

**REMEDIAL DESIGN INVESTIGATION – PHASE 2
FORMER UNDERGROUND STORAGE TANK AREA**

**BROWNFIELD CLEANUP PROGRAM
NYSDEC SITE ID C828130
118 PETTEN STREET
ROCHESTER, NEW YORK**

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I David D. Day, P.E., certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Remedial Design Investigation was prepared in accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

A handwritten signature in blue ink, reading "David D. Day, P.E.", is written over a horizontal line.

David D. Day, P.E.
President
Day Environmental, Inc.

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1.0 INTRODUCTION

The subject property (Site) is addressed as 118 Petten Street, in the City of Rochester, Monroe County, New York. The Site consists of approximately 25-acres, and is bounded to the north and south by land owned by the City of Rochester, to the east by the Genesee River, and to the west by a railroad spur. The location of the Site is shown on Figure 1 (Project Locus Map), and the approximate boundaries of the Site are shown on Figure 2 (Site Plan).

The Site consists of a commercial marina formerly known as the Riverview Yacht Basin and Genesee Marina, and is currently known as Gibbs Marina. The marina includes multiple buildings and more than 200 boat slips. There are two boat ramps along the river front. The Site also consists of asphalt and gravel roadways and parking areas, woods, and wetlands that are regulated federally and by the New York State Department of Environmental Conservation (NYSDEC).

The Site is zoned by the City of Rochester as Harbortown Village District (H-V). Recreational Use, commercial use, and residential use are permitted uses in the H-V zoning district.

This Remedial Design Investigation (RDI) was conducted under the NYSDEC Brownfield Cleanup Program (BCP) to locate and investigate three closed-in-place underground storage tanks (USTs) at the Site located in the vicinity of Building #6 (refer to Figure 3).

1.1 Background

A Remedial Action Work Plan – Phase 2 (RAWP) dated December 2012 was submitted to the NYSDEC. The NYSDEC provided a conditional approval letter on June 26, 2013. A representative of the BCP Applicant invoked dispute resolution on July 16, 2013. A meeting to discuss the informal dispute resolution issues was held on August 6, 2013. On September 19, 2013, the Department issued a letter proposing revisions to the Remedial Action Work Plan – Phase 2 and a settlement to the informal dispute resolution. The September 19, 2013 letter with the proposed revisions was accepted on October 18, 2013 by a representative of the BCP Applicant; thus, closing the informal dispute resolution process.

2.0 REMEDIAL DESIGN INVESTIGATION

This RDI was performed to search for three reportedly closed-in-place USTs and further evaluate/define the extent of any associated petroleum contamination. Additional goals of the RDI included obtaining data to assist in selecting and designing a remedial program for this area. The scope of the RDI that was completed is presented in this section of the report.

2.1 Test Pit Evaluation and Pipe Removal

On June 8, 2015, DAY representatives conducted a Site visit to confirm access to proposed test pit locations and completed an evaluation of the proposed test pit areas using a magnetic locator. Two magnetic anomalies were detected, each approximately 5 feet long, one directly north of existing monitoring well GM-MW16 and one directly south of existing monitoring well GM-MW16.

Between June 18, 2015 and June 22, 2015, a Code of Federal Regulation (CFR) 1910.120 Hazardous Waste Operation and Emergency Response (HAZWOPER)-trained Gibbs Marina representative excavated three test pits (designated TP1, TP2 and TP3) using a backhoe in accordance with Section 2.1.1 of the approved RAWP-Phase 2. The locations of these test pits are shown on Figure 3. A Day Environmental, Inc. (DAY) representative was on-site to observe the test pit work. Monitoring included visually observing soil samples for evidence of impact (e.g., staining, odors, etc.) as well as screening soil samples, and the headspace on portions of select samples, with a RAE Systems MiniRAE 2000 photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp for evidence of volatile organic compound (VOC) impact. Other portions of the soil samples were collected for possible laboratory analysis. Pertinent information for each test pit is provided on test pit logs included in Appendix A. Some of the information for each test pit is provided below.

