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WORK PLAN

For

REMEDIAL INVESTIGATION

4630 RIVER ROAD SITE

SITE # C915258
4630 RIVER ROAD
TONAWANDA, NEW YORK 14150

Prepared For:

Giuseppe Holdings, LLC
2947 Delaware Ave
Kenmore, NY 14217

Prepared By:

Panamerican Environmental, Inc.
2390 Clinton Street
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1.0 INTRODUCTION

This document presents details of a work plan designed to support a Remedial Investigation (RI) at the 4630 River Road Site (Site) located at 4630 River Road, Tonawanda, New York (refer to Figure 1). Giuseppe Holdings, LLC owns the property (for this work plan will be designated as "owner") and will conduct a remedial investigation and remediate the site under New York's Brownfield Cleanup Program (BCP). The owner plans, upon completion of remediation, to redevelop the site. The current project plans consists of the construction of a marina within the Niagara River for boat docks and slips and the construction of 16 townhomes ("River Rod Townhouses") with surface parking spaces for home owners and guests. The balance of the property will be open green space.

A number of environmental studies/investigations (refer to Section 3) completed at the site to date concluded that there are impacted site soils and possibly impacted groundwater due to the property's former use by Ashland Petroleum and United Refining Company (URC) for stormwater retention ponds. Site soils have been impacted with petroleum related compounds.

The remaining sections of the work plan discuss: goals and objectives of the investigation (Section 2.0); the investigation scope of work (Section 5.0); supplemental field investigations that maybe required as a result of the IRM (Section 6.0); a qualitative exposure assessment (Sections 7.0); oversight and reporting requirements (Section 8.0); and, work plan PE certification (Section 9.0). Appendix A provides a site specific Health and Safety Plan (HASP); Appendix B Citizens Participation Plan; Appendix C-Quality Assurance Quality Control Plan; Appendix D-Field Sampling Plan; Appendix E-Project Schedule; Appendix F-Historic Environmental Report Excerpts and Appendix G DER-10 Appendix 3C Fish and Wildlife Decision Key.

1.1 Site History and Description

The subject site is located on River Road in Tonawanda, New York. Located on the south side of the Niagara River the property is roughly across the River from East River Road, Winkler Drive and Staley Road on Grand Island, New York. The subject property is a vacant approximately 3.5-acre parcel. A drainage swale divides the property and runs from River Road to the river through the east-central portion of the parcel. The South Grand Island Bridge is located about 0.4 miles or 726 yards west of the property. Historically, the property contained two separate stormwater retention ponds formerly used by Ashland Petroleum and United Refining Company (URC). The ponds were previously remediated under a NYSDEC Spill (Spill # 9614534) during which all the soils from the ponds bottoms were removed down to the water table. Indication is that the soils were bio-treated and re-used onsite. Previous soil sampling by others indicate that petroleum impacted soil and possibly groundwater exists on the property.

The adjacent property to the east is a public park; to the west by property owned by Ashland Oil & Refining Company/United Refinery and to the south by River road and further south by

property owned by Noco Energy Corp./Tonawanda Terminals Corp.

1.2 Contemplated Use of the Site

The proposed project consists of the construction of a marina within the Niagara River for nineteen (19) boat dock/slips and Townhouses for residential purposes. The marina plans for a breakwater and 19 fixed docks associated with sixteen (16) townhouses, gabion improvements and thirty one (31) surface parking spaces.

1.3 Project Organization

The following are the lead personnel on the project team:

Project Manager - Peter J. Gorton, CHCM
Project/Remedial Engineer (s) - John Berry, P.E. and John Gorton, Jr.
Project Geologist – Greg Zayatz
Project Health and Safety - Peter J. Gorton, CHCM
Project QA/QC - Frank Schieppati, Ph.D.

Analytical Laboratory – Paradigm Environmental or Accutest Laboratories
Drilling/Excavation subcontractors – to be determined

2.0 GOALS AND OBJECTIVES

2.1 Overall RI Objectives

In general, a remedial investigation has the following overall objectives as described in NYCRR Part 375-1.8(e):

- Delineation of the areal and vertical extent of the contamination at, and emanating from all media at the Site and the nature of that contamination;
- Characterization of the surface and subsurface characteristics of the site, including topography, surface drainage, stratigraphy, depth to groundwater, and any aquifers that have been impacted or have the potential to be impacted;
- Identification of the sources of contamination, the migration pathways and actual or potential receptors of contaminants;
- Evaluation of actual and potential threats to public health and the environment; and,
- Production of data of sufficient quality and quantity to support the necessity for, and the proposed extent of, remediation and to support the evaluation of proposed alternatives.

The scope and goals specific to this work plan are summarized below and are based on the results of investigations completed to date and those remaining to satisfy the objectives above. If necessary, the RIWP will be supplemented with additional work plans, as needed, to meet the overall objectives of the RI.

