesticides Riverview Industrial Center 5335 River Rd. Tonawanda, New York

Soil Sample ID	TOGs	OWS-1	MH-1
Date	1.1.1 Water Guidance	05/21/09	5/21/2009
Time	Values for Ambient	9:00	9:30
Matrix	and Class D	Water	Water
4,4'-DDD	1x10-5	< 0.050	< 0.067
4-4'-DDE	1x10-5	< 0.050	< 0.067
4-4'-DDT	1x10-5	< 0.050	< 0.067
Aldrin	0.001	< 0.050	< 0.067
alpha-BHC	NL	< 0.050	< 0.067
alpha-Chlordane	NL	< 0.050	< 0.067
delta-BHC (2C)	NL	< 0.050	< 0.067
Dieldrin	0.001	< 0.050	< 0.067
Endosulfan I	0.22	< 0.050	< 0.067
Endosulfan II	0.22	< 0.050	< 0.067
Endosulfan Sulfate	0.22	< 0.050	< 0.067
Endrin	0.002	< 0.050	< 0.067
Endrin aldehyde	5	< 0.050	< 0.067
Endrin ketone	5	< 0.050	< 0.067
gamma BHC (Lindane)	ND	< 0.050	< 0.067
gamma Chlorodane	5	0.025J	0.033J
Heptachlor	2x10-4	< 0.050	< 0.067
Heptachlor epoxide	3x10-4	< 0.050	< 0.067
Methoxychlor	35	< 0.050	< 0.067
Toxaphene	6x10-6	< 0.50	< 0.67

#### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009. Units for liquid are micrograms per Liter  $(\mu g/L)$ 

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or Concentrations within this range are estimated.



## Table 8D: Oil/Water Separator & Site Sewer PCB's Riverview Industrial Center 5335 River Rd. Tonawanda, New York

Soil Sample ID	TOGs	OWS-1	OWS-1	MH-1	MH-1	MH-2	MECH-PIT
Date	1.1.1 Water	05/18/09	05/21/09	05/15/2009	5/21/2009	5/19/2009	5/18/2009
Depth (ft)	Guidance	11:55	9:00	10:30	9:30	15:00	10:30
Matrix	Values for	Water	Water	Water	Water	Water	Water
Aroclor-1016	1x10-6	< 0.47	< 0.52	< 0.60	< 0.67	< 0.47	< 0.60
Aroclor-1221	1x10-6	< 0.47	< 0.52	< 0.60	< 0.67	< 0.47	< 0.60
Aroclor-1232	1x10-6	< 0.47	< 0.52	< 0.60	< 0.67	< 0.47	< 0.60
Aroclor-1242	1x10-6	< 0.47	< 0.52	< 0.60	< 0.67	< 0.47	< 0.60
Aroclor-1248	1x10-6	< 0.47	< 0.52	< 0.60	< 0.67	< 0.47	< 0.60
Aroclor-1254	1x10-6	< 0.47	< 0.52	< 0.60	< 0.67	< 0.47	< 0.60
Aroclor-1260	1x10-6	< 0.47	< 0.52	0.33J	< 0.67	< 0.47	< 0.60

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

Units for liquid are micrograms per Liter (µg/L)

J - Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.



## Table 8E: Oil/Water Separator & Site Sewer Metals Riverview Industrial Center 5335 River Rd. Tonawanda, New York

Soil Sample ID	TOGs	OWS-1	MH-1	MH-1	MH-2	MECH-PIT
Date	1.1.1 Water Guidance	05/18/09	05/15/2009	5/21/2009	5/19/2009	5/18/2009
Depth (ft)	Values for Ambient and	11:55	10:30	9:30	15:00	10:30
Matrix	Class D	Water	Water	Water	Water	Water
Aluminum	0.1	< 0.200	2.97	0.267	0.351	< 0.200
Barium	1	0.0288	0.0969	0.0287	0.0282	0.0485
Cadmium	0.01	< 0.0010	0.0021	< 0.0010	< 0.0010	< 0.0010
Calcium	NL	47.2	92.2	56.6	45.0	76.4
Chromium	0.05	< 0.0040	0.0068	< 0.0040	< 0.0040	0.130
Copper	1	< 0.0100	0.283	< 0.0100	< 0.050	0.0114
Iron	0.3	0.209	3.75	0.377	0.519	0.667
Lead	0.05	< 0.0050	0.0477	< 0.0050	< 0.0050	0.0743
Magnesium	35	14.1	16.1	15.5	13.2	9.61
Manganese	0.6	0.154	0.588	0.335	0.314	0.0557
Potassium	NL	1.50	3.90	1.36	1.27	61.3
Sodium	NL	35.6	201	38.3	36.0	174
Thallium	0.19	< 0.0200	0.0085	< 0.0200	< 0.0200	< 0.0200
Zinc	5	< 0.0100	0.424	< 0.0100	< 0.0100	0.259

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009. Units for liquid are milligrams per Liter (mg/L)



### Table 9A: Sediment Samples & Catch Basin Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Do at 275	SED-2	SED-3-OF	SED-4	SED-5	SED-6	SS-1
Date	- Part 375 - Unrestricted	05/13/09	05/18/09	05/18/09	5/18/2009	05/18/09	5/13/2009
Time	Use	TNR*	11:45	12:00	14:00	14:30	11:40
Matrix	Use	Solid	Solid	Solid	Solid	Solid	Solid
Acetone (µg/kg)	50	79	< 16	< 16	< 7.8	< 28	14J
Benzene (µg/kg)	60	6.6J	< 16	< 16	5.0J	< 28	< 6.4
Carbon DiSulfide (µg/kg)	NL	< 10	< 16	< 16	< 7.8	< 28	1.9
Chlorobenzene (µg/kg)	1100	5.7J	< 16	< 16	< 7.8	< 28	< 6.4
Cyclohexane (µg/kg)	NL	35	< 16	< 16	< 7.8	44D04	< 6.4
Ethylbenzene (µg/kg)	1000	52	< 16	< 16	< 7.8	< 28	< 6.4
Isopropylbenzene (μg/kg)	NL	9.2J	< 16	< 16	< 7.8	< 28	< 6.4
Methylcyclohexane (μg/kg)	700	35	< 16	< 16	< 7.8	27D04,J	< 6.4
Toluene (μg/kg)	700	50B	< 16	< 16	< 7.8	< 28	< 6.4
Xylenes, Total (μg/kg)	260	220	< 31	5.2J	9.1J	29D04,J	< 13

#### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram  $\;\; (\mu g/kg)$ 

- NL Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.
- $\boldsymbol{B}$  Analyte was detected in the associated Method Blank
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.

D04 -Dilution required due to high levels of non-target compounds

\* Time not recorded on COC.



### Table 9B: Sediment Samples & Catch Basin Semi-Volatile Organic Compounds Riverview Industrial Center 5335 River Road Tonawanda, NY

Soil Sample ID	Dowt 275	SED-2	SED-3-OF	SED-4	SED-5	SED-6	SS-1
Date	Part 375	05/13/09	5/18/2009	05/185/09	5/18/2009	05/18/09	5/13/2009
Time	Unrestricted	TNR*	11:45	12:00	14:00	14:30	11:40
Matrix	Use	Solid	Solid	Solid	Solid	Solid	Solid
2,4 Di Methylphenol (µg/kg)	NL	< 73000	< 5400	< 5500	< 1400	< 9700	170J
2-Methylnaphthalene (µg/kg)	NL	3400 D02,J	< 5400	< 5500	< 1400	< 9700	< 220
Acenaphthene (µg/kg)	20000	8000 D02,J	< 5400	< 5500	< 1400	< 9700	< 220
Anthracene (µg/kg)	100000	13000 D02,J	< 5400	290 D02,J	< 1400	< 9700	< 220
Benzo(a)anthracene (µg/kg)	1000	71000 D02,J	< 5400	1200 D02,J	65 D02,J	< 9700	34J
Benzo(a)pyrene (µg/kg)	1000	74000 D02	< 5400	1000 D02,J	57 D02,J	400 D02,J	17J
Benzo(b)fluoranthene (µg/kg)	1000	100000 D02	< 5400	1100 D02,J	< 1400	500 D02,J	47J
Benzo(g,h,i)perylene (μg/kg)	100000	60000 D02,J	350D,J	1000 D02,J	62 D02,J	480 D02,J	21J
Benzo(k)fluoranthene (µg/kg)	800	29000 D02,J	< 5400	840 D02,J	< 1400	< 9700	21J
(µg/kg)	NL	< 73000	< 5400	< 5500	< 1400	3800 D02,J	160J
Carbazol (µg/kg)	NL	17000 D02,J	< 5400	< 5500	< 1400	< 9700	< 220
Chrysene (µg/kg)	1000	83000 D02	< 5400	1200 D02,J	< 1400	< 9700	67J
Dibenzo(a,h)anthracene (µg/kg)	330	14000 D02,J	< 5400	350 D02,J	< 1400	< 9700	< 220
Dibenzofuran (µg/kg)	NL	3600 D02,J	< 5400	< 5500	< 1400	< 9700	< 220
Fluoranthene (µg/kg)	100000	220000 D02	< 5400	2300 D02,J	68 D02,J	780 D02,J	150J
Fluorene (µg/kg)	30000	8300 D02,J	< 5400	< 5500	< 1400	< 9700	< 220
Indeno(1,2,3-cd)pyrene (μg/kg)	500	50000 D02,J	220D,J	840 D02,J	57 D02,J	< 9700	20Ј
Phenanthrene (µg/kg)	100000	130000 D02	< 5400	1200 D02,J	< 1400	< 9700	1000
Pyrene (µg/kg)	100000	170000 D02	< 5400	1800 D02,J	65 D02,J	780 D02,J	270

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram  $(\mu g/kg)$ 

- NL Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.

D02 -Dilution required due to sample matrix effects.

<sup>\*</sup> Time not recorded on COC.



### Table 9C: Sediment Samples & Catch Basin Pesticides Riverview Industrial Center 5335 River Road Tonawanda, New York

Soil Sample ID		SED-2	SED-3-OF	SED-4	SED-5	SED-6	SS-1
Date	Part 375 Unrestricted	05/13/09	05/18/09	5/18/2009	5/18/2009	05/18/09	05/13/09
Depth (ft)	Use	TNR*	11:45	12:00	14:00	14:30	11:40
Matrix	0.50	Solid	Solid	Solid	Solid	Solid	Solid
4,4'-DDT (2C)	3.3	130QFL,D10,J	< 5.2	< 5.3	< 2.8	< 75	2.2QFL
delta-BHC (2C)	40	< 180	< 5.2	< 5.3	< 2.8	< 75	1.2QFL,J
Dieldrin	5	< 180	< 5.2	3.8QFL,J	< 2.8	< 75	< 2.2
Endosulfan I	2400	< 180	< 5.2	< 5.3	< 2.8	46D10,QSU,QFL,J	< 2.2
Endosulfan II	2400	<180	< 5.2	< 5.3	< 2.8	96D10,QSU,QFL	< 2.2
Endosulfan II (2C)	2400	<180	< 5.2	<5.3	<2.8	<75	2.1QFL,J
Endrin (2C)	14	< 180	< 5.2	< 5.3	< 2.8	< 75	1.5QFL,J
gamma- Chlorodane (2C)	NL	< 180	< 5.2	< 5.3	< 2.8	< 75	0.070QFL,J,B

#### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram  $(\mu g/kg)$ 

- NL Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup
- B Analyte was detected in the associated Method Blank
- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- D10 Dilution required due to sample color.
- QFL Florisil clean-up (EPA 3620) performed on extract.
- QSU Sulfur (EPA 3660) clean-up performed on extract.
- \* Time not recorded on COC.



### Table 9D: Sediment Samples & Catch Basin PCB's Riverview Industrial Center 5335 River Road Tonawanda, New York

Soil Sample ID		SED-2	SED-3-OF	SED-4	SED-5	SED-6	SS-1
Date	Part 375	05/13/09	05/18/09	5/18/09	5/18/2009	05/18/09	05/13/09
Time	Unrestricted Use	TNR*	11:45	12:00	14:00	14:30	11:40
Matrix		Solid	Solid	Solid	Solid	Solid	Solid
Aroclor-1016	100	< 35	< 52	< 53	< 28	< 19	< 22
Aroclor-1221	100	< 35	< 52	< 53	< 28	< 19	< 22
Aroclor-1232	100	< 35	< 52	< 53	< 28	< 19	< 22
Aroclor-1242	100	< 35	< 52	< 53	< 28	< 19	< 22
Aroclor-1248	100	< 35	< 52	< 53	< 28	< 19	< 22
Aroclor-1254	100	< 35	< 52	< 53	< 28	< 19	< 22
Aroclor-1260	100	<b>290QSU</b>	< 52	46QSU,J	< 28	< 19	< 22

### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are micrograms per kilogram  $\;\; (\mu g/kg)$ 

QSU - Sulfur (EPA 3660) clean-up performed on extract.

- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- \* Time not recorded on COC.



### Table 9E: Sediment Samples & Catch Basin Metals Riverview Industrial Center 5335 River Road Tonawanda, New York

Soil Sample ID		CED 2	SED 2 OF	CED 4	CED 5	CED (	SS-1
Date	Part 375	SED-2 05/13/09	SED-3-OF 05/18/09	SED-4 05/18/09	SED-5 5/18/2009	SED-6 05/18/09	05/13/09
Time	Unrestricted	TNR*	11:45	12:00	14:00	14:30	11:40
Matrix	Use	Solid	Solid	Solid	Solid	Solid	Solid
Aluminum (mg/kg)	NL						
	-	18000	27700	18100	7540	2740	13900
Antimony (mg/kg)	NL	< 29.4	< 48.3	< 46.1	< 22.9	< 17.5	< 19.0
Arsenic (mg/kg)	13	5.0	10.8	18.9	9.0	1.7J	3.8
Barium (mg/kg)	350	162	237B	145B	119B	55.9B	114
Beryllium (mg/kg)	7.2	0.922	1.57	1.03	0.392	0.135J	0.713
Cadmium (mg/kg)	2.5	< 0.392	1.28	1.41	0.376	0.253	0.086J
Calcium (mg/kg)	NL	90700	84400B	59300B	9020B	6070B	14100
Chromium (mg/kg)	NL	32.0	50.9	29.4	11.2	5.23	17.7
Cobalt (mg/kg)	NL	16.0	24.6	15.5	7.40	2.14	10.6
Copper (mg/kg)	50	31.9	59.7	61.1	15.8	11.0	17.1
Iron (mg/kg)	NL	31200	48000B	41600B	18700B	5750B	24200
Lead (mg/kg)	63	17.3	50.7B	54.9B	13.2B	74.3B	14.4
Magnesium (mg/kg)	NL	29300	25900	25100	4730	1950	7120
Manganese (mg/kg)	1600	892	1740	954	4560D08	363	425
Mercury (mg/kg)	0.18	0.188	0.0653	0.101	0.0132J	0.0238	0.0205J
Nickel (mg/kg)	30	37.9	52.4	47.7	14.5	5.23	22.8
Potassium (mg/kg)	NL	3720	4130	2830	1040	466	1450
Selenium (mg/kg)	4	< 7.8	< 12.9	2.1J	< 6.1	< 4.7	< 5.1
Silver (mg/kg)	2	< 0.981	0.364J	0.397J	0.200J	< 0.583	< 0.633
Sodium (mg/kg)	NL	451	339J	371J	161J	78.7J	126J
Thallium (mg/kg)	NL	< 11.8	4.2J	3.4J	2.0J	0.7J	< 7.6
Vanadium (mg/kg)	NL	33.8	54.4	37.8	16.3	5.65	25.8
Zinc (mg/kg)	109	104B	302B	451B	138B	150B	67.4B

#### **NOTES:**

All sample analysis performed by Test America (Amherst, New York) in May 2009.

All units are milligrams per kilogram (mg/kg)

NL - Analyte not listed in 6 NYCRR Part 375 Environmental Remediation Programs Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

B - Analyte was detected in the associated Method Blank

D08 - Dilution required due to high concentration of target analyte(s)

- J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDl Concentrations within this range are estimated.
- \* Time not recorded on COC.

### APPENDIX A SOIL BORING LOGS



SUBSURFACE LOG

Soil Boring

LOCATION#

B-1

5335 River Road

Date 5/6/2009 Client/ Joh# NVCDEC

Tonawanda NY	Client/Job# NYSDEC

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-2'	0	Dark brown, fine to medium SAND and SILT. Dry; gun powder smell.	SW-SC
2-4'	0	Brown, CLAY; some coarse angular Gravel; little fine angular Gravel. Dry; no odor.	GC
4-10'	4-6' 0	Brown, Silty CLAY. Dry; no odor.	ОН
	6-10' 0	Brown, Silty CLAY. Dry; no odor.	OH
		Bottom of boring Sample Interval 0'-2'& 4'-6'	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

B-2

5335 River Road

5/6/2009

Tonawanda NY Client/Job# NYSDEC

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Brown, Silty CLAY; trace fine to coarse Sand. Saturated;no odor.	SP-SC
1-5'	0	Brown, Clayey SILT. Dry;no odor.	ОН
5-10'	0	Brown, Clayey SILT. Moist; no odor.	ОН
	0	Brown, Clayey SILT. Moist; no odor.	ОН
		Bottom of boring Sample Interval s 0'-2' & 4'-7'	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

B-3

5335 River Road

5/6/2009

Tonawanda NY Client/Job# NYSDEC

	TOHAWanu	a IV T	HIGDEO	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1'	0	Brown, Silty CLAY; trace fine to coarse Saturated; no odor.	and.	ОН
1-4'	0	Light Brown, Clayey SILT; trace (+) fine to Dry; no odor.	o medium Sand.	ОН
4-8'	4-6' 0	Light Brown, Clayey SILT; trace (+) fine to Dry; no odor.	o medium Sand.	ОН
6-10'	6-10' 0	Brown, CLAY; trace fine Sand. Dry; no odor.		СН
		Bottom of boring 10'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

B-4

5335 River Road

5/6/2009

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Brown, fine to coarse SAND and SILT; Dry; no odor.	SP-SM
1-3'	0	Light brown, fine to medium SAND and SILT. Dry; no odor.	SP-SM
3-5'	0	Light brown, fine to medium SAND and SILT. Dry; no odor.	SP-SM
4-7'	0	Light brown, Clayey SILT; little fine to medium Sand. Dry; no odor.	ОН
7-10'	0	Light brown, Silty fine to medium SAND.  Dry; no odor.	ОН
		Bottom of boring Sample Interval None	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

B-5

5335 River Road

5/6/2009

	Tonawand	a NY Client/Job#	NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1'	0	Dark brown, fine to Coarse SAND and SII Some fine to medium Sand. Moist to wet; no odor.	_T;	SW-SM
1-4'	0	Light brown, Clayey SILT; Dry; no odor.		ОН
4-5'	0	Brown, Silty CLAY; occasional coarse Gra Dry; no odor.		ОН
		Bottom of boring 5'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-6

5335 River Road

Date 5/6/2009

Tonawanda NY Client/Job# NYSDEC

	Toriawariu		NISDEC	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1'	0	Brown, Silty fine to medium SAND and Common Moist to wet; no odor.	LAY.	SW-SM-CL
1-5'	0	Brown, Clayey SILT; little fine to medium Moist; no odor.	Sand.	ОН
		Bottom of boring 5'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-7

5335 River Road

Date 5/6/2009

Tonawanda NY Client/Job# NYSDEC

	Toriawariu	d N1 Client/300#		
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1'	0	Dark Brown, Silty fine to medium SAND (*) Wet; no odor.	Горsoil).	SM
1-5'	0	Brown, Silty CLAY. Wet; no odor.		ОН
		Bottom of boring	Sample Interval	
		5'	1-4'	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-8

5335 River Road

Date 5/6/2009

	Tonawand	a NY Client/Job#	NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	0	Dark Brown, very fine to medium Sandy v GRAVEL (Topsoil); Moist to wet; no odor.	very fine to medium	GW-GP
1-5'	0	Brown, Silty CLAY Dry, firm.		ОН
		Bottom of boring 5'	Sample Interval None	



### SUBSURFACE LOG

Soil Boring

LOCATION#

B-9

5335 River Road

Date 5/6/2009

Tonawanda NY Client/Job# NYSDEC

	TUTTAWATTU		NISDEC	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-6 inches	0	Black, organic TOP SoIL; Wet, no odor.		PEAT
6in-5'	0	Brown, fine to medium Sandy CLAY; trace to occasional fine to medium rounde Gravel. Dry; no odor.	ed to semi rounded	SP-SC
		Bottom of boring 5'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-10

5335 River Road

Date 5/6/2009

Tonawanda NY Client/Job# NYSDEC
---------------------------------

Depth (feet)	PID (ppm)	DESCRIPTION	Middle	Soil Classification Symbols
0-1	0	TOP SOIL. Moist; no odor.		PEAT
1-5'	0	Brown, Silty fine to medium Sandy CLAY trace (-) fine to very fine angular Gravel. Dry; no odor.		SM-SC
		Bottom of boring 5'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

B-11

5335 River Road

5/6/2009

Tonawanda NY Client/Job# NYSDEC

	Toriawariu	1	NISDLC	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	0	Dark brown, Silty fine to medium SAND. Wet; no odor.		SM
1-5'	0	Light brown to brown, fine to medium SAI trace (+) Silt. Moist; no odor.	ND and CLAY;	SC
		Bottom of boring	Sample Interval	
		5'	None	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-12

5335 River Road

Date 5/6/2009

Tonawanda NY	Client/Job# NYSDEC

	Toriawariu	a IVI CIICIU JUD#		
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-0.2'		Top Soil; organics. Wet; no odor.		PEAT
0.2-5'	0	Light brown to brown to red, CLAY; little v little Silt. Dry; No odor.	ery fine to fine Sand;	CL
		Bottom of boring 5'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-13

5335 River Road

Date 5/13/2009

	Tonawanda	a NY Client/Job#	TODLO	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-2		Light brown, SILTY fine to Medium SAND Wet to saturated; no odor.	); Some Clay.	SM
1-5'	0	Brown-red, Silty CLAY; trace fine Sand. Wet to saturated; no odor.		ОН
		Datte was of hearing	Occupate Internal	
		Bottom of boring 5'	Sample Interval 0'-4'	



### SUBSURFACE LOG

Soil Boring

LOCATION#

B-14

5335 River Road

Date 5/13/2009

Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	0	Dark Brown, coarse to fine SAND and SILT; Gravel. Wet to saturated; no odor.	little very fine to fine	SM
1-2.75'	0	1-2.75 Brown, CLAY and very fine to fine Sa Wet to saturated; no odor.	nd.	SC
2.75-5.0'	0	2.75-4 Red-brown, Clayey SILT; trace very fi Wet to saturated; no odor.	ine to fine Sand.	ОН
		Rottom of boring	umnla Interval	
		Bottom of boring Sa 5' No	imple Interval one	



### SUBSURFACE LOG

Soil Boring

LOCATION#

B-15

5335 River Road

Date 5/13/2009

Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1		Fill/Topsoil.		PEAT
1-4'	0	Brown, CLAY; with very fine to fine Sand. Dry; no odor.		SC
4-5'	0	Brown-red-gray, Silty CLAY; Some very for trace coarse angular Gravel.  Moist; no odor.	ine to fine Sand;	ОН
		Bottom of boring	Sample Interval	
		5'	0'-4'	



# SUBSURFACE LOG

Soil Boring

LOCATION#

B-16

5335 River Road

Date 5/13/2009

Tonawanda NY	Client/Job# NYSDEC
I OHAWAHAA IN I	

Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1		Fill/Topsoil.		PEAT
1-4'	0	Gray, Silty CLAY; Some very fine to fine strace coarse angular Gravel.  Moist; no petroleum odor.	Sand;	ОН
4-5'	0	Brown-red-gray, Silty CLAY; Some very f trace coarse angular Gravel. Moist; no petroleum odor.	ine to fine Sand;	OH
	<u>!</u>	Bottom of boring 5'	Sample Interval 1-4'	



### SUBSURFACE LOG

Soil Boring

LOCATION#

B-17

5335 River Road

Date 5/13/2009

	TOHAWAHU	a N 1 SDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1		Grass and Topsoil.	
1-4'	0	Gray, Silty fine to medium SAND; occasional coarse Gravel. Moist; petroleum odor.	SM
4-5'	0	Brown-red-gray, Silty CLAY; Some very fine to fine Sand; trace coarse angular Gravel. Moist; petroleum odor.	ОН
		Bottom of boring Sample Interval 1-4'	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-18

5335 River Road

Date 5/13/2009

Tonawanda NY	Client/Job# NYSDEC
I OHAWAHAA IN I	

	l	I		
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1		Grass and Topsoil.		
1-4'	0	Gray, Silty fine to medium SAND; occasio coarse Gravel. Moist; petroleum odor.	onal	SM
4-5'	0	Brown-red-gray, Silty CLAY; Some very f trace coarse angular Gravel. Moist; petroleum odor.	ine to fine Sand;	ОН
	<u>!</u>	Bottom of boring 5'	Sample Interval None	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-19

5335 River Road

5/13/2009 Date

	Tonawanda	a NY Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	0	Fill, brown, fine to medium Sandy CLAY; trace organics; trace Clay nodules.	
1-4'	0	Gray, Silty fine to medium SAND; occasional coarse Gravel. Moist; petroleum odor.	SM
4-5'	0	Brown-red-gray, Silty CLAY; some very fine to fine Sand; trace coarse angular Gravel. Moist; petroleum odor.	ОН
		Bottom of boring Sample Interval Sone	



SUBSURFACE LOG

Soil Boring

LOCATION#

B-20

5335 River Road

Tonawanda NY

Date 5/13/2009
Client/Job# NYSDEC

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	Not Collected	Fill, brown, fine to medium Sandy CLAY; trace organics; trace Clay nodules.  0	SW-SC
1-5'	0	Brown, Fine to medium Sandy CLAY; trace organics; trace Clay nodules.  0	SW-SC
		Bottom of boring Sample Interval 5' None	

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	Response • Service • Experience
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### SUBSURFACE LOG

Soil Boring

LOCATION#

5335 River Road

Date 5/13/2009

	Toriawariu	1	FNISDLC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Clas Sym	
0-1	Not Collected	Fill, brown, fine to medium Sandy CLAY; Moist; no odor.	some Silt. S	SW-
1-5'	0	Brown, fine to medium SAND and CLAY. Moist; no odor.	S	SW-
	<u> </u>	Bottom of boring 5'	Sample Interval 4-5'	

ication ols

-SC

-SC



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-1

5335 River Road

Date 5/4/2009

	Toriawariu	a N1 Client/300# N13DEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	NC	Fill - subbase.	
1-2'	1000+	Black, CLAY; little (+) fine to medium Sand; Moist; strong petroleum odor.	CL
2-4'	204	Light brown, CLAY; little (+) fine to medium Sand; Moist; strong petroleum odor.	CL
4-6'	129	Brown, Clayey very fine to fine SAND; Moist to dry; strong petroleum odor.	SC
6-8'	47	6-7' brown, very fine to medium Sandy Silty CLAY; Dry; petroleum odor.	SM-SC
		7-8' brown, very coarse angular GRAVEL; Moist; petroleum odor.	GW
		Bottom of boring Sample Interval 1'-3'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-2

5335 River Road

Date 5/4/2009

	Tonawand	a NY Client/Job# NYSDEC			
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols		
0-1		Fill - subbase.			
1-2'	Collected 4.5	Brown, Silty SAND; trace very fine angular Gravel ; Moist; slight petroleum odor.	SM		
2-5'	2.6	Brown, Silty CLAY; trace (+) very fine to fine Sand; Moist; slight petroleum odor.	ОН		
5-7'	0.1	Brown, Silty CLAY; trace (+) very fine to fine Sand; Moist; no odor.	ОН		
7-9'	0.1	Brown, Silty CLAY; trace (+) very fine to fine Sand; Dry; No odor.	ОН		
	Bottom of boring Sample Interval 1'-2'				



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-3

5335 River Road

Date 5/4/2009

	Tollawallu	a IVI Client/Job# IVI JDEC	Onil Olanaifiantian		
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols		
0-1	0	Fill - subbase.			
1-3'	0	Brown, Silty fine SAND. Moist; no petroleum odor.	SM		
3-5'	0	Brown, Silty CLAY; trace very fine to fine Sand. Dry; no odor.	ОН		
5-8'	5-6' 0	Brown, Clayey SILT; trace (-) very fine to fine Sand. Dry; no odor.	ОН		
	6-8' 0.1	Brown, Clayey SILT; trace (-) very fine to fine Sand. Dry; no odor.	ОН		
	Bottom of boring Sample Interval None				



Riverview Industrial Center Location

SUBSURFACE LOG

Soil Boring

LOCATION#

SB-4

5335 River Road

Date 5/4/2009

Tonawanda NY			Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION		

Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	0	Asphalt and subbase.		
1-3'	1-2' 0 2-3' 7.2	Brown, Clayey SILT; Trace very fine to fine Sa Moist; no odor.	nd.	ОН
3-5'	3.5	Brown, Clayey SILT; Trace very fine to fine Sa Moist; no odor.	nd.	ОН
5-8'	0.1	Brown, Clayey SILT; Trace very fine to fine Sand. Moist; no odor.		ОН
		Bottom of boring Sam 8' None	ple Interval	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

SB-5

5335 River Road
Tonawanda NY

Client/Job# NYSDEC

5/4/2009

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	0	Asphalt and subbase.	
1-3'	75	Black-gray, Silty very fine to fine SAND. Moist; petroleum odor.	SM
3-5'	36	Black-gray, Silty very fine to fine SAND. Moist to wet; petroleum odor.	SM
5-8'	8	Brown-gray, Silty CLAY. Moist to slightly moist; petroleum odor.	ОН
		Bottom of boring Sample Interval 1-3'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-6

5335 River Road

Date 5/4/2009

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	0	Asphalt and subbase.	
1-3'	9.2	Dark gray, Silty CLAY. Moist; SVOC petroleum odor.	ОН
3-5'	8.1	Light gray, very fine to fine Sandy SILT. Moist; slight petroleum odor.	SM
5-7'	8.0	Brown-red; Silty CLAY. Moist to slightly moist; slight petroleum odor.	ОН
7-9'	1.0	Light brown, Clayey SILT; trace (+) very fine to fine Sand. Dry; no petroleum odor.	ОН
		Bottom of boring 9' Sample Interval 1'-4'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-7

5335 River Road

Date 5/4/2009

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	0	Asphalt and subbase.	
1-3'	270	Brown, Clayey SILT; Some (-) very fine to fine Sand. Moist; petroleum odor.	ОН
3-5'	160	Light gray, very fine to fine Sandy SILT. Moist; petroleum odor.	SM
5-7'	32	Light gray, very fine to fine Sandy SILT. Moist; petroleum odor.	SM
7-9'	10	Light gray, very fine to fine Sandy SILT. Moist; petroleum odor.	SM
		Bottom of boring  9'  Sample Interval 1'-3'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-8

5335 River Road

Date 5/4/2009

	Toriawaria	a ivi Chembook			
Depth (feet)	PID (ppm)	DESCRIPTION			Soil Classification Symbols
					-,
0-1	0	Asphalt and subbase			
1-2'	88	Brown, Silty CLAY; little very fine to fine S Moist; Petroleum odor.	Sand.		ОН
2-4'	72	Light gray, very fine to fine Sandy SILT. Moist; petroleum odor.			SM
4-5'	11.5	Red, Silty CLAY; trace fine to medium Sa Moist; sight petroleum odor.	ind.		ОН
5-9'	10	Red, Silty CLAY; trace fine to medium Sa Moist; sight petroleum odor.	nd.		ОН
		Bottom of boring	Sample Interva	al	
	9' 1st 0'-4' Second Sample 8D-5'-9'				mple 8D-5'-9'



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-9

5335 River Road

Date 5/4/2009

Tonawanda NY	Client/Job# NYSDEC

Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	0	Asphalt and subbase.		Cyscie
1-3'	55	Brown, fine to medium Sandy CLAY; Moist; petroleum odor.		SP-SC
3-5'	45	Brown, Clayey SILT; some fine to medium Sand; Moist; petroleum odor.		ОН
5'	10	Refusal at 5 feet.		
		Bottom of boring 5'	Sample Interval 1'-4'	



SUBSURFACE LOG

Soil Boring

Date

LOCATION#

SB-10

5335 River Road

5/4/2009

Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	0	Asphalt and subbase.		
1-3'	40	Brown, fine to medium Sandy CLAY; Moist; petroleum odor.		sw-sc
3-5'	140	Brown, Clayey SILT; some fine to mediun Moist; petroleum odor.	n Sand;	ОН
5-7'	0	Brown, Clayey SILT; some fine to mediun Moist; no petroleum odor.	n Sand;	ОН
7-9'		Brown, very coarse angular GRAVEL; Moist; no petroleum odor.		GP
		Bottom of boring	Sample Interval	
		9'	None	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-11

5335 River Road

Date 5/4/2009

	Tonawand	a NY Client/Job	# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1 1-5'	0 1-3' 0	Asphalt and subbase.  Brown, CLAY; Some Silt trace fine to me	dium Sand	СН
1-5	Ŭ	Moist; no petroleum odor.	dum Sand.	GII
	3-6' 0	Brown, CLAY; Some Silt trace fine to me Moist; no petroleum odor.	dium Sand.	СН
		Bottom of boring 5'	Sample Interval 3'-5'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-12

5335 River Road

Date 5/4/2009

		a IVI Glienios	JOH NI JOLC	0 11 01 11 11
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
				,
0-1	0	Asphalt and subbase.		
1-3'	355	Black, SILTY fine to medium SAND; Moist to wet; petroleum odor.		SM
3-5'	145	Black, SILTY fine to medium SAND; Moist; petroleum odor.		SM
5-7'	120	Brown, fine to medium SAND. Moist; petroleum odor.		SW
7-9'	65	Brown, fine to medium SAND. Moist; petroleum odor.		SW
9-10'	0	Brown, fine to medium SAND. Moist to dry; no petroleum odor.		SW
		Bottom of boring	Sample Interval	
		10'	1'-3'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-13

5335 River Road

Date 5/4/2009

	Tonawand	a NY Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	NC	Asphalt and subbase.	
1-4'	87	Gray, Silty CLAY; Some (+) fine Sand. Wet; petroleum odor.	CL
4-5'	1.7	Brown, fine to medium GRAVEL and SAND. Moist to wet; slight petroleum odor.	GP-SP
5-7'	0	Brown, CLAY; trace (-) fine Sand. Moist to dry; no petroleum odor.	СН
7-8'	0	Brown, CLAY; trace (-) fine Sand. Moist to dry; no petroleum odor.	СН
		Bottom of boring Sample Interval 1'-4'	<u> </u>



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-14

5335 River Road

Date 5/4/2009

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	NC	Asphalt and subbase.	
1-4'	60	Brown-gray, Silty fine to medium SAND. Wet; petroleum odor.	SP-SM
4-5'	0	Brown, fine to medium GRAVEL and SAND. Dry; no odor.	GP-SP
		Bottom of boring Sample Interval 5' 1'-4'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-15

5335 River Road

Date 5/4/2009

PID (ppm) 0 0	DESCRIPTION Asphalt.	Well Completion Data
	Asphalt.	
0		
	Brown red, Silty CLAY and very fine to fine Sand. Dry; no odor.	SW-SM-SC SW
	Brown, very coarse to fine SAND. Dry; no odor.	SW
0	Red brown, Clayey SILT; trace fine Sand. Dry; no odor.	ОН
	Red brown, Clayey SILT, trace fine Sand. Dry, no odor.	
		Red brown, Clayey SILT, trace fine Sand.