Test Pit TP1: Two apparent concrete-filled USTs were identified in Test Pit TP1, located on the eastern exterior side of Building 6 near a foundation footer for the building. The USTs appeared to be approximately 5 feet (ft.) long and 4 ft. in diameter. The tops of the USTs were located approximately 4.5 ft. below ground surface (bgs). The fill ports of the USTs were accessible. The USTs were determined to be concrete-filled by visual inspection and attempting to insert a metal pole into the fill ports of the USTs. A large concrete slab was located to the north of the USTs. An approximate 3 inch diameter steel pipe that was connected to the tops of both USTs entered the south wall of the large concrete slab (i.e., the steel pipe was oriented in a north-south direction). Also, two smaller, loose concrete slabs (each approximately 3 ft. by 2 ft. by 0.8 ft. thick) were located approximately 0.5 ft. above the steel pipe. During the excavation of Test Pit TP1, groundwater monitoring well GM-MW16 was destroyed due to its proximity to the USTs. Evidence of apparent contamination was noted in Test Pit TP1. Specifically, elevated PID readings ranging between 0.0 parts per million (ppm) to 681 ppm, stained sand fill and apparent petroleum-type odors were encountered. The evidence of apparent contamination appeared to be greatest in the location of the USTs and large concrete slab. The maximum depth of Test Pit TP1 was 6 ft. bgs. The test pit was not extended to a depth of 8 ft. bgs, as stated in the RAWP, due to saturated soil/fill encountered at an approximate depth of 5 ft. bgs. In addition, the area of the concrete-filled USTs was not excavated to the invert of the tanks as stated in the RAWP due to the saturated soil/fill. Following completion of Test Pit TP1, the excavated material removed

from Test Pit TP1 was used to backfill Test Pit TP1. Material was placed back into the excavation in the same general strata from which it was removed. Fill material was not imported to the Site for use as backfill.

Test Pit TP2: Test Pit TP2 was located approximately 10 feet east of Test Pit TP1. Two steel pipes, each approximately 3 inches in diameter, were identified passing through Test Pit TP2. The pipes appeared to be in-line with the large concrete slab in Test Pit TP1 and were oriented in an east-west direction. Evidence of apparent contamination was noted in Test Pit TP2 (i.e., elevated PID readings ranging between 0.0 ppm to 53.5 ppm, stained soil, odors) but to a lesser degree than noted in Test Pit TP1. The maximum depth of Test Pit TP2 was approximately 5.2 ft. bgs due to the presence of saturated soil/fill at an approximate depth of 5 ft. bgs. Following completion of Test Pit TP2, the excavated material removed from Test Pit TP2 was used to backfill Test Pit TP2. Material was placed back into the excavation in the same general strata from which it was removed. Fill material was not imported to the Site for use as backfill.

Test Pit TP3: Test Pit TP3 was located inside Building 6, approximately 3 feet west of Test Pit TP1. No tanks or piping were encountered in Test Pit TP3. Staining was not observed in Test Pit TP3. A petroleum odor and elevated PID readings, ranging between 0.8 ppm to 9.7 ppm, were noted in Test Pit TP3 in the vicinity of the large concrete slab that was observed in Test Pit TP1. Two small concrete slabs were observed in TP3, each approximately 5 ft. by 3.5 ft. and 1 ft. thick. The northern concrete slab was removed from the excavation. The southern concrete slab did not appear to be attached to the building or piping underneath, but was left in-place due to its proximity to the building wall. The maximum depth of Test Pit TP3 was approximately 5 ft. bgs due to the presence of saturated soil/fill at an approximate depth of 5 ft. bgs. Following completion of Test Pit TP3, the excavated material removed from Test Pit TP3 was used to backfill Test Pit TP3. Material was placed back into the excavation in the same general strata from which it was removed. Fill material was not imported to the Site for use as backfill.