2.2 Specific RI Objectives

Specific objectives of the RI are as follows:

- Sample existing groundwater wells to assess groundwater impacts from off-site and on-site sources by evaluating groundwater quality entering and leaving the site;
- Advance a series of test trenches across the property to groundwater for the purpose of developing a soil profile across the property to depth
- Collect and analyze representative surface and subsurface soil samples to supplement samples collected in previous investigations
- Fill any data gaps resulting from previous assessments and the previous Site Remediation.

The scope of work to complete these objectives is provided in Section 5.0 along with a discussion of supplemental field investigations that may be required to fill data gaps.

2.3 Contaminates of Concern

Based on the findings related to historic use of the Site and previous investigations, the contaminates of concern (COCs) are petroleum based VOCs and SVOCs in the groundwater and soils. However, in keeping with DER-10 guidance for Brownfield investigations, the complete list of parameters as identified in 6NYCRR Part 375 Restricted Residential Soil Cleanup Objectives (SCOs) will be analyzed for a subset of samples.

3.0 ENVIRONMENTAL CONDITIONS/PAST INVESTIGATIONS

3.1 Past Investigations/Remediation Summary

Historical information indicates the following previous investigations/ remedial activities have been completed on the property:

- 1997-2001 NYSDEC Spill Report - NYSDEC Spill Report Form for Spill # 9614534 which was a former Spill at the Site related to stormwater retention ponds formerly used by Ashland Petroleum and United Refining Company (URC). The spill report covers the years from 1997 until 2001. The spill report indicates that the ponds active use was discontinued in 1982 when the refinery closed. The last entry in June 2001 in the spill report indicates that analytical results from the downgradient wells were below limits and no further action was required. However, the report and letter from NYSDEC dated September 7, 2001 indicates that the spill was given an “inactive” status since low levels of petroleum impacted soils remained.

According to the Spill Report Form, URC conducted a cleanup of the property consisting of excavating all soils from the pond bottoms down to the apparent water table. Prior to backfilling the excavation, numerous (total of 16) sidewall and bottom soil samples were collected and submitted for laboratory analysis for NYSDEC STARS List volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). A review of the laboratory analytical data as provided in summary Table 1 indicates that most VOC and all SVOC compounds were not detected above their respective laboratory method detection limits. The chain of custody for these samples indicates that the samples were analyzed by the TCLP method. AS such, the results only tell us that some contaminates remained on site following retention pond closures. As a result, direct comparison to Part 375 Soil Cleanup Objective (SCOs) cannot be made. Also, a note in the spill report suggests that the soil excavated from the ponds was "treated" or "bio-remediated" at the terminal/plant. However, the report does not indicate whether these soils were used as backfill in the former ponds or spread across the site or removed off-site.

According to the NYSDEC Spill Report, four groundwater monitoring wells were installed on the property. Analytical data from these wells was included in the Spill Report. The spill report suggested that testing results from these wells indicated minimal to no impacts to groundwater and that the NYSDEC did not require any additional groundwater investigation based on these findings. Boring logs for the wells indicate that total volatile organic vapor readings of soil, as measured by a field PID along the soil column, were elevated in three of the four borings/wells. Groundwater results are summarized in Table 3.

- 2006 Phase I Environmental Assessment - A Phase I Environmental Site Assessment was prepared by LCS, Inc. dated November 2006 (Phase I). According to the LCS Phase I, three of the four groundwater monitoring wells remain on the site. PEI did not have access to the Phase I report and therefore has not included its findings.

- 2010 Phase II Subsurface Investigation (Phase II). A Phase II Environmental Site Assessment (ESA) was prepared by Empire Geo Services, Inc. (SJB) dated May 28, 2010. Twelve (12) soil probes (P-1 through P-12) were advanced using Geoprobe direct push technology. Continuous soil samples were retrieved in each borehole. All the borings, with the exception of one (P-12) were completed west of the drainage ditch which crosses the property. The probes were completed to a depth of 8-12-feet below ground surface (bgs). All samples were monitored in the field using a total organic vapor compound (Total OVC) monitoring instrument using PID technology and were visually and olfactory described. Five of the borings (P-3, P-5, P-6, P-8, and P-12) were described as having creosote, petroleum or tar-like odors and elevated PID (Total VOC) readings. Two other locations (P-7 and P-11) were described as having a strong "paint thinner" odor and elevated PID readings of 2,200-3,200 ppm. Four of the borings (P-1, P-2, P-4 and P-9) were reported to have Total VOC readings of background. Only one sample was collected and analyzed in a laboratory for Target Compound List (TCL) volatile and semi-volatile compounds; from P-11 between 6.8 and 8.0 feet bgs where the paint thinner odor was identified (refer to Table 1). The SJB

Phase II identified that soil contamination levels from this sample exceeded NYSDEC Part 375 Soil Cleanup Objective for Restricted Residential Site Use levels.