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-16

5335 River Road

Date 5/5/2009

	Tonawanda NY Cilent/Job# NYSDEC			
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1'	0	Asphalt subbase.		
1-4'	77	Gray, Silty CLAY; some very fine to fine Sangular Gravel. Dry; petroleum odor	Sand; trace coarse	ОН
4-5'	44	Gray, Silty CLAY; some very fine to fine S angular Gravel. Dry; petroleum odor	Sand; trace coarse	ОН
5-9'	5-7' 15 7-9' 10	Red-brown, Silty CLAY; some (-) fine to coccasional coarse angular Gravel.  Dry; slight petroleum odor.	oarse Sand;	ОН
		Bottom of boring	Sample Interval	
		9'	1'-4'	



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-17

5335 River Road

Date 5/5/2009

	Lonawand	a NY Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Asphalt subbase.	
1-4'	488	Gray, Silty fine to medium SAND; occasional coarse angular Gravel. Dry; strong petroleum odor.	SM
4-5'	758	Red-brown, Silty fine to medium SAND; occasional coarse angular Gravel. Dry; petroleum odor.	SM
5-6'	433	Red, Silty CLAY; trace (-) fine Sand. Dry; petroleum odor.	ОН
6-8'	235	Red, Silty CLAY; trace (-) fine Sand. Dry; petroleum odor.	ОН
8-10'	195	Red, Silty CLAY; trace (-) fine Sand. Dry; petroleum odor.	ОН
10-12'	44	Red, Silty CLAY; trace (-) fine Sand. Dry; petroleum odor.	ОН
		Bottom of boring 12' Sample Interval 1-4' & 4'-5' due to soil volu	umes



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-18

5335 River Road

Date 5/4/2009

	Tonawand	a NY Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Asphalt subbase.	
1-4'	250	Gray, Silty fine to medium SAND; occasional coarse angular Gravel. Dry; strong petroleum odor.	SM
4-5'	225	Red-brown, Silty fine to medium SAND; occasional coarse angular Gravel. Dry; petroleum odor	SM
5-7'	110	Red, Silty CLAY; trace (-) fine Sand. Dry; petroleum odor.	ОН
5-8'	0	Red, Silty CLAY; trace (-) fine Sand. Dry; no petroleum odor.	ОН
8-12'	0	Red, Silty CLAY; trace (-) fine Sand. Dry; no petroleum odor.	ОН
		Bottom of boring 12' Sample Interval 1'-4'	



### SUBSURFACE LOG

Soil Boring

LOCATION#

5335 River Road

Date 5/4/2009

	Toriawariu	a N1 Cheffb300# N13DEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classif Symbo
0-1'	0	Asphalt subbase.	
1-4'	280	Brown, Silty fine to medium SAND; trace (+) fine angular Gravel. Moist; petroleum odor.	SM
4-6'	20	Brown, Silty fine to medium SAND; trace (+) fine angular Gravel. Moist; slight petroleum odor.	SM
6-8'	10	Brown, fine to medium Sandy SILT; trace very fine to fine Gravel. Moist; no petroleum odor.	SM
8-12'	0	Brown, fine to medium Sandy SILT; trace very fine to fine Gravel.  Moist; no petroleum odor.	SM
		Bottom of boring 12' Sample Interval 1'-4'	

ication ols



SUBSURFACE LOG

Soil Boring

LOCATION#

SB-20

5335 River Road

Date 5/4/2009

	ronawand	a NY Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Fill.	
1-4'	0	Brown, fine to medium Sandy CLAY; trace (+) Clay Nodules; trace organics. Moist; no petroleum odor.	SC
4-8'	0	Light Brown, Sandy fine to medium CLAY; trace (+) Clay nodules; trace organics. Moist; no petroleum odor.	SC
8-12'	0	Light Brown, Sandy fine to medium CLAY; trace (+) Clay nodules; trace organics. Moist; no petroleum odor.	SC
		0 Sample collected 4-5'	
		Bottom of boring 12' Sample Interval 1-4'	



Riverview Industrial Center Location

5335 River Road

# SUBSURFACE LOG

Soil Boring

Date

5/4/2009

LOCATION#

SB-21

	Tonawand	a NY Client/Job# NYSDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Fill.	
1-5'	0	Brown, fine to medium SAND and CLAY. Moist; no petroleum odor.	SC
5-8'	0	Brown, Clayey fine to medium SAND; trace Silt; trace (-) very fine angular Gravel.  Moist; no petroleum odor.	SC
8-12'	0	Brown, Clayey fine to medium SAND; trace Silt; trace (-) very fine angular Gravel.  Moist; no petroleum odor.	SC
		Bottom of boring Sample Interval 12' 4'-6'	



SUBSURFACE LOG Soil Boring LOCATION#

SB-22

5335 River Road

Date 5/4/2009

	Toriawanu	a NT CIIEII/JOD# NTODEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1'	0	Fill.	
1-3'	0	Brown-grey, fine to medium SAND and CLAY. Moist; no petroleum odor.	SC
3-5'	0	Reddish-brown silty CLAY. Moist; slight odor.	SC
5-8'		Reddish-brown silty CLAY Moist; slight odor 5-6'	SC
		Bottom of boring Sample Interval 8 4'-6'	



Riverview Industrial Center Location

5335 River Road

### SUBSURFACE LOG

Soil Boring

LOCATION# SEP-SB-1 SEP- NW

Date 5/4/2009

Tonawanda NY

Client/Job# NYSDEC

Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	NC	Fill	
1-5'	0	Brown-red, CLAY; little Silt; trace very fine to fir Dry; no petroleum odor.	ne Sand. CL
5-8'	0	Red-brown, CLAY; trace (+) very fine to fine Sa occasional coarse angular Gravel; hard packed Dry; no petroleum odor.	
		Bottom of boring Samp 8' None	ple Interval



Location

Riverview Industrial Center

SUBSURFACE LOG Soil Boring

LOCATION#

SEP-SB-2 SEP-SW

5335 River Road

Date 5/4/2009

	Toriawariu	Glielitoop# N13DEC	
Depth (feet)	PID (ppm)	DESCRIPTION	Soil Classification Symbols
0-1	NC	Fill.	
1-5'	0	Brown-red, CLAY; little Silt; trace very fine to fine Sand. Dry; no petroleum odor.	CL
5-8'	0	Hard packed red-brown, CLAY; trace (+) very fine to fine Sand; occasional coarse angular Gravel.  Dry; no petroleum odor.	CL
		Bottom of boring Sample Interval None	



# SUBSURFACE LOG

Soil Boring

LOCATION# SEP-SB-3 SEP-SE

5335 River Road

Date 5/4/2009

	Tonawanda NY Client/Job# NYSDEC			
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols
0-1	NC	Fill.		
1-5'	0	Brown-red, CLAY; little Silt; trace very fine to f Dry; no petroleum odor.	ine Sand.	CL
5-8'	0	Hard packed red-brown, CLAY; trace (+) very foccasional coarse angular Gravel. Dry; no petroleum odor.	ine to fine Sand;	CL
Bottom of boring Sample Interval 8' None				



SUBSURFACE LOG

Soil Boring

LOCATION# SEP-SB-4 SEP-NE

5335 River Road

Date 5/4/2009

	Toriawariu	Tonawanda NY Client/Job# NYSDEC			
Depth (feet)	PID (ppm)	DESCRIPTION		Soil Classification Symbols	
0-1	NC	Fill.			
1-5'	0	Brown-red, CLAY; little Silt; trace very fine Dry; no petroleum odor.	e to fine Sand.	CL	
5-8'	0	Hard packed red-brown, CLAY; trace (+) very fine to fine Sand; occasional coarse angular Gravel. Dry; no petroleum odor.		CL	
		Bottom of boring 8'	Sample Interval None		

# APPENDIX B

**TEST PIT LOGS** 



SUBSURFACE LOG

Test Pit

LOCATION#

TP-1

5335 River Road

Date 5/11/2009

	Toriawariu		
Depth (feet)	PID (ppm)	DESCRIPTION	
0-1.5'	0	Grass Brown, CLAY. Moist; no odor.	
1.5-6.5'	0	Red-brown, CLAY; trace Silt. Dry; no odor.	
6.5-7.5'	0	Brown, CLAY; some fine to medium rounded Gravel. Dry; no odor.	
7.5-10'	0	Brown, CLAY; some fine to medium rounded Gravel; occasional sub angular to rounded Gravel. Dry; no odor.	
		Bottom of test pit 10'	Sample Interval None



SUBSURFACE LOG

Test Pit

LOCATION#

TP-2

5335 River Road

Date 5/11/2009

Tonawanda NY	Client/Job# NYSDEC

	Toriawariu	Client/30b# N13DEC	
Depth (feet)	PID (ppm)	DESCRIPTION	
0-1.75'	0	Biologic swamp substrate, fine cherty GRAVEL. Saturated; no odor.	
1.75-7.5	0	Red-brown, CLAY; trace fine Sandy Silt. Dry; no odor.	
7.5-9.5'	0	Red-brown, CLAY; some fine to medium rounded Gravel. Dry; no odor.	
		Bottom of test pit Sample Interval 9.5	



SUBSURFACE LOG

Test Pit

LOCATION#

TP-3

5335 River Road

Date 5/11/2009

	Toriawariu	CHERIOSOD# NTODEC	
Depth (feet)	PID (ppm)	DESCRIPTION	
0-1.5'	0	Grass and Brown, CLAY. Moist; no odor.	
1.5' 1.5-3'	0	Geo-fabric at 1.5 feet; detritus concrete blocks and steel. Wet; no odor .	
3-4.5'	0	Brown, CLAY; some fine to medium rounded Gravel. Dry; no odor.	
4.5-6.5'	180	Black, Silty CLAY; occasional detritus and trash. Moist; biologic and petroleum based fuel odor.	
6.5-9.5'	0	Red-brown, CLAY; some fine sand; fine to coarse subangular to subrounded Gravel; Moist; no odor.	
		Bottom of test pit Sample Interval 4.5-6.5'	



SUBSURFACE LOG

Test Pit

LOCATION#

TP-4

5335 River Road

Date 5/11/2009

	Toriawariu	a IVI Glient/Job#	
Depth (feet)	PID (ppm)	DESCRIPTION	
0-0.5'	0	Grass and Red-brown, fine to coarse Sar Moist; no odor.	dy CLAY.
5-6'	27.5	Dark brown-black, fine to coarse Sandy C very fine angular Gravel. Moist; petroleum/solvent odor.	CLAY; little coarse to
6-10'	0	Red-brown, CLAY; some fine to coarse subangular Gravel. Dry; no odor.	
		Bottom of test pit	Sample Interval
		10'	5-6' WS-4P collected in the TP-4 area



SUBSURFACE LOG

Test Pit

LOCATION#

TP-5

5335 River Road

Date 5/11/2009

Depth (feet)	PID (ppm)	DESCRIPTION	
0-0.6'	0	Brown; some fine to coarse GRAVEL and Silty fine to coarse SAND. Moist; no odor.	
.5-4.5'	90	Dark brown, CLAY; some fine to medium rounded Gravel densely packed. Moist; petroleum odor.	
4.5-6	0	Dark brown, CLAY; some fine to medium rounded Gravel densely packed. Moist; petroleum odor.	
6-9'	0	Red-brown, CLAY; some fine to medium Sand; some Silt; subrounded Gravel at 6.1-6.4 feet. Dense, dry; no odor.	
		Bottom of test pit 9'	Sample Interval



SUBSURFACE LOG

Test Pit

LOCATION#

TP-6

5335 River Road

Date 5/11/2009

	Tonawanda NY Cilent/Job# NYSDEC			
Depth (feet)	PID (ppm)	DESCRIPTION		
0-0.5'	0	Brown, some fine to coarse GRAVEL and Silty fine to coarse SAND; Moist; no odor.		
0.5-5'	90	Dark brown, CLAY; some fine to medium rounded Gravel. Moist; petroleum odor, densely packed.		
5-7'	5-6' 600	Dark brown, CLAY; some fine to medium rounded Gravel. Moist; petroleum odor, densely packed.		
6-7'	6-7' 600	Red-brown, CLAY; some fine to medium Sand; some Silt. Subrounded Gravel at 6.1-6.4 feet. Dense, dry; no odor.		
6-10'	100	Red-brown, CLAY; some fine to medium Sand; some Silt; soil may have been reworked due to steel and plastic trash located in the soil matrix. Dense, slightly moist; petroleum odor.		
10-12'	19	Red-brown, CLAY; some fine to medium Sand; some Silt. Moist; petroleum odor.		
12-14'	0	Red-brown, CLAY; some fine to medium Sand; some Silt. Moist; petroleum odor.		
		Bottom of test pit Sample Intervals 14' 5'-7' 12'-14'		



SUBSURFACE LOG

Test Pit

LOCATION#

TP-7

5335 River Road

Date 5/12/2009

	Toriawariu	CHERIOSOD# NT SDEC	
Depth (feet)	PID (ppm)	DESCRIPTION	
0-1.5'	0	SLAG; fine to coarse angular to semi-angular GRAVEL and fine to coarse SAND; no odor.	
0.5-4'	0	Red-brown, CLAY; trace of fine to medium Sand; trace coarse to fine angular to sub rounded Gravel. Moist; no odor.	
4.75-6'	0	Blue-green, SLAG. Dry; strong sulfur odor.	
6-10'	0	Red-brown, CLAY. Dry; slight petroleum odor decreasing with depth.	
		Bottom of test pit Sample Interval 10' None	



# SUBSURFACE LOG

Test Pit

LOCATION#

TP-8

5335 River Road

Date 5/12/2009

	Total and Tri			
Depth (feet)	PID (ppm)	DESCRIPTION		
0-1'	0	Brown, vegetation and Silty Sandy LOAM Moist; no odor.	l;	
1-10'	0	Moist; no odor.  Red-brown, CLAY; trace of fine to medium Sand; trace coarse to fine angular to sub rounded Gravel.  Moist; no odor.		
		Bottom of test pit 10'	Sample Interval None	
		10	110110	



SUBSURFACE LOG

Test Pit

LOCATION#

TP-9

5335 River Road

Date 5/12/2009

	TUTTAWATTU	d 111 Ollotti dobii	FNIODEC
Depth (feet)	PID (ppm)	DESCRIPTION	
0-1'	0	Brown, vegetation and Silty Sandy LOAN Moist; no odor.	1.
1-10'	0	Red-brown, CLAY and coarse to fine ang to sub rounded Gravel. Moist; no odor.	ular Gravel
	0	Brown, fine to medium SAND; size increating Gravel amounts decrease with depth. Moist; no odor.	ases with depth some fine to coarse Gravel.
		Bottom of test pit	Sample Interval
		10'	None



# SUBSURFACE LOG

Test Pit

LOCATION#

5335 River Road

Date 5/12/2009

Depth (feet)	PID (ppm)	DESCRIPTION	
0-4"	0	Light brown, Sandy SILT. Moist, no odor.	
4"-6'	2	Dark brown to red, CLAY; trace fine to medium S angular to rounded Gravel. Moist, no odor.	and and coarse to fine
6-9'	100+	Brown, fine to medium SAND and GRAVEL; amo Gravel; amounts decrease with depth. Moist, no odor.	ount increases with depth; fine to co
9-10'	10' Dark gray, fine to medium SAND increases with depth, while fine to coarse G Strong petroleum/diesel odor .		depth, while fine to coarse Gravel o
		Bottom of test pit Sample 10' 6'-10'	e Interval

TP-10

parse

lecreases.



SUBSURFACE LOG

Test Pit

LOCATION#

TP-11

5335 River Road

Date 5/12/2009

	Tonawana	divi dictional in the distribution of the dist
Depth (feet)	PID (ppm)	DESCRIPTION
0-1.5	0	Dark brown, Silty CLAY and fine to coarse SAND.
		Moist, no odor.
1.5-10	0	Red to dark brown, CLAY and angular GRAVEL;
		trace fine to medium Sand.
10-11'	46	Dark brown to red, CLAY and light gray SILT.
		Bottom of test pit Sample Interval
		11' None
		•



SUBSURFACE LOG

Test Pit

LOCATION#

TP-12

5335 River Road

Date 5/12/2009

	Toriawariu	d IVI Client/300# IVI 3DEC
Depth (feet)	PID (nnm)	DESCRIPTION
0-2"	7	Dark red-brown, CLAY.
2"-2'	0	Dark red-brown, CLAY.
2-4'	34	Dark red-brown, CLAY; trace fine Sand; trace angular coarse Gravel.
4-7'	5	Dark red-brown, CLAY; trace fine Sand; trace angular coarse Gravel.
7-10'	0	Dark red-brown, CLAY; trace fine Sand; trace angular coarse Gravel.
		Bottom of test pit Sample Interval
		10' None

7	OP-TECH*
	OI - I LOII
40	Response • Service • Experience

SUBSURFACE LOG

Test Pit

LOCATION#

TP-13

5335 River Road

Date 5/12/2009

Toriawariu	d IVI
PID (ppm)	DESCRIPTION
	Brown, fine to coarse angular GRAVEL.
	Moist; no odor.
	Bottom of test pit Sample Interval 6"-2'



SUBSURFACE LOG

Test Pit

LOCATION#

TP-14

5335 River Road

Date 5/13/2009

	Tonawand	a NY Cilent/Job# NYSDEC
Depth (feet)		DESCRIPTION
0-0.75'	7	Dark brown, Silty LOAM; trace fine to medium Clay. Moist; no odor.
.75'-6'	0	Detritus FILL materials, metallic and wood, paper products; slight solvent odor.
6-9'	0	Dark brown-red, CLAY; trace fine to medium Sand; trace coarse to very fine Gravel; trace gray Silt stringers in Clay; tight matrix. slight solvent odor.
4-7'	5	Dark brown-red, CLAY; trace fine to medium Sand; trace coarse to very fine Gravel; trace gray Silt stringers in Clay; tight matrix. slight solvent odor.
7-10'	0	Dark brown-red, CLAY; trace fine to medium Sand; trace coarse to very fine Gravel; trace gray Silt stringers in Clay; tight matrix.
		Bottom of test pit Sample Interval 10' None



# SUBSURFACE LOG

Test Pit

LOCATION#

TP-15

5335 River Road

Tonawanda NY

Date 5/13/2009
Client/Job# NYSDEC

Depth (feet)	PID (ppm)	DESCRIPTION
0-0.5"	7	Dark red-brown, CLAY; trace fine rounded Gravel; trace fine Sand.
		No odor.
0.5-5.5	0	Red-brown, CLAY; trace fine Sand and rounded fine Gravel. No odor.
5.5-6.5'	0	Brown, fine to coarse GRAVEL. Wet; No odor.
6.5-8'	0	Red-brown, CLAY; trace fine Sand and rounded fine Gravel. No odor.
7-10'	0	Red-brown, CLAY; trace fine Sand and rounded fine Gravel. No odor.
		Bottom of test pit Sample Interval
		10' None
		I



SUBSURFACE LOG

Test Pit

LOCATION#

TP-16

5335 River Road

Date 5/13/2009

		a IVI Client/300# IVI 3DEC
Depth (feet)	PID (ppm)	DESCRIPTION
0-5"	0	Dark brown, swamp material; biologic odor.
0.5'-3'	8	Brown-red, CLAY; trace organic material.
		slight fuel odor, smell increases with depth.
3-4'	21	Brown-red, CLAY; trace organic material.
4-7'	5	Brown-red, CLAY; trace organic material.
4-7	3	blown-red, olar, trace organic material.
7 401	_	
7-10'	0	Brown-red, CLAY; trace organic material.
		Bottom of test pit Sample Interval
		10' None



SUBSURFACE LOG

Test Pit

LOCATION#

TP-17

5335 River Road

Date 5/13/2009

	Tonawana	GIICHBOODH INTODEO
Depth (feet)	PID (ppm)	DESCRIPTION
0-0.5"	0	Dark brown, organic PEAT; trace fine Gravel.
		Low moisture; no odor.
5"-4'	0	Dark brown to red, CLAY; trace medium to fine angular Gravel.
		Dry; no odor.
4-7.5'	0	Dark brown, organic PEAT; trace fine Gravel.
4-7.5		Low moisture; no odor.
		large amounts of debris (concrete, conduit and steel pieces)
7.5-13'	0	Dark brown to red, CLAY; trace medium to fine angular Gravel.
		Dry; no odor.
		Dettem of test nit
		Bottom of test pit Sample Interval  None
		10110



SUBSURFACE LOG

Test Pit

LOCATION#

TP-18

5335 River Road

Date 5/14/2009

	Toriawariu	a IVI
Donth (for the	DID (a.e.)	DECODIDATION
Depth (feet)	PID (ppm)	DESCRIPTION
025'	0	Brown, fine to coarse GRAVEL and Silty fine to medium SAND.
0.25-3	2 3' 12	Red-brown, CLAY; trace fine Sand; trace Silt. Tight, dry; no odor, plant matter present.
4-6'	26	Red-brown, CLAY; trace fine Sand; trace Silt. Tight soils, dry; fuel odor.
6-8'	54	Red-brown, CLAY; trace fine Sand; trace Silt. Petroleum odor.
8-10'	84	Red-brown, CLAY; trace fine Sand; trace Silt. Petroleum odor.
10-13'	98	Red-brown, CLAY; trace fine Sand; trace Silt. Strong petroleum odor.
		Bottom of test pit Sample Interval 13' None



SUBSURFACE LOG

Test Pit

LOCATION#

TP-19

5335 River Road

Date 5/14/2009

	Tonawana	
Depth (feet)	PID (ppm)	DESCRIPTION
075'	0	Brown, coarse to medium GRAVEL; debris, metal pieces and slag.
	0.75	Red-brown, CLAY; some fine to coarse Gravel.
	8	Moist; fuel odor, reworked soil.
0.75-4'	12	Red-brown, CLAY; some fine to coarse Gravel.
		Moist; fuel odor, reworked soil.
4-6'	98	Black, CLAY; some fine to coarse Gravel.
4-0	90	Strong petroleum odor.
6-8.5'	46	Red-brown, CLAY; some fine to coarse Gravel. Moist; strong fuel odor.
8.5-9.5'	50	Red-brown, CLAY; some fine to coarse Gravel.  Moist; strong fuel odor.  Drain pipe located at 9 feet below grade.
		Bottom of test pit Sample Interval
		9.5' 4'-6'
L		



# SUBSURFACE LOG

Test Pit

LOCATION#

TP-20

5335 River Road

Date 5/14/2009

	Tonawanu	a INT Client/JOD# INT SDEC
Donth (for the	DID (	DESCRIPTION
Depth (feet)		DESCRIPTION
0-1'	0	Dark brown, fine to coarse GRAVEL and SAND.
		Moist; no odor.
1-5'	0	Dark brown, fine to medium Sandy CLAY; some coarse Gravel and Sand. Moist; no odor; large pieces of concrete.
5-9'	0	Dark brown, fine to medium Sandy CLAY; some coarse Gravel and Sand. Moist; no odor; decreasing amounts of concrete.
9'	5	Dark brown, fine to medium Sandy CLAY; some coarse Gravel and Sand. Dry; no odor.
9-9.5'	10	Red, CLAY; tight. Dry; no odor.
		Bottom of test pit Sample Interval
		9.5' None
B		•



SUBSURFACE LOG

Test Pit

LOCATION#

TP-21

5335 River Road

Date 5/14/2009

	Tonawand	a NY Cilent/Job#	NIGDEG
Depth (feet)		DESCRIPTION	
0-1'	0	Fill, brown, fine to coarse GRAVEL and S Dry with concrete pieces.	AND;
1-4'	136	Brown, fine to coarse GRAVEL and SANI Saturated; strong fuel odor; liquid phase h	
4'	259	Brown, fine to coarse GRAVEL and SANI Saturated; strong fuel odor; liquid phase h	nydrocarbons on water.
		Bottom of test pit 4'	Sample Interval 1'-4'

# APPENDIX C

MONITORING WELL BORING LOGS

&

WELL CONSTRUCTION DIAGRAMS



SUBSURFACE LOG MONITORING WELL LOG LOCATION# MW-002R

5335 River Road

Date 6/2/2009Reinstalled

Grout/Cement 0-6'

Tonawanda NY

Client/Job# NYSDEC

Bentonite 6-7'

7-32'

8-30'

Sand Well Screen interval

	1	·	Ven Gereen interval	0-30
Depth (feet) -			Soil	Well
BLOW COUNTS	DID (nam)	DECORIDATION	Classification Symbols	Completion
		DESCRIPTION	Symbols	Data
0-1	NC	Dark brown, coarse to fine SAND and SILT; little very fine to fine	014	
		Gravel.	SM	
	4.01	Wet to saturated; no odor.		
1 41	1-3' 355	1.2.75 brown CLAV and vary fine to fine CAND	sc	
1-4'	333	1-2.75 brown, CLAY and very fine to fine SAND.  Moist; petroleum odor.	30	
	3-5'	2.75-4 Red brown, CLAYEY SILT; trace very fine to fine Sand.		
	145	Moist; petroleum odor.		
<i>4</i> -8'	143	imoist, petroleum odor.		_
7 0	5-7'	Red-brown, CLAYEY SILT; trace very fine to fine Sand.	ОН	
8-12'	120	Moist; petroleum odor.	0	
0 12	7-9'	Red-brown, CLAYEY SILT; trace very fine to fine Sand.	ОН	<b></b>
	0	Dry; no odor.	011	33333
	9-12'	Red-brown, CLAYEY SILT; trace very fine to fine Sand.	ОН	
	0	Dry; no odor.	OII	
12-14'	85	12-13' Red brown, CLAY; Some (-) fine to medium Sand; trace Silt.		33333
5,8,11,14	05	Moist to dry; petroleum odor.	CL	
5,6,11,14		13-14' Brown, hard packed CLAYEY very fine to fine SAND.	CL	33333
			sc	
11 101	_	Moist to dry; petroleum odor.	30	33333
14-16'	0	Red-brown, CLAY; some (-) fine to medium Sand; trace Silt.	CII	
9,8,9,11	_	Moist to dry; no odor.	СН	300000
16-18'	0	16-17.5' Red brown, CLAY; Some (-) fine to medium Sand; trace	01	
10,13,		Silt. Moist to dry; no petroleum odor.	CL	
	0	17.5-18' Brown, CLAY; little very fine angular Gravel; trace very fine		
	_	Sand. Moist to dry; no petroleum odor.	CL	
18-20'	0	Brown, fine GRAVEL; trace (+) fine angular Gravel.		
		Moist to dry no petroleum odor.		
4,7,9,5	0	Brown, CLAY; trace (-) fine angular Gravel; trace (-) very fine	GW	
		to fine Sand.	CL	
		Moist to wet; no petroleum odor.		
20-22'	0	20-21' Brown, CLAY; Some (-) very fine to fine Sand; trace Silt;		
		Moist to dry; no petroleum odor.		
10,12		21-22' Brown, CLAY; little very fine Sand; occasional fine angular;	ОН	
16,17		Gravel. Moist to dry; no petroleum odor.	CL	
22-24'	0	Brown, CLAY; Some (-) very fine to fine Sand; trace Silt;		
4,7,12,15		occasional very fine to fine angular Gravel.	CL	
		Dry; no petroleum odor.		
24-26'	0	Red-brown, SILTY CLAY; trace very fine Sand; trace (-) fine		
3,5,8,1		angular Gravel. Moist; no petroleum odor.	OH	
26-28'	0	Brown, SILTY CLAY; trace very fine angular Gravel; trace		
8,10,15,16		very fine to fine Sand.	ОН	
		Moist; no petroleum odor.		
28-30'	0	Brown; SILTY CLAY; trace very fine angular Gravel; trace		
3,5,9,5		very fine to fine Sand. Moist; no petroleum odor.	ОН	
30-32'	0	Brown, SILTY CLAY; trace very fine angular Gravel; trace		
10,12		very fine to fine Sand.	ОН	
13,15		Moist; no petroleum odor.	· ·	
	Ì	·	<del></del>	30000

	Bottom of boring 32'	Sample Interval 5'-7'
-		



5335 River Road

Tonawanda NY

SUBSURFACE LOG Riverview Industrial Center MONITORING WELL LOG

> 5/8/2009 Date

Client/Job# NYSDEC

LOCATION# MW-005

Grout/Cement 0-6'

> 6-7' Bentonite

> > Sand 7-30'

Well Screen interval 8-30'

		v	/ V C II	Screen interval	8-30
Depth (feet) -				Soil	Well
BLOW				Classification	Completion
COUNTS	PID (ppm)	DESCRIPTION		Symbols	Data
0-2'	0	Dark brown-red, fine to medium SAND and CLAY;		SC	
4,4,6,7		trace organics. Dry; no petroleum odor.			
2-4'	0	Light brown, CLAY; trace very fine Sand;		CL	
3,3,3,4		trace organics. Dry; no petroleum odor.			
4-6'	0	Red-brown, very fine to fine SANDY CLAY.		SC	
4,5,8,12		Slightly moist; no petroleum odor			
6-8'	0	Red-brown, very fine to fine SANDY CLAY.		SC	
9,13,14,19		Slightly moist; no petroleum odor.			
8-10'	0	Red-brown, very fine to fine SANDY CLAY.			
7,13,13,19		9-10 Moist; no petroleum odor.			
10-12'	0	Red-brown, very fine to fine SANDY CLAY.			00000
19,24		Moist; no petroleum odor.			
,26,29		inclos, no posicionam outin			000000
12-14'	0	Red-brown, very fine to fine SANDY CLAY.			
7,11,15,19	Ü	Moist; no petroleum odor.			3333
14-16'	0	Brown, CLAY; some fine Sand; trace angular fine gravel;			600000 600000 600000
	U				300000
5,6,9,13	_	Slightly moist; no petroleum odor.			33333
16-18'	0	Brown, CLAY; some fine Sand; trace angular fine gravel;			33333
12,12,		Slightly moist; no petroleum odor.			
13,17					100000
18-20'	0	Brown, CLAY; trace (-) fine angular Gravel; trace (-) very fine			
1,3,4,4		to fine Sand.			
1		Moist to wet; no petroleum odor.			
20-22'	0	Brown, SILTY CLAY; trace (-) fine angular Gravel; trace (-)			300000 300000
4,5,5,6		very fine to fine Sand.			
		Moist to wet; no petroleum odor.			33333
22-24'	0	Brown, SILTY CLAY; trace (-) fine angular Gravel; trace (-)			300000 300000
5,7,7,6		very fine to fine Sand.			
		Moist to wet; no petroleum odor.			
24-26'	0	Brown, SILTY CLAY; trace (-) fine angular Gravel; trace (-)			
3,4,4,5		very fine to fine Sand.			
0, ., ., 0		Moist to wet; no petroleum odor.			
26-28'	0	Brown, SILTY CLAY; trace (-) fine angular Gravel; trace (-)			
2020	ľ	very fine to fine Sand.			000000 000000 000000
1		Moist to wet; no petroleum odor.			1000000 300000 300000
28-30'		Brown, SILTY CLAY; trace (-) fine angular Gravel; trace (-)			3333
20-30					933333 933333 933333
ŀ		very fine to fine Sand.			33333
!		Wet to saturated; no petroleum odor.			
ŀ					
ŀ					
ļ					
ļ					
!					
		Bottom of boring Sample Interval			

30' 8'-10'



Riverview Industrial Center

5335 River Road

Tonawanda NY

### SUBSURFACE LOG MONITORING WELL LOG

Date 5/8/2009

Client/Job# NYSDEC

LOCATION# MW-006

Grout/Cement 0-6'

Bentonite 6-7'

Sand 30-7' Well Screen interval 8-30'