As shown on Table 1, one soil sample from each test pit was selected and subsequently submitted under chain-of-custody control to Paradigm Environmental Services, Inc. (Paradigm), which is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified analytical laboratory (ELAP #10958). Samples with the greatest field evidence of impact (e.g., elevated PID readings, staining, odors) were selected for laboratory testing. Paradigm analyzed the three soil samples for the following parameters:

- Target Compound List (TCL) Volatile Organic Compounds (VOCs) plus Tentatively Identified Compounds (TICs) using United States Environmental Protection Agency (USEPA) Method 8260;
- TCL Semi-Volatile Organic Compounds (SVOCs) plus TICs using USEPA Method 8270; and
- Lead using USEPA Method 6010.

On June 26, 2015, Mr. Charles M. Ekiert, P.E., Structural Engineer from Herrick-Sayler Engineers, P.C., and a representative from DAY, conducted a site visit to determine if the

removal of the USTs would structurally impact the building. In a discussion conducted with Mr. Ekiert, P.E., the structural engineer, Mr. Ekiert, stated that the structural integrity of the building would be compromised if the concrete-filled USTs were removed. A formal report was not provided by Herrick-Saylor Engineers, P.C. With concurrence from the NYSDEC, a decision was made to leave the concrete-filled USTs in place.

Pipe Removal: On July 13, 2015, representatives of TREC Environmental Inc. (TREC) were on-site to remove piping associated with the two concrete-filled USTs (refer to select photographs included in Appendix B). A DAY representative was on-site to observe the removal of the pipes. Approximately 80 feet of steel pipe was removed from the site by TREC. Two pipes, each approximately 3 inches in diameter, located approximately 1 foot apart and configured in an east-west direction were removed from an area to the east of the large concrete slab identified in Test Pit TP1 (refer to attached Figure 3). The north pipe was approximately 25 feet long and the south pipe was approximately 45 feet long. The north pipe was found to be capped on the eastern end. The south pipe was not capped. Evidence of product was not observed in either pipe. An elbow was observed on the eastern end of the north pipe, and a test pit (designated TP4) was excavated to the north of the elbow. No evidence of a third UST was detected in the test pit. However, a steel pipe was observed slightly above the ground surface to the east of the test pit, in an approximate north-south configuration. A peak PID reading in this pipe was measured at 1,000 ppm. This pipe was excavated and removed. It was found to be connected to a concrete slab that appeared to be part of an assumed former pump dispenser location. The concrete slab was shifted aside and the area beneath the concrete slab was excavated to a depth of approximately three feet bgs. Evidence of impacted soils (odor, staining, elevated PID readings ranging between 0.8 to 248 ppm) was observed below the elbow of the piping as well as in the area of the assumed former pump dispenser.

Following completion of pipe removal activities and excavation of Test Pit TP4, the excavated material removed from the area of the pipes and Test Pit TP4 was used as backfill. Material was placed back into the excavations in the same general strata from which it was removed. Fill material was not imported to the Site for use as backfill.

2.2 Test Boring/Temporary Monitoring Well Evaluation

On July 13, 2015 and July 14, 2015, representatives of TREC were on-site to advance eleven test borings (designated as TMW1 to TMW3, GM-MW-16A, TMW5 to TMW10, and TB11) to depths of approximately 12 feet bgs using truck-mounted direct-push Geoprobe equipment. A DAY representative documented the work, performed field screening, and collected samples for possible analytical laboratory testing. Pertinent information for each test boring is included on test boring logs included in Appendix A. As shown on Table 1, at least one soil/fill sample from test borings TMW1 to TMW3, GM-MW-16A, TMW5 to TMW10, as well as one soil/fill sample from beneath the location of the pipe elbow (designated TP4), were selected for laboratory analysis of TCL VOCs and TICs using USEPA Method 8260 and TCL SVOCs and TICs using USEPA Method 8270. Following concurrence from the NYSDEC, approximately half of those soil samples were also tested for Lead using USEPA Method 6010.