- 2011 Surface Water and Sediment Sampling. A surface water and sediment sampling program was completed in the drainage swale prior to the point where it runs through the east-central portion of the property. One surface water and one sediment sample were collected from each of three locations along the swale (refer to Figure 2 Sediment Fig 3 Surface water). Samples were analyzed for STARS list petroleum VOCs and SVOCs. These samples were collected along the swale at locations from north of River Road and south of the property line prior to its entrance onto the property. No samples were collected in the swale on the property. Sample results indicate a number of semi-volatile compounds were detected. These were all PAH compounds. The report also indicates sheen and "free-phased product were observed. Additionally, absorbent booms were located across the swale near culverts.

3.2 Historic Investigations/Analytical results

As noted in section 3.1 there have been a number of site investigation programs and a remediation associated with excavation of the former lagoons completed at the site. However, the actual sampling/analysis was limited to sixteen (16) soil samples obtained in 1999 at the bottom and side walls of the excavations completed when the lagoons were excavated and one soil sample obtained from one boring at a depth of 6-8 feet bgs during a Phase II ESA completed in 2010. These samples were analyzed for Stars Target Compound List (TCL) volatile and semi-volatile organic compounds only. Additionally, four (4) groundwater samples were collected and analyzed for 8021 Stars list VOAs and 8270 Stars list semi-volatile organic compounds only. A summary Table 1 of the soil results and a comparison to NYSDEC Part 375 restricted residential clean-up level guidelines is attached. Table 3 of groundwater results in comparison to TOGs 1.1.1 Groundwater Standards is also attached.

The results indicate that soil and ground water contain petroleum-based compounds. The results of the one Phase II soil sample indicate that ethybenzene and m,p-xylene were detected above the NYSDEC Part 375 guideline levels. The results of the water and sediment samples collected in the drainage swale prior to its entrance on-site indicated semi-volatile PAH compounds.

4.0 INTERIM REMEDIAL MEASURES (IRM)

Following the remedial investigation, the need for and design of an IRM will be developed.

5.0 INVESTIGATION SCOPE OF WORK

5.1 Introduction

The investigation scope of work will concentrate on soil assessment. Sampling of existing groundwater monitoring wells will also be completed. The scope of work to accomplish each of these objectives is provided in the following sections.

5.2 Environmental Media Investigation

5.2.1 Surface and Subsurface Soil Assessment

Establishment of Sample Locations

Surface and subsurface conditions on the site will be investigated by excavating a series of slit-trenches across the property. The property will be marked off in a 50 ft- 100 ft rough grid to enable approximately 20 slit trenches to be advanced across the property (refer to Figure 2). Test trenches will be placed approximately 100 feet apart on a rough grid pattern to provide information across the property. However, some trenches will be located in specific areas as follows:

- Six trenches will be located in the eastern portion of the property to assess this area which was not examined in previous site assessments. Historic aerial photographs also indicate that filling may have occurred in this area.
- One trench will be located at the northern end of the drainage swale to examine outflow conditions.
- Trenches will be aligned with some of the previous sampling locations. Test pits will be located close to locations P-2, P-6 and P-10 (from the 1997-2001 wastewater lagoon closure program confirmatory sample program) and boring P-7 from the SJB Phase II program. These represent areas that previous sampling indicted elevated levels of petroleum compounds
- Four trenches will be located along the western border to determine if impacts have occurred from the adjacent western property.

The precise location of trenches and sampling will be based on field observations and will also specifically target potential contaminant features in an effort to gain representative samples across the property while at the same time ensuring that areas of concern are examined.

Surface and Subsurface Soil Assessment/Sampling

A detailed description of the soil stratigraphy and other observations (staining, odors) will be completed at each trench. Detailed total organic vapor monitoring will be completed/recorded as each test trench is excavated.

<u>Full Part 375 Brownfields Constituent Analyses</u>

A total of five surface and five subsurface soil samples will be collected from five of the test trenches. The tentative locations of the samples are shown on Figure 2. In general, samples will be collected from the northeast, southeast, northwest, southwest and center of the property. Actual sample locations will be selected in the field based on filed observations and field screening.

Two samples will be obtained from each of the 5 selected slit-trench location, one surface sample from 0-2 inches below grade (below the grass/weed cover) and one subsurface soil sample for a total of ten (10) soil samples. The samples will be analyzed by a NYSDOH ELAP certified laboratory and a full Contract Laboratory Program (CLP), NYSDEC Category B, or full CLP-type analytical data package deliverables will be provided. All ten samples will be analyzed for the full Part 375 Brownfields constituent list including volatile and semi-volatile organic compounds (plus TICs), metals, pesticides, and PCBs. Soil samples to be collected are summarized in Table 1 of Appendix C along with QA/QC requirements.