Depth (feet) - BLOW COUNTS PID (ppm) DESCRIPTION DESCRIPTION  0-2'	Well ompletion Data
BLOW COUNTS PID (ppm) DESCRIPTION  O-2' 4,4,6,7 2,4,4,6 2-4' 4,6,7,12 Dry; no petroleum odor.  Dry; no petroleum odor.  SW-SC  O Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  CL  Very fine to sub-rounded Gravel. Dry; no petroleum odor.  CL  CL  CL  CL  Rown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  CL  CL  CL  CL  CL  CL  CL  CL  CL  C	-
0-2' 4,4,6,7 2,4,4,6 2-4' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) 4,6,7,12	Data
4,4,6,7 2,4,4,6 2-4' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) 4,6,7,12 very fine to sub-rounded Gravel. Dry; no petroleum odor.  4-6' 7,5,7,11 very fine to sub-rounded Gravel. Dry; no petroleum odor.  6-8' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  6-8' 7,10,15,18 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  8-10' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	
2,4,4,6 2-4'  4,6,7,12  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  4-6'  7,5,7,11  Dry; no petroleum odor.  6-8'  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  6-8'  7,10,15,18  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  8-10'  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	
2-4' 4,6,7,12  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  4-6' 7,5,7,11  Dry; no petroleum odor.  CL  very fine to sub-rounded Gravel. Dry; no petroleum odor.  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) Very fine to sub-rounded Gravel. Dry; no petroleum odor.  CL  CL  Serown, CLAY; some very fine to fine Sand; occasional to trace(-) Very fine to sub-rounded Gravel. Dry; no petroleum odor.  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  CL  CL	
<ul> <li>4,6,7,12 very fine to sub-rounded Gravel. Dry; no petroleum odor.</li> <li>4-6' Dry; no petroleum odor.</li> <li>7,5,7,11 very fine to sub-rounded Gravel. Dry; no petroleum odor.</li> <li>6-8' Dry; no petroleum odor.</li> <li>8-10' Dry; no petroleum odor.</li> <li>Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.</li> <li>Brown, CLAY; some very fine to fine Sand; occasional to trace(-)</li> <li>CL</li> </ul>	
Dry; no petroleum odor.  4-6'  7,5,7,11  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  very fine to sub-rounded Gravel.  Dry; no petroleum odor.  6-8'  7,10,15,18  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  very fine to sub-rounded Gravel.  Dry; no petroleum odor.  8-10'  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  CL	
4-6' 7,5,7,11  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  6-8' 7,10,15,18  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  8-10'  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL  CL	
7,5,7,11 very fine to sub-rounded Gravel.  Dry; no petroleum odor.  6-8' 7,10,15,18 Dry; no petroleum odor.  CL very fine to sub-rounded Gravel. Dry; no petroleum odor.  8-10' Dry; no petroleum odor.  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  CL	
Dry; no petroleum odor.  6-8' 7,10,15,18 Dry; no petroleum odor.  CL very fine to sub-rounded Gravel. Dry; no petroleum odor.  8-10' Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL CL	
6-8' 7,10,15,18  Brown, CLAY; some very fine to fine Sand; occasional to trace(-) very fine to sub-rounded Gravel. Dry; no petroleum odor.  8-10'  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  CL	
7,10,15,18 very fine to sub-rounded Gravel. Dry; no petroleum odor. 8-10'  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  CL	
Dry; no petroleum odor. 8-10'  Dry; no petroleum odor.  Brown, CLAY; some very fine to fine Sand; occasional to trace(-)  CL	
8-10' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	
	555
6,9,12,16 very fine to sub-rounded Gravel.	606 600000
	00000
Dry; no petroleum odor.	
10-12' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	
21,25 very fine to sub-rounded Gravel.	
Dry; no petroleum odor.	
12-14' Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	
7,12,16,19 very fine to sub-rounded Gravel.	
Dry; no petroleum odor.	
14-16' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	
5,6,9,13 very fine to sub-rounded Gravel.	100 100 100 100 100 100 100 100 100 100
Dry; no petroleum odor.	100
16-18' 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	00000
12,12, very fine to sub-rounded Gravel.	000000 000000 000000
13,17 Dry; no petroleum odor.	300 200 200 200 200 200 200 200 200 200
18-20 0 Brown, CLAY; some very fine to fine Sand; occasional to trace(-) CL	300000 300000 300000
4,6,12,16 very fine to sub-rounded Gravel.	300 B
Dry; no petroleum odor.	1000 1000 1000 1000 1000 1000 1000 100
20-22' 0 Brown CLAY and SILT; trace (-) fine Sand. OH	
12,14,17,21 Moist; no petroleum odor.	
22-24' 0 Brown CLAY and SILT; trace (-) fine Sand. OH	
5,7,7,6 Moist; no petroleum odor.	300 300 300 300 300 300
24-26' 0 Brown CLAY and SILT; trace (-) fine Sand. OH	
10,9,11,8 Moist; no petroleum odor.	
26-28' 0 Brown CLAY and SILT; trace (-) fine Sand. OH	000 000 000 000 000 000
4,9,16,15 Moist; no petroleum odor.	
28-30' 0 Brown CLAY and SILT; trace (-) fine Sand. OH	
10,8,11,6 Moist; no petroleum odor.	
Bottom of boring Sample Interval	ļ
30' 2'-4'	ŀ



Riverview Industrial Center

5335 River Road
Tonawanda NY

SUBSURFACE LOG MONITORING WELL LOG

Date 5/11/2009

Client/Job# NYSDEC

LOCATION# MW-007

Grout/Cement

0-6'

Bentonite 6-7'

Sand 30-7' Well Screen interval 8-30'

		vven	Screen interval	8-30'
Depth (feet) -			Soil	Well
BLOW ` ´			Classification	Completion
COUNTS	PID (ppm)	DESCRIPTION	Symbols	Data
0-2'	0	Dark brown-red fine to medium SAND and CLAY; trace organics.	SC	
4,4,6,7		Dry; no petroleum odor.		
2-4'	0	Brown, CLAY; some very fine to fine Sand.	CL	
5,4,5,5		Dry; no petroleum odor.		
4-6'	0	Brown to light Brown, CLAY; some very fine to fine Sand.	CL	
3,5,6,7		Dry; no petroleum odor.		
6-8'	0	Light brown, fine to medium SAND; fine to coarse GRAVEL	SP-GP	
11,13,		Dry; no petroleum odor.		
16,12		Water likely at 7-8 feet.		
8-10'	0	Light brown fine to medium SAND; some rounded to subangular	SP	
7,11,32,55		coarse to fine Gravel; cobble at 9 feet. Saturated; no odor.		
10-12'	0	Brown, TILL at 10' hard packed fine to medium GRAVELLY	GP-GM	
8,8,7,8		SILT; fine to coarse trace very fine to fine Sand.		
		Saturated; no odor.		
12-14'		Brown SILT; some very fine to medium Sand.	OL	
3,2,3,4		Saturated; no petroleum odor.		
14-16'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
2,2,2,3		angular Gravel.		
		Saturated to wet; no petroleum odor.		
16-18'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
4,5,5,5		angular Gravel.		
		Wet; no petroleum odor.		
18-20'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
3,4,4,4		angular Gravel.		
-, , ,		Saturated to wet; no petroleum odor.		
20-22'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
8,17,10,9	-	angular Gravel.		
, , , , , , , ,		Saturated to wet; no petroleum odor.		
22-24'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	20000
9,8,10,9		angular Gravel.	0	
0,0,10,0		Saturated to wet; no petroleum odor.		33333
24-26'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
1,1,1,1		angular Gravel.	Civi	
1,1,1,1		Saturated to wet; no petroleum odor.		
26-28'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
1,1,1,1		angular Gravel.	Givi	
1,1,1,1		Saturated to wet; no petroleum odor.		
28-30'	0	Brown, SILTY fine to medium SAND; some (-) Clay; trace (-) fine	SM	
2,2,1,1	U	angular Gravel.	SIVI	
۷,۷,۱,۱				
		Saturated to wet; no petroleum odor.	<u> </u>	
		Bottom of boring Sample Interval 5'-9'		
		ง - ซ		



Riverview Industrial Center

5335 River Road

Tonawanda NY

### SUBSURFACE LOG MONITORING WELL LOG

5/13/2009

Client/Job# NYSDEC

Date

LOCATION# MW-008

Grout/Cement 0-6'

Bentonite 6-7'

Sand 30-7

			Well	Screen interval	8-3
Depth (feet) -				Soil	Wel
BLOW				Classification	Comple
COUNTS	PID (ppm)	DESCRIPTION		Symbols	Data
0-2'	0	Dark brown, SANDY SILT; some very fine	to fine angular		
1,2,3,4		subrounded Gravel.		SP-SM	
		Dry; no petroleum odor.			
2-4'	0	Brown, hard packed SILTY CLAY; little (+)	very fine Sand.	ОН	
5,8,14,15		Dry; no petroleum odor.			
4-6'	0	Brown, SILTY fine to medium SAND.		SW-SC	
2,8,13,10		Dry; no petroleum odor.			
6-8'	0	Light brown, fine to coarse GRAVEL; some	e fine to medium Sand;	GP	
17,		subrounded Gravel.			
24,28		Dry; no petroleum odor.			
8-10'	0	Brown-red, CLAY; trace (+) very fine Sand		CH	000000
10,17,24,30		Dry, hard; no petroleum odor.			200000
10-12'	0	Red-brown CLAYEY fine to medium SAND	); occasional fine	SW-SC	000000
23,26		angular Gravel.			000000
30,34		Dry, hard; no petroleum odor.			000000
12-14'		Red-brown CLAY; little (-) very fine to fine	Sand;	CL	200000
8,10,11,12		occasional angular coarse Gravel.			000000 000000 000000
		Dry to moist; no petroleum odor.			0000000 0000000 0000000
14-16'	0	Brown, CLAY; trace very fine to fine Sand;	trace (-) angular fine	CL	300000
2,5,5,7		Gravel; Moist; no petroleum odor.			0000000
16-18'	0	Brown, CLAY; trace very fine to fine Sand;	trace (-) angular fine	CL	000000 000000 000000
4,5,7,5		Gravel; Moist; no petroleum odor.	-		0000000
18-20	0	Brown, CLAY; trace very fine to fine Sand;	trace (-) angular fine	CL	3000000
4,4,5,8		Gravel; Moist; no petroleum odor.	., .		000000
20-22'	0	Dark brown, SILTY CLAY; trace (+) fine Sa	and; occasional fine	ОН	0000000
3,4,7,8		Gravel; Moist; no petroleum odor.	·		000000
22-24'	0	Dark brown, SILTY CLAY; trace (+) fine Sa	and: occasional fine	ОН	5000000 5000000 5000000
3,4,7,8	_	Gravel; Moist; no petroleum odor.	,		000000 000000 000000
24-26'	0	Brown, SILTY CLAY; some (-) fine Sand; to	race (-) angular fine	ОН	000000 000000 000000
10,8,11,14		Gravel; Moist; no petroleum odor.		J	000000
26-28'	0	Brown, SILTY CLAY; some (-) fine Sand; trace (-) angular fine		ОН	000000 000000 000000
10,11,15,16		Gravel; Moist; no petroleum odor.		0	000000 000000 000000
28-30'	0	Light brown, SILTY CLAY; trace (-) angular fine Gravel.		ОН	2000000 2000000 2000000
4,6,8,10		Moist; no petroleum odor.		J. 1	3000000 3000000 30000000
7,0,0,10		inoist, no petroleum odor.			200000
		Bottom of boring	Sample Interval		200000
			14-16'		
		JU	17-10		

)' tion

Appendix F
Daily Inspection Reports

# New York Department of Environmental Conservation Division of Environmental Remediation Region 9 Office-Buffalo



#### DAILY FIELD REPORT

**Date:** May 4, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Overcast, T~55°F, SE breeze

**Description of Work Performed:** Remedial Investigation - Soil Boring

### **Items of Concern/Comments:**

MJH on site at 1012 hrs

### SB-1 West side of 2-3000 gal USTs

0-5' 100% recovery

0-2" black gravelly soil

2-8" gravel

8-60" red silty clay PID @ 1' bgs >1000, PID @ 2-4' bgs ~204 (sample 1-2')

5-8' 100% recovery

Red silty clay native PID @ 4-6' bgs ~129, PID @ 6-8' bgs ~47

### SB-2 South end of 2-3000 gal UST

0-5' 100% recovery

0-12" crushed stone/gravel

12-72" red silty clay PID @1-2' ~2.6

5-8' 100% recovery

Red silty clay No PID reading

#### SB-3 East Side of 2-3000 gal USTs

0-5' 100% recovery

0-12" gravel/stone

12-60" red silty clay PID @1-2' bgs ~0, PID @3-4' bgs ~1

5-8' 100% recovery

Red silty clay dry/ stiff 0-PID

### SB-4 North end of 2-3000 gal USTs

0-5' 100% recovery

0-12" gravel

12-60" red firm silty clay PID @1-3' bgs ~0, PID @305' bgs ~7.2

5-8' 100% recovery

Red firm silty clay PID @ 6-7' bgs ~3.5

```
SB-5 In Bldg Alcove
        0-5' 90% recovery
             0-6" asphalt/gravel
             6-15" sand fill
              15-60" grey silty clay PID 1-3' bgs ~75, PID 3-5' bgs ~36 Sample 1-3'
        5-10' 90% recovery
              5-7' grey silty clay moist
              7-10' very firm red silty clay
MJH off site at 1235 hrs
Picked up coolers and jars at Test America
MJH on site at 1335 hrs
SB-06 near SW corner of Bldg
         0-5' 66% recovery
             0-12" fill
             12-60" grey to light brown silty clay
         5-8' 100% recovery
              5-5.5' grey to light brown silty clay
              5.5-8' very firm, dry reddish brown silty clay
SB-07 Near west Property line (old foundation tank cradle?)
          0-5' 100% recovery
              0-12" gravel
              12-48" fill/brick chemical odor
              48-60" grey silty clay
           5-8' 100% recovery
               5-6' grey silty clay
                6-6' reddish brown silty clay
SB-08 along west property line
           0-5' 100% recovery
                0-15" gravel/fill
                15-30" silty clay gravel w/ stones
                30-60" very firm, dry reddish brown silty clay
SB-09 12' west of loading dock
            0-5' bgs 100% recovery
                0-15" gravel/stone
                15-48" grey silty clay
                48-60" light brown silty clay
             5-8' 100% recovery
                  Reddish brown silty clay
```

SB-10 Near Catch basin NW corner of Bldg 0-5' bgs 100% recovery 0-18" gravel/fill 18-60" firm, dry, reddish brown silty clay
MJH left site at 1500 hrs
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert CME - Beau Fletcher, Chris Stone
Inspector's Name: Michael Hinton Date: May 28, 2009
Distribution: G. Sutton/file M. Hinton
Attachments: photo's



#### DAILY FIELD REPORT

**Date:** May 5, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

#### Weather Conditions:

**Description of Work Performed:** Remedial Investigation - Soil Boring

GPS on site at 0945 hrs

Tom Helleret noted that strong petroleum odor (diesel) found in SB-18 at 7-8' with staining. Sample collected with Dup

Op-Tech removed fence post @ corner of Bldg for access

SB-20 East of Bldg on berm/dike

0-12' reddish mottled sand silty clay no sample

SB-21 1040 hrs

0-8' 100% recovery reddish brown silty clay, plastic

Site walk around noted mechanics pit in bldg - should sample

1100 hrs skies cleared sunny

SB-22 along River Rd ROW

0-5'

0-12' fill

12-36" grayish silty clay

36-60" reddish brown silty clay w/ slight odor

5-8

5-6' reddish brown silty clay slight odor

6-8' reddish brown silty clay

GPS left site at 1125 hrs

GPS on site @1350 hrs

Now boring mid-site near O/W seperator holding tank
SB- B3 west end of holding tank 0-5' silty clay with fill layers stone/cinders/organics 5-8' silty brown clay w/ misc small stones (rounded) dry
SB-B4 1430 hrs south of east end of O/W/S holding tank 0-5' silty clay, brown, no odor, small black rounded stones 5-8' hard pack clay same as above
1450 Telcon Hinton - WP clarification MW's to be 20' bgs, no bedrock wells, account for berms
1520 hrs - Surveyed out location of MW-5 - access problems need to relocate. Tom to discuss w/ Hinton
GPS off site at 1530 hrs
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert CME - Beau Fletcher, Chris Stone
Inspector's Name: Greg Sutton Date: May 28, 2009
Distribution: G. Sutton/file M. Hinton
Attachments:



#### DAILY FIELD REPORT

**Date:** May 6, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Clear to partly cloudy T~60<sup>0</sup>F light S breeze

## Description of Work Performed: Remedial Investigation - Soil Boring

MJH on site at 0910 hrs

Geo-probe area south of Rattlesnake Creek

B-7

0-5' 100% recovery

0-6" black sandy topsoil

6-60" reddish silty clay with some fine sand, very firm

Requested Op-Tech to space soil borings out further

Walked back wooded area found SW corner property stake. No Base line placed to assist in locating soil borings. No obvious signs of dumping or other disposal activity. Ground very hummocky. Misc debris scattered throughout area.

Waterline along south property line area.

#### B-8 & B9

0-5' 100% recovery

0-8" wet loamy topsoil

8-60" reddish brown silty clay, dry very firm

#### B-10

0-5' 100% recovery

0-6" sandy topsoil, moist

6-60" reddish brown silty clay, dry very firm

Found old Monitoring Well in back portion of site. Locked cap. Will use well and name the existing well MW-009

B-11
0-5' 100% recovery
0-10" moist grey sandy soil
10-24" reddish brown sandy silty clay
24-60" reddish brown silty clay, dry firm
D 14
B-14 0-5' 100% recovery
0-8" sandy loam
8-36" sandy silty clay soft
36-60" reddish brown silty clay dry, firm
30 00 readish brown shey etay ary, rinin
MJH left site at 1505 hrs
HEALTH & SAFETY:
SITE VISITORS: Norm Wohlabaugh
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert
CME - Beau Fletcher, Chris Stone
Inspector's Name: Michael Hinton
<b>Date:</b> May 28, 2009
· · · · · · · · · · · · · · · · · · ·
Distribution: G. Sutton /file
M. Hinton
Attachments:



#### DAILY FIELD REPORT

**Date:** May 7, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

**Project Manager:** Michael Hinton **Project Engineer:** Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Light mist, fog, T~55°F, no breeze

**Description of Work Performed:** Remedial Investigation - Soil Boring

MJH on site at 0920 hrs

Geo-probe area south of Rattlesnake Creek

B-22 & B23

0-5' 100% recovery

0-3" brown sandy loam

3-60" reddish brown silty clay, firm, dry

Soil borings completed at 1000hrs.

Began monitoring well installation at

MW-006 Along access road, west of former tank 7 area

0-2' 50% recovery counts 2,4,4,6

0-6" brown sandy loam

6-24" reddish brown, moist

2-4' 50% recovery counts 4,6,7,12 moist firm reddish brown silty clay

4-6' 75% recovery, counts 7,5,7,11 reddish brown silty clay

6-8' 100% recovery, counts 7,10,15,\_\_\_\_, reddish brown silty clay

16-18' counts 15,18,20,24 moist reddish brown silty clay

18-20' counts 4,6,12,16, reddish brown silty clay

20-22' counts 12,14,17,21, moist reddish brown silty clay

22-24' 100% recovery, counts 3,4,8,11, moist reddish brown silty clay

Drill rig ran out of fuel. Advised Tom Hellert to auger to 30' and build well with 15' screen.

Checked and gaged existing wells:
MW-002 Along North property line at River Road 2" diameter, casing loose. Riser - 2.9'
Water level- 1.9' bgs
Soft bottom at 10.9' bgs
Recorded Installed depth - 23' bgs
MW-003 SW corner of site
2" diameter
Riser - 3.0'
Water level- 4.0' bgs
Soft bottom at 9.2' bgs
Recorded Installed depth - 23' bgs
MW-001 SE Corner
4" diameter.
Riser - 2.8'
Water level- 3.1' bgs
Soft bottom at 15.5' bgs
Recorded Installed depth - 20' bgs
MW-004 Near O/W Seperator
4" diameter.
Riser - 3.1'
Water level- 1.3' bgs
Soft bottom at 18.15' bgs
Recorded Installed depth - 21' bgs
MJH left site at 1525 hrs
HEALTH & SAFETY:
SITE VISITORS: Norm Wohlabaugh
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert CME - Beau Fletcher, Chris Stone
Inspector's Name: Michael Hinton Date: May 28, 2009
Distribution: G. Sutton/file M. Hinton
Attachments: photo



## DAILY FIELD REPORT

	DAIL I FIELD REPORT	
Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	May 8, 2009 Riverview Industrial Center 915225 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A	
Weather Conditions:	Partly cloudy, T~60°F, light west breeze	
<b>Description of Work Per</b>	formed: Remedial Investigation - MW and Test Pits	
MJH on site at 0845 hrs		
Completed installation of MW-006 to 30' bgs - No water in well at 0800 hrs		
Norm Wohlabaugh on site setting pin flags and stakes at geo-probe locations for surveyor.		
CME deconning rig and augers before proceeding to MW-005		
MW-005 moved to area between Tank 1 and Tank 5 dike area.		
Looked for storm manholes - unable to find manholes that are indicated on site maps.		
MJH left site at 1155 hrs	3.	
HEALTH & SAFETY:		
SITE VISITORS: Norr	n Wohlabaugh	
CONTRACTORS INF	ORMATION: OP-Tech and CME	
<b>EQUIPMENT:</b> geo-pro	obe	
Work Force: Op-Tech - CME - Be	- Tom Hellert eau Fletcher, Chris Stone	
<b>Inspector's Name:</b> Mic <b>Date:</b> May 28, 2009	hael Hinton	
<b>Distribution:</b> G. Sutton M. Hinto		

**Attachments:** photo's



#### DAILY FIELD REPORT

**Date:** May 11, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Clear,, T~50°F, SW breeze

**Description of Work Performed:** Remedial Investigation - MW and Test Pits

MJH on site at 0915 hrs

MW-005 water level observed at 4.2 bgs in augers - suspect water level in MW reflects water level in adjacent containment dike

20-22' 80% recovery counts 3,4,5,6 Soft silty clay

22-24' 100% recovery counts 3,4,7,8 brown silty clay, firm moist

MJH off site at 0950 hrs MJH on site at 1125 hrs

MW-005 auger bottom 31' bgs. Will install 15' screen and grout seal to prevent infiltration from adjacent dike area.

Started test pits at 1000hrs.

TP-2

0-12" very wet clay sand fill

12-24" sandy soil

2'-10' reddish brown silty clay

TP-3 along south fence line

0-12" black loam topsoil

12" greo-textile layer

12-24" crushed stone, weathered petroleum odor

2'-5' clay fill w/ crushed stone PID~180

5'-7' clay fill sample collected at ~6 bgs

7'-10' native reddish brown silty clay

TP-5 bottom of slope at Rattlesnake Creek 0-4' reworked clay and sand fill 4-5' sand fill PID~25
TP-6 along west property line 0-7' fill gravel clay sand, strong petroleum odor ~6'bgs 7-10' reddish brown silty clay
MJH left site at 1430 hrs
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert, Dennis Hoffman CME - Beau Fletcher, Chris Stone
Inspector's Name: Michael Hinton Date: May 28, 2009
Distribution: G. Sutton/file M. Hinton
Attachments: photo's



#### DAILY FIELD REPORT

**Date:** May 12, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Clear, T~50°F, SW breeze

**Description of Work Performed:** Remedial Investigation - MW and Test Pits

MJH on site at 0950 hrs

Continuing test pits

T-6 (?) found clay pipe with oil/water flowing to west

TP-7 in access road - some clay

Dug along O/W separator holding tank water and free product found in excavation

MJH left site at 1030 hrs

MJH on site at 1320 hrs

TP-10 Tank 4 dike area - fuel (chemical?) odor at 6-9' PID~1000, PID at 10' bgs >1000

TP-11 Tank 4 dike area - fuel odor @ ~6' bgs PID ~ 50

TP-12 Tank 4 dike area

0-12" fill PID ~ 6

12-24" grey clay (dike liner?)

2' - 6' reddish brown clay PID @ 4' bgs ~ 34

72" grey clay

PID at 10' bgs ~0

TP-13 looking for site sewer pulled long test pit Tank 6 and 8 dike area. Did not find pipe. Strong chemical odor @18" bgs at interface between stone layer and clay. Sample collected.

TP-14 in fill area of former Tank 8 dike area.

Checked O/W separator holding tank Top of Tank ~5.6' from top of riser Bottom of Tank ~ 15.5' from top of riser Est 10" dia tank Oil layer estimated at 1" thick remaining tank full of water.
MJH left site at 1605 hrs
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert, Dennis Hoffman, operator, laborer CME - Beau Fletcher, Chris Stone
Inspector's Name: Michael Hinton Date: May 29, 2009
Distribution: G. Sutton /file M. Hinton
Attachments: photo's



#### DAILY FIELD REPORT

**Date:** May 13, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Sunny, partly cloudy, T~52<sup>0</sup>F, light west breeze

Description of Work Performed: Remedial Investigation - MW and Test Pits

MJH on site at 0910 hrs

Sediment sample from test pit in dike for Tank 6 collected from dike drain.

Installing MW-008 south end of site.

MW-009 - Existing MW of unknown origin, removed lock water  $\sim 5'$  bgs, well located  $\sim\!50'NE$  of boring B-20

MW-008 bottom of auger hole 30' bgs,15' screen to be installed.

Op-Tech placed plastic over suspected asbestos containing material debris pile behind building.

TP-16 excavated to 6' no observed contamination in containment area for tank7/8

Collected sediment sample from MW-1 NW of building

TP-17 fill area of former tank 7 dike 0-7' fill, stone and concrete 7-13' grey hard clay		
MJH left site at 1215 hrs OP-Tech shut down job to attend DEC meeting on new contract. CMS demobilizing from site.		
HEALTH & SAFETY:		
SITE VISITORS:		
CONTRACTORS INFORMATION: OP-Tech and CME		
EQUIPMENT: geo-probe		
Work Force: Op-Tech - Tom Hellert, Dennis Hoffman, operator, laborer CME - Beau Fletcher, Chris Stone		
Inspector's Name: Michael Hinton Date: May 29, 2009		
Distribution: G. Sutton/file M. Hinton		
Attachments: photo's		



#### DAILY FIELD REPORT

**Date:** May 13, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Sunny, partly cloudy, T~52<sup>0</sup>F, light west breeze

Description of Work Performed: Remedial Investigation - MW and Test Pits

MJH on site at 0910 hrs

Sediment sample from test pit in dike for Tank 6 collected from dike drain.

Installing MW-008 south end of site.

MW-009 - Existing MW of unknown origin, removed lock water  $\sim 5'$  bgs, well located  $\sim\!50'NE$  of boring B-20

MW-008 bottom of auger hole 30' bgs,15' screen to be installed.

Op-Tech placed plastic over suspected asbestos containing material debris pile behind building.

TP-16 excavated to 6' no observed contamination in containment area for tank7/8

Collected sediment sample from MW-1 NW of building

TP-17 fill area of former tank 7 dike 0-7' fill, stone and concrete 7-13' grey hard clay		
MJH left site at 1215 hrs OP-Tech shut down job to attend DEC meeting on new contract. CMS demobilizing from site.		
HEALTH & SAFETY:		
SITE VISITORS:		
CONTRACTORS INFORMATION: OP-Tech and CME		
EQUIPMENT: geo-probe		
Work Force: Op-Tech - Tom Hellert, Dennis Hoffman, operator, laborer CME - Beau Fletcher, Chris Stone		
Inspector's Name: Michael Hinton Date: May 29, 2009		
Distribution: G. Sutton/file M. Hinton		
Attachments: photo's		



#### DAILY FIELD REPORT

**Date:** May 14, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Overcast, rain heavy at times, T~60°F, high winds

**Description of Work Performed:** Remedial Investigation - Test Pits

MJH on site at 0925 hrs

TP-19 behind building black layer at ~3.5' bgs pipe found at 9' bgs suspect site sewer

Met with Enbridge - they are a crude oil pipeline with no service to the site.

Spoke to Rick Brandt, Terminal Manager at United Refining. Former Ashland Terminal and refinery. Will look for info on pipeline service to sight. Suspects that pipeline ran along river from Ashland and entered site from hte River Rd area.

#### TP-20

0-7' fill, moist rubble, asphalt concrete, wire

7-9' red silty clay

TP-21 along south edge of loading rack, looking for suspected O/W seperator - did not find it. Gravel fill under rack area heavily contaminated with fuel. Extreme odors from excavation. Sample collected from 2-3' zone.

MJH left site at 1200 hrs MJH on site at 1315 hrs

Scaped surface in hte SE corner of parking lot area near former electrical panels. Found approx 6 x 10' concrete pad and 2 -6" dia pipelined and 1 -8" diameter pipeline. Valves on pipelines opened no fuel found.

Test pit to locate 4" clay pipe discovered in TP -6. Geo-textile fabric found at 6" bgs. Found 4" clay tile pipe and broke with back hoe. Petroleum odor, water and trace indications of free product. Collected water sample from pipe area.
MJH left site at 1520 hrs.
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech and CME
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert, Dennis Hoffman, operator, laborer
Inspector's Name: Michael Hinton Date: May 29, 2009
Distribution: G. Sutton/file M. Hinton
Attachments: photo's



#### DAILY FIELD REPORT

**Date:** May 15, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Clear sunny, T~70°F, slight SW breeze

Description of Work Performed: Remedial Investigation -Surface soil

MJH on site at 1045 hrs

No one on site

Op-Tech on site at 1115 hrs.

Collected water sample from MH-1 @1115 hrs

Collected 22 surface soil samples.

SS-1 stained soil at 10,000 gal fuel oil tank @1145 hrs

SS-2 NE Corner of Dike T1 @1155 hrs

SS-3 Along west property line 1210 hrs

SS-4 ~50' behind Bldg in low area @1210 hrs

Ss-5 Tank 1 dike south side of tank foot print @1225 hrs

SS-6 south side of Tank 7 dike @1240 hrs

SS-7 South side of tank 6 dike @1250 hrs

SS-8 east side of tank4&2 dike area @1255 hrs

SS-9 Tank 1&5 top of dike east side @1305 hrs

SS-10 along west property line @1315 hrs

SS-11 SW corner of Tank 4 dike area@1320 hrs

SS-12 west side of Tank 10 dike at waters edge @1330 hrs

SS-13 behind O/W/S, MS/MSD @1335 hrs

SS-14 SE corner of site @1345 hrs

SS-15 SE corner of Tank 11 Dike area @1350 hrs ~2' into water

SS-16 25' south of MW-7 @1400 hrs

SS-22 dup of SS-16

SS-17 5' SE of B6 @1425

SS-18 7' N of B14 @1435

SS-19 approx 30 N of MW-008

SS-20 approx 20' east of B20

Ss-21 approx 10' west of B18

MJH of site at 1535 hrs

HEALTH & SAFETY:	
SITE VISITORS:	
CONTRACTORS INFORMATION: OP-Tech	
EQUIPMENT: geo-probe	
Work Force: Op-Tech - Tom Hellert, Jason	
Inspector's Name: Michael Hinton Date: May 29, 2009	
Distribution: G. Sutton/file M. Hinton	
Attachments: photo's	



#### DAILY FIELD REPORT

**Date:** May 18, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Clear, T~50°F, west breeze

Description of Work Performed: Remedial Investigation -Surface Water & Sediment Sampling

MJH on site at 0850 hrs

Erie County/Town of Tonawanda conducting a pre-bid walk through for demolition contractors.

Collected Surface water samples:

SW-1 Tank 1/5 dike area @ 1045 hrs

SW-2 NE Tank 4 Dike Area @1100 hrs

SW-3 East side of Tank 10 dike area @1115 hrs

SW-4 west fence line discharge - 5/28/2009 - Sample mis-labeled and spiked at lab for MS/MSD due to confusion with chain of custody. Sample un-useable, MS/MSd for water samples lost due to problem. Directed T. Hellert to re-collect SW-4. Per email message from Hellert, due to rain on 5/28 SW-4 and MS/MSd samples collected on 5/29/2009.

SED-4-OF sediment sample collected from SW-4 area @1145

SW-5 O/W/S discharge - no flow no sample collected

SED-4-OF sediment sample colleected at O/W/S discharge point

MH-2 (east of O/W/S) water sample collected at 1340 hrs

Sed-5 collected from MW-2 @1410 hrs

O/W/S-1 water sample from oil/water separator @ 1355 hrs

SED-6 sediment from oil water separator east end (inlet) @1430 hrs (sheen on sample)

T4- NAPL sample collected from tank T4 (O/W/S holding tank) @1445 hrs

Sediment sampling scoop deconned with alkonox between sampling events

MP-1 mechanics pit water sample collected at 1505 hrs. No sediment available to be collected.

MJH left site at 1510 hrs.

#### **HEALTH & SAFETY:**

SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert, Sonya
Inspector's Name: Michael Hinton Date: May 29, 2009
Distribution: G. Sutton /file M. Hinton
Attachments: photo's



#### DAILY FIELD REPORT

**Date:** May 19, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Partly cloudy, cool, T~45°F, SW breeze

Description of Work Performed: Remedial Investigation -Surface Water & Sediment Sampling

MJH on site at 0845 hrs

Removing fill caps from T1 and T2, 3000 gallon USTs along the west property line

Tank T2 - no water approx 7" fuel in bottom of tank, NAPL sample collected at 0900 hrs. tank bottom at 8-8" bgs. Estimated 178 gallons of of gasoline in tank

Tank T1 western most tank along property line Sampled NAPL at 0930 hrs. Approx 8" fluid in tank. Sample phase seperates, about 4" water and 4" fuel. Estimated 217 gallons water/fuel mix in tank.

Tank T3 10,000 gal UST adjacent and under east side of bldg. Tank seeping oil to surface. Suspect water seeping into tank. Unknown amount of oil in tank. Oil level to with in 3" of surface. Unable to determine water level. NAPL sample collected at 1000 hrs.

Tank T5 estimated 1000 gallon AST adjacent to east wall of bldg, approx 54" dia and 102" long. Approx 13" fuel in tank, no water. NAPL sample collected at 0950 hrs.

Tank T4 holding tank for O/W/S. Water sample collected at 1035 hrs.

Checked MW-006 depth to water 31.1' (~27 Bottom33'

#### **HEALTH & SAFETY:**

SITE VISITORS:					
CONTRACTORS INFORMATION: OP-Tech					
EQUIPMENT: geo-probe					
Work Force: Op-Tech - Tom Hellert, two laborers					
Inspector's Name: Michael Hinton Date: May 29, 2009					
Distribution: G. Sutton/file M. Hinton					
Attachments: photo's					



#### DAILY FIELD REPORT

**Date:** May 21, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie Counry

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Clear, sunny, T~75°F, SW wind

Description of Work Performed: Remedial Investigation -Surface Water & Sediment Sampling

MJH on site at 1035 hrs

Op-Tech collected additional water samples for Test America to provide sufficient volume for requested analysis.