On July 13, 2015 and July 14, 2015, nine temporary groundwater monitoring wells (designated as TMW1 to TMW3, and TMW5 through TMW10) and one permanent groundwater monitoring well (designated as GM-MW-16A) were installed in the corresponding test borings. The groundwater monitoring wells were constructed of one-inch inner diameter Schedule 40 polyvinyl chloride (PVC) with a ten-foot long 10-slot screen attached to solid riser. The well screens were placed from about 2 feet and 12 feet below the existing ground surface. The annulus around, and about one foot above, each screen was backfilled with a sand pack. A 1-foot thick bentonite seal was placed above the sand pack. GM-MW-16A was installed as a replacement for GM-MW16, which was destroyed during the excavation of Test Pit TP1. GM-MW-16A was completed with a curb-box, which was concreted in place. Monitoring well construction diagrams are included in Appendix A.

On July 14, 2015, the temporary monitoring wells were opened and screened with a PID, the static water level was measured in each well, the presence of light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL) was assessed using an interface probe, the wells were purged, and groundwater samples were collected. Groundwater samples were submitted for laboratory analysis of TCL VOCs and TICs.

On July 17, 2015, DAY personnel decommissioned the nine temporary monitoring wells. For temporary monitoring wells TMW1 to TMW3, TMW5 to TMW7, and TMW9, the PVC casings were removed and the resulting boreholes were backfilled with hydrated bentonite grout. For temporary monitoring wells TMW8 and TMW10, the PVC casing broke in-place at about five-feet below the ground surface as the casing was being pulled from the ground. Therefore, the resulting boreholes at each of these two locations, including the remaining portions of the PVC casing and well screen, were backfilled with hydrated bentonite grout.

2.3 Quality Assurance/Quality Control

The applicable quality assurance/quality control (QA/QC) protocols and procedures included in the RAWP Quality Assurance Project Plan (QAPP) were implemented during performance of the tasks associated with the RDI. In accordance with the QAPP, the following QA/QC samples were submitted to Paradigm and analyzed for the parameters identified:

- A field blank from test pit sampling equipment (designated as FB-06-19-2015) was analyzed for TCL VOCs and TICs using USEPA Method 8260, TCL SVOCs and TICs using USEPA Method 8270 and Lead using USEPA Method 6010.
- A matrix spike/matrix spike duplicate (MS/MSD) was performed on soil sample TP1-06-18-2015 which was tested for TCL VOCs using USEPA Method 8260, TCL SVOCs and TICs using USEPA Method 8270 and Lead using USEPA Method 6010.
- A field blank from soil sampling equipment (designated as FB-14-07-15) was analyzed for TCL VOCs and TICs using USEPA Method 8260, TCL SVOCs and TICs using USEPA Method 8270 and Lead using USEPA Method 6010.
- A MS/MSD was performed on groundwater sample GM-MW-16A-14-07-15 which was tested for TCL VOCs and TICs using USEPA Method 8260.

- A trip blank (designated as T-634) was analyzed for TCL VOCs and TICs using USEPA Method 8260.

Data Usability Summary Reports

Data Usability Summary Reports (DUSRs) have been prepared by Environmental Data Validation, Inc. (EDV) for data packages 152526 and 152535 (sampling dates June 18, 19 and 22, 2015) and for data packages 152971 and 152977 (sampling dates July 13 and 14, 2015). The scope of the DUSRs included review of blanks, instrument tunings, calibration standards, calibration verifications, laboratory controls, surrogate recoveries, spike recoveries, and sample data.

2.4 CAMP Monitoring

As per the requirements of the Health and Safety Plan, Community Air Monitoring Plan (CAMP) monitoring was conducted during ground intrusive activities (i.e., test pit excavations, pipe removal and test borings). Field notes and CAMP Monitoring logs are included in Appendix D.