Surface soil samples will be collected from the upper two inches below the sod prior to advancing a test trench. **Surface soil samples <u>will not</u> be analyzed for volatile compounds.**

<u>STARS Volatile Organic Compound Analysis</u>

An additional four (4) samples will be collected from other locations that indicate potential impacts based on visual and olfactory indication and elevated PID readings. These samples will be grab samples and analyzed for STARS VOC compounds only. The reason for the limited analysis is based on site history and previous assessments which indicate impacts from petroleum compounds.

The primary purpose of the subsurface assessment is to visually inspect and describe subsurface conditions across the large area. A total of approximately twenty test trenches will be advanced to an average depth of eight-ten feet each as described above. Although test trenches will vary in dimensions, they will roughly be 2-4 feet wide, 8-10 feet deep and 4-6 feet long. At each test pit the following will be performed:

- The depth of the cover soil/fill will be determined
- Depth to bedrock if encountered within eight-ten feet will be documented
- Depth to water table, if encountered.

The following outlines the approach:

- Surface Soil Samples (0-2") will be collected as discrete samples. If sod exists at any given location, it will be removed and the sample collected from the two (2) inches of soil directly below it. At locations where the soil is exposed, samples will be taken directly from the top two inches.
- An estimated 20 test pits will be advanced as described above.
- Soils will be visually observed/logged and screened with an organic vapor analyzer (PID), as the trench is advanced. A detailed log of field screening total organic vapor reading results will be maintained to augment the soil sample results and to help select the most appropriate locations of samples in each site area. **Extra samples may be collected as the trenches are advanced and the subset of samples (total five surface and five subsurface and four STARS VOCs) will be selected at the end of each day for laboratory analysis. However, at least one surface and one subsurface sample from each quadrant of the site will be selected and submitted for analysis for the full 375 constituent list.**

- No samples from below the groundwater table will be tested.

Each test pit will be backfilled and compacted prior to moving to the next. Protocols for backfilling and compacting the soil are contained in Appendix D.

Prior to any intrusive activities, subsurface utilities will be located and marked out at the sample locations. The backhoe will be set up and operated in accordance with standard practices and in a manner that will ensure the safe and efficient operation of the equipment. Hydraulic system leaks, as well as lubricant and fuel leaks, will be eliminated or prevented. Safety considerations during equipment operation are addressed in the HSP.

A PEI geologist will be in attendance at the backhoe at all times in order to:

- log samples as required;
- prepare field logs based on sample observations;
- perform air monitoring;
- Properly label, package, and handle samples;
- supervise operations; and
- Complete trench records

All soil samples will be visually described and classified using the Unified Soil Classification System, inspected for signs of contamination, and screened with a PID for the presence of organic vapors.

The Onsite Coordinator/Supervising Geologist will keep the Project Manager updated on daily progress and the results of the subsurface investigation. No major changes in the subsurface investigations will be carried out unless approved by the Project Manager. The Project Manager will likewise keep the Client/NYSDEC informed of the project developments. No major changes in the subsurface investigations will be carried out unless approved by the Client/NYSDEC. A detailed description of the sampling methods are provided in Appendix D. Investigative derived waste will not be containerized. All cutting will be returned to the test trench.

Waste Disposal Analysis

Three representative composite soil samples will be collected from the test trenches so a disposal profile can be established. Three samples are being collected to allow profiling of up to 2,000 tons of impacted soils for off-site disposal at the Town of Tonawanda Landfill. The 2,000 ton estimate is based on the assumption that SJB's estimate of the extent of impacts as described in their Phase II report is reasonable as well as the assumption that fill or overburden soils encountered from 0-5 feet below grade (bgs) will be segregated as clean and stockpiled separately on-site for re-use as fill. The disposal characterization sample zone is estimated to be from 5 to 8 feet bgs. The three composite soil samples (from the five test trenches) will be submitted for laboratory analysis of:

- Ignitability.

- Toxicity Characteristic Leaching Procedure (TCLP)
- Benzene.
- TCLP Lead
- pH
- Total Petroleum Hydrocarbons

5.2.2 Groundwater Investigation

A total of four monitoring wells were installed during the 2001 lagoon excavation and site assessment. These wells will be sampled for the same 375 parameters as the soil samples. If some or all of the wells are not functioning, new wells may be installed.

Monitoring Well Installation

If new wells are necessary, they will be installed using Geoprobe technology. Boreholes for monitoring wells will be advanced to an assumed maximum depth of between 10-15 feet, to refusal or the top of bedrock, two (2) feet below the top of any confining layers, or five (5) feet below the groundwater surface, whichever is less using Geoprobe direct push technology. Continuous soil sampling will be conducted using the Geoprobe with a two and a half inch diameter sampler resulting in two (2) to five (5) distinct sample cores, i.e. (0-4 feet, 4-8 feet, 8-12 feet, 8-12 feet, 12-16 feet). A field technician/geologist will log all samples, performed visual observations, and field screening of all core samples for volatile organic compound (VOC) concentrations using a photoionization detector (PID).