Well development crew on site @1200 hrs

MW-002 Existing 2" well

Riser stick up 3.08'

Depth to water 5.5' from riser

Depth to soft bottom 12.8.

Installed depth 23' bgs

Fabricated well jet tool with compressor and air line

After development depth to bottom 13' bgs. Not sufficient. Will try tomorrow with a larger compressor to shoot more air into sediment.

Requested Op-Tech to cut riser down so that well casing is more reachable.

MW-004 Existing 4" dia well

Riser 2.9'

Depth to water 5.4' (2.5' bgs)

Bottom 21.1 (18.2' bgs)

Installed depth 21' bgs estimated 2.8' sediment in well.

Used air to remove sediment, after air knifing WL at 12.92 ' and bottom at 22'

MW-001 Existing 4" well
Riser 2.8' bgs
Depth to Water 10.05' (8.3 bgs)
Bottom 16.1' (13.2 bgs)
Installed depth 20' bgs
Started air knifing at 1410 hrs
MW-03 existing 2" diameter
Riser 2.9'
Depth to Water 11.2 (8.3 bgs)
Bottom 16.1 (13.2 bgs)
Installed depth 23'
Air knifing not very successful in removing sediment Compressor lacks sufficient power to jet well Op-Tech to have larger compressor and Vac truck on site tomorrow to develop wells
MJH left site at 1425 hrs
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech
EQUIPMENT: geo-probe
Work Force: Op-Tech - Tom Hellert, two laborers
Inspector's Name: Michael Hinton Date: May 29, 2009
Distribution: G. Sutton /file M. Hinton
Attachments: photo's



#### DAILY FIELD REPORT

**Date:** May 22, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Partly cloudy, T~65°F, SW wind

Description of Work Performed: Remedial Investigation -Surface Water & Sediment Sampling

MJH on site at 1025 hrs

MW-022 were able to get down to 18' appears like a hard bottom. Well integrity questioned

MW-004 vacuumed sediment to 22.5' bgs added water and surged with custom surge block. Added water vac'd from well, pumped dry. Gaged well 21.7' hard bottom

MW-001, depth to water 11.2' started vacuuing at 1125 hrs, flushed about 40 gallons water into well, surged well. Vacced water from well, well dry. Final depth 22' hard bottom

MW-003 depth to water 11.2', bottom 17.2, started vacing at 1315 hrs, flushed well with 25 gallons water, surged well with custom surge block. Vac'd out water w/ numerous small stones and bentonite clay coming up with water. Repeated process. More bentonite showed up. Well integrity questioned Will not use well.

Advised Op\_tech to bring drill rig back onto site to replace MW-002 and remove casing and grount existing MW-002 and MW-003 wells. MW-003 will not be replaced.

Gaged Wells

MW-006

Water level 30.31

Bottom 33.0

MW-005

Water level 6.21'

Bottom 32.55

MW-007

Water level 23.72'

bottom 32.43'

MW-005 Developing with vac truck. Requested Op-tech to vac out well, allow well to recover for approx 20 minutes and vac out dry again						
MJH left site at 1500 hrs						
HEALTH & SAFETY:						
SITE VISITORS:						
CONTRACTORS INFORMATION: OP-Tech						
EQUIPMENT: Vac Truck						
Work Force: Op-Tech - Tom Hellert, two laborers						
Inspector's Name: Michael Hinton Date: May 29, 2009						
Distribution: G. Sutton /file M. Hinton						
Attachments: photo's						



#### DAILY FIELD REPORT

**Date:** May 26, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Overcast, T~61°F, east breeze

Description of Work Performed: Remedial Investigation -Well development

MJH on site at 1055 hrs

MW-008

Water level 32.1'

Bottom 32.5'

Stick up 2.6'

Developed MW-008 with bailer removed ~0.25 gallons very turbid

MW-009 Existing 2" well

Water level 4.9' (2' bgs)

Bottom 22.5' (19.6' bgs)

Stick up 2.9'

Approx 17.6' of water column Estimated well volume 2.8 gallons. 10 gallon development ~28 gallons. Hand bailing well, first few gallons water is clear. Well dry at 1235 hrs after approx 12.5 gallons removed.

MW-004 water level 6.25'

MW-001 Water level - 11.75'

MW-006 water level - 29.12' Not developed yet

MW-005 pressure built up in well, violent release when cap removed. Water level 15.78'

MW-007 not developed yet Water level - 20.97

MW-007 approx 1.84 gallons per well volume. 18.5 gallons for 10 volume development. Hand bailing well. Water clear at start then turbid at about 2 gallons

Vac truck drummed 3 drums of development water with sediment. Staged at back of site near O/W separator.

Requested Op-Tech to continue well development on 5/27

MJH left site at 1505 hrs
HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech
EQUIPMENT: Vac Truck
Work Force: Op-Tech - Tom Hellert, Dennis Hoffman
Inspector's Name: Michael Hinton Date: May 29, 2009
Distribution: G. Sutton /file M. Hinton
Attachments:



#### DAILY FIELD REPORT

**Date:** June 2, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Partly cloudy, cool, T~60°F, SW breeze

**Description of Work Performed:** Remedial Investigation -Well-002R

MJH on site at 1200 hrs

Installing MW-002R approx 10' south of original MW-002 elevated PID readings in upper levels ~600 on the PID

12-14' 80% recovery counts 5,8,11,14 PID at 12-13' bgs ~85

Brown silty clay with sand, dry, very firm

14-16' 75% recovery counts 9,8,9,11

Brown silty clay with sand, firm some moisture

16-18' 75% recovery counts 10,13,13,18

Brown silty clay with sand plastic

20-22' 100% recovery counts 10,12,16,17

Brown silty clay firm with slight moisture

26-28' 100% recovery counts 8,10,15,16

Brown silty clay moist, firm

28-30' 75% recovery counts 3,5,9,5

brown silty clay moist at top, dry at bottom

30-32' counts 10,12,13,15

Moist silty sandy clay

Built well at 30' bgs with 15' screen

Gaged wells

MW-005 - WL @ 6.92'

MW-006 - WL@ 29.61'

MW-004 - WL @ 6.57' (existing)

MW-001 - WL @ 11.61' (existing)

MW-007 - WL @ 25.11'

MJH off site at 1425 hrs

HEALTH & SAFETY:
SITE VISITORS:
CONTRACTORS INFORMATION: OP-Tech
EQUIPMENT: Drill Rig
Work Force: Op-Tech - Tom Hellert, CME - Beau Fletcher, Chris Stone
Inspector's Name: Michael Hinton Date: June 4, 2009
Distribution: G. Sutton /file M. Hinton
Attachments:



DAILY FIELD REPORT								
Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	June 4, 2009 Riverview Industrial Center 915225 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A							
Weather Conditions:	Partly cloudy, T~60°F, SW breeze							
Description of Work Peri	formed: Remedial Investigation -Well-002R							
MJH, GPS and DKK on	site at 1030 hrs							
Decommissioning MW-0	003, building pad and installing protective casing for MW-002R							
DKK on site reviewed lo remedial action.	ocation of USTs on site for inclusion in Regional Stimulus package for							
Gaged wells - MW-008 - WL @ 31.8' MW-009 - WL @ 6.9' MW-002R - WL @ 2.0'	MW-008 - WL @ 31.8'							
HEALTH & SAFETY:								
SITE VISITORS:								
CONTRACTORS INF	ORMATION: OP-Tech							
<b>EQUIPMENT:</b> Drill Ri	g							
Work Force: Op-Tech -	Tom Hellert, CME - driller, Chris Stone							
<b>Inspector's Name:</b> Michael June 4, 2009	hael Hinton							
<b>Distribution:</b> G. Sutton M. Hinton								

**Attachments:** 



#### DAILY FIELD REPORT

**Date:** June 12, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton
Contractor: Op-Tech

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Overcast, cool, , T~60°F, very light breeze

**Description of Work Performed:** Remedial Investigation -GW Sampling

MJHon site at 0930 hrs

Op-tech sampling groundwater wells on site.

MW-007 sample collected

MW-008 2" dia - only about one foot of water in well. Did not purge well due to low well volume. Collected metals first to keep turbidity down. Collected VOCs. Only able to collect approx 1 liter for SVOCs. Pest, and PCBs. Advised Hellert to come back later to allow well to recover and to collect additional volume.

**MW-009** 2" dia water level 5.9', bottom 22.4' 2.7 gallons per volume, three volumes 8.1 gallons Started purge at 1030 hrs.

<u>Volume</u>	<u>Temp</u>	<u>pH</u>	<u>Turbidity</u>	<u>Conductivity</u>	<u>Notes</u>
0	12.9	7.81	24	1.05	Clear
2.7	10.8	7.57	>999	1.02	Muddy
5.4	11.2	7.53	>999	1.02	Muddy

Dry at approx 6.5 gallons

Purge ended at 1110 hrs with dry well

**MW-006** 2" dia water level 25.3', bottom 32.9' 1.23 gallons per volume, three volumes 3.69 gallons Started purge at 1130 hrs.

<u>Volume</u>	<u>Temp</u>	pН	<b>Turbidity</b>	Conductivity	<u>D.O</u> .	<u>Notes</u>
0	12.5	6.15	30	4.40	12.5	Clear
1.25	12.5	6.61	>999	4.37	13.08	Muddy
2.50	12.7	6.9	>999	4.47	14.19	Muddy
3.75	12.7	6.93	>999	4.4	15.88	Muddy

Purge complete at 1215 hrs

**MW-005** 2" dia water level 7.00', bottom 32.6' 4.17 gallons per volume, three volumes 12.5 gallons Started purge at 1130 hrs.

<u>Volume</u>	<u>Temp</u>	<u>pH</u>	<u>Turbidity</u>	<u>Conductivity</u>	<u>D.O</u> .	<u>Notes</u>
0	16.5	7.5	145	2.27	13.95	Clear
4.2	13.9	7.0	375	2.31	14.6	Brown/murky
8.4	13.4	6.93	>999	2.56	16.26	Muddy
12.6	14.9	6.83	>999	2.72	16.06	Muddy
14.7	14.7	6.84	>999	2.76	16.09	Muddy

**MW-002R** 2" dia water level 1.62 bgs', bottom 29.8' 4.59 gallons per volume, three volumes 13.78 gallons

Started purge at 1425 hrs.

Purge complete at 1350 hrs

<u>Volume</u>	<u>Temp</u>	pН	<u>Turbidity</u>	<u>Conductivity</u>	<u>D.O</u> .	<u>Notes</u>
0	19.0	6.77	152	3.64	11.65	Clear
4.6	13.6	7.27	>999	3.67	14.3	Muddy
9.2	13.8	6.96	>999	3.82	13.32	Muddy
13.8	13.0	7.0	>999	3.8	13.34	Muddy

Purge complete at 1450 hrs

**MW-004** 4 " dia water level 6.9', bottom 21.8' 9.73 gallons per volume, three volumes 29.25 gallons Started purge at 1515 hrs.

<u>Volume</u>	<u>Temp</u>	<u>pH</u>	<b>Turbidity</b>	Conductivity	<u>D.O</u> .	<u>Notes</u>
0	13.6	7.21	110	1.06	12.76	Clear
9.75	11.3	6.63	>999	Conductivity 1.06 0.98 1.02 0.94	14.25	Muddy
19.5	11.1	6.67	>999	1.02	13.82	Muddy
25	13.2	6.92	>999	0.94	12.51	Dry at 25 gallon

Purge complete at 15450 hrs

**MW-001** 4 " dia water level 11.69', bottom 22.22' 6.87 gallons per volume, three volumes 20.6 gallons Started purge at 1520 hrs.

<u>Volume</u>	<u>Temp</u>	<u>pH</u>	<u>Turbidity</u>	<u>Conductivity</u>	<u>D.O</u> .	<u>Notes</u>
0	12.7	6.69	135	1.01	13.05	Clear
6.9	10.9	6.67	420	1.01	14.29	Murky
13.8	11.2	6.75	>999	1.05	14.05	Muddy
20.7	11.4	6.80	>999	1.04	14.09	Muddy

Purge complete at 15450 hrs

Due to the turbid nature of the groundwater water after purging. Directed Op-Tech to not sample wells today. Allow gw to recover and the sediment to settle before wells are sampled. Op-Tech decided to sample wells on Saturday June 13, 2009. Advised Op-Tech that we will not pay overtime premium for the Saturday work.

MJH left site at 1550 hrs

Email from T. Hellert - sampling completed on 6/13/2009. Volume problems in MW-008.

### **HEALTH & SAFETY:**

**SITE VISITORS:** Norm Whollabaugh

CONTRACTORS INFORMATION: OP-Tech
EQUIPMENT:
Work Force: Op-Tech - Tom Hellert, and technian
Inspector's Name: Michael Hinton Date: June 15, 2009
Distribution: G. Sutton/file M. Hinton
Attachments: photo's



	DAILY FIELD REPORT	
Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	July 21, 2009 Riverview Industrial Center 915225 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A	
Weather Conditions:	Overcast, T~70°F, very light SE breeze, threat of rain	
Description of Work Per	formed: Remedial Investigation -Spill 0904554 Fire response	
MJH on site at 1105 hrs		
Op-Tech prime contract LiRo - Town Engineer	for on site demolition through the Town of Tonawanda on project	
Per Linda Grimmer fire still smouldering, rubber gasket around internal floating roof still on fire. Intend to let the fire run its course. Fire dept left hose for water spray on gasket area.		
Concern with potential additional contamination from fire fighting water and foam runoff and sludge from tank. All water and foam contained in tank ~2" water in bottom of tank. No sludge in tank. Tank is very clean. Op-Tech to leave a lip at the bottom to hold the firefighting water and will pump out and dispose of water at a later date.		
Dike water was pumped into adjacent dike are prior to work on the tank. Very little water remains in the dike. No evidence of a sheen seen on dike water.		
No additional contamination observed, no additional sampling required.		
Refer site photo's		
MJH left site at 1135 hrs		
Inspector's Name: Mid Date:July 21, 2009	chael Hinton	
<b>Distribution:</b> G. Sutton M. Hinto		



#### DAILY FIELD REPORT

**Date:** August 18, 2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Partly cloudyt, T~80°F, very light SW wind

**Description of Work Performed:** Remedial Investigation

MJH on site at 1105 hrs

Op-Tech - Tom Hellert, Dennis Hoffman

Op-Tech on site to straighten out boring locations and survey map

Geo-probe locations in back portion of site appear to mis-numbered.

MJH left site at 1305 hrs

**Inspector's Name:** Michael Hinton

**Date:** August 18, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

**Date:** August 25, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

**Project Manager:** Michael Hinton **Project Engineer:** Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Partly cloudy, T~75°F, very light SW breeze

#### **Description of Work Performed:** Remedial Investigation

MJH on site at 1000 hrs

Job Progress meeting with Town of Tonawanda regarding demolition contract

Op-Tech - Linda Grimmer & project manager

Town of Tonawanda - engineer and one other person

Erie County - Paul Kranz, Ken Swanacamp

Advised group about status of DEC investigation and plans for spill remedial work and possible schedule. Work to start after 9/1/2009, Linda Grimmer to provide schedule.

Walked demolition project as part of final inspection for punch list.

Observed suspected drum area. Op-Tech to be on-site 8/26 to look for drums.

MJH left site at 1110 hrs

**Inspector's Name:** Michael Hinton

**Date:** August 31, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

Date:	August 26,	2009

**Site Name:** Riverview Industrial Center

Site Number: 915225

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Overcast,  $T \sim 70^{\circ}$ F, light S breeze, light to steady rain

#### **Description of Work Performed:** Remedial Investigation

MJH on site at 0915 hrs

Op-Tech - Tom Hellert, Dennis Hofman and operator

Op-Tech excavating test pits in area near Tank 4 where drums were observed.

Found two drums that were full of concrete, suspect drums were used as pipe supports during the facility operational days.

Test Pit T4-T3 broke into pipe bedding for site sewer. Pit filled with water and oil product. Strong fuel oil/gasoline odor. Directed Op-Tech to bring frac tank on site and pump water and oil into tank for disposal. After test pit is pumped out, scrape sides with backhoe bucket and place soil with other contaminated soil for future disposal.

Sediment sample collected from dike area of former T10 tank. Oily sheen on water as excavator collected sample.

MJH left site at 1110 hrs

**Inspector's Name:** Michael Hinton

**Date:** August 31, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

Date:	August 27, 2009	
Site Name:	Riverview Industrial Center	
Site Number:	915225/SN 0902367	
<b>Location:</b>	5335 River Road, Town of Tonawanda, Erie Counry	
Project Manager:	Michael Hinton	
Project Engineer:	Michael Hinton	
Contractor:	Op-Tech	
Job Phone:	N/A	
<b>Weather Conditions:</b>	Overcast, T~70°F, light S breeze, light to steady rain	
Description of Work Per	formed: Remedial Investigation	
MJH on site at 1200 hrs Op-Tech - Dennis Hoffman		
Op-Tech pumping water from T4-T3 into frac tank. Pumping began ~1140 hrs. Pumped down approx 6". Observed water in adjacent MH, no apparent effect on water in MH. Advised Dennis to continue.		
MJH left site at 1210 hrs		
Telcon with Linda Grimmer at Op-Tech, Dennis Hoffman reports that pit is pumping done with no problems.		
Inspector's Name: Mic Date: August 31, 2009	hael Hinton	

**Distribution:** G. Sutton /file

**Attachments:** 

M. Hinton\_\_\_\_



#### DAILY FIELD REPORT

Date:	August 31, 2009
Site Name:	Riverview Industrial Center
Site Number:	915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton
Contractor: On Tech

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Partly sunny, T~70°F, light S breeze

Description of Work Performed: Remedial Investigation

MJH on site at 1300 hrs

Op-Tech - Linda Grimmer, Gary Britt

SN - 0902367 Met with Op-Tech to review project with project manager Gary Britt. Walked site and discuseed both Phase 1 and Phase 2 work.

Test Pit T4-T3 backfilled. Contaminated soil and drums covered with plastic. ~4000 gallons of water pumped into frac tank. Advised Op-Tech to run through carbon filters and discharge after sample for TCL VOCs and SVOCs along with TAL metals. Water can be discharged into secondary containment pond area after carbon filter and sample results.

MJH left site at 1350 hrs

**Inspector's Name:** Michael Hinton

**Date:** August 31, 2009

**Distribution:** G. Sutton\_\_\_\_\_/file

M. Hinton



#### DAILY FIELD REPORT

Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	September 3, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A
<b>Weather Conditions:</b>	Clear and sunny, T~75°F, light SW breeze, nice day
Description of Work Per	formed: Spill remediation
MJH on site at 0900 hrs	
Large underground squadeep. Estimated volum the rest water. Tank conremain.	st pits to obtain waste characterization samples for disposal. Excavated several ding area and former bldg area.  The steel tank found in building area. Estimated size is 25' long X 20' wide X 8' to 29900 gallons. Tank is separated in 6 compartments with approx 6" of oil and attents being pumped in baker tank. All oil to be removed some water to the samples - advised Op-Tech it is OK to pump contents through carbon arent dike pond.
Inspector's Name: Mic Date: August 31, 2009	chael Hinton
<b>Distribution:</b> G. Sutton M. Hinto	



#### DAILY FIELD REPORT

Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	September 9, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A	
Weather Conditions:	Partly Cloudy, T~75°F, SW wind, nice day	
Description of Work Performed: Spill Remediation		
MJH on site at 1030 hrs		
No one on site.		
Tank 3 was removed on 9/8/09. Tank 3 was reported to be a 10,000 UST fuel oil tank, after tank removal tank size determined to be 2,000 gal. Tank cleaned and cut up for scrap. Side wall and floor samples obtained to document residual contamination. Excavated soil onsite and covered with plastic.		
Two Baker tanks on site East tank - approx half full, unknown amount of visible oil/water West tank - approx 1' in bottom of tank water with oil scum visible		
Tank 6uncovered and appears to be stable. Water and oil was pumped into east Baker tank.		
MJH left site at 1100 hrs.		
Inspector's Name: Mic Date: September 9, 200		
<b>Distribution:</b> G. Suttor		



#### DAILY FIELD REPORT

Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	September 17, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A	
<b>Weather Conditions:</b>	Partly cloudy, T~65°F, SW Breeze	
<b>Description of Work Per</b>	formed: Spill Remediation	
MJH on site at 1150 hrs		
Op-Tech - Gary Britt, v	vac truck and operator, laborer	
Tank T7 removed - estimated 1000gal capacity Vac'ing up spilled oil from T7 in excavation KN Glaser on site.		
MLH off site at 1210 hrs		
MJH on site at 1325 hrs Op-Tech continuing to excavate around T6 tanks. Soil at edge of excavation looks good.		
Authorized overtime to button up the T6 and T7 work.		
MJH left site at 1345 hrs		
<b>Inspector's Name:</b> Mic <b>Date:</b> September 22, 20		
<b>Distribution:</b> G. Sutton M. Hinto		
Attachments:		



#### DAILY FIELD REPORT

**Date:** September 18, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie Counry

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** Overcast, T~60°F, SW wind

**Description of Work Performed:** Spill Remediation

MJH on site at 0940 hrs

Op-Tech - Gary Britt, excavator and operator, laborer, vac truck

Op-Tech removing T6 tanks. Vacuming out oil from excavation

MJH off site at 1005 hrs

MJH on site at 1215 hrs

Op-Tech staff off site for lunch, back on site at 1300 hrs

Tank T6:

П		
Man hole present in end of each tank. Est. Volume per tank 3430 gallons. Total capacity of T6 ~20581 gallons.		
Puddle of oil found below tank, vacuming up into frac tank Authorized overtime for Op-Tech to complete tank removal tofay and remove oil from excavation.		
Removed tanks placed on plastic. Initial cleaning wit power wash while tank still in hole.		
Two tank loads of oil/water from frac tanks trucked out for disposal at Diarsenal		
Baker Tanks - SV27768L ~ ½ full, CFA116L ~less than ½ full		
Op-Tech has removed 4 of the 6 T6 tanks		
MJH left site at 1355 hrs		
Inspector's Name: Michael Hinton Date: September 22, 2009		
Distribution: G. Sutton /file M. Hinton		
Attachments: photo's		



#### DAILY FIELD REPORT

Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	September 21, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A
<b>Weather Conditions:</b>	Partly sunny, T~70°F, SW wind
<b>Description of Work Per</b>	formed: Spill Remediation
MJH on site at 1150 hrs	
All T6 tanks have been a floor. Excavation approximately Excavation being backfidust. Requested Op-Teo.	illed with stone/gravel from site. Backfill operation generating unacceptable ch operator be more carefull when placing backfill to reduce dust.  f clean excavated soil for back fill. Requested that soil be screened with PID l can be used for backfill
Inspector's Name: Mic Date: September 22, 20	
<b>Distribution:</b> G. Suttor M. Hinto	



#### DAILY FIELD REPORT

Date:	October 1, 2009	
Site Name:	Riverview Industrial Center	
Site Number:	915225/SN 0902367	
<b>Location:</b>	5335 River Road, Town of Tonawanda, Erie Counry	
Project Manager:	Michael Hinton	
Project Engineer:	Michael Hinton	
Contractor:	Op-Tech	
Job Phone:	N/A	
<b>Weather Conditions:</b>	Overcast, T~55°F, NW wind	
<b>Description of Work Per</b>	formed: Spill Remediation	
MJH on site at 1230 hrs		
Op-Tech - operator Dale, laborer Ben		
Op-Tech excavating and hauling off contaminated soil from loading rack area.		
East end of excavation looks good ~3' deep		
Dirt and stone from haul road accumulating on River Road. Requested Op-Tech get broom on site to keep road clear.		
MJH left site at 1300 hrs	S	

Inspector's Name: Michael Hinton

**Distribution:** G. Sutton\_\_\_\_\_/file M. Hinton\_\_\_\_\_

Date: October 2, 2009



#### DAILY FIELD REPORT

Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	October 2, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A	
Weather Conditions:	Rain T~55°F, SW wind	
Description of Work Per	formed: Spill Remediation	
MJH on site at 1145 hrs		
Op-Tech - operator Dale, laborer		
Op-Tech excavating and	d hauling off contaminated soil from loading rack area.	
North end of excavation looks good ~2' deep		
Encountered pocket of oil from former pipe trench under truck rack. Oil/water being pumped to frac tank.		
River Road shoulder an	d entrance to site swept clean. Looks good	
MJH left site at 1200 hrs		
Inspector's Name: Mic Date: October 2, 2009	chael Hinton	
<b>Distribution:</b> G. Sutton M. Hinto		



#### DAILY FIELD REPORT

Date:	October 6, 2009
Site Name:	Riverview Industrial Center
Site Number:	915225/SN 0902367
<b>Location:</b>	5335 River Road, Town of Tonawanda, Erie Counry
Project Manager:	Michael Hinton
Project Engineer:	Michael Hinton
Contractor:	Op-Tech
Job Phone:	N/A
Weather Conditions:	Partyl cloudy T~60°F, SW wind
Description of Work Per	formed: Spill Remediation
MJH on site at 1310 hrs	
Op-Tech - operator Dek	e, laborer
Op-Tech excavating and	I hauling off contaminated soil from loading rack area.
	berm. Black sandy layer, very oily with strong odor oad after last ruck in cycle left site at 1315 hrs
Development office. Di Expect remedial work to	atton, K. Swanekamp, Jim Jones and Jim Tonawanda Community iscussed site progress. Advised of work being done under spill contract. To be done by Nov 1. RI report expected by 12/1. Erie County needs to be in in building area is complete.
Found two more 1000 g little liquid in tanks.	al USTs in NW corner of truck loading rack excavation area. Removed, very
Op-Tech continuing to e	excavate in truck rack area.
Took Photos	
MJH left site at 1430 hrs	S
Inspector's Name: Mic Date: October 15, 2009	hael Hinton
<b>Distribution:</b> G. Sutton M. Hinto	
Attachments: photo's	
<u> </u>	



#### DAILY FIELD REPORT

October 7, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A			
Very high SW wind gusts to 40 mph, overcast, rain T~50°F,			
rmed: Spill Remediation			
avator destroyed MW-2R			
Op-Tech - operator Deke, laborer Op-Tech excavating and hauling off contaminated soil from loading rack area.			
Excavating along dike 1 berm. Black sandy layer, very oily with strong odor River Rd has mud clods on it, requested cleaning			
Continuing to excavate in Truck Rack Area			
perm needs more work to remove oily sand layer.			
ael Hinton			
<u>/file</u>			



#### DAILY FIELD REPORT

Date: October 8 & 13, 2009
Site Name: Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie Counry

Project Manager: Michael Hinton
Project Engineer: Michael Hinton
Contractors
On Task

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** 10/8 - T~55<sup>0</sup>F, mostly cloudy w breeze

10/13 - T~50°F, mostly cloudy west wind

#### **Description of Work Performed:** Spill Remediation

10/08/2009

MJH on site at 1120 hrs

K. Glaser on site

Op-Tech Gary Brit, Derke, laborer

Additional excavation of sand lens south of dike 1 berm needed. Test pits in Dike 1 area indicated limited area. Directed Op-Tech to excavate in Dike 1 area.

MJH left site at 1140 hrs

10/13/2009

MJH on site at 1225 hrs Op-Tech - Deke and laborer

Op-Tech excavating in former building area

Op-tech collected documentation samples of truck rake excavation area on 10/9/2009. Requested 10 day turn around.

MJH left site at 1245 hrs

**Inspector's Name:** Michael Hinton

**Date:** October 15, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

**Date:** October 16, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** T~45°F, mostly cloudy west wind

**Description of Work Performed:** Spill Remediation

MJH on site at 1000 hrs with Terry Mucha

K. Glaser on site

Op-Tech removing tankns 1 & 2, tanks out of ground, hole cleanup required Tanks are opened and being cleaned

Former truck loading are being backfilled with recycled concrete

MJH left site at 1120 hrs

**Inspector's Name:** Michael Hinton

Date: November 6, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

**Date:** October 16, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** T~45°F, mostly cloudy west wind

**Description of Work Performed:** Spill Remediation

MJH on site at 1000 hrs with Terry Mucha

K. Glaser on site

Op-Tech removing tankns 1 & 2, tanks out of ground, hole cleanup required Tanks are opened and being cleaned

Former truck loading are being backfilled with recycled concrete

MJH left site at 1120 hrs

**Inspector's Name:** Michael Hinton

Date: November 6, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

	DAILT FIELD REPORT
Date: Site Name: Site Number: Location: Project Manager: Project Engineer: Contractor: Job Phone:	November 2, 2009 Riverview Industrial Center 915225/SN 0902367 5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton Michael Hinton Op-Tech N/A
Weather Conditions:	T~40°F, clear, SW windwest wind
Description of Work Per	formed: Spill Remediation
MJH on site at 1035hrs	
Op-Tech - operator and	two asbestos technicians
Op-Tech continuing to pipe west from former r	remove asbestos containing transite pipe. Directed Op-Tech to chase 6' transite man hole
Empire Geo technician	on site monitoring asbestos work
Direstred Op-Tech to co contamination in soil ar	ollect samples from soil around pipe at pond berm. No evidence of visual ound pipe.
MJH left site at 1130 hr	s
-	at 0930 hrs, asbestos work complete removed 6" transite pipe to west of former ll pipe with product (oil) flowing from it. Directed Op-Tech to chase pipe.
Telcon with Gary Brit a gallons in pipe.	at 1315 hrs will have vac truck on site on 11/4 to vac out pipe, estimate 1200
Inspector's Name: Mic Date: November 6, 200	
<b>Distribution:</b> G. Sutton M. Hinto	



#### DAILY FIELD REPORT

Date:	November 6, 2009					
Site Name:	Riverview Industrial Center					
Site Number:	915225/SN 0902367					
<b>Location:</b>	, , , , , , , , , , , , , , , , , , ,					
<b>Project Manager:</b>	Ianager: Michael Hinton					
<b>Project Engineer:</b>	Michael Hinton					
<b>Contractor:</b>	Op-Tech					
Job Phone:	N/A					
<b>Weather Conditions:</b>	T~35°F, mostly cloudy, light west breeze					
<b>Description of Work Per</b>	formed: Spill Remediation					
MJH on site at 1000 hrs						
Op-Tech - excavator an	d operator, laborer, off road truck and driver, bull dozer					
Op-Tech excavating Oil Water Separator. Excavation looks good, no evidence of contamination in hole. Hauling excavated soil to stock pile with off-road truck, dozer grading spoil pile.						
Site very muddy due to recent heavy rains.						
Advised K. Glaser to have Op-Tech back blade the site with a dozer to cleanup the excavation areas after work is done. Expect drying conditions this week end.						
Op-Tech chased suspected former Pipe line east to property line. Pipe appeared to go onto adjacent property. Cut off pipe and plugged.						
Mjh left site at 1030 hrs						
Inspector's Name: Mic Date: November 6, 200						
<b>Distribution:</b> G. Sutton M. Hinto						



#### DAILY FIELD REPORT

Date:	November	12, 2009

**Site Name:** Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

**Project Manager:** Michael Hinton **Project Engineer:** Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** T~45°F, clear, south breeze

**Description of Work Performed:** Spill Remediation

MJH on site at 1120 hrs

Op-Tech: 2 operators, laborer

Hauling out contaminated soil stockpiled from O/W/S, T4 and asbestos pipe removal.

Running 10 trucks. Expect to be complete by 11/16

General remedial work is complete, site dress-up to be performed.

Contaminated concrete blocks to be broken up week of 11/16

O/W/S and T4 area looks good. Some standing water

Mjh left site at 1140 hrs

**Inspector's Name:** Michael Hinton

Date: November 6, 2009

**Distribution:** G. Sutton /file

M. Hinton



#### DAILY FIELD REPORT

Date: November 18 & 20, 2009 Site Name: Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** 11/20/2009 - T~45°F, overcast, west wind

#### **Description of Work Performed:** Spill Remediation

November 18, 2009

MJH on site at 1230 hrs

Op-Tech excavating remnants of foundations fro Town of Tonawanda discovered additional contamination along front of of former bldg and an abandoned pipe full of oily water in hte SW corner. Soil along front of building sampled during RI phase no exceedance of Commercial SCOs detected. Will leave soil along front of building, requested Op-Tech collect sample for VOC's, SVOCs and TAL metals. Soil in SW corner of bldg associated with pipe to be excavated. Op-Tech to complete Town work before addressing contaminated areas.

MJH left site at 1315 hrs

November 20, 2009

MJH left site at 1325 hrs

Op-Tech removing contaminated soil in former tank cradle area. Very strong petroleum odor in area of excavation. Excavated area approx 60x60' an 4' deep. Excavtion should be complete by end of day. Direct loading contaminated soil into trucks for disposal at Chaffee Landfill.

Work on oily pipe in SW corner of former bldg to start on 11/23/2009

Foundation work for Town of Tonwanda complete. Short piece of foundation remains over oil pipe area to be removed during spill cleanup.