2.5 Investigation Derived Wastes

Investigation derived wastes (IDWs), such as well purge water and decontamination water, was placed in New York State Department of Transportation (NYSDOT)-approved drums. A sample from a drum of liquid IDW (designated as Sample WC-17-07-15) was collected following completion of the RDI field work. Also, a sample from a second drum of liquid IDW (designated as Sample WC-26-02-2016) was collected subsequent to receipt of NYSDEC comments regarding the RDI Report. The samples were submitted for laboratory testing of the following:

- Purgeable Organics using USEPA Method 624; and
- SVOCs using USEPA Method 625.

On March 31, 2016, the two drums of liquid IDW were transported by DAY personnel to the Frank E. VanLare Wastewater Treatment Plant (WTP), for discharge at a location into the treatment system identified by WTP personnel. The liquid IDW was discharged under Specialty Short Term Discharge Permit ST-305. A copy of the Specialty Short Term Discharge Permit is provided in Appendix F.

Piping removed during the investigation was taken off-site by TREC personnel. A TREC representative indicated that free liquids were not present in the piping, and that the piping was sent for recycling to the Ben Weitsman of Rochester facility located at 80 Steel Street, Rochester, NY. No documentation regarding the recycling of this piping was generated. Concrete removed during the excavation work was put back into the test pit excavations in the same general strata from which the concrete was removed.

3.0 FINDINGS

The findings of the work performed during the RDI are presented in this section of the report. Analytical laboratory reports and chain-of-custody documentation for soil samples, groundwater samples, and QA/QC samples are included in Appendix E.

3.1 Soil

As shown on the test pit logs included in Appendix A, peak PID readings on soil samples from the initial three test pits ranged between 9.7 parts per million (ppm) (TP3) and 681 ppm (TP1). The peak PID reading on soil from test pit TP4 was 248 ppm. Peak PID readings on soil samples from the test borings ranged from 0.0 ppm (TMW2, TMW3) to 284 ppm (TMW5).

Fill material consisting of sand and gravel was observed in the eleven test borings and four test pits. Wood beams, shingles and brick were observed in the fill at test pit TP1. Fill material in the location of the USTs was fine sand with little to no gravel. Broken asphalt-pavement was observed in two layers in portions of Test Pit TP1, and two to three layers of asphalt-pavement was observed in Test Pit TP2, including asphalt-pavement at the ground surface. Increasing clay content was observed below 5 ft. bgs. in TMW5 and below 10 ft. bgs. in TMW6. Peat was observed below 10 ft. bgs. at TMW10. Apparent indigenous materials consisting of clay with some silt and sand were encountered beneath fill materials at test locations TMW5 and TMW6.

The soil sample analytical laboratory test results for TCL VOCs and TICs, TCL SVOCs and TICs and Lead are provided on Table 2, Table 3 and Table 4, respectively. These results are discussed below:

VOCs

As shown on Table 2, TCL VOCs were detected in each of the fifteen soil samples that were tested. Apparent petroleum-related TCL VOCs detected in one or more soil samples included: benzene, ethylbenzene, xylenes, isopropylbenzene, cyclohexane, methylcyclohexane and toluene. Other TCL VOCs detected in one or more soil samples included: acetone, 2-butanone, carbon disulfide, methylene chloride and trans-1,3-dichloropropene. TICs were detected in nine of the fifteen soil samples that were tested and had a maximum total TICs concentration of 647 ppm (TP1-06-18-2015). The total TCL VOCs and TICs ranged in concentration from 0.0148 ppm (TP2-06-19-2015) to 722.21 ppm (TP1-06-18-2015). The ratio of TICs to total VOCs from soil sample TP1-06-18-2015 was approximately 8.6:1 (i.e., 647 ppm: 75 ppm), indicating that the petroleum contamination is likely weathered. Total TCL VOCs and TICs concentrations detected in the soil sample from each test boring are shown on Figure 4.