A micro-well will be installed in each boring. Each well will consist of a two-inch diameter, schedule 40 PVC casing equipped with a ten-foot screen and solid PVC riser pipe extending to the surface. Screens will be positioned to straddle the groundwater surface and will be extended to the bottom of the boring to ensure assessment potential for contaminants associated with the property.

The data (soil types, rock depth, groundwater depth obtained from installation of the first boring/micro-well) will be used to guide the installation of the remaining borings/micro-wells. Installation of wells will also adhere to the requirements provided in the Field Sampling Plan provided in Appendix D. Boring logs and well completion diagrams will be provided in the RI report.

All field work will adhere to the Health and Safety Plan provided in Appendix A.

Groundwater Sampling

One groundwater sample will be collected from each of the 4 wells. Well development and sampling will be in accordance with the Appendix D Fields Sampling Plan. Groundwater samples will be submitted to a New York State approved laboratory and analyzed for:

- TCL VOCs + STARS + TICs;

- TCL SVOCs + STARS + TICs;
- TAL Metals + cyanide;
- PCBs; and
- Pesticides.

All sample analysis will be in accordance with ASP, Cat B requirements and all data will be validated. Metals analysis will be run for both unfiltered and lab filtered. QA/QC requirements for all sample analysis are provided in Appendix C Quality Assurance/Quality Control Plan. Table 1 in Appendix C summarizes the number of Groundwater samples to be collected.

All detected sample concentrations will be included in a table and compared to NYSDEC Groundwater Standards.

5.3 Soil Vapor Assessment

A soil vapor assessment will be completed across the property by monitoring soil during excavation of each test pit using a PID. A more detailed approach using geoprobe technology and down-hole monitoring was researched. It was determined that the detailed monitoring of excavated soil during the test pit program was a more cost effective approach at this stage of the site assessment.

Future development on the property will include a sub-slab vapor intrusion system due to the history of the property and adjacent properties.

6.0 ADDITIONAL SUPPLEMENTAL FIELD INVESTIGATION

All the data generated during the RI will be evaluated to determine if additional investigation activities are needed. Additional assessment may include a subsurface boring program and sample analysis limited to contaminants identified during the RI program.

7.0 QUALITATIVE EXPOSURE ASSESSMENT

A qualitative exposure assessment will be completed in accordance with DER-10 sections 3.3(c) 3 & 4. The assessment will include what impacts site contaminates may have, if any, on all media (ground/surface water, soil, soil vapor, ambient air and biota). Human health and ecological exposure impacts will be assessed as outlined in DER-10 Appendix 3B Qualitative Human Health Exposure Assessment and Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key. The Appendix 3C Fish and Wildlife resources Impact Analysis (FWRIA) Decision Key is provided in Appendix G. No FWRIA is needed based on the completed decision key process. This determination is based on the following:

- The Site was an industrial property used as for wastewater lagoons.
- There is no habitat of an endangered, threatened or special concern species present; and
- There are no ecological resources present on the site. The ecological resources of the adjacent Niagara River will be discussed with the NYSDEC.

The qualitative human health exposure assessment will evaluate the five elements (DER-10 Appendix 3B) associated with exposure pathways, and describe how each of these elements pertains to the Site. The exposure pathway elements that will be addressed include:

- A description of the contaminant source(s) including the location of the contaminant release to the environment (any waste disposal area or point of discharge) or if the original source is unknown, the contaminated environmental medium (soil, indoor or outdoor air, biota, water) at the point of exposure;
- An explanation of the contaminant release and transport mechanisms to the exposed population;
- Identification of all potential exposure point(s) where actual or potential human contact with a contaminated medium may occur;
- Description(s) of the route(s) of exposure (i.e., ingestion, inhalation, dermal absorption); and
- A characterization of the receptor populations who may be exposed to contaminants at a point of exposure.

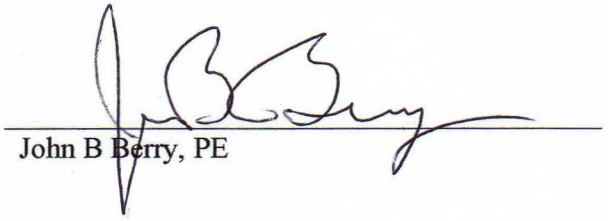
As called for in DER-10 for volunteers in the BCP, sufficient field information and sampling data will be provided to identify the presence of contamination, if any, that maybe leaving the site to support qualitative off-site exposure assessments by others.