Op-Tech sweeping River Road and access to excavation to prevent soil from being dragged onto road. MJH left site at 1350 hrs

**Inspector's Name:** Michael Hinton

Date: November 20, 2009

**Distribution:** G. Sutton /file

M. Hinton



### DAILY FIELD REPORT

Date:	December 22, 2009
Site Name:	Riverview Industrial Center
Site Number:	915225/SN 0902367
<b>Location:</b>	5335 River Road, Town of Tonawanda, Erie Counry
<b>Project Manager:</b>	Michael Hinton
Project Engineer:	Michael Hinton
Contractor:	Op-Tech
Job Phone:	N/A
Weather Conditions:	T~25°F, partly cloudy, light SW breeze
Description of Work Per	formed: Spill Remediation
MJH on site at 1400 hrs	
K. Glaser on site	
G. Brit and Todd	Op-Tech
Final Inspection	
	complete. Op-Tech running bulldozer to grade disturbed areas.
-	Op-Tech place a load of stone/recycled concrete in settled area of access road.
General area looked goo	od. No further action needed.
O T 1.	
	naining section of asbestos pipe from in front of former building (~150).
	ncounter black soil that was found during investigation and remedial work,
<u>-</u>	this material back in excavation as sampling determined that the soil did not
	O's. If gross contamination is found thay are to segregate the soil and contact
us.	
MJH left site at 1450 hr	
Wish left site at 1430 iii	o e e e e e e e e e e e e e e e e e e e
Inspector's Name: Mic	chael Hinton
Date: December 23, 20	
<b>Distribution:</b> G. Sutton	n /file
M. Hinto	
	<u>""</u>
Attachments:	



#### DAILY FIELD REPORT

**Date:** March 30, 2010

**Site Name:** Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

**Project Manager:** Michael Hinton **Project Engineer:** Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** T~45°F, sunny, light S breeze

**Description of Work Performed:** Spill Remediation

MJH on site at 1145 hrs

Inspected CO Steel west property line and took photo's for pipe removal activity.

MJH left site at 1205 hrs

**Inspector's Name:** Michael Hinton

**Date:** March 31, 2010

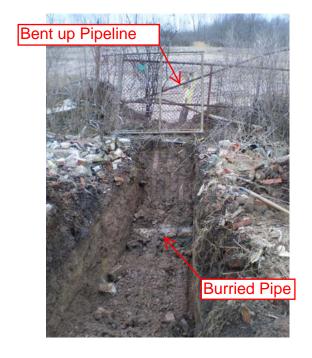
**Distribution:** G. Sutton /file

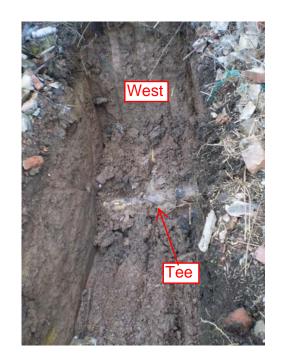
M. Hinton\_\_\_\_



#### DAILY FIELD REPORT

Date:	April 4, 2010
Site Name:	Riverview Industrial Center
Site Number:	915225/SN 0902367
Location:	5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton
Project Manager:	Michael Hinton
Project Engineer: Contractor:	Op-Tech
Job Phone:	N/A
Weather Conditions:	T~55°F, overcast then sunny, light SW breeze
Description of Work Po	erformed: Spill Remediation
MJH on site at 0850 h	rs
Op-Tech - Todd Harri	s and Tom w/ John Deere 200C
Bob Downie - Gerdau manager.	Ameristeel property owner representative w/ Rick Rothfuss Buffalo area
Traced pipe with line	locater and excavated test pits to determine if contamination is present
	flange approx 8' east of fence line. Line runs north to and under River Road. In the north side of River Road down the bank and is back underground in Park ketch.
Test pits excavated in	several areas along pipe no evidence of petroleum contamination.
Suspect gasoline prese	ent in pipe. Slight odor of gasoline at tee/flange area.
Op-Tech to open flang flange.	ge and evacuate gasoline if present. Will be on site at 0730 on April 6 to remove
MJH left site at 1200 h	nrs
Inspector's Name: M Date: April 05, 2010	ichael Hinton
<b>Distribution:</b> G. Sutto M. Hin	
Attachments: Photo's	3





040510-01 Pipe Investigation.JPG

040510-02 Pipeline Tee.JPG





040510-03 Line Trace.JPG Riverview Industrial Center

040510-04 South.JPG Page 1





040510-05 Capped Tee.JPG

040510-06 Cap.JPG





040510-07 Trace North.JPG Riverview Industrial Center

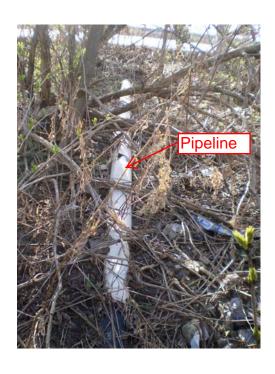
08 Abandoned Pipelines North of Page 2





09 Abandoned Pipelines North of

10 Abandoned Pipelines North of



Pipeline

40510-11 Pipeline North of RR.JP( Riverview Industrial Center

0510-12 Pipeline at Power Pole.JF Page 3



### DAILY FIELD REPORT

Date: Site Name:	April 14, 2010 Riverview Industrial Center
Site Number:	915225/SN 0902367
Location: Project Manager:	5335 River Road, Town of Tonawanda, Erie Counry Michael Hinton
Project Engineer:	Michael Hinton
Contractor:	Op-Tech
Job Phone:	N/A
Weather Conditions:	T~50°F, sunny, high wispy clouds, light W breeze
Description of Work Perf	formed: Spill Remediation
MJH on site at 0940 hrs	
Op-Tech on site at 0830	hrs- Todd Harris Sr excavator operator
	Mike Vac truck operator
	Todd Harris Jr - laborer
Equipment - Kamatsu 16	60, Vac truck license plate 40602 PA, Box van license plate 99163 JR
called Rick Rothfuss (71	16)208-4848 advised him that we were on site
	peline to inspect and remove if necessary any gasoline product top of pipe about 18" behind flange - unable to remove
45 minutes downtime - Containment system.	Op-Tech did not have the right tools to remove flange. Used time to improve
•	hrs - very little gasoline, mostly water removed approx 20 gallons max from about 25' into pipe to remove product. None found
Op-Tech replaced flange	e (finger tight/snug), removed containment poly and backfilled excavation.
Called Rick Rothfuss ad	vised that we are done, Rick will stop by and place locks on gates.
MJH left site at 1220 hrs	3
Inspector's Name: Mic Date: April 15, 2010	hael Hinton
<b>Distribution:</b> G. Sutton M. Hinton	
Attachments: Photo's	





041410-01 Flange.JPG

041410-02 Flange.JPG



041410-03 Poly Containment.JPG Riverview Industrial Center

041410-04 Poly Containment.JPG Page 1





041410-05 Vac Truck.JPG

041410-06 Flange removal.JPG





)-07 Poly Containment Improveme Riverview Industrial Center

041410-08 Flange removal.JPG Page 2





0-09 Flange removal Fluid Leaking

0-10 Flange removal Fluid Leaking





041410-11 Flange Removed.JPG Riverview Industrial Center

041410-12 Flange removed.JPG Page 3



041410-13 20' hose in Pipe.JPG



# DAILY FIELD REPORT

Date: September 17, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:City of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

- OpTech found another UST north of the 6 rectangular tanks. This new UST was approximately 2000 gallons and full of water and old product. OpTech used a Vac truck to remove the liquids and put them in the empty frac tank onsite. OpTech removed the UST from the ground, cleaned it and crushed it. The vac truck was cleaned before putting materials from the rectangular tanks into it. A sample of the tanks contents was sent to a laboratory for disposal analysis.
- OpTech pumped out the contents of the 6 nested rectangular tanks and put them in the tank with other material from these tanks.

#### **Problems/Observations Noted:**

• OpTech anticipates removing the rectangular tanks from the ground tomorrow.

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications? Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

# **CONTRACTOR WORK FORCE:**

# **CONTRACTOR EQUIPMENT:**

# ATTACHMENTS:

INSPECTOR'S NAME: Kevin Glaser \_\_\_\_\_ Sanitary Const. Insp. II

Date:

Distribution G. Sutton via Email





# DAILY FIELD REPORT

Date: September 30, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

• Optech loading out contaminated soils to Waste Management in Chaffee. Began excavation in at the east end and had to expand the east end beyond the pavement to pipes that had contamination beneath them approximately 15' east of the pavement. Depth of excavation is approxmately 3'. Shipped 14 trucks today.

# **Problems/Observations Noted:**

• Expanded the east dimension by approxmately 15'.

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE:** one operator – one laborer

**CONTRACTOR EQUIPMENT: JD 270 excavator** 

3" trash pump and hoses

A	7 77	ľA	CH	м	$\mathbf{E}$	JTS:

INSPECTOR'S NAME: Kevin Glaser \_\_\_\_\_\_ Sanitary Const. Insp. II

Date: September 30, 2009

Distribution L. Ross, G. Sutton via Email



Figure 2 Oily debris in the SE corner



# DAILY FIELD REPORT

Date: October 1, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

• Optech loading out contaminated soils to Waste Management in Chaffee. Continuing the excavation started yesterday. An additional 21 truck loads off site today.

#### **Problems/Observations Noted:**

• Requested that OpTech get something onsite to keep the road and road shoulder clean.

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE:** one operator – one laborer

**CONTRACTOR EQUIPMENT: JD 270 excavator** 

3" trash pump and hoses

#### **ATTACHMENTS**:

INSPECTOR'S NAME: Kevin Glaser \_\_\_\_\_\_ Sanitary Const. Insp. II

Date: October 1, 2009



Figure 3 expanded excavation to the east



# DAILY FIELD REPORT

**Date:** October 5 & 6, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

- Optech loading out contaminated soils to Waste Management in Chaffee. An additional 40 truck loads off site on these dates total.
- OpTech loaded scrap metal into a roll off box for recycling.

#### **Problems/Observations Noted:**

- OpTech isolating the east end of the excavation to prevent any migration of oily material from the excavation face.
- There is a petroleum contaminated sandy layer in the south wall of the excavation that appears to be the bedding for old pipes. Instructed OpTech that this material should be removed down to the pond, but not allowing any pond water into the excavation.

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE:** one operator – one laborer

**CONTRACTOR EQUIPMENT: JD 270 excavator** 

3" trash pump and hoses BobCat S185 with broom

#### **ATTACHMENTS**:

INSPECTOR'S NAME: Kevin Glaser Sanitary Const. Insp. II

Date: October 6, 2009



Figure 4 Oily water coming from excavation



Figure 5 Berm created to prevent oily liquids from migrating east



# DAILY FIELD REPORT

**Date:** October 8 & 9, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# Weather Conditions:

# **Description of Work Performed:**

- Optech loading out contaminated soils to Waste Management in Chaffee. Approximately 40 trucks in the past 2 days.
- OpTech loaded a second scrap metal into a roll off box for recycling.
- Upon the excavation of the petroleum contaminated sandy pipe bedding, more contamination was found at the NW corner of the pond. This material was approximately 10 cy of material related to a foundation pad and the pipe bedding previously noted.

#### **Problems/Observations Noted:**

- Had some trouble with the landfill due to the sending of oversized concrete.
- There is a large pile of contaminated concrete onsite that will need to be broken before it can be sent off site.

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE:** one operator – one laborer

**CONTRACTOR EQUIPMENT: JD 270 excavator** 

3" trash pump and hoses BobCat S185 with broom

#### ATTACHMENTS:

INSPECTOR'S NAME: Kevin Glaser Sanitary Const. Insp. II

Date: October 9, 2009



Figure 6 Extent of excavation facing NE



Figure 7 Excavated pipe trench to the south



# DAILY FIELD REPORT

**Date:** October 12, 13 & 14, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

- OpTech worked half a day on Monday, October 12, 2009. They pulled the remaining material to be shipped offsite into one consolidated pile.
- Optech loading out contaminated soils to Waste Management in Chaffee. Approximately 30 trucks total on October 13 & 14.
- OpTech began backfilling the excavation on Wed., Oct. 14, 2009.

#### **Problems/Observations Noted:**

- Anticipate the excavation will be backfilled tomorrow and then OpTech will begin the removal of the 2 UST near the gate and the one at the rear of the property.
- There is a large pile of contaminated concrete onsite that will need to be broken before it can be sent off site.

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE:** one operator – one laborer

**CONTRACTOR EQUIPMENT: JD 270 excavator** 

3" trash pump and hoses BobCat S185 with broom

JD 230 excavator

8 ton Ingersol Rand vibrating roller

JD 450J dozer

ATTACHMENTS:	•
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INSPECTOR'S NAME: Kevin Glaser \_\_\_\_\_\_ Sanitary Const. Insp. II

**Date: October 14, 2009** 



Figure 8 Backfilling of excavation with crushed concrete



Figure 9 Contaminated concrete to be broken and disposed



# DAILY FIELD REPORT

**Date:** October 20, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

- OpTech attempted to excavate the sewer line onsite. Pumping from the manhole late yesterday controlled the water with approximately 12,000 gallons of water and oil pumped from the manhole to a tank. Began excavation of the sewer at the north end, but stopped after 10' when it was determined that the pipe is made of transite, an asbestos containing material.
- OpTech began excavation around the last tank at the far south end of the site. Contaminated soils were transported to the front of the site using an off road truck.

#### **Problems/Observations Noted:**

- OpTech is working on a plan to appropriately remove the transite sewer pipe. State Dept. of Labor laws need to be followed.
- A third frac tank was delivered to the site for water management.
- OpTech needs to make arrangements to dispose of the fiberglass UST being closed.

#### **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE:** 1 operator – 2 laborers

**CONTRACTOR EQUIPMENT: 3" trash pump and hoses** 

BobCat S185 with broom

JD 230 excavator

8 ton Ingersol Rand vibrating roller

JD 450J dozer

JD 25 cy off road truck

ATTACHMENTS	:
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INSPECTOR'S NAME: Kevin Glaser \_\_\_\_\_\_ Sanitary Const. Insp. II

**Date: October 20, 2009** 



Figure 10 North end of 10" transite sewer pipe excavation



Figure 11 picture of 10" transite pipe



# DAILY FIELD REPORT

**Date:** October 21, 2009

Site Name: Riverview

**Site Number:** <u>C915225/Spill 0902367</u>

Location:Town of Tonawanda, Erie CountyDEC Project Engineer:Michael Hinton, NYSDEC - Buffalo

Contract Engineer: OpTech
Contractor: OpTech

# **Weather Conditions:**

# **Description of Work Performed:**

- OpTech completed the excavation of the 4,000 gallon fiberglass UST and the contaminated soils around it. Contaminated soils staged at the River Road end of the site.
- Sampled the excavation for STARS parameters on the four walls and bottom.
- Backfilling the excavation with crushed concrete.

#### **Problems/Observations Noted:**

•

# **HEALTH & SAFETY**

PPE Level: \_\_\_\_, Is the PPE in conformance with the specifications?

Is Air monitoring being performed? \_\_\_Are monitoring results at acceptable levels?

**CONTRACTOR WORK FORCE: 2 operator – 1 laborers** 

**CONTRACTOR EQUIPMENT: 3" trash pump and hoses** 

BobCat S185 with broom

JD 230 excavator

8 ton Ingersol Rand vibrating roller

JD 450J dozer Vac Truck

# ATTACHMENTS:

INSPECTOR'S NAME: Kevin Glaser \_\_\_\_\_\_ Sanitary Const. Insp. II

**Date: October 21, 2009** 



# FIELD INSPECTION REPORT

Date/Time: October 28, 2009 - 1:45 PM
Riverview Industrial Center

Site Number: 915225

Location: Tonawanda(T), Erie County
Project Engineer: Mike Hinton, NYSDEC - Buffalo

**Contractor/Engineer:** OpTech

Weather Conditions: Cloudy/Misty rain, Heavy rain in AM - 50°F

Purpose of Inspection: Inspect removal of ACP

# **Observations:**

- Met with Mike and Fred of OpTech on Site, Also on site were a OpTech laborer and operator.
- Doug from Empire performing Asbestos removal third party oversight.
- Site very wet and muddy. Numerous areas of standing surface water, however excavation was bone dry.
- OpTech completed ~75ft of ACP removal and is stopping for today to line roll-off and load wrapped ACP.
- Mike noted that only the first portion of the pipe excavation actually had petroleum contamination in it. The remainder is petroleum free. (confirmed visually and agree). No odor noted.
- Clay very tight and there is no bedding material around the pipe which probably inhibits contaminant migration.
- OpTech noted that ran into a 6" clay tile pipe that ran above the ACP pipe. That pipe and bedding contained petroleum. OpTech backfilled area with excavated clay to seal area and to keep contamination out of excavation.

**Respectfully submitted: G. Sutton** 

Distribution: G. Sutton/file/eDoc





Location of unknown clay pipe with suspected petroleum contamination







# DAILY FIELD REPORT

**Date:** March 30, 2010

**Site Name:** Riverview Industrial Center

**Site Number:** 915225/SN 0902367

**Location:** 5335 River Road, Town of Tonawanda, Erie County

Project Manager: Michael Hinton
Project Engineer: Michael Hinton

**Contractor:** Op-Tech **Job Phone:** N/A

**Weather Conditions:** T~45°F, sunny, light S breeze

**Description of Work Performed:** Spill Remediation

MJH on site at 1145 hrs

Inspected CO Steel west property line and took photo's for pipe removal activity.

MJH left site at 1205 hrs

**Inspector's Name:** Michael Hinton

**Date:** March 31, 2010

**Distribution:** G. Sutton /file

M. Hinton\_\_\_\_

**Attachments:** Photo's

# Appendix G Site Photographs





050409-01 SB-1.JPG

050409-02 SB-1 cores.JPG





050409-03 SB-2 cores.JPG

050409-04 SB-04 cores.JPG





050409-05 SB-05.JPG

050409-06 SB-5 cores.JPG





051109-01 MW-06.JPG

051109-02 MW-06.JPG





051109-03 MW-06 Area.JPG

051109-04 Debris SE Corner.JPG





051109-05 TP-2.JPG

051109-06 TP-3.JPG





051109-07 TP-4.JPG

051109-08 South Line .JPG





)51109-09 South Slope Creek.JPC

051109-10 West Line.JPG





)51109-11 South Slope Creek.JPG

051109-12 TP-5.JPG





051109-12 TP.JPG

051109-13 TP-5.JPG





050809-01 MW-05.JPG

050809-02 Debris.JPG





050809-03 Fill Area.JPG

050809-04 Fill Area.JPG





050809-05 Fill Area.JPG

050809-06 Debris.JPG





050809-07 Debris.JPG

050809-08 Debris.JPG



050709-01 MW-05.JPG



051209-01 TP.JPG



051209-02 TP-13.JPG



051209-03 MW-06.JPG



9-01 MW-2 Developmen



)9-02 MW-2 Developmen



052109-03 Turkey.JPG



9-04 MW-4 Developmen



9-05 MW-3 Developmen



051909-01 Tank 2.JPG



051909-02 T1 T2 Area.JPG



051909-03 T3.JPG



051909-04 T5 AST.JPG



051909-05 .JPG



051909-06 T3 fill.JPG



051809-01 SW-4 Drainage .JPG



051809-02 SW-4.JPG



051809-03 MH-2.JPG





051509-01 SS-1.JPG

051509-02 SS-2.JPG



509-03 Fish DTank Dike 12 Area. 1509-04 Fish Tank Dike 12 Area.Jl





051409-01 Test Pit.JPG

051409-02 Test Pit.JPG





051409-03 Test Pit.JPG

051409-04 Tank Dike 1 Area.JPG





051409-05 Tank 1 Dike Area.JPG

051409-06 Tank 5 Dike Area.JPG





1409-07 Former Maniflold Bldg.JF

109-08 Former Manifold Bldg Area.





)51409-09 NE Corner Pipeline.JPC

)51409-10 NE Corner Pipeline.JPC





09-11 Tank Dike 4 former pipeline

051409-12 Tank 4 Dike area.JPG





051309-01 Fill Debris Area.JPG

051309-02 Access Road.JPG





51309-03 Dike Area T10 11 12.JP 51309-04 Dike Area T10 11 12.JP





051309-05 MW-06.JPG

051309-06 MW-06.JPG





051309-07 Pipe Line ROW.JPG

051309-08 Pipe line ROW.JPG





051309-09 Pipeline ROW.JPG

051309-10 T4.JPG





051309-11 T11 area.JPG

051309-12 T4 Area.JPG





051309-13 T4 Area.JPG

051309-14 T12 area.JPG





051309-15 T9 Area.JPG

051309-16 Access Road.JPG





051309-17 Access Road.JPG

051309-18 Fill Area.JPG



052209-01 MW-4 Surging.JPG



052209-02 MW-1 Development.JPG



052209-03 MW-3.JPG





101309-01 Dike 1 Area, JPG

101309-02 Dike 1 Berm.JPG





101309-03 Bldg Area.JPG

09-04 SW Corner Truck Rack Area





101309-05 Dike 1 Berm Area.JPG

101309-06 Bldg Area.JPG





101309-07 Bldg Area.JPG

101309-08 Bldg Area.JPG



100709-09 Road Sweeping.JPG





100709-01 Tank 8 & 9 Area.JPG

100709-02 Tank 8 & 9 Area.JPG





100709-03 Dike 1 Berm.JPG

100709-04 Tank 8 & 9 Area.JPG





100709-05 Dike 1 Berm Area.JPG

100709-06 Dike 1 berm area.JPG





)0709-07 SE Corner Rack Area.JP

100709-08 Dike 1 Berm.JPG



100609-01 Tank 8 & 9 Area.JPG



100609-02 Tank 8 & 9 Area.JPG





100209-01 Oil Collection.JPG

100209-02 Oil Seep.JPG





100209-03 Oil Collection.JPG

100209-04 Oil Seep.JPG





)-01 East Side Excavation Old Pipe

00109-02 east Side Excavation.JP





0109-03 South Side Excavation.JF

100109-04 Excavation.JPG





100109-05 South Side .JPG

100109-06 North Side.JPG





90309-01 Test Pits Rack Area.JP(

90309-02 test Pit Loading rack.JP(





90309-03 Test Pit Loading rack.JP

90309-04 Test Pit Loading rack.JP





)90309-05 Teat Pit NE Corner.JPC

ว9-06 Test Pits Loading Rack Area





09-07 Test Pits Loading rack Area

090309-08 Test Pit Bldg Area.JPG





090309-09 Tank 6 Bldg Area.JPG

090309-10 Tanlk 6 Bldg Area.JPG





090309-11 Tank 6 Bldg Area.JPG

090309-12 Tank 6 steel roof.JPG





092109-01 North Wall.JPG

092109-02 West Wall.JPG





092109-03 East Wall.JPG

092109-04 West Wall.JPG





092109-05 East Wall.JPG

092109-06 West Wall.JPG





092109-07 Backfill.JPG

092109-08 T6 Tank.JPG





092109-09 T7.JPG

092109-10 T6 tanks.JPG





91809-01 T6 Oil in Excavation.JP

091809-02 Residual Oil in T6.JPG





91809-03 Removing T6 tanks.JPC

)91809-04 Removing T6 tanks.JPC





091809-05 removing T6 tanks.JPG

)91809-06 Removing T6 tanks.JPC



090909-01 Tank 3 Area.JPG



090909-02 Tank 3 Area.JPG



090909-03 Contaminated Soil Pile.JPG





082609-01 T4-T3.JPG

082609-02 Drum from T4-T2.JPG





082609-03 Drum from T4-T1.JPG

082609-04 Drum from T4-T1.JPG





082609-05 T4-T1.JPG

082609-06 T4-T2.JPG





082609-07 T4-T4.JPG

082609-08 T4-T5.JPG





082609-09 T4-T9.JPG

32609-10 Sed Sample Dite T10.JP





32609-11 Sed sample T10 dike.JP

32609-12 Sed Sample T10 Dike.JP





32609-13 Sed Sample T10 Dike.JP

082609-14 T10 Dike.JPG



081209-01 Spill Area.JPG



081209-02 Spill Area.JPG



072109-01 Tank 4 South Side.JPG



072109-02 Tank 4 Access Cut.JPG



061209-01 MW-002R.JPG



061309-02 UST T-3 cap.JPG



060209-01 MW-002R.JPG



060209-02 Fawn.JPG





110209-01 10 inch clay tile.JPG 9-02 Sewer line removal - Asbesto



)9-03 Sewer line removal Asbestos





2009-01 Cradle Foundation Area.J

2009-02 Cradle Foundation Area.J





2009-03 Cradle Foundation Area.J

2009-04 Cradle Foundation Area.J





2009-05 Cradle Foundation Area.J

2009-06 Cradle Foundation Area.J





)09-07 SW Bldg Corner Pipe Area.

)09-08 SW Bldg Corner Pipe Area.





112009-09 NW Bldg Corner.JPG

2009-10 Contaminated Concrete.J



2009-11 Contaminated Concrete.J





209-01 Former Ashland Pipeline.J

11209-02 Former Tank 4 Area.JP(





209-03 Former Ashland Pipeline.J Riverview Industrial Center

:09-04 Former Oil Water Sep Area Page 1



1209-05 Former Oil Water Sep. Ar





)9-03 Sewer line removal Asbestos

10609-01 Oil Water Seperator.JP0





2 Former Manhole Oil Water Sepe

10609-03 Oil Water Seperator.JPC





10609-04 Oil Water Seperator.JPC

10609-05 Oil Water Seperator.JPC





10609-06 Oil Water Seperator.JPC

110609-07 Sunoco Pipeline.JPG





110609-08 Sunoco Pipeline.JPG

309-09 Former Connection for Site.





30310-01 CO Steel NW Corner.JP

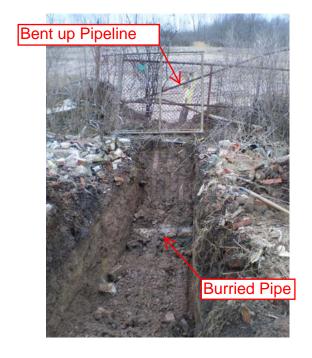
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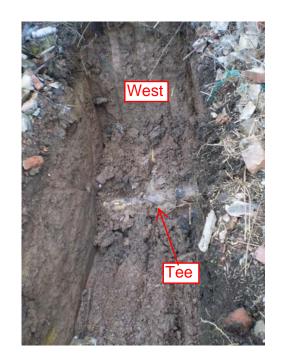




1310-03 Co Steel West Line area.J

30310-04 Riverview NE Corner.JP





040510-01 Pipe Investigation.JPG

040510-02 Pipeline Tee.JPG





040510-03 Line Trace.JPG Riverview Industrial Center

040510-04 South.JPG Page 1





040510-05 Capped Tee.JPG

040510-06 Cap.JPG





040510-07 Trace North.JPG Riverview Industrial Center

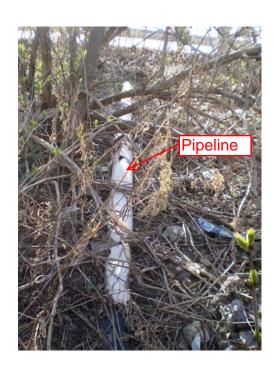
08 Abandoned Pipelines North of Page 2

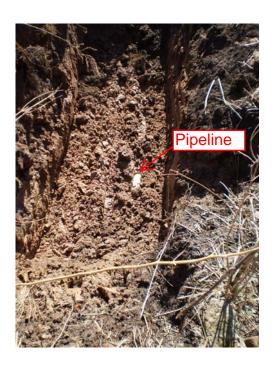




09 Abandoned Pipelines North of

10 Abandoned Pipelines North of





40510-11 Pipeline North of RR.JP( Riverview Industrial Center

0510-12 Pipeline at Power Pole.JF Page 3





041410-01 Flange.JPG

041410-02 Flange.JPG



041410-03 Poly Containment.JPG Riverview Industrial Center

041410-04 Poly Containment.JPG Page 1





041410-05 Vac Truck.JPG

041410-06 Flange removal.JPG





)-07 Poly Containment Improveme Riverview Industrial Center

041410-08 Flange removal.JPG Page 2





0-09 Flange removal Fluid Leaking

0-10 Flange removal Fluid Leaking





041410-11 Flange Removed.JPG Riverview Industrial Center

041410-12 Flange removed.JPG Page 3



041410-13 20' hose in Pipe.JPG

# Appendix H Former Tank Farm SPCC Plan

# SPILL

## DREVENTION &

## COUNTERMEAGURE

CONTROL PLAN

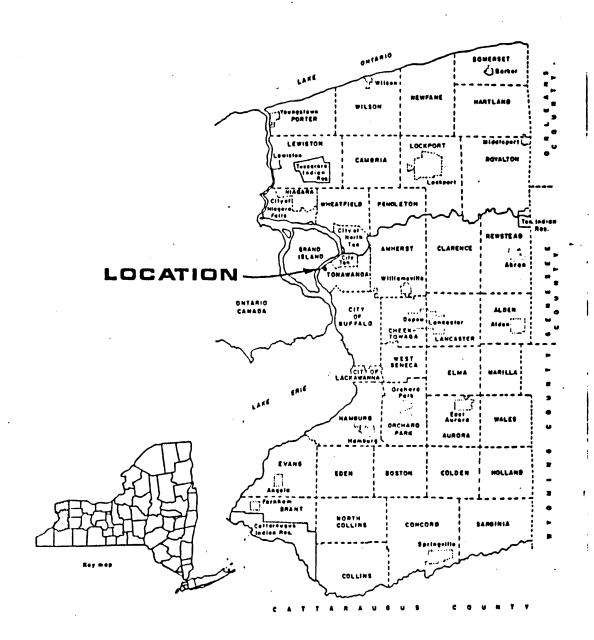
N. N. B. B.

5335 AIVER BOAD

TONAWANDA, N.Y. 14150

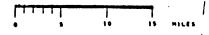
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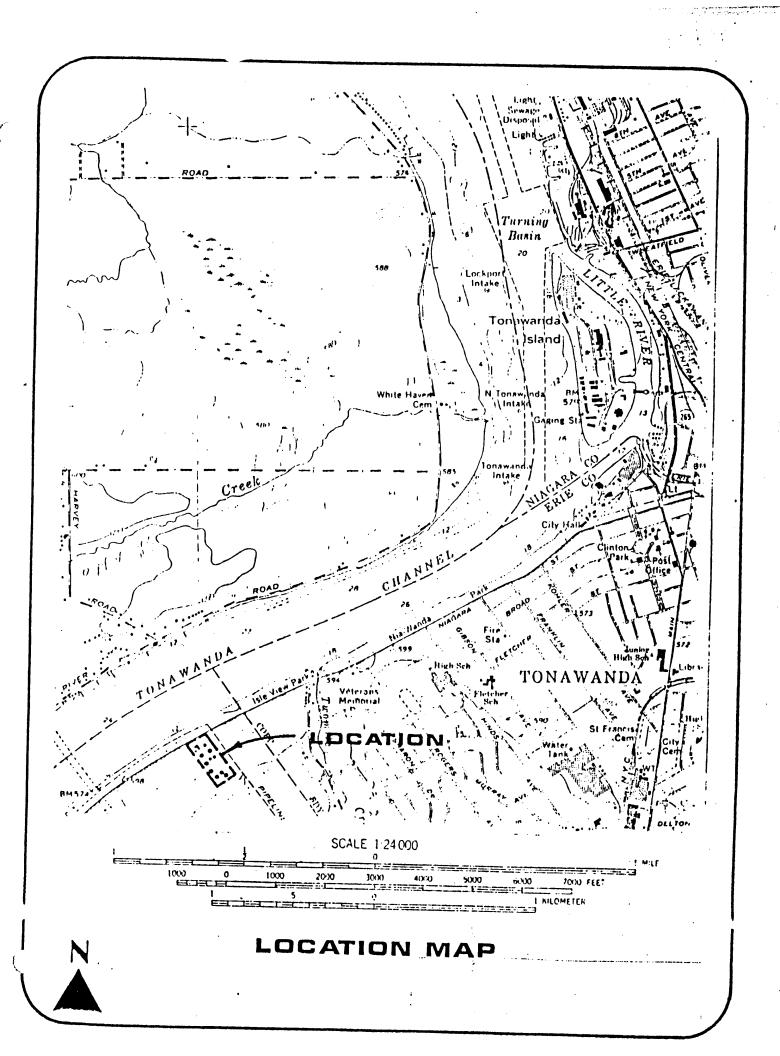


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# BUFFALO METROPOLITAN AREA 🤄 🖑







# N.N.R.S., 5335 River Road, Tonawanda

## SPCC Telephone Directory

Facility Numbers				
Terminal Office Terminal Manager, Bob Fisher (home) Asst. Terminal Mgr., Mike Brown Pumper, Ed Broskin Owner, Neil Norry (office) Owner, Harold Schectman (office)	716-877-2424 716-795-9168 716-877-9325 716-875-7952 716-688-7448 716-634-6600	**		
Notification Numbers (in the event of a spill)				
National Response Center Oil Spill Hotline (24 hours) NY State Dept. of Environmental Conservation U.S. Coast Guard Erie County Dept. of Environmental Quality	800-424-8802 800-457-7362 716-847-4590 716-846-4168 716-846-6370	(Michael Hinton)		
Other In-House or Supplier Numbers for Service				
	716-688-2551 716-693-8058	·		
Elmwood Tank Cleaning Buffalo Waste Oil Service New England Pollution Control Co.	716-853-5960 716-855-2212 716-343-6444			
Town of Tonawanda Fire Alarm Headquarters Town of Tonawanda Police	716-876-1212 716-876-5300			
ARCO Pipeline	316-331-1300	•		

#### FACILITY INFORMATION

· CHARACTER STREET

Owner-operated, bulk liquids Facility Type 1. receiving, storage, and shipping terminal 5335 River Road Facility Location 2. Tonawanda, New York 14150 26.26 acres (8.55 acres developed) Site Area 3. Bounded on the north by River Road and on the south by Two Mile Creek. Perimeter of tank farm, loading, offices fully fenced. Receiving by underground pipeline Terminal Capability 4. (ARCO) and trucks. Storage in eleven diked, unheated above ground tanks total 16.5 million gallon capacity. Three truck loading racks. NNRS Owner/Operator 5. 5335 River Road Tonawanda, New York 14150 Harold Schectman

**NNRS** 

**NNRS** 

P. O. Box 1011

Buffalo, New York

5335 River Road

Bob Fisher, Terminal Manager

Tonawanda, New York 14150

14240

Owner Officer

Designed person

spill prevention

accountable for oil

6.

7.

### FORWARD

This document is to outline environmentally satisfactory operation of a petroleum product terminal at 5335 River Road, Tonawanda, New York 14150. The plan conforms to the requirements of 40CFR112 and American Petroleum Institute's Bulletin D16 entitled "Suggested Procedure for Development of Spill Prevention Control and Countermeasure Plans." This plan is also a factor in 6NYCRR 610 and 611 governing the Licensing of Major on Shore Facilities, as well as SPDES/NPDES permitting for the discharge of waste water.