The detected concentrations of TCL VOCs were compared to soil cleanup objectives (SCOs) for Unrestricted Use, Restricted Commercial Use and Protection of Groundwater as referenced in the NYSDEC document titled “6 NYCRR Part 375 Environmental Remediation Program”, dated December 15, 2006 as supplemented by NYSDEC document titled “CP-51/Soil Cleanup Guidance”, dated October 21, 2010. As shown on Table 2, the

concentration of ethylbenzene and total xylenes in the soil sample collected from TP1, and the concentrations of acetone in soil samples collected from TMW3 (6-8), TMW5 (2-4) and TMW8 (3-4), exceeded their Unrestricted Use SCOs and Protection of Groundwater SCOs; however, the concentrations of ethylbenzene, xylenes and acetone did not exceed their Restricted Commercial Use SCOs. The other eleven soil samples tested contained one or more TCL VOCs; however, the concentrations of VOCs detected were below their respective Unrestricted Use SCOs.

SVOCs

As shown on Table 3, TCL SVOCs were detected in nine of the fifteen soil samples that were tested. TICs were detected in the fifteen soil samples that were tested. Concentrations of TICs ranged from 1.25 ppm [TMW10-14-07-15(6-8)] to 80.4 ppm (TMW1-06-18-2015). Total TCL SVOCs and TICs concentrations detected in the soil sample from each test boring are shown on Figure 4. TCL SVOCs detected in one or more soil samples included: 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, carbazole, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene.

The detected concentrations of specific SVOCs were compared to Unrestricted Use, Restricted Commercial Use and Protection of Groundwater. As shown on Table 3, the soil samples discussed below had exceedances of Unrestricted Use SCOs, Restricted Commercial Use SCO and/or Protection of Groundwater SCOs:

TP1-06-18-2015:

Benzo(a)anthracene: Concentration of 1.99 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Benzo(a)pyrene: Concentration of 2.13 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Restricted Commercial Use SCO of 1 mg/kg.

Benzo(b)fluoranthene: Concentration of 2.51 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1.7 mg/kg.

Benzo(k)fluoranthene: Concentration of 1.45 mg/kg exceeded the Unrestricted Use SCO of 0.8 mg/kg.

Chrysene: Concentration of 1.89 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Dibenz(a,h)anthracene: Concentration of 0.487 mg/kg exceeded the Unrestricted Use SCO of 0.33 mg/kg.

Indeno(1,2,3-cd)pyrene: Concentration of 2.14 mg/kg exceeded the Unrestricted Use SCO of 0.5 mg/kg.

TMW1-13-07-15(7-8):

Benzo(a)anthracene: Concentration of 1.28 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Benzo(a)pyrene: Concentration of 1.29 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Restricted Commercial Use SCO of 1 mg/kg.

Benzo(b)fluoranthene: Concentration of 1.37 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg.

Benzo(k)fluoranthene: Concentration of 1.06 mg/kg exceeded the Unrestricted Use SCO of 0.8 mg/kg.

Chrysene: Concentration of 1.4 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Indeno(1,2,3-cd)pyrene: Concentration of 0.942 mg/kg exceeded the Unrestricted Use SCO of 0.5 mg/kg.

GM-MW-16A-13-07-15(4-8):

Benzo(a)anthracene: Concentration of 1.58 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Benzo(a)pyrene: Concentration of 1.48 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Restricted Commercial Use SCO of 1 mg/kg.

Benzo(b)fluoranthene: Concentration of 1.43 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg.

Benzo(k)fluoranthene: Concentration of 1.18 mg/kg exceeded the Unrestricted Use SCO of 0.8 mg/kg.

Chrysene: Concentration of 1.66 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Indeno(1,2,3-cd)pyrene: Concentration of 1.01 mg/kg exceeded the Unrestricted Use SCO of 0.5 mg/kg.

TP4-13-07-15(2.5):

Benzo(a)anthracene: Concentration of 1.16 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Benzo(a)pyrene