8.0 OVERSIGHT AND REPORTING

A Remedial Investigation report will be prepared in accordance with the applicable requirements of DER-10 and Part 375. A schedule is provided in Appendix F. We anticipate that upon completion of the 30 day public comment period we would conduct the RI immediately and complete field activities in approximately 2-3 weeks,

9.0 WORK PLAN CERTIFICATION

I, John B. Berry, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Remedial Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



John B Berry, PE

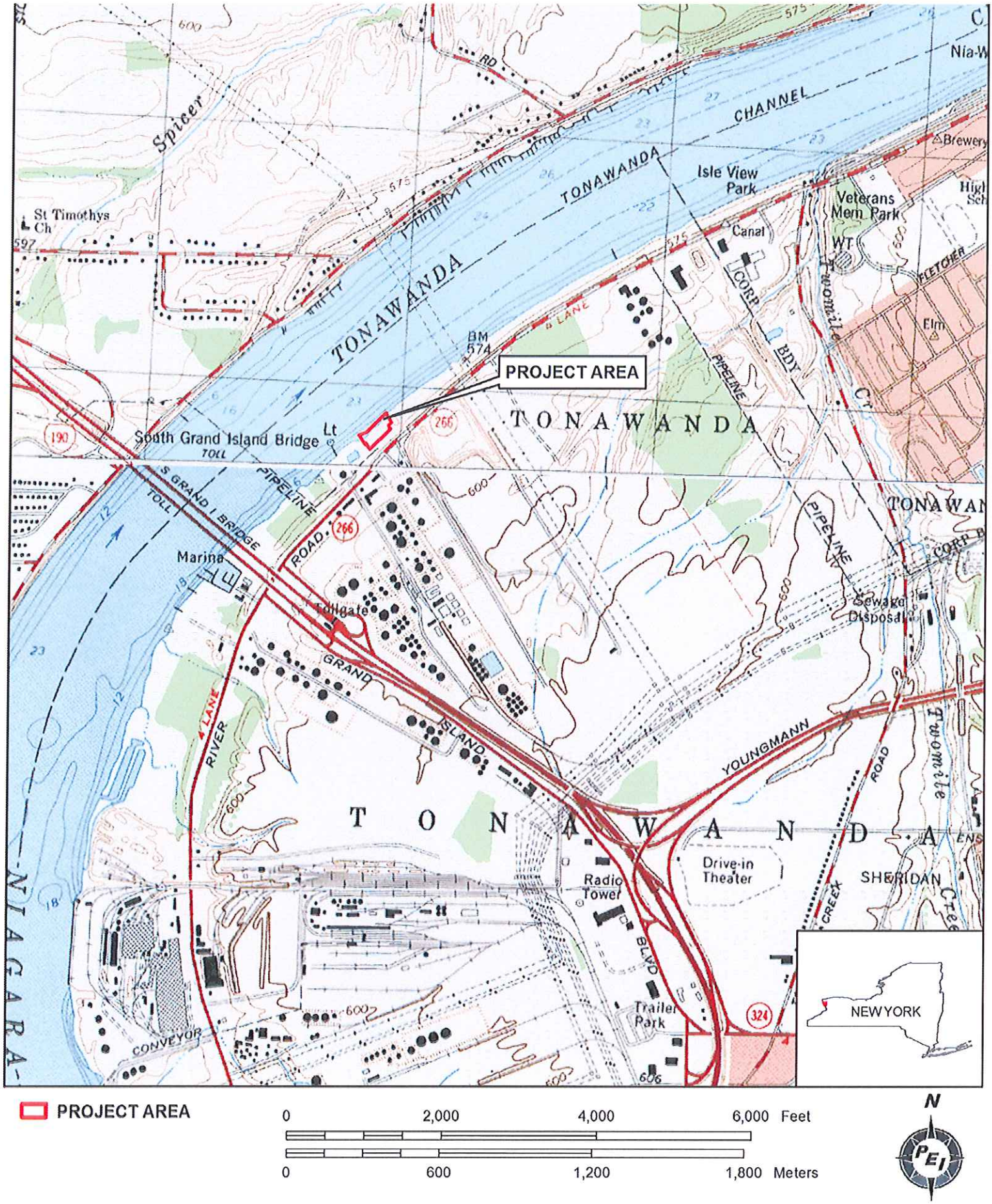


Fig 1: Project location area (USGSTonawanda West Quad. 1980)