It is required that a plan such as this be updated every three year or whenever there are changes made in the operation of the facility. The facility was originally built for operation as a petroleum products terminal by Amoco Oil.

Only now are the present owners of the facility assuming the common role as bother owner and operator.

#### SPILL PREDICTION AND CONTROL

Spills can occur as a result of human error or because of equipment failure. For purposes of reporting, a spill is the escape of product from the container in which stored or moved (such as a storage tank or truck). Possible causes for spills are contemplated and addressed herein Ref. cases 1 thru 6. Preventative measures and reactions for specific types and size spills are discussed. The terminal has no mobile clean up capability such as tank or vacuum trucks but rather would contract such work. Products stored and handled on the premises include heating oil and petroleum liquids, No. 2 heating oil & kerosene. Recovered oil would likely be hauled by the same cleanup contractor as mentioned above.

Use of mobile equipment for spill cleanup on the east side of the terminal is to be considered a last resort and is further discouraged by being remote from a plant access road.

## CASE 1. Overflow of storage tanks while receiving:

#### A. Prevention

- 1. Gauge tanks before receipt to determine capacity.
- Observe tanks during receipt to ascertain continued capacity.
- 3. Stop receipt if any question arises as to safety.

## B. Action required to control

- 1. Close down pipeline.
- Open valves into other tanks of similar product; pump from overflowing tank to one with adequate capacity.
- If no room exists in similar product, use pipeline manifold to transfer to tank of suitable capacity.
- 4. With the use of vacuum pumps, recover any spilled product from diked area and transfer to tank with similar product.

#### CASE 2. Overflow of truck equipment while at loading racks:

#### A. Prevention

- 1. Maintain loading equipment in high state of repair.
- 2. Attend loading valve at all times.
- 3. Train all personnel in emergency shutdown procedures.

#### B. Action required to control

- 1. Shut off switch at loading rack.
- 2. Close valve on loading arm.
- 3. Open internal valves of truck, allowing product to flow to partially empty or empty compartments.
- 4. Clean up spilled product at this point.
- 5. Flush down driveway and loading rack area with fire hoses.
- 6. Pump recoverable product back into storage tanks.

#### CASE 3. Damage to equipment at loading rack by trucks:

#### Λ. Prevention

- 1. Driver training
- 2. Truck inspection before departure

#### B. Action required to control

- 1. Shut off switch
- 2. Clean up spillage with absorbents and then flush drive
- 3. Institute repairs

#### CASE 4. Ruptures or leading pipelines - equipment malfunction

#### A. Prevention

- 1. Maintain all pipelines in high state of repair.
- 2. Inspect regularly for corrosion, leakage, etc.
- Insure that all lines have operative thermal and pressure relief valves.

- 4. Insure that pumping pressures do not exceed line working pressure.
- 5. Insure that line supports are adequate and in good repair.

## B. Action required to control

- 1. Immediately shut down pumps and close valves both ends of break.
- 2. Attempt to pump or flow by gravity from line into another tank or vessel.
- 3. If break is small, attempt to install temporary clamp.
- 4. Place container under break and pump from container into tank trucks.

## Case 5. Ruptured or leaking storage tank:

#### A. Prevention

- Maintain tank shell in high state of repair, inspect regularly for signs of weakness.
- Insure that tank vents are maintained on a regular basis, and are operating during any transfer into or out of tank.

## B. Action required to control

- If leak is small, attempt to plug or patch with epoxy or other cold means.
- 2. Immediately transfer product from tank to another tank or vessel.
- 3. Recover product from dike area. Insure that all dike valves are closed.

# Case 6. Appearance of product from undetermind source:

#### A. Prevention

- 1. Maintain adequate and accurate stock accounting program.
- 2. Investigate immediately any and all unusual variations.
- Constantly monitor all surrounding plant areas for any signs of product.

## B. Action required to control

- 1. If a tank or line is suspect, isolate it.
- Excavate observation trenches to determine source of product.
- 3. When source is found, evacuate container and make necessary repairs.
- 4. Utilizing pumps and absorbent material, recover all product possible from ground.

#### TRUCK LOADING/UNLOADING

Truckload shipping is the only presently available means of moving product from the terminal. Vessel loading was once possible and is not expected to be reestablished. No railroad service exists.

In the limited scope outset of terminal operations, a "key" loading system will not be activated. An attending terminal operator will direct truck spotting and vehicle grounding by the driver.

Throughout the loading of any truck, the terminal pumper will maintain the ability to abort by shutting down the pump, and the driver will also maintain the ability to abort the pumping by closing the spout shutoff valve from the vehicles top.

In the event of valve shutoff against load out pump pressure, the line will withstand the elevated pressure for so little time as is necessary to shut the pump off. Such incidents are to be rigorously avoided.

Between truck loadings, any spillage will be removed to minimize tire or sole carryout. Dripping spouts will be positioned over a catch container. Soiled sorbents will be put in drums and/or pails along with provide cleaning, and housekeeping will also be dedicated to maintaining underfoot traction on or around the racks, as well as snow removal to maintain drainage egress.

Terminal operators will not participate in any tanker vehicle manipulation.

Driver instruction sheets will be posted to advise of the necessity to abide

by the terminal loading procedures and to cooperate with the terminal operator

during the actual pumping.

Simplified pump locations, line routings, and rack/embankment piping schematics are appendixed (pp. A-1 thru A-9). They are a primary source of information and guidance in making on shift rounds for inspection, gauging and end of shift shutdown and securing.

An emergency shutdown of all pumping operations is available in the driver ready room. Smoking is not permitted (in or out of vehicles) except in the driver ready room or offices. Any indication of terminal equipment leakage will be cause to discontinue pumping until brought under control.

Any spill which occurs on the platform while a truck is being either loaded or unloaded is contained on the north and south by concrete curbs and east and west by trench drains that go directly into the plant sewer system. Before a truck leaves the platform, it is inspected to insure disconnection from the loading rack, that valves and hatches are closed, and that there is no product dripping or leaking.

Trucks will enter the yard from the west gate parking in front of the office, pointed toward the racks and ultimately the east exit gate.

The driver will confirm that his vehicle unloading valves are closed and the to-hose connections tightly capped. The driver will identify for whom he is picking up, and the compartment program and quantities to be loaded. On confirmation by the terminal pumper that the truck is fit, the pumper will direct the driver to the rack isle and spot and take the ticket to the rack platform, knowing the product and quantities desired.

At gound level on the loading spot, the driver will connect the ground to the vehicle and proceed to the vehicle top to insert a telescoping, swing joint fill pipe, down into the vehicle. Concurrent loading of different products is possible, by using both sides of a rack.

On indication by the driver on the vehicle that he has opened the shutoff valve, the pumper on the adjacent rack will key or switch activate the remote pump, both observing to make sure the vehicle is not leaking. Preception of any level leakage will be immediate cause to stop pumping, and off-load vehicle. Both the driver and the pumper will be committed to the job of filling that truck until such time as the driver indicates he is nearing full, or an internal vehicle gauging mark. At the conclusion of filling, the pumper will shut off the pump

so the driver can release the spout shutoff, and drain the spout into the vehicle. This will entail the driver lifting the spout free of the vehicle contents and lowering it again before withdrawing it. The pumper will stamp the meter reading on the ticket and permit the driver to remove the ground and pull ahead to get his temperature corrected shipping papers while still parked in the yard confines.

## BULK STORAGE TANKS

The product storage tanks are all steel, designed and built to ASME/API standards. The plant is equipped with four small buried tanks: gasoline (2,000 gals), diesel fuel (2,000 gals), No. 2 fuel oil (10,000 gals), and O/W/S skimmings (4,000 gals), and there are 11 aboveground vertical type field storage tanks. Aboveground tanks are diked. The dikes are made of compacted earth.

Aboveground tanks are inspected externally at least once a week for seepage or failures. Inventory control and stock records for all products are maintained and reviewed daily. Any discrepancy, particularly a shortage, may indicate product lost due to an undetected leak. An investigation is begun immediately. A record is kept of the periodic draining and cleaning of a tank. On such occassions the integrity of the tank bottom is tested by vacuum, by ultrasonics, by scraping and tapping, or by a combination of all these methods. When a leak is suspected, the tank must be taken out of service, drained, cleaned, and tested. If such tests are inconclusive, it may be desirable to put water in the tank for a period of time, and watch for a loss of water which will generally confirm the existence of a leak. Ultrasonic and water tests were performed on all tanks in 1983.

Underground tanks suspected of leaking can be confirmed with a pressure or standpipe test.

Attached in the appendiz (p. A-10) is a tank schedule sketch of the 11 aboveground storage tanks along with their capacity. All were inspected in late 1983 (Inspection reports are in appendix B). All tanks have bee repainted, and cathode protection (grounding) replaced or repaired where needed. With the exception of No. 4 tank which is on a concrete ring, all tanks are steel bottoms on compacted earth elevated above the dike floor area by 12" to 18". Tank suction and fill valves or cocks are 6" to 8" and approximately 18" above tank floors. Condenstate drain valaves are 1½" to 3" and approximately

8" above the tank floor. All are capable of securing with padlocks especially for off-shift security. None of the aboveground tanks have thru-floor wet walls for any purpose.

At the geginning and ending of each shift, currently active tanks will be gauged or gauging will be at the beginning of a first shift and at the end of a second shift. At least once a week, all tanks will be simultaneously gauged and plumbed to directly measure innage, height of condensate or ice heel, and to determine precision of tanks gauges. Similarly, tanks will be simultaneously gauged and plumbed as a first step in preparation in advance of receiving pipeline quantities or a compaign of truck deliveries to the terminal.

Pipeline deliveries to terminal storage tanks are a matter of greater importance and complexity. They require the first hand attention of the terminal manager in the preparation and planning stage and the commitment of the work to writing. Such deliveries are acquired two or more weeks ahead. They are nine days in transit and their dispatching is closely monitored. It is not feasible to simply shut-off against a delivery in progress. Special terminal staffing, including the terminal manager must be on the scene at least two hours prior to the time of arrival. Assurance of adequately empty tank space must be planned and confirmed immediately prior to the time of arrival. Access to contingency space must be planned. In terminal distribution valve and pip alignments must be planned including mid-delivery switching and instruction for that program posted in the manifold house. Also posted within the tank house is a table listing tank heights and the gallons per inch capacity of each (p. A-10). Pipelines within the manifold house will be color-coded and all valves will be labeled. Approximately 20 hours

is required to receive a minimal pumping of about one million gallons.

There are three lines into the manifold house by which product is received.

The Arco line which arrives underground on the south side and continues underground to the manifold house over a distance of some 10,000 feet to the meter at the tee of the Arco pipeline.

The Ashland line comes into the terminal from a tee midway along the outside of the east fence, lateral into the plant across No. 4 tank above the dike floor to the manifold house.

From the truck loading rack receipts or returns arrive at the manifold house from truck pump pressure by way of a line paralleling the underground portion of the No. 10 tank loadout, and in a reverse direction thru it to the maifold house. Appendixed is a schematic of lines as they go underground at the rack (p. A-12) and a second as they pass thru the walls of the manifold house (p. A-13).

# PUMPS AND PIPELINES

Product pipelines are generally aboveground within the diked areas, but run underground to the truck loading area. All product pipelines are welded steel pipe. Aboveground lines are mounted on pipe supports, spaced to prevent significant deflection. The individual supports are concrete or steel set in concrete.

Pipelines are observed continuously during daily operations. Periodic close inspections are made, particularly at pipe supports. An underground line which is excavated is carefully examined for deterioration, and replaced if necessary. Unused or abandoned pipelines are to be securely capped.

Pumps, and particularly pump seals, are checked regularly for leaks. The immediate vicinity of the pump is examined for signs of product which might have escaped since the previous inspection.

Within the tank farm (other than under the loading rack pavement area) there are no underground load-out pump suction or pressure lines visually inaccessible to a single on-shift terminal operator. None of the loadout lines routinely depend upon the complexing capability of the manifold house. Each product has a dedicated tank suction line, pump, pressure line, and rack loading spout which are color coded. Lines are not equipped for routine drainage, nor are they equipped for or expected to be blown clear. They are equipped with self-actuating, thermal-expansion-pressure relief by-passes around the tank suction shut-off valve adjacent to the side of the tank near its bottom. Vacuum relief valves encourage total gravity drainage of the loading spout. Tank pressure-vacuum relief valves work without shift operator intervention or inspection. Air eliminator vent piping is the object of scrutiny and made accessible for that purpose.

Aside from the two lines which pass through the manifold house and the underground portion of all lines at the loading rack, in terminal load out piping is exposed several feet above the dike-area floors but not quite clear of the top of between-tank partitioning dikes. Uniformly, free falling leaks would be apparent and contained within dike enclosures. Terminal tanks, lines, pumps and flanges are readily accessible for close scrutiny. If a leak is perceived, loading of the product will be immediately discontinued and the tank suction valve closed as a first step in remedying the problem. This will isolate the leak from tank head pressure while repairs progress and while spillage is still contained within the dike where first encountered. Perimeter inspection for spillage migration should confirm containment, both within the terminal and within the dike area where encountered.

Prior to disappearing below ground, load lines include isolation valves or cocks, air eliminators, and check valves. Cross connections permit optional routing to different loading rack spouts and around deficiencies which are isolatable in that area.

All loadout pump power can be shut off from a common emergency shutdown switch in the driver waiting room.

#### FACILITY DRAINAGE

The nearest navigable waterway is the Niagara River located northwest of the site. Drainage on the property flows southeasterly (perpendicular to & away from the Niagara River) and eventually discharges into Two Mile Creek which empties into the Niagara River 1/2 mile northeast of the property.

An underground storm drain, perpendicular to River Road, runs the length of the property. It begins near River Road at the front of the property where several catch basins exist. (see A-15 Appendix A).

The truck loading racks are located in the northeast corner of the property alongside River Road. This area drains into the in plant sewer system.

Each dike enclosure is connected thru a lateral into the storm drain.

Each lateral has a gate valve which is normally kept closed. This valve is located inside each dike and has no permanently attached valve key.

To drain a dike, a plant employee first inspects the water for any product obtains a valve key and operator, opens the valve and drains the dike area. The valve is closed before proceeding to the next dike. A log is kept of the time each dike valve is opened and closed, and identifies the tankyard being drained. This procedure is repeated for each tank. A daily visual inspection of each dikeyard is performed and noted in the log.

The main storm drain carries the drainage to the dike enclosures for tank nos. 11 and 12. An electric lift pump moves the water thru a steel pipe into a sump outside the dike and flows thru an A.P.I. type oil water separtor. The plant drainage discharges into a ditch which drains into Two Mile Creek.

# WATER POLLUTION CONTROL OPERATION

The terminal has no continous use of wate for cooling or other purposes. Nevertheless, it is registered as wastewater discharger. Precipitation will accumulate within diked areas. Accumulation of some is not discouraged but as the accumulation increases to near the tank base level, it needs to be drained by way of operator intervention with drain valves. Precipitation accumulation may also be supplemented by the necessity to draw water from the "heel" within the tank. The drawing operation must proceed continuously from beginning to end under the close scrutiny of the terminal operator, preferably a few hours before draining an accumulation from the diked area. Drawing and draining must avoid losing product and soiling dike floor aggregate. The practice of draining a dike area completely dry is discouraged, and the time involved is intended to be 45 minutes more or less. Drawing tank heels must be followed by precise tank gauging.

Product which my be lost, spilled or leaked, or flushed are lighter than and essentially immiscible with water. If the quantity of product outside the tank or lines is sizeable, consideration must first be given to vacuuming or other removal of product before resorting to use of the draining system and the separator. The product/water interface should be drained immediately before the lift station pump shutdown so as to be in residence in the separator for some time before lift station pumping is resumed. Following a leakage or spill incident haste to draw off the water is not a desirable consideration. Draining water should not become a sustained effort, but rather should be a series of campaigns, with a few hours between them.

The single plant sewer lift station is the only means for evacuating in terminal surface drainage from pavement, roofs and the tank farm. Sanitary wastes are segregated and discharges thru an underground septic tank and leach field not connected to the plant sewer. Water is discharged when if falls from the pipe halfway down the south slope of the south terminal embankment and must be periodically sampled from this point and sent out for qualitative analysis and monitoring reporting, SPEDES/NPDES.

As constituted, the wastewater discharge system has the necessary control and fail safe characteristic. It may not be reworked to become self-actuating such as by a float switch. When not in use the motor control switch must be locked out. Time and duration of the intermittent operations must be logged, and operator attended. When the lift station is out of service for repair or replacement is lost function will be replaced by a portable pump discharging to the feed end of the separator. If the separator is frozen of for any reason the outflow from it is blocked or impeded, the lift station may not be used. Lift station operation will seldom be imperative except to evacuate pavement and roof rumoff accumulated in the sewer.

In the separator the sluiceway is an open topped (longitudinally split) 8" pipe which functions as a skimmer. It is put into the sluicing mode by rolling the split into the level of topmost surface of the skimmer. Sluicing is not expected to be a factor in all or most lift station operations. Rather, the separator is expected to accumulate a few inches of floating layer during quiescent periods between lift station operations. Two inches of float sliced of the separator relates to one eighth of the collector tank capacity. A portable pump may be used to remove a heel from the bottom of the collector tank to the feed end of the separator. If the float appears in the outfall from the separator, the lift station must be shut down until sluicing can reduce the float layer.

Overfilling the collector tank is not a problem since the gravity feed to it will back into the sluiceway. Evacuation of the collector tank will be by a waste oil collection contrator at such times as a commercially significant load (2,800 gallons) can be pumped off. Otherwise, the collector tank may be emptied to meet situational demand following a spill incident and as part of the follow-up program over a period of days following it.

Initial and periodic testing will confirm the leakproof integrity of the collector tank. Dike drain valves are each to be equipped with their own tee-handle key and complementing lock-out structure beginning immediately with those from tank areas with direct access to the plant sewer, as shown in the appendix (p. A-15).

# INVENIORY BALANCE, LOSS PERCEPTION AND LOGGING

Inherent to the commercial relationship between a terminal operator and the product thruput lease is the necessity for rigid inventory control and prompt perception of apparent losses, shortages or even unexplained overages. Product delivery meters will be quantitatively calibrated and sealed by weights and measures inspectors. Recalibration and resealing will promptly follow perceptions of inaccuracy, such as exceeding gauge markers in a truck permaturely. Contents of storage tanks will be gauged at the beginning and/or ending of shifts. Valves and motor controls will be closed and locked when unused especially if the plant is left unattended, to avoid accidents, larceny and vandalism.

Inventory balances will be computed, and will provide guidance for close inspection and maintenance to prevent, minimize or remedy drips, leaks, or spills as is required herein. Other matters, such as lead time and size of inventory replacement ordering, are also of critical significance.

#### TRAINING PROGRAM

New employees are carefully trained and supervised during their first year of employment. They are accompanied by a trained man on each new work assignment and are not given sole responsibility for any given work assignment until they have shown themselves qualified to do the work.

Periodic briefings, reviews, and safety meetings provide additional training opportunities between the supervisor and the new employee(s).

Each employee is provided with a copy of SPCC Plan, with adequate time to study this manual.

SPCC Plann is reviewed with individuals under supervision of qualified operator.

Qualified personnel have the following responsibilities:

- . Review transfer operation annually.
- . Periodic management observations of performance of all personnel.
- . Conduct meetings on safety and terminal procedures.
- . Personnel are properly instructed in the operation and maintenance of equipment to prevent petroleum discharges.
- Personnel are kept informed of pollution control laws, rules, regulations, and penalties.

Within the terminal, smoking is prohibited, anywhere outside the main office building and operators are prohibited from carrying matches, lighters or other smoking materials.

#### INSPECTION AND RECORDS

Tank storage and line integrity testing was peformed by Tank Service

Inc. and their report is attached (Appendix B). On the west side for the full

length of the terminal, a service road is at the level of the top of the embankment.

Similarly the loading rack is at the level of the top of the north embankment,

and a southward extended embankment includes the separator and collector tank

and an access area for service vehicles. Only the unbuttressed east perimeter

dike warrants inspection on terminal operator rounds.

On his walking "round" thru the tank farm, the terminal operator is required to make use of line of sight access to all tanks, pumps, lines, flanges, dike walls and containment area floors for indications of leakage that must be logged. On the round tank gauges will be read and/or dipped. Suction valves, pump motor controls, and riser valves will be set up (opened) or shut down and locked out (closed) according to the program for loading.

Reguired inspections follow written procedures as shown in the following list of daily duties required of plantmen.

- 1. Check all dike areas and ditches for any sign of petroleum leakage.
- 2. Visually inspect areas of underground pipes for any signs of seepage of oil.
- 3. Visually check fencing enclosing property.
- 4. All items are to be logged on log book during routine operations of terminal.
- 5. Any opening or closing of dike valves shall be recorded in log book.
- 6. Check locks on tanks and dike valves to be sure they are in a closed position.
- 7. Check time clocks and photo cells to insure proper operation of lighting.
- 8. Be on duty continually during receipts into terminal.
- 9. Maintain daily tank charts on tank capacities and receipts.
- 10. Starters on pumps not in use to remain in off position.
- 11. Repairs to terminal meters are to be recorded.

#### SECURITY PROVISIONS

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The full perimeter of the developed terminal area is fenced and entranceexit gates locked shut when the plant is unattended.

Tank valves (suction and filling) will be locked closed when the plant is unattended, and when on standby status in relation to load out or receiving operational programs. Similarly, product suction and lift station motor controls will be locked.

Mercury vapor area lighting will be maintained and activated.

Simplified schematic (p. A-l-appx. - A) discloses motor control centers and fire hydrant locations. Also is a simplified schematic that shows the location of product-loading lines.

In-terminal communications will be by public address system or radio telephone.

At the manifold house, a procedure is written for instructing operation and purpose of all the plumbing therein.

New York State Department of Environmental Conservation requires a notification letter indicating any new terminal managers/operators at this facility even if only temporary replacements.

### MAINTENANCE AND HOUSEKEEPING

Listed below are internal maintenance and housekeeping items regarding inspection, supplies, procedures, materials, and tools.

## Maintenance & Housekeeping Procedures

Remove & replace soiled material drums nightly (securing for thawing)

Separation of sorbents & soiled aggregates from product (weekly)

Storage for and disposition of soiled solids

Disposition of recovered product:

a.) Into heating oil or collector tank (weekly)

b.) Back into product (quality and available quantity permitting)

c.) To waste oil recovery contractor with collector tank pumpout

Extraneous material removal from dike areas (day after job)

Pavement cleaning between trucks

General greasing and equipment inspection round weekly

# Cleanup Materials and Hand Tools

Catch pails and covers Pickup truck/snow plow (days only)

Cleanup drums and covers Drum hand cart

Sorbent Booms (1 bag) Tool and supply sled

Sorbent Blankets (2 bags) Portable pump

Sorbent Pads (2 bags) Wheelbarrows

Squeegees Shovels

Ice Traction Materials Spare Fire Extinguishers

# N.N.R.S.

This SPCC Plan will be implemented as herein described:

Name HAROLD SCHECTMAN

Title OWNER

Date JAN

# Engineer's Certification

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, NYSNL Article 12 Section 191 Title 6 NYCRR Part 610 attest that this SPCC Plan has been prepared in accordance with good engineering paractices.

Robert Sweigard

meer

Printed Name of Registered Professional Engineer

Signature of Registerd Professional Engineer

#### APPENDIX A INDEX

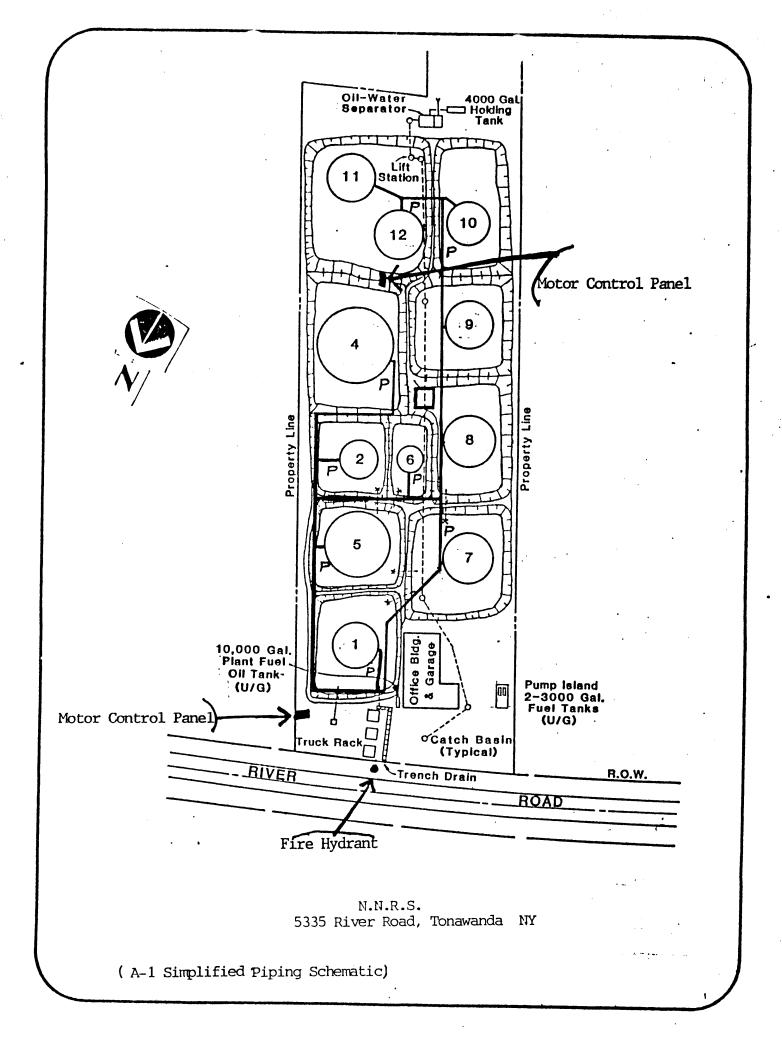
## APPENDIX A - Drawings λ - 1 Simplified Piping Schematic A - 2Schematic - Tank 1 Λ - 3 Truck Loading Pump Schematic - Tank 2 Λ – 3 Truck Loading Pump Schematic - Tank 4 Λ - 5 Truck Loading Pump Schematic - Tank 5 Λ – 6 Truck Loading Pump Schematic - Tank 6 Λ - 7 Truck Loading Pump Schematic - Tank 7, 8, 9 Truck Loading Pump Schematic - Tank 10 $\lambda - 8$ Λ - 9 Truck Loading Pump Schematic - Tank 11, 12 $\lambda - 10$ Tank Schedule $\lambda - 11$ Dike Plan $\lambda - 12$ Loading Rack Schematic $\lambda - 13$ Manifold House $\Lambda - 14$ Operation/Inspection Checklist

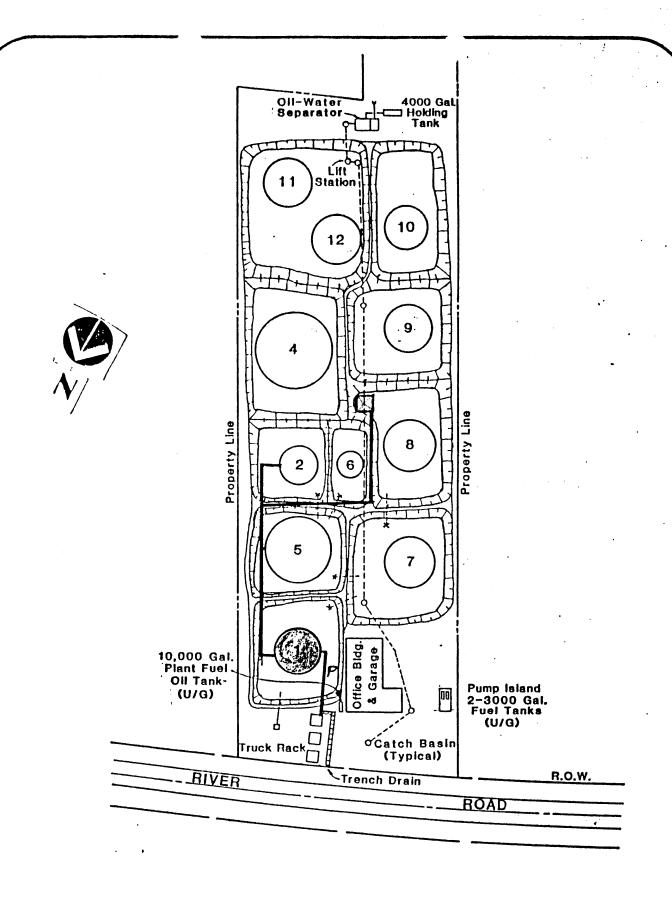
Loading Rack Containment & Drainage

Undergroung Piping

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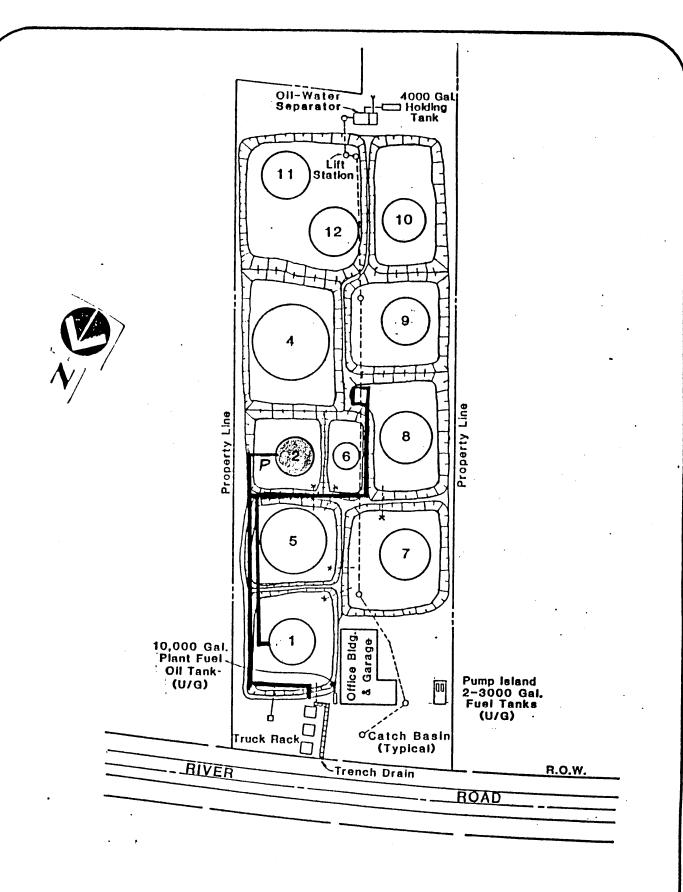
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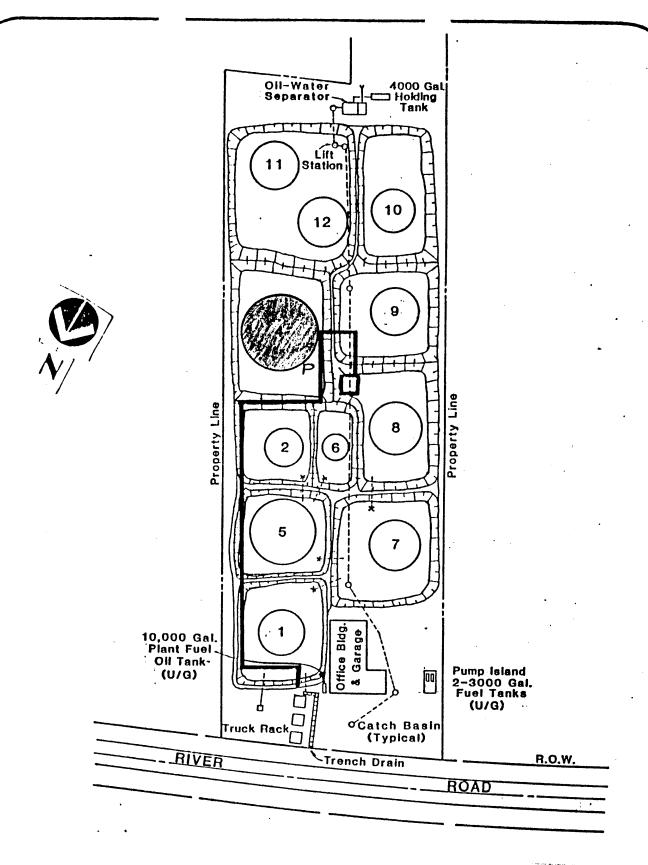