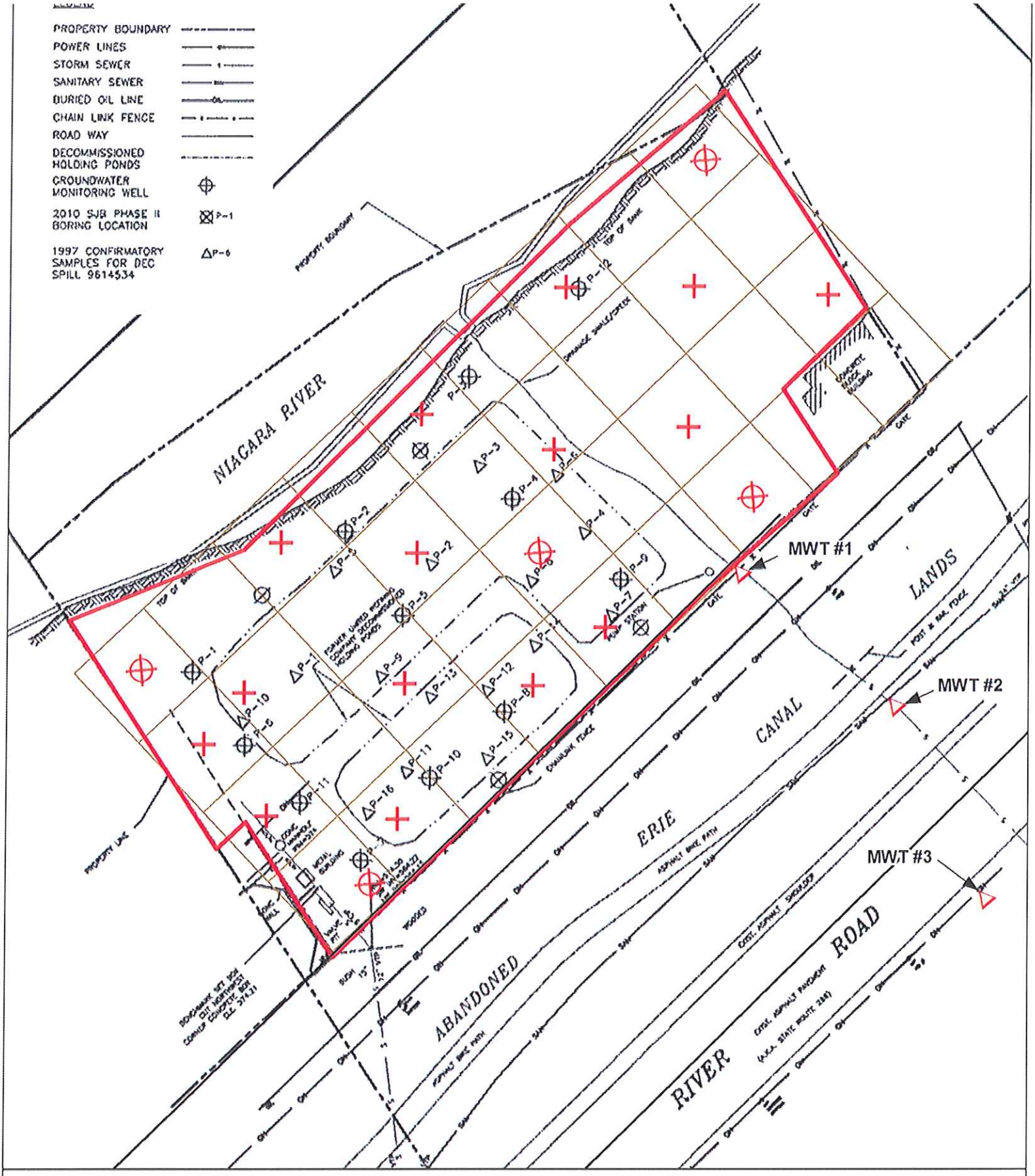


Figure 2a: Previous survey test sample locations and proposed testing locations.

TABLE 1 - 4630 RIVER ROAD - HISTORICAL SOIL SAMPLE ANALTICAL RESULTS SUMMARY

Sampling Program	SJB (1)	United Refinery Confirmation Samples (2)											NYSDEC
Sample Number	P-11	P-1	P-2	P-3	P-5	P-6	P-7	P-10	P-11	P-12	P-13	P-15	
Sample Date	5/12/2010	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	8/28/1997	PART 375
Sample depth (bgs)	6.8' - 8.0'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Restrict-Res
Compounds	ppm	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm (3)	ppm
Volitiles													
Benzene	ND	0.002	0.007	ND	0.001	0.001	0.002	0.005	0.001	ND	0.001	0.002	5
Ethylbebenzene	**300**	ND	0.028	ND	ND	ND	ND	0.026	ND	ND	ND	ND	41
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Toluene	ND	ND	0.016	ND	ND	ND	ND	0.013	ND	ND	ND	ND	100
o-Xylene	ND	ND	0.034	ND	ND	ND	ND	0.031	ND	ND	ND	ND	100
Xylenes (Total)	ND	ND	0.18	0.007	0.008	0.015	ND	0.17	ND	0.007	ND	ND	100
m,p-Xylene	**1080**	ND	0.14	ND	ND	0.011	ND	0.14	ND	ND	ND	ND	100
SVOCs													
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Benzo(a)anthracene	0.464	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Benzo(g,h,I)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9
Chrysene	1.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Flourene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Phenanthrene	2.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Pyrene	1.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100

ND - Non-Detect NA - Not Available

Shaded Value - Exceeds Part 375 Restricted Residential SCO

(1) - Data from Empire GEO Services subsidiary of SJB Services Phase II Sursurface Investigation of 4630 River Rd Report dated May 28,2010

(2) - Data from EnSol, Inc. Remedial Action Plan dated February 18, 2011. Samples P-4, P-8, P-9, P-14 and P-16 not shown all ND