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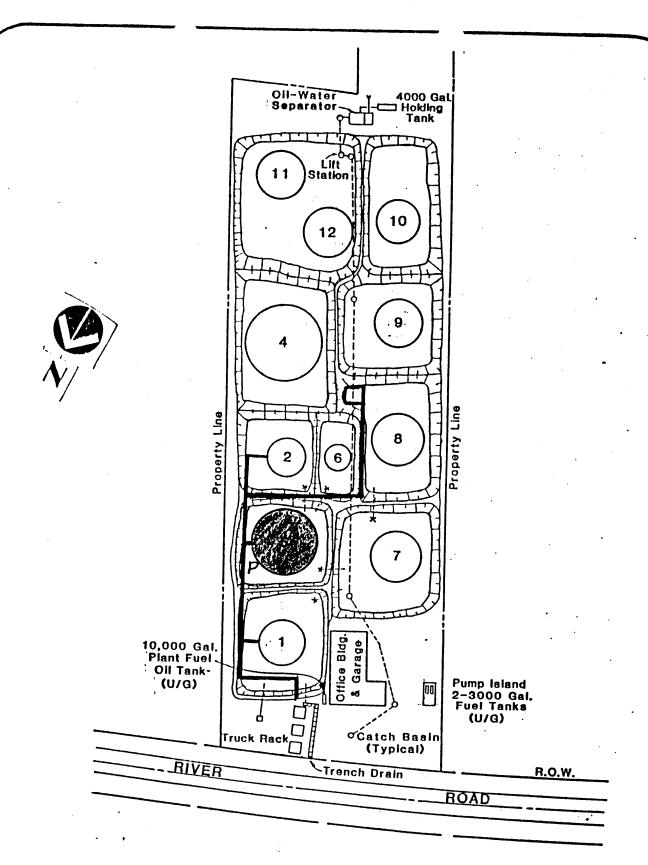
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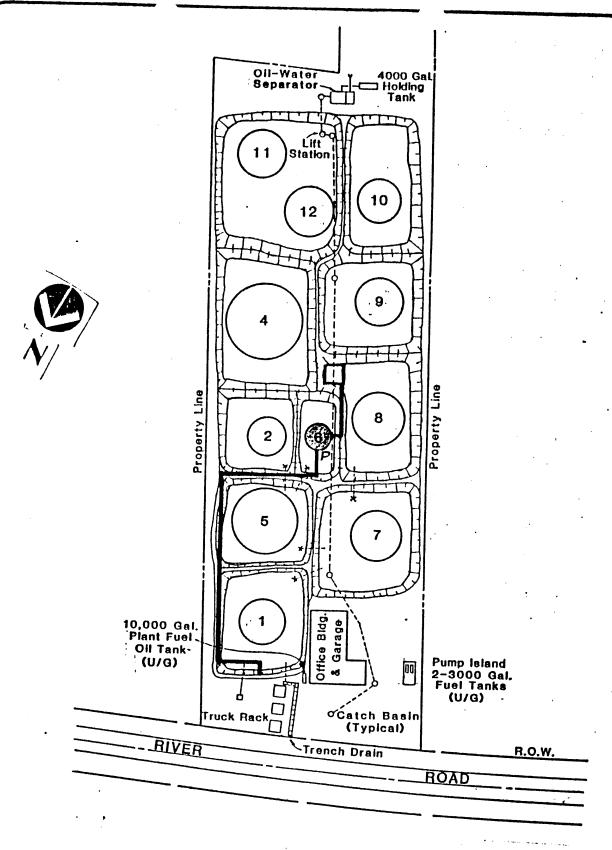
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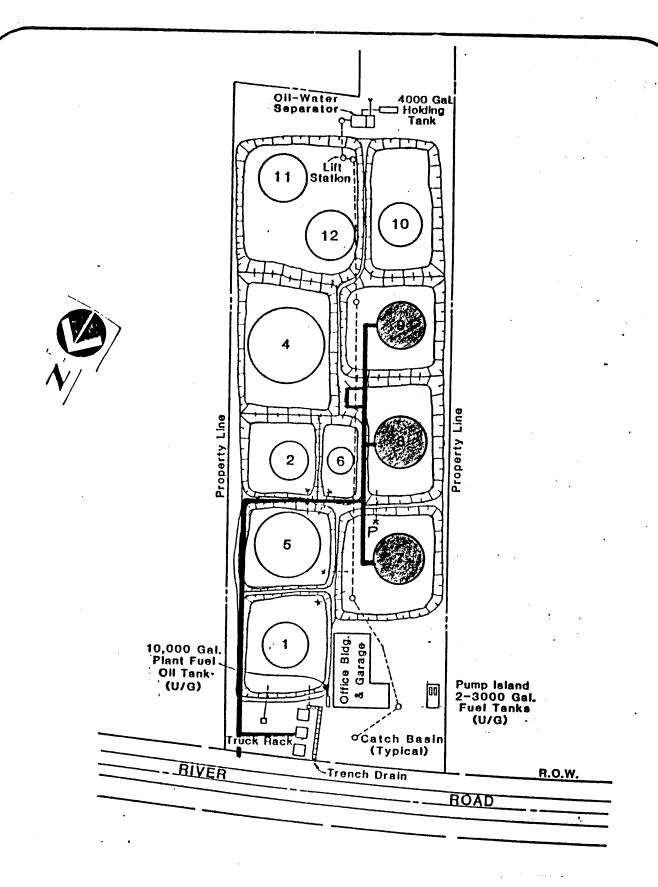
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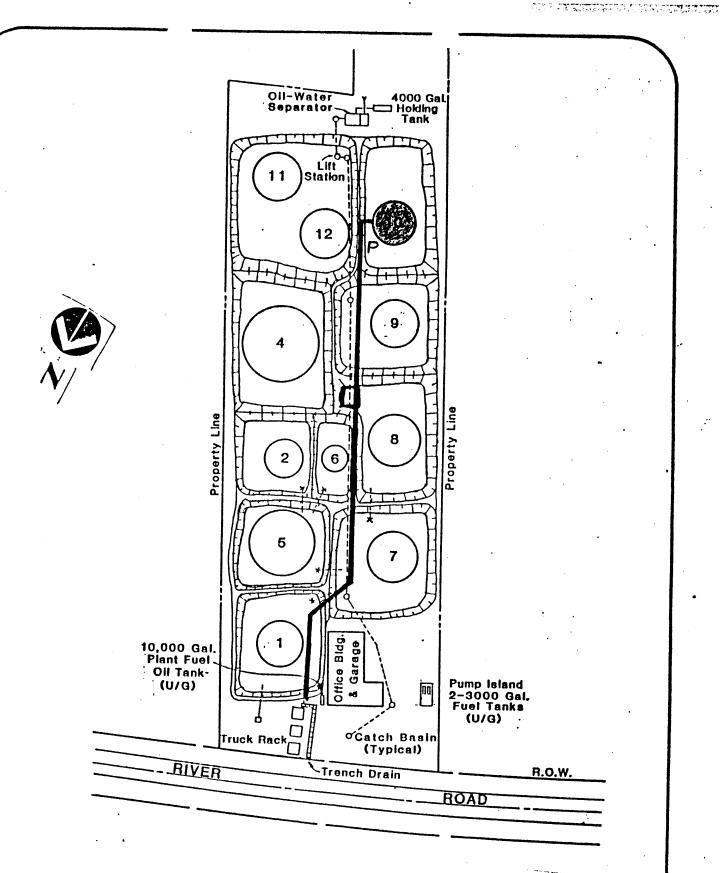


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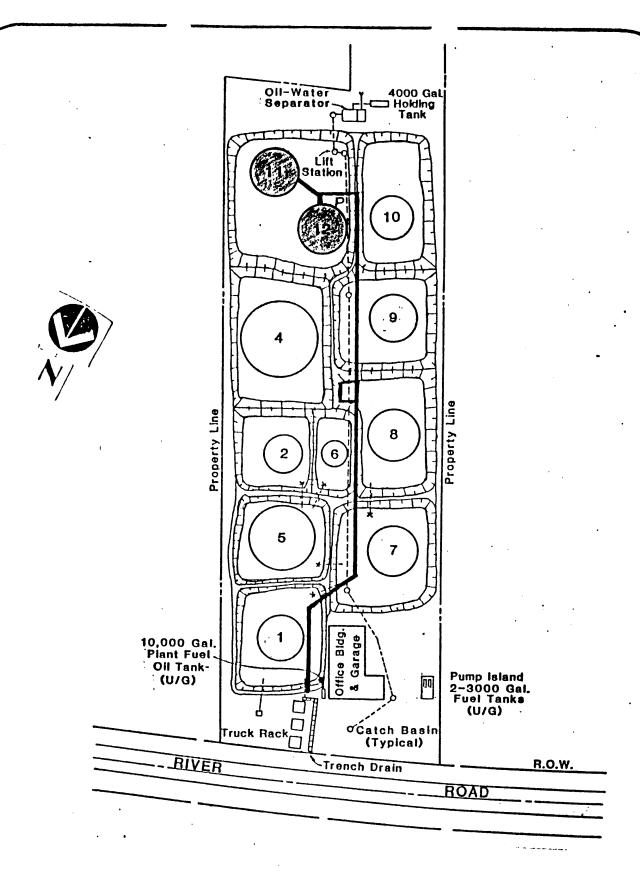
(A-7 Tank Nos. 7,8,9,10 Schematic) (GREEN)



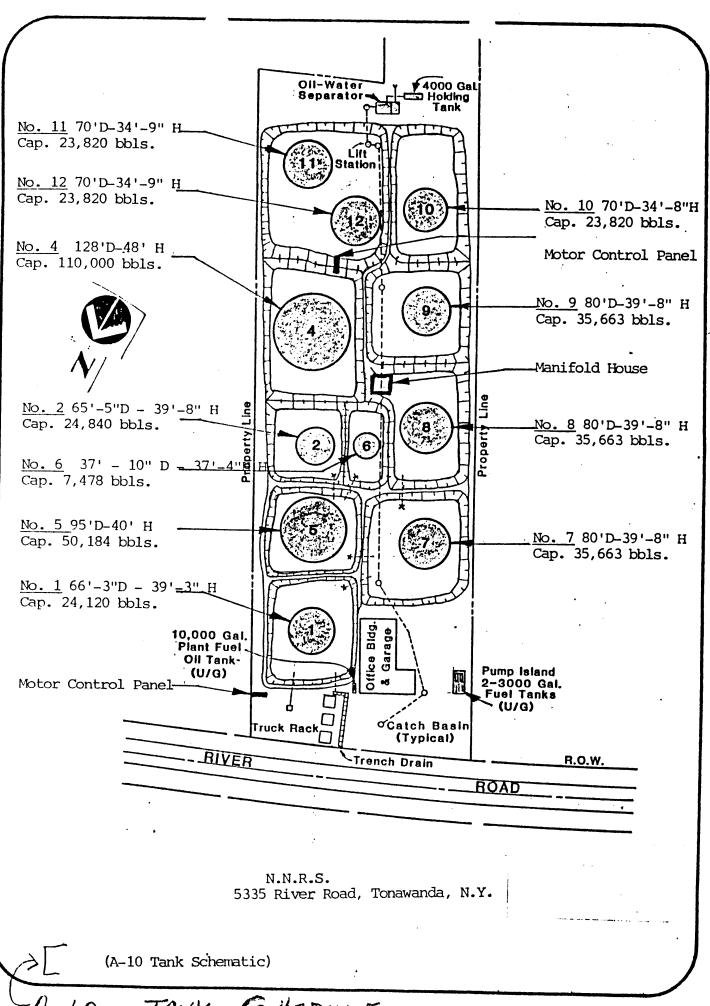
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(A-8 Tank No. 10 Schematic)

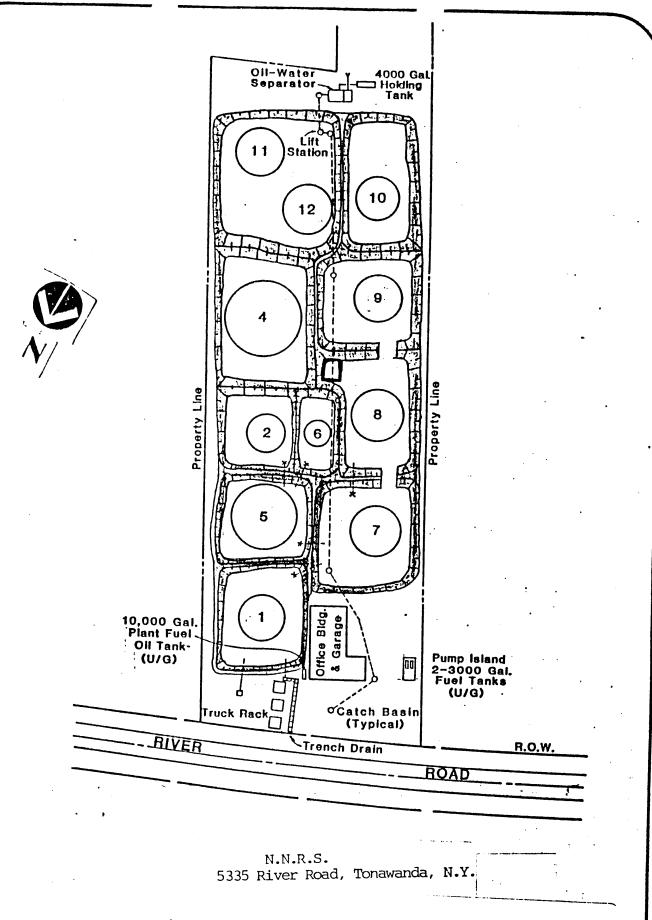
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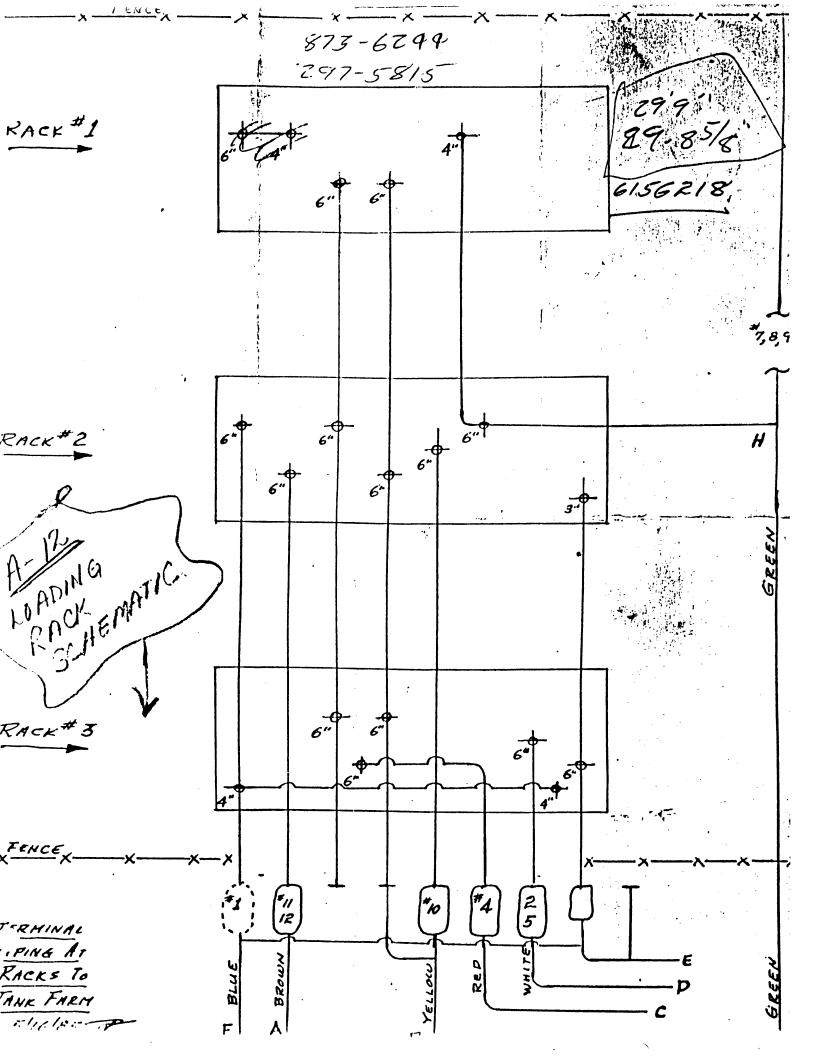
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A-10 TANK SCHEDULE



(A-11 Dike Plan)



5335 River Road Tonawanda

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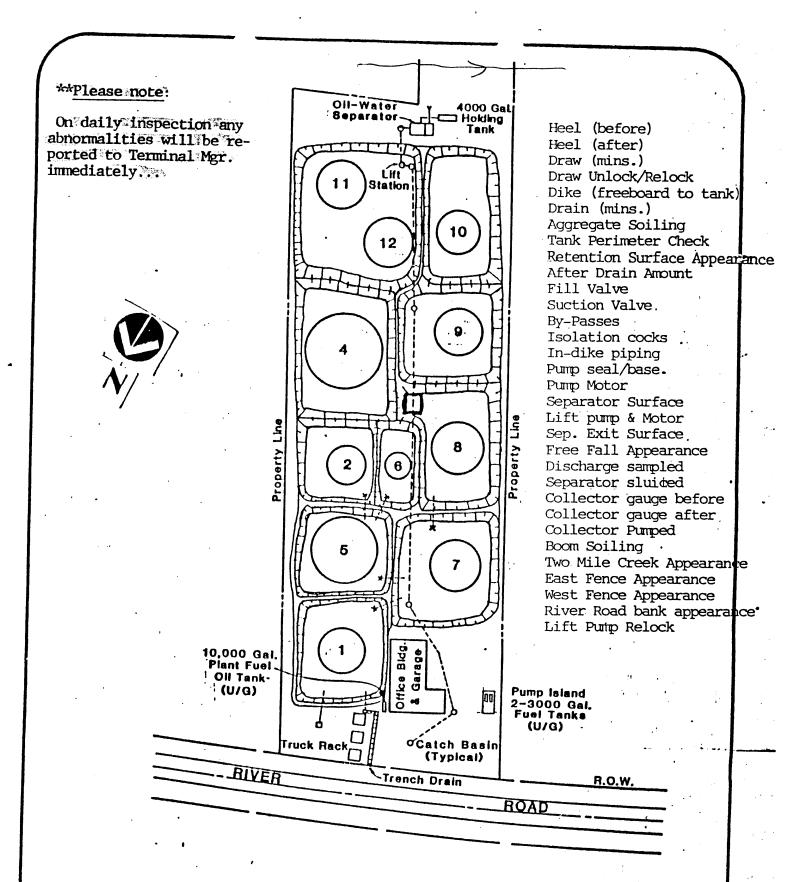
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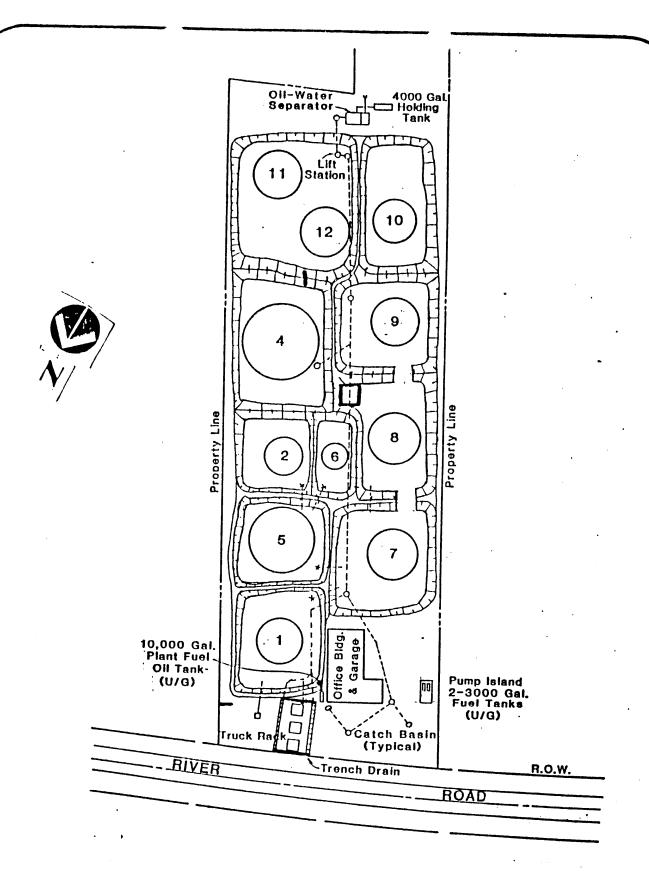
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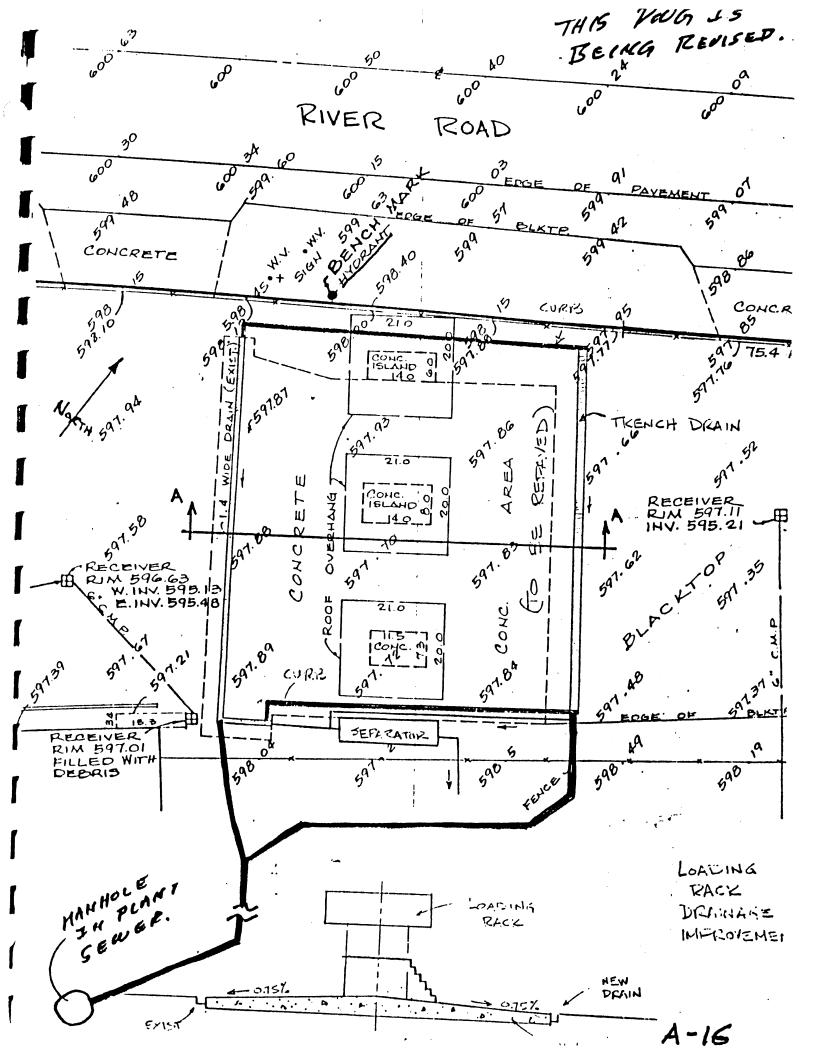
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N.N.R.S. 5335 River Road, Tonawanda, N.Y.



N.N.R.S. 5335 River Road, Tonawanda, N.Y.



# APPENDIX B

TANK INSPECTION REPORT



5800 Belleville Road Belleville, Michigan 48111 / (313) 397 0040

Subject: Certification of Storage Tank Shell Plate for River Road Oil Terminal, Tonawanda, New York

On October 20, 1983, TSI conducted a visual inspection and ultra-sonic testing of all tankage at the above mentioned facility. The thickness readings were taken with a Krautkramer-Branson KBI type DM-1B meter.

These results may be found on the attached TSI tank inspection reports.

The following assumptions were made in evaluating the structural integrity of the storage tank shell.

- a joint efficiency of 100%
- shell plate material of A-36
- specific gravity of 1.0

the design calculations were done in accordance with API 650, 7th edition.

The below listed notes are keyed to the attached inspection reports.

- Note 1. The upper shell plates are currently below, less than, .250 inches thick. This thickness is not in accordance with the current API 650 for thickness only. In our opinion the current shell thickness poses no structural problems.
- Note 2. This assumes A 516 GR 65 shell plate was used in this tank. (Approximate construction date 1979-80).

William E. Stapleton

# TANK SERVICE, INC. TANK INSPECTION REPORT

	ANK # 1 RIV								
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	a. Elastomer Parts		
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	d. Gaps *		*, *
7.	OTHER SEAL TYPES	4	· co
8.	ROOF SUPPORTS	4	189
9.	ANTI-ROTATION DEVICE	4	• ************************************
0.	ROLLING LADDER		
	a. Alignment	4	
	b. Wheels		
	c. Track		
11.	OVERFLOWS/ SHELL VENTS	1	·
12.	TANK GROUNDING	2	
3.	HANDRAILS/ GUARDRAILS	1	
14.	BLEEDER VENTS (FL. ROOF)	1	944
5.	P-V VENTS	4	
6.	GAUGES	2	
17.	FOAM DAM & OTHER FIRE PROTECTION	4	
ς.	FIRE DYKES .	1	THE STATE OF THE S
9.	FOUNDATION		

<sup>\*</sup> Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch for of Tank (1)

ITEM	CONDITION CODE *	COMMENTS	
LADDERS .	1		
MISC. FITTINGS			
a.			
b.			
С.			
d			
e			
PIPING TO TANK	1		
GENERAL CONDITIO	NS		
a. Leaking Rivet Sea	ins		and the second s
b. Shell Buckles			
c			
d.			AND THE PERSON NAMED IN COLUMN TWO
e			
		$\mathcal{L}_{\mathcal{A}} = \mathcal{L}_{\mathcal{A}} = $	
NDITION CODE (*)			
Good			;'
. Fair			
Poor/Needs repair or	replacement		•

4. Not applicable.

INSPECTED BY:

name of inspector

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TANK # 2 RIVE	TED WEI	DED X	INSPECTION	DATE 10-20-8
ESCRIPTION:65'5" Øx				
TYPE: CONE ROOF	FL. ROOF	IN	TERNAL FL. ROOF	
IQUID LEVEL	INSPECTION M	ADE WHILI		
USTOMER/LOCATION	RIVER ROAD OIL/Tonaw	vanda, NY	OUT OF SI D-6250	ERVICE X & sea
ITEM	CONDITION CODE	*	COMMENTS	
1. PAINT/COATING				
a. Shell	2	Crae	sking	
b. Fixed Roof	2		cking & peeling	
c. Fl. Roof/Int. Fl.	4			
d. Bottom	4			
THICKNESS				
a. Shell	See Note 1	.400	, .310, .260, .200,	195 195
b. Fixed Roof	1	.195		
c. Fl. Roof/Int. Fl.	4			
d. Bottom	4			
PONTOONS	4			
DRAINAGE SYSTEM				ı
a. Fl. Roof	4		·	
1. Check Valve	4			
PRIMARY SEAL			,	
a. Shoe Type	4		•	• .
1. Vapor Fabric				
2. Hanger/Pusher				
3. Sealing Ring				
4. Other Hardware			·	
<ol><li>Seal Contact w/shell</li></ol>				
b. Form Type	4	!		
1. Fabric	•			
2. Form				
3. Hardware		•		
4. Seal Contact w/shell				

	ITEM	CONDITION CODE *	COMMENTS
	c. Liquid Type	4	
	1. Fabric	<u> </u>	
	2. Liquid		
	3. Hardware		
	4. Scal Contact w/shell		·
6.	SECONDARY SEAL	,	
	a. Elastomer Parts		·
	b. Metal Parts	İ	
	c. Hardware		
	d. Gaps *		
7.	OTHER SEAL TYPES	4	
8.	ROOF SUPPORTS	4	
9.	ANTI-ROTATION DEVICE	4	
0.	ROLLING LADDER		·
	a. Alignment	4	
	b. Wheels		
	c. Track	:	
11.	OVERFLOWS/ SHELL VENTS	1	
. 2.	TANK GROUNDING	2	
.3.	HANDRAILS/ GUARDRAILS	1	
4.	BLEEDER VENTS (FL. ROOF)	1	
5.	P-V VENTS	4	
ű.	GAUGES	2	, to
7.	FOAM DAM & OTHER FIRE PROTECTION	4	
8.	FIRE DYKES		
9.	FOUNDATION	. 5	Tank_chime_is_deteriorating

<sup>\*</sup> Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch

ITEM	CONDITION CODE	*	COMMENTS
STAIRWAYS &	. 2	:	Repair rusted out platform
. MISC. FITTINGS			
a			
b			
c			
d	The second secon		
c			
. PIPING TO TANK	1		
. GENERAL CONDITIONS	5_		
a. Leaking Rivet Seams	S		
b. Shell Buckles		a desire selection	
c.			
d			
e			
1			
ONDITION CODE (*)		•	
Good		:	· ·
Fair			
Poor/Needs renair or re	enlacement		SA.

1. Not applicable.

name of inspector

INSPECTED BY:

/

ANK # 4 RIVI	ETED WELDE	D X INSPECTION DATE 10-20-	83
ESCRIPTION: 128 0 x	48 HIGH CAPAC	CITY: 110,000 Bb!	-
TPE: CONE ROOF X	FL. ROOF	INTERNAL FL. ROOF X	
QUID LEVEL	INSPECTION MAD	DE WHILE TANK WAS: IN SERVICE	•
	, ;	OUT OF SERVICE X	
ISTOMER/LOCATION _	River Road Oil/Tonawand		
ITEM	CONDITION CODE *	COMMENTS	
PAINT/COATING			
a. Shell	1		
b. Fixed Roof	1 .		
c. Fl. Roof/Int. Fl.	4 -		
d. Bottom	4		
THICKNESS			
a. Shell	1 Note 2	.675, .560, .440, .340, .335, .330	
b. Fixed Roof	1	.210	
c. Fl. Roof/Int. Fl.	4		
d. Bottom	4		
PONTOONS	4		
DRAINAGE SYSTEM		•	
a. Fl. Roof	4		
1. Check Valve	4		
PRIMARY SEAL			
a. Shoe Type	4		
1. Vapor Fabric			
2. Hanger/Pusher			
3. Scaling Ring			
4. Other Hardware			
<ol><li>Scal Contact w/shell</li></ol>	·		
b. Form Type	1		_
1. Fabric	1		
2. Foam	1		
3. Hardware	1		-
4. Seal Contact w/shell	1		-

	ITEM	CONDITION CODE *	COMMENTO
	c. Liquid Type	4	COMMENTS
	1. Fabric		
	2. Liquid		
	3. Hardware		-
	4. Scal Contact w/shell		W
6.	SECONDARY SEAL		
	a. Elastomer Parts		<b>₩</b>
	b. Metal Parts		
	c. Hardware		
	d. Gaps *		
7.	OTHER SEAL TYPES	4	upi
3.	ROOF SUPPORTS	1	
9.	ANTI-ROTATION DEVICE	1	· ·
0.	ROLLING LADDER		
	a. Alignment	4	- м <b>я</b>
	b. Wheels		
	c. Track		
1.	OVERFLOWS/ SHELL VENTS	1	
2.	TANK GROUNDING	. 1	_
3.	HANDRAILS/ GUARDRAILS	1	
1.	BLEEDER VENTS (FL. ROOF)	1	
5.	P-V VENTS	1	
6.	GAUGES	1	
7.	FOAM DAM & OTHER FIRE PROTECTION	4	***
; .	FIRE DYKES	. 1	
	FOUNDATION	1 ,	

<sup>\*</sup> Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch per ft. of Tank  $\emptyset$ .)

ITEM	CONDITION	CODE *	COMME	NTS	
STAIRWAYS & LADDERS	·1				
. MISC. FITTINGS					
a		• 1			
b			An analysis of the section of the se		
с.				-	
d					
e					
PIPING TO TANK	1				
GENERAL CONDITION	ONS				
a. Leaking Rivet Sea	ams				
b. Shell Buckles					
C					
d.		,			
е.					
NUTION CODE (*)				•	
ONDITION CODE (*)		•	•	•	
Good				<b>¿'</b>	
Fair				•	
Poor/Needs repair or	replacement				

4. Not applicable.

name of inspector

INSPECTED BY:

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		MANE:

ANK # 5 R1	l trans	
DESCRIPTION: 95 0	VETED	WELDED X
YPE: CONE ROOF	<u>c 40   111GH</u>	WELDED X INSPECTION DATE 10 CAPACITY: 50,184
LIQUID LEVEL	* FL. ROOF	50,184
THE DEVEL	INSPECTIO	ON MADE WILL BOOF
HSTOMED IS	*Graver expansion	TANK WAS: IN SERVICE
USTOMER/LOCATION	River Road Oil	roof OUT OF SERVICE
	1000 011)	Tonawanda, NY D-6250
ITEM	CONDITION COL	
PAINT/COATING	TANDITION COL	COMMENTS
a. Shell	•	
b. Fixed Roof	2	
c. Fl. Roof/Int. Fl.	2	
d. Bottom	4	
THICKNESS	4	
a. Shell		
b. Fixed Roof		.545, .425, .320, .265
c. Fl. Roof/Int. Fl.	2	.155
d. Bottom	4	
PONTOONS	2	275
DRAINAGE SYSTEM	4	.275 - Pitting was in process of bei
a. Fl. Roof		repaired
1	4	
1. Check Valve PRIMARY SEAL	4	
a. Shoe Type	!	
	4	
1. Vapor Fabric		
2. Hanger/Pusher		
3. Sealing Ring		
4. Other Hardware		
5. Seal Contact w/shell		
b. Form Type	<u> </u>	
(AMIC)	4 .	
1. Fabric		
0.00		
3. Hardware		
4. Seal Contact w/shell		
	and the same state of the same	

	ITEM	CONDITION CODE *	COMMENTS
•	c. Liquid Type	4	
	1. Fabric	•	<u> </u>
	2. Liquid		
	3. Hardware		
	4. Seal Contact w/shell		
6.	SECONDARY SEAL		
	a. Elastomer Parts		
	b. Metal Parts		
	c. Hardware		
	d. Gaps *		
7.	OTHER SEAL TYPES	4	
8.	ROOF SUPPORTS	2	
9.	ANTI-ROTATION DEVICE	4	
0.	ROLLING LADDER	:	
	a. Alignment	4	
	b. Wheels		
	c. Track		
1.	OVERFLOWS/ SHELL VENTS	1	
2.	TANK GROUNDING	2	
3.	HANDRAILS/ GUARDRAILS	1	
4.	BLEEDER VENTS (FL. ROOF)	1	
5.	P-V VENTS	4	
<b>5.</b>	GAUGES	2	
7.	FOAM DAM & OTHER FIRE PROTECTION	4	
÷.			
9.	A COLONI	1 %	
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<sup>·</sup> Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch per ft. of Tank 0.)