(3) - Samples were analyzed by the TCLP method so the results cannot be directly compared to the NYSDEC Part 375 Soil Cleanup Objectives

TABLE 2 - 4630 RIVER ROAD - HISTORICAL SEDIMENT SAMPLE ANALTICAL RESULTS SUMMARY

Sampling Program	EnSol-Ditch Sediment Samples (1)			NYSDEC
Sample Number	**MWT-1-SED**	**MWT-2-SED**	**MWT-3-SED**	
Sample Date	**11/22/2011**	**11/22/2011**	**11/22/2011**	**PART 375**
Sample depth (bgs)	**0.0' - 0.17'**	**0.0' - 0.17'**	**0.0' - 0.17'**	**Ecological Resources (2)**
Compounds	**ppm**	**ppm**	**ppm**	**ppm**
Volitiles				
n-Butylbenzene	ND	0.17	ND	NS
SVOCs				
Acenaphthene	ND	0.74	0.74	20
Anthracene	0.92	2.79	2.79	NS
Benzo(a)anthracene	2.69	4.08	4.08	NS
Benzo(a)pyrene	2.12	2.3	2.3	2.6
Benzo(b)fluoranthene	2.01	2.73	2.73	NS
Benzo(g,h,I)perylene	**1.51**	**1.3**	**1.3**	NS
Benzo(k)fluoranthene	1.78	1.92	1.92	NS
Chrysene	2.82	5.08	0.44	NS
Dibenz(a,h)anthracene	ND	0.54	ND	NS
Fluoranthene	5.95	8.92	ND	NS
Flourene	ND	2.36	0.89	30
Indeno(1,2,3-cd)pyrene	1.13	1.13	ND	NS
Phenanthrene	3.32	9.62	0.57	NS
Pyrene	4.63	7.15	0.68	NS

ND - Non-Detect NS - Not Specified

(1) - Data from EnSol, Inc. Summary of Surface Water and Sediment Sampling dated November 9, 2011

(2) - Part 375 - 6.8(b) Restricted Use SCOs - Protection of Ecological Resources

TABLE 3 - 4630 RIVER ROAD - HISTORICAL GROUNDWATER AND SURFACE WATER SAMPLE ANALTICAL RESULTS SUMMARY													
Samplling Program	**United Refinery Groundwater Samples (1)**							**EnSol-Ditch Surface Water Samples (3)**			**NYSDEC Standard/Guidance**		
Well Number	**HP MW-1**	**HP MW-2**	**HP MW-3**			**HP MW-4**		**MWT-1**	**MWT-2**	**MWT-3**			
Sample Number	**TT-HPMW1**	**TT-HPMW2**	**TT-HPMW3**	**TT-HPMW3**	**(2)**	**TT-HPMW4**	**(2)**	**MWT-1-H2O**	**MWT-2-H2O**	**MWT-3-H2O**	**TOGS H(WS)**	**TOGs E**	**TOGs 1.1.1. GA**
Sample Date	**10/14/1999**	**10/14/1999**	**10/14/1999**	**11/2/2000**	**5/23/2001**	**10/14/1999**	**5/23/2001**	**11/22/2011**	**11/22/2011**	**11/22/2011**	**(a)**	**(b)**	**(c)**
Compounds	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**
Volatiles Organics													
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	1
Ethylbebenzene	ND	ND	**150 (c)**	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	5
Isopropylbenzene	ND	ND	**8.1 (c)**	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	5
o-Xylene	ND	ND	**410 (c)**	4	ND	ND	ND	ND	ND	ND	N/A	N/A	5
Xylenes (Total)	ND	ND	ND	**28 (c)**	ND	ND	ND	ND	ND	ND	N/A	N/A	5
m,p-Xylene	ND	ND	**890 (c)**	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	5
Methyl tert-butyl Ether	ND	ND	ND	ND	ND	4.5	ND	ND	ND	ND	N/A	N/A	N/A
Semi-Volitile Organics													
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	**132 (a)**	ND	20	N/A	N/A
Chryzene	ND	ND	ND	ND	ND	ND	ND	ND	128	ND	N/A	200	N/A
Flourene	ND	ND	ND	ND	ND	ND	ND	ND	**363 (b)**	ND	N/A	50	N/A
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	**897 (b)**	ND	N/A	50	N/A
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	**210 (b)**	ND	N/A	50	N/A

ND - Non-Detect **N/A - No Standard or Not-Applicable**

Shaded Value - Exceeds Groundwater Standard

(1) - United Refinery analytical Results fron NYSDEC Spill Reports

(2) - Analytical Results from NYSDEC Table 1 4630 River Road Site Analytical Results for Groundwater Samples Collected After Retention Pond Closure

(3) - Data from EnSol, Inc. Summary of Surface Water and Sediment Sampling dated November 9, 2011

TOGS H(WS) - Source of Drinking Water (surface water)

TOGS E - Aesthetic (fresh waters)

TOGS GA - Source of Drinking Water (groundwater)