ITEM	CONDITION CODE *	COMMENTS	
STAIRWAYS & LADDERS	2	Foundation to ladder shoul	d be repaired
a	,		
b			•
c			
d			
с.			
PIPING TO TANK	1		
GENERAL CONDITIONS	3		
a. Leaking Rivet Seams			
b. Shell Buckles			
c			
d			
e			
NDITION CODE (*)			•
Good		•	
Fair	; ;		
Poor/Needs repair or rep	placement		

Not applicable.

name of inspector

INSPECTED BY:

	•	•		
TANK # 6 RIV	ETED WELDI	ED X 11	SPECTION DAT	E 10-20-
DESCRIPTION:37'10" 0 x	37'4" HIGH CAPA	CITY: 314,090	O GLS	X KX X
YPE: CONE ROOF	* FL. ROOF	INTERNAL	FL. ROOF	
LIQUID LEVEL	INSPECTION MAI	DE WHILE TANK W		CE X
	*Dome roof		OUT OF SERVIC	
TUSTOMER/LOCATION _	River Road Oil/	Tonawanda, NY [	)-6250	
ITEM	CONDITION CODE *	CO	MMENTS	
PAINT/COATING				
a. Shell	]			
b. Fixed Roof	1	Company of the second of the s		
c. Fl. Roof/Int. Fl.	4 -			
d. Bottom	4			
. THICKNESS		The state of the s		
a. Shell	1	245 205	105 200 205	
b. Fixed Roof	4		195, .200, .205, rong to take read	
c. Fl. R∞f/Int. Fl.	4	14013 600 361	ong to take read	ing
d. Bottom	4			
5. PONTOONS	4		· ·	<del></del>
DRAINAGE SYSTEM				<del></del>
a. Fl. Roof	4			
1. Check Valve	4			<del></del>
PRIMARY SEAL			*	
a. Shoe Type	4	•		
1. Vapor Fabric				<del></del>
2. Hanger/Pusher				
3. Sealing Ring				
4. Other Hardware			•	
<ol> <li>Seal Contact w/shell</li> </ol>	1 -			
b. Form Type	. 4			
1. Fabric				
2. Form	And the second of the second o			
		•		
4. Seal Contact w/shell				<u></u>

	ITEM	CONDITION CODE *	COMMENTS
	e. Liquid Type	4	
	1. Fabric		
	2. Liquid	and to a complete a second	<b>_</b>
	3. Hardware		
	4. Scal Contact w/shell		
6.	SECONDARY SEAL		
	a. Elastomer Parts		·
	b. Metal Parts		7
	c. Hardware	•	
	d. Gaps *		
7.	OTHER SEAL TYPES	4	
8.	ROOF SUPPORTS	4	
9.	ANTI-ROTATION DEVICE	4	· .
0.	ROLLING LADDER		. 5
	a. Alignment	4	
	b. Wheels		·
	c. Track		
11.	OVERFLOWS/ SHELL VENTS	1	
:2.	TANK GROUNDING	2	
3.	HANDRAILS/ GUARDRAILS	1	
4.	BLEEDER VENTS (FL. ROOF)	4	
5.	P-V VENTS	4	No vent exists-currently venting to
6.	GAUGES	1	atmosphere.
7.	FOAM DAM & OTHER FIRE PROTECTION	4	
8.	FIRE DYKES .	. 1	
9.	FOUNDATION	1	

Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch per ft. of Tank 0.)

ITEM	CONDITION CODE *	COMMENTS
TAIRWAYS & LADDERS	1	
MISC. FITTINGS		
a.	The second secon	
b		
c		
d		
e	The same and the s	
PIPING TO TANK		
GENERAL CONDITIONS	<u>;                                    </u>	
a. Leaking Rivet Seams		
b. Shell Buckles		
C		
d.		
e.		
NDITION CODE (*)		
Good		•
Fair		

Poor/Needs repair or replacement

name of inspector

Not applicable.

NSPECTED BY:

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TANK # 7 RIVE		INSPECTION DATE 10-20-8
DESCRIPTION: 80 ' 0 x	34'10" HIGH CAPACI	TY: 35,663 Bb1
TYPE: CONE ROOF	X FL. ROOF	INTERNAL FL. ROOF
LIQUID LEVEL		WHILE TANK WAS: IN SERVICE
Justomer/Location _	River Road Oil/Ton	OUT OF SERVICE X & sea
ITEM	CONDITION CODE *	COMMENTS
1. PAINT/COATING		
a. Shell	1	
b. Fixed Roof	1	
c. Fl. Roof/Int. Fl.	4 —	
d. Bottom	4	
. THICKNESS		
a. Shell	See note 1	.445, .355, .295, .250, .195, .200
b. Fixed Roof	1	.185
c. Fl. Roof/Int. Fl.	4	
d. Bottom	4	
PONTOONS	4	: .
DRAINAGE SYSTEM		
a. Fl. Roof	4	
1. Check Valve	4	
PRIMARY SEAL		
a. Shoe Type	4	
1. Vapor Fabric		
2. Hanger/Pusher		
3. Scaling Ring		
4. Other Hardware		
5. Seal Confact w/shell		
b. Foam Type	4	
1. Fabric		
2. Form		
4. Seal Contact		
w/shell		

	ITEM	CONDITION CODE *	COMMENTS
	c. Liquid Type	4	
	1. Fabric		
	2. Liquid		
	3. Hardware		
	4. Seal Contact w/shell		
6.	SECONDARY SEAL		
	a. Elastomer Parts		
	b. Metal Parts		
	c. Hardware		
	d. Gaps *		
7.	OTHER SEAL TYPES	4	
8.	ROOF SUPPORTS	4	
9.	ANTI-ROTATION DEVICE	4	
0.	ROLLING LADDER		
	a. Alignment	4	
	b. Wheels		
	c. Track		
1.	OVERFLOWS/ SHELL VENTS	11	
2.	TANK GROUNDING	2	
3.	HANDRAILS/ GUARDRAILS	1	
4.	BLEEDER VENTS (FL. ROOF)	4	
5.	P-V VENTS	2	
6.	GAUGES	2	
7.	FOAM DAM & OTHER FIRE PROTECTION	4	
ì.	FIRE DYKES .	1	
9.	FOUNDATION	-1	

<sup>\*</sup> Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch per ft. of Tank Ø.)

ITEM	CONDITION CODE *	CON	MENTS	
STAIRWAYS &				
LADDERS	·2	2nd step on ladde	r - repair	
MISC. FITTINGS				
a		•		
b				
С.		to the speciments on the couldness when the speciments are a superior of the speciments.		<del></del>
d				
e				· · · · ·
PIPING TO TANK	1	The Author contraction and the contraction of the c		
GENERAL CONDITION	l'S	The state of the s		
a. Leaking Rivet Sean	ns			
b. Shell Buckles				
c		-		<del></del>
d		And the state of t		
е.		The state of the s		
		The second secon		
NUITION CODE (*)				
Good				
Fair			. *	<b>:'</b>
Poor/Needs repair or r	eplacement			
	<del>-</del>			

Not applicable.

name of inspector

DEPECTED BY:

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ANK # 8 RIVETED	WELI	DED X	INSPECTION	DATE 10 20 0
DESCRIPTION: 80 0 x 39'9"	HIGH CAP	CITY: 35	,663	Bbls
TPE: CONE ROOF X	FL. ROOF	INTERN	SAL FL. ROOF	
LIQUID LEVEL	INSPECTION MA			
ACTOMER A OCATION			OUT OF SEE	RVICE X seal
CUSTOMER/LOCATION	River Road Oil,	Tonawanda, NY	D-6250	
ITEM CO.				
2001	NDITION CODE *		COMMENTS	
PAINT/COATING  a. Shell				
	1		•	
b. Fixed Roof	1			Marie 1990
c. Fl. Roof/Int. Fl.	4 —			
d. Bottom	4			
THICKNESS				
a. Shell	1	. 440 371	ה 205 מבה מ	200 005
b. Fixed Roof	1	.195	5,295,255,2	.00,205
c. Fl. Roof/Int. Fl.	4			
d. Bottom	4	The second secon		-
3. PONTOUNS	4			
DRAINAGE SYSTEM				·
a. Fl. Roof	4			
1. Check Valve				
PRIMARY SEAL				
a. Shoe Type	4			
1. Vapor Fabric		•		
2. Hanger/Pusher				
3. Scaling Ring			,	
4. Other Hardware	}	the control of the co	- c. **	
5. Seal Contact w/shell	-	The second secon		•
b. Foam Type	.4			
1. Fabric				
4. Scal Contact w/shell				

	ITEM	CONDITION CODE *	COMMENTS
	c. Liquid Type	4	
	1. Fabric		
	2. Liquid		
	3. Hardware		
	4. Seal Contact w/shell		
ε.	SECONDARY SEAL		· ·
	a. Elastomer Parts		
	b. Metal Parts		
	c. Hardware	-	
	d. Gaps *		
7.	OTHER SEAL TYPES	4	
8.	ROOF SUPPORTS	2	
9.	ANTI-ROTATION DEVICE	4	•
0.	ROLLING LADDER		•
	a. Alignment	4	
	b. Wheels		
	c. Track		
!1.	OVERFLOWS/ SHELL VENTS	1	
2.	TANK GROUNDING	2	
:3.	HANDRAILS/ GUARDRAILS	1	
14.	BLEEDER VENTS (FL. ROOF)	4	
5.	P-V VENTS	2	
6.	GAUGES	2	
17.	FOAM DAM & OTHER FIRE PROTECTION	4	
s.			- Live mode to be filled back
9.		3	Foundation needs to be filled back built up around perimenter to previews.
٠	Must Meet EPA 60.112A per ft. of Tank Ø.)	(Accumulated area of ga	aps shall not exceed 1.0 square inch

ITEM	CONDITION CODE *	COMMENTS
LADDERS MISC. FITTINGS	1	
a		
b		
С.		
d.		
с.		
PIPING TO TANK		
GENERAL CONDITIONS		
a. Leaking Rivet Seams	<del></del>	
b. Shell Buckles		
c		
d.		
e		
NDITION CODE (*)		
Good		:•
Fair		

Poor/Needs repair or replacement

name of inspector

Not applicable.

INSPECTED BY:

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unio.

FANK # 9 RIV	ETED	WE	LDED	. <u>X</u>	INSPE	CTION DAT	TE 10-20-8
DESCRIPTION: $80 \cdot \phi_{X}$	39'9" 1110	GH CA	PACIT	ΓY:	35,663		Bbls
TYPE: CONE ROOF	X FL.	ROOF		10	TERNAL FL.	ROOF	
, JIQUID LEVEL	INSI	PECTION 1	MADE	WHILE	TANK WAS:	IN SERVI	CE
r 1	•				OUT	OF SERVIC	
JUSTOMER/LOCATION _	River Road	0i1/Tonawar	da, NY		D-6250		
<b>r</b> 1							
ITEM	CONDITI	ON CODE	*		COMME	NTS	
1. PAINT/COATING							
a. Shell	2		_		-		
b. Fixed Roof	2		 <del>-+</del>				,
c. Fl. Roof/Int. Fl.	4						
d. Bottom	4						
. THICKNESS							
a. Shell	1			,460	375295.	.255195	195 ·
b. Fixed Roof	1			.190			
c. Fl. Roof/Int. Fl.	4						
d. Bottom	4						
. PONTOONS	4						
4. DRAINAGE SYSTEM							1
a. Fl. Roof	4						er.
1. Check Valve							
PRIMARY SEAL							
a. Shoe Type	4		_		•		
1. Vapor Fabric				•			
2. Hanger/Pusher						-	<del></del>
3. Scaling Ring							
4. Other Hardware							
5. Seal Contact w/shell			- <del></del>				en elleri i prese ple Elleri i prese escuen esc
b. Form Type	4		1: -				
1. Fabric	•		-   -			• .	-
2. Form	refreshed assertations and distribute a graphical age	derenden – erre dere im menne den in en mende	- !				
3. Hardware	***************************************	and the second s		•			
4. Seal Contact w/shell						The second section of the sect	

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<sup>\*</sup> Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch per ft. of Tank 0.)

1TEM	CONDITION CODE *	COM	MENTS
TAIRWAYS &	. 1		
MISC. FITTINGS			
a			
b			
d.			
ePIPING TO TANK	1		
GENERAL CONDITIO	NS		
	ms		
b. Shell Buckles			
d			
6.			
CONDITION CODE (*)		: 	
Good			**
. Fair			
Poor/Needs repair or	replacement		

Not applicable.

\*SPECTED BY:

name of inspector

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		e de la composition della comp

	ANK # 10 RIVET	red welder	D X INSPECTION DATE 10-20-
TEM			1TY: 23,820 Bbl
INSPECTION MADE WHILE TANK WAS: IN SERVICE   X OUT OF SERVICE		•	
ITEM   CONDITION CODE   COMMENTS			E WHILE TANK WAS: IN SERVICE X
1. PAINT/COATING  a. Shell  b. Fixed Roof  c. F1. Roof/Int. F1.	USTOMER/LOCATION	River Road Oil/To	
a. Shell b. Fixed Roof c. Fl. Roof/Int. Fl. 4 d. Bottom 4  THICKNESS a. Shell 1 .385, .310, .255, .250, .250 b. Fixed Roof c. Fl. Roof/Int. Fl. 4 d. Bottom 4  PONTOONS DRAINAGE SYSTEM a. Fl. Roof 4 1. Check Valve 4  PRIMARY SEAL a. Shoe Type 4 1. Vapor Fabric 2. Hanger/Pusher 3. Sealing Ring 4. Other Hardware	ITEM	CONDITION CODE	COMMENTS
b. Fixed Roof c. Fl. Roof/Int. Fl. 4 d. Bottom 4  THICKNESS a. Shell 1 .385, .310, .255, .255, .250, .250 b. Fixed Roof c. Fl. Roof/Int. Fl. 4 d. Bottom 4  PONTOONS DRAINAGE SYSTEM a. Fl. Roof 4 1. Check Valve 4  PRIMARY SEAL a. Shoe Type 4 1. Vapor Fabric 2. Hanger/Pusher 3. Sealing Ring 4. Other Hardware	1. PAINT/COATING		
c. Fl. Roof/Int. Fl. 4 d. Bottom 4  THICKNESS a. Shell 1 .385, .310, .255, .250, .250 b. Fixed Roof 1 .195 c. Fl. Roof/Int. Fl. 4 d. Bottom 4  PONTOONS 4  DRAINAGE SYSTEM a. Fl. Roof 4 1. Check Valve 4  PRIMARY SEAL a. Shoe Type 4 1. Vapor Fabric 2. Hanger/Pusher 3. Scaling Ring 4. Other Hardware	a. Sheli	1	
d. Bottom	b. Fixed Roof	1	
### THICKNESS  a. Shell  b. Fixed Roof c. Fl. Roof/Int. Fl.  d. Bottom  PONTOONS  DRAINAGE SYSTEM  a. Fl. Roof  1. Check Valve  PRIMARY SEAL a. Shoe Type 4  1. Vapor Fabric 2. Hanger/Pusher 3. Sealing Ring 4. Other Hardware	c. Fl. Roof/Int. Fl.	4	
a. Shell b. Fixed Roof c. F). Roof/Int. Fl. d. Bottom PONTOONS DRAINAGE SYSTEM a. F). Roof 1. Check Valve PRIMARY SEAL a. Shoe Type 1. Vapor Fabric 2. Hanger/Pusher 3. Scaling Ring 4. Other Hardware	d. Bottom	4	
b. Fixed Roof c. Fl. Roof/Int. Fl. d. Bottom PONTOONS DRAINAGE SYSTEM a. Fl. Roof 1. Check Valve PRIMARY SEAL a. Shoe Type 1. Vapor Fabric 2. Hanger/Pusher 3. Scaling Ring 4. Other Hardware	THICKNESS		
c. Fl. Roof/Int. Fl. 4 d. Bottom 4 PONTOONS 4  DRAINAGE SYSTEM a. Fl. Roof 4 1. Check Valve 4 PRIMARY SEAL a. Shoe Type 4 1. Vapor Fabric 2. Hanger/Pusher 3. Scaling Ring 4. Other Hardware	a. Shell	1	
d. Bottom 4 PONTOONS 4 DRAINAGE SYSTEM a. Fl. Roof 4 1. Check Valve 4 PRIMARY SEAL a. Shoe Type 4 1. Vapor Fabric 2. Hanger/Pusher 3. Sealing Ring 4. Other Hardware	b. Fixed Roof	1	.195
PONTOONS  DRAINAGE SYSTEM  a. Fl. Roof  1. Check Valve  PRIMARY SEAL  a. Shoe Type  4  1. Vapor Fabric  2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	c. Fl. Roof/Int. Fl.	4	
DRAINAGE SYSTEM  a. Fl. Roof  1. Check Valve  PRIMARY SEAL  a. Shoe Type  4  1. Vapor Fabric  2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	d. Bottom	4	
DRAINAGE SYSTEM  a. Fl. Roof  1. Check Valve  PRIMARY SEAL  a. Shoe Type  4. 1. Vapor Fabric  2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	PONTOONS	4	
1. Check Valve  PRIMARY SEAL  a. Shoe Type  1. Vapor Fabric  2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	DRAINAGE SYSTEM		
PRIMARY SEAL  a. Shoe Type  1. Vapor Fabric  2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	a. Fl. Roof	4	
a. Shoe Type  1. Vapor Fabric  2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	1. Check Valve	4	
1. Vapor Fabric  2. Hanger/Pusher  3. Scaling Ring  4. Other Hardware	PRIMARY SEAL		
2. Hanger/Pusher  3. Sealing Ring  4. Other Hardware	a. Shoe Type	4	
3. Sealing Ring 4. Other Hardware	1. Vapor Fabric		
4. Other Hardware	2. Hanger/Pusher		
	3. Scaling Ring		
	4. Other Hardware		
w/shell			
b. Foam Type 4	b. Form Type	4	
1. Fabric	1. Fabric		
2. Form	2. Form		
3. Hardware	3. Hardware		
4. Seal Contact w/shell	7		

	TTEM	CONDITION CODE 1	COMMENTS
	c. Liquid Type	4	
	1. Fabric		
	2. Liquid		
	3. Hardware		
	4. Seal Contact w/shell		
ĵ, .	SECONDARY SEAL		
	a. Elastomer Parts		
	b. Metal Parts		
	c. Hardware		
	d. Gaps *		
ï.	OTHER SEAL TYPES	4	
8	ROOF SUPPORTS	4	
9.	ANTI ROTATION DEVICE	4	
0.	ROLLING LADDER		•
	a. Alignment	4	
	b. Wheels		
	c. Tinek		
1	OVERFLOWS/ SHELL VENTS	1	
•	TANK GROUNDING_	2	
	HANDRAILS/ GUARDRAILS	1	
·i.	RLEEDER VENTS (FL. POOF)	4	
-, <b>.</b>	P-V VENTS	2	
;	GAUGES	2	
i	FOAM DAM &		
	OTHER FIRE PROTECTION	4	
٠.	FIRE DYKES		
).	FOUNDATION		
		:	·.

Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square incher ft. of Tank  $\emptyset$ .)

ITEM	CONDITION CODE *	COMMENTS
STAIRWAYS & LADDERS	1	
MISC. FITTINGS		
a		
b.		
с.		
d		
с.		
. PIPING TO TANK	1	
B. GENERAL CONDITIONS		
a. Leaking Rivet Seams		Closely observe shell to floor connection
b. Shell Buckles		at ladder platform could be the beginning
c		of pin hole leak.
d.		
е.		
ONDITION CODE (*)	·	••
. Good	• .	· · · · · · · · · · · · · · · · · · ·
. Fair		• • • • • • • • • • • • • • • • • • •
Poor/Needs repair or rep	lacement	

4. Not applicable.

name of inspector

INSPECTED BY:

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			Ице

7 K # 11 RIV	ETED	WELDED X	INSPE	CTION DATE 10-20-83
ESCRIPTION: 70 '0x				Bbls.
Y E: CONE ROOF				
ICUID LEVEL		. •	•	
				OF SERVICE X & seale
TOMER/LOCATION _	River Road	Oil/Tonawanda, I	NY D-6250	
ITEM	CONDITION	CODE *	COMME	NTS
. PAINT/COATING				;
a. Shell	1			
b. Fixed Roof	11			
c. Fl. Roof/Int. Fl.	4	•		•
d. Bottom	4			
. THICKNESS				
a. Shell	11		380 <b>, .</b> 315 <b>, .</b> 255 <b>,</b>	.255, .250, .250
b. Fixed Roof	11		105	
c. Fl. Roof/Int. Fl.	44			
d. Bottom	<u> </u>			
PONTOONS	44			
DRAINAGE SYSTEM				;
a. Fl. Roof	44			
1. Check Valve	44			
PRIMARY SEAL		1	•	
a. Shoe Type	4			
1. Vapor Fabric	Western frequency others comprehensions at each consequence to place designed		• ,	
2. Hanger/Pusher				
3. Sealing Ring			<u> </u>	
4. Other Hardware				
<ol> <li>Seal Contact w/shell</li> </ol>				
b. Form Type	4			
1. Fabric				
2. Foam				
3. Hardware		•		
4. Seal Contact w/shell				

	1TEM	CONDITION CODE	*	COMMENTS
	c. Liquid Type	4		
	1. Fabric			
	2. Liquid			
	3. Hardware			
	4. Seal Contact w/shell			
6.	SECONDARY SEAL			The Control of the Co
	a. Elastomer Parts			
	b. Metal Parts			
	c. Hardware			
	d. Gaps *			
7.	OTHER SEAL TYPES	4		
8.	ROOF SUPPORTS	44		
9.	ANTI-ROTATION DEVICE	4		
0.	ROLLING LADDER	·		No.
	a. Alignment	4		
	b. Wheels			
	c. Track			
1.	OVERFLOWS/ SHELL VENTS	1		
2.	TANK GROUNDING	2		
3.	HANDRAILS/ GUARDRAILS	1		
4.	BLEEDER VENTS (FL. ROOF)	4		
5.	P-V VENTS	2		
6.	GAUGES	2		
7.	FOAM DAM & OTHER FIRE PROTECTION	4		
٠,	FIRE DYKES	1		
3. 9.	FOUNDATION	2		Tank is settling, should be watched Excavate chime & fill in tank chime
٠ ١		(Accumulated area c	<b>្រ</b> ព	ps shall not exceed 1.0 square inch

	ITEM	CONDITION CODE *			•	COMMENTS	
	STAIRWAYS & LADDERS	1					
	MISC: FITTINGS						
	a						
	b. ·						·
	c.						
	d.				··· - 4		
	е.					·	
	PIPING TO TANK	1					
	GENERAL CONDITIONS	_					
	a. Leaking Rivet Seams						
	b. Shell Buckles			-			
	c	· Andre				·	
	d	decompose a decomposida a reproductiva de caracter a personal de como de como como como como como como como com					
	е.	and the second of the second o					
		•	1				
)](	DITION CODE (*)					•	•
(	Good						· •
1	Fair		1				

Poor/Needs repair or replacement

name of inspector

1. Not applicable.

TASPECTED BY:

ANK # 12 1	RIVETED		WELDI	ED X	INSPE	CTION	DATE	10-20-83
DESCRIPTION: 70 1								
YPE: CONE ROOF	X	FL. ROO	F	101	ERNAL FL.	ROOF		
TIQUID LEVEL		INSPECT	ION MYI	DE WHILE	TANK WAS:	IN SE	RVICE	ستاد خانده فجمد سينو
•					OUT	OF SE	RVICE	X & Seal
USTOMER/LOCATIO	N	River Ro	ad Oil/T	onawanda, 1	NY D-6250			
		•		•	· .			
<u>ITEM</u>	<u>CO1</u>	ADILION C	ODE *	÷ *	COMME	NTS		
1. PAINT-/COATING	<del>-</del>							
a. Shell	***************************************	1						<del></del>
b. Fixed Roof		1				·		<u> </u>
c. Fl. Roof/Int. I	?l	4						
d. Bottom	ar constant on the state of	4						
. THICKNESS								
a. Shell	***	1 See no	te 1	380,	.310, .250,	.250, .	2402	30 .
b. Fixed Roof		1		.180				
c. Fl. Roof/Int. F	71.	4						
d. Bottom		4				·		-
PONTOONS	<del>discussion</del> sand	4		***************************************		···	· ·	
DRAINAGE SYSTE	<u>EM</u>							
a. Fl. Roof		4				· · · · · · · · · · · · · · · · · · ·		
1. Check Valve		4		<u> </u>	•			
PRIMARY SEAL		•						
a. Shoe Type		4					· · · · · · · · · · · · · · · · · · ·	
1. Vapor Fabri	c			<u> </u>				
2. Hanger/Pusl								
3. Scaling Ring					·			<del></del>
4. Other Hardy								
5. Scal Contact w/shell		A						
b. Foam Type		4						
1. Fabric	-							
2. Form								
3. Hardware	Spagning republic			•				
4. Seal Contact w/shell								

	ITEM	CONDITION CODE	*	COMMENTS
	c. Liquid Type	4		
	1. Fabric			
	2. Liquid			
	3. Hardware			
	4. Scal Contact w/shell		<del></del>	
6.	SECONDARY SEAL			
	a. Elastomer Parts			
	b. Metal Parts			
	c. Hardware			
	d. Gaps *			
7.	OTHER SEAL TYPES	4		
а.	ROOF SUPPORTS	4		
9.	ANTI-ROTATION DEVICE	4		
0.	ROLLING LADDER			
	a. Alignment	44		
	b. Wheels			
	c. Track			
1.	OVERFLOWS/ SHELL VENTS	1		
2.	TANK GROUNDING	2		,
3.	HANDRAILS/ GUARDRAILS	1		
4.	BLEEDER VENTS (FL. ROOF)	4		•
5.	P-V VENTS	2		
6.	GAUGES	2		
7.	FOAM DAM & OTHER FIRE PROTECTION	4		
S.	FIRE DYKES .	. 1	<del></del>	*
. i.	FOUNDATION	1		

\* Must Meet EPA 60.112A (Accumulated area of gaps shall not exceed 1.0 square inch per ft. of Tank Ø.)

		1	
ITEM	CONDITION CODE	•	COMMENTS
STAIRWAYS &			COMMENTS.
LADDERS	1		•
. MISC. FITTINGS			
a	•		
b	-	-	
c	Other commence and discount in commence of the condition	†	
d.		+	
е.	Andrews of the second of the s	+	
PIPING TO TANK	1	+	
GENERAL CONDITIONS		1	
a. Leaking Rivet Seams	•		
b. Shell Buckles			Moisture in thermometer
c	Andrews of the second s		
d	. 400	-	
е.		-	
	-	-	
NDITION CODE (*)			•
Good			
Fair			s•
Poor/Needs repair or ren	lacamont		

Not applicable.

name of inspector

I SPECTED BY:

RECEIVED

MAR 03 1986

M.Y.S. DEPT. OF ENVIRONMENTAL CONSERVATION REGION 9

# Appendix I ARCO (Atlantic) Pipeline Correspondence

most file



#### ERIE PETROLEUM TRANSFERS, INC.

5335 RIVER ROAD TONAWANDA, NEW YORK 14150

(716) 877-9325

November 2, 1987

N. Y. S. Department of Environmental Control. 600 Delaware Avenue Buffalo, New York 14202

Attn: Michael Hinton

Subject: Removal of Gasoline from Pipeline

Dear Mr. Hinton,

We are presently under construction to update our connection with the Atlantic Pipeline Corporation.

Due to the fact there is presently gasoline in that line we must remove it prior to doing any further work. We have developed the following plan.

- 1) We will push a pig through the line from Two Mile Creek to the Tank Farm.
- 2) Within the Tank Farm we will pipe the product to the rack and bottom loan into our trailer.
- 3) The trailer will be parked near our oil separation and when the product has settled out we will draw off the water.
- 4) The product will then be tested and will be sold or disposed of in an acceptable manner.

This procedure will give maximum protection for containment and operation control.

Your immediate review and acceptance is requested.

Thank you for your co-operation concerning this matter.

Very truly yours,

Robert L. Fisher Terminal Manager

600 Delaware Avenue, Buffalo, New York 14202-1073 November 13, 1987 Erie Petroleum Transfers, Inc. 5335 River Road Tonawanda, New York 14150 Attention: Robert Fisher Major Petroleum Facility License Number 09-1540 Purging and Testing of Atlantic Pipelines Dear Nr. Fisher: Your request for approval for the purging and testing of the Atlantic product pipeline has been approved. This approval is for a one-time-only occurrence to remove the residual gasoline that is in the pipeline.

The transfer of this product must occur at the loading rack area to maintain proper spill control. After the product is transferred to tank trucks for temporary storage, you must provide this office with a report on the transfer operation indicating date of transfer and volume recovered. The tank trucks must be staged on your property until proper disposal or recycling of the product is determined. You must provide this office with verification of the final disposition of the recovered product.

Also, enclosed for your use is a copy of Part 229 for petroleum liquid storage facilities regarding vapor recovery requirements at loading/unloading racks. Any future transfer of gasoline at this facility will not be permitted unless all rules and regulations are complied with.

If you have any questions, please call me at (716) 847-4586.

Sincerely,

Michael J. Hinton, P.E. Senior Sanitary Engineer

MJH: VU RIS

Enclosure

cc: Henry Sandonato

MOZS



#### ERIE PETROLEUM TRANSFERS, INC.

5335 RIVER ROAD TONAWANDA, NEW YORK 14150

(716) 877-9325

N.Y.S. Dept. Envir. Conv. 600 Delaware Ave. Buffalo, N.Y. 14202

Attn: Mr. Michael Hinton

Dear Mike;

In response to your November 13th 1987 letter requesting a report of the transfer operations for purging the Atlantic Pipline entering our Terminal we submit the following.

- 1) On November 3rd we connected and checked all pipes and fittings to prepare to pig the line.
- 2) On Nobember 4th we piged the line with water at low pressure and loaded product into tankers at rack #3 using bottom loading.
- 3) We recovered approximately 14,000 gallons of gasoline. The product  $\theta$  as checked and found to be OK, and was sold to Ontario Fuels.

The entire operation went smooth and all gasoline has been removed from this terminal.

If you should have any questions please do not hesitate to contact me at 716-877-9325.

Regards

Robert L. Fisher

Terminal Manager

f.h

December 23, 1987

Erie Petroleum Transfers, Inc. 5335 River Road Tonawanda, New York 14150

Attention: Robert Fisher

Terminal Manager

Major Petroleum Facility License Number 09-1540

Dear Mr. Fisher:

Please provide documentation to substantiate the disposition of the 14,000 gallons of gasoline that came out of the product line prior to testing.

Please call me at 847-4586 if you have any questions.

Sincerely,

Michael J. Hinton, P.E. Senior Sanitary Engineer

MJH:vu

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#### ERIE PETROLEUM TRANSFERS, INC.

5335 RIVER ROAD TONAWANDA, NEW YORK 14150

(716) 877-9325

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NYS Dept. Envir. Cons. 600 Delaware Avenue Buffalo NY 14202

Mr. Michael Hinton P.E.

Dear Mike;

Enclosed please find a copy of shipper for the product recovered from the Atlantic Pipeline, as you requested in your letter of December 23, 1987.

If you should have any questions please contact me at 877-9375.

Regards

Robert L Fisher Terminal Manager Fac Lic. # 09-1540

U.S. DEPARTMANT OF COMMERCE—BUREAU OF THE CENSUS—INTERNATIONA 'ADE ADMINISTRATION FORM **7525-V** (3-19-85) SHIPPER'S EXPORT DECLARATIO OMB No. 0607-0018 1a. EXPORTER (Name and address including ZIP code) ERIE FETROLEUM TRANSFERS INC. 5035 RIMER ROAD ZIP CODE 2. DATE OF EXPORTATION 3 BILL OF LADING/AIR WAYBILL NO. 70%解码,你已经50 11/13/87 b. EXPORTER EIN NO. c. PARTIES TO TRANSACTION 111111463 Related Non-related 4a. ULTIMATE CONSIGNEE ONTAFIO FUELS JIBB BUFFERIN STREET. DOWNEYIEW. BRIAFIO b. INTERMEDIATE CONSIGNEE 5. FORWARDING AGENT PENENEULA CUSTOM EFORTES PO AFCHANSE POAD 6. POINT (STATE) OF ORIGIN OR FTZ NO. 7. COUNTRY OF ULTIMATE DESTINATION FORT EFIE. ONTARIO 9. MODE OF TRANSPORT (Specify) 8. LOADING PIER/TERMINAL 10. EXPORTING CARRIER EFT1 11. PORT OF EXPORT 12. FOREIGN PORT OF UNLOADING ECHIEVIEW, DATAFID 13. CONTAINERIZED (Vessel only) ☐ Yes ☐ No 14 SCHEDULE B DESCRIPTION OF COMMODITIES, (Los columns 15 10)

MARKS, NOS., AND	Γ.	<del></del>	T QUANTITY—	SHIPPING WEIGHT	1	omit cents (Selling price of
KINDS OF PKGS.	D/F	•	I SCHEDULE B UNIT(S)	l (Pounds)	1	not sold)
(15)	(16)	<u>l (17)</u>	(18)	(19)	4	(20)
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1 T/T	p	4782B	44.000	89999		
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gular Gasoline	i L Cons	i wity 60 0	1	 		
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23. Duly authorized officer or employee | The exporter authorizes the forwarder named above to act as forwarding agent for export control and customs purposes.

24. I certify that all statements made and all information contained herein are true and

24.1 Gettily that all statements made and all information contained herein are true and correct and that I have read and understand the instructions for preparation of this document, set forth in the "Correct Way to Fill Out the Shipper's Export Declaration." I understand that civil and criminal penalties, including forfeiture and sale, may be imposed for making false or fraudulent statements herein, failing to provide the requested information or for violation of U.S. laws on exportation (13 U.S.C. Sec. 305: 23.0 S.C. Sec. 401; 18 U.S.C. Sec. 1001; 50 U.S.C. App. 2410).

U.S.C. Sec. 305: 22 9 S.C. Sec. 401; 18 U.S.C. Sec. 1001; 50 U.S.C. App. 2410).	
Signature	Confidential—For use solely for official purposes authorized by the Secretary of Commerce (13 U.S.C. 301 (g))
Title	Export shipments are subject to inspection by U.S. Customs Service and/or Office of Export Enforcement.
Date	25. AUTHENTICATION (When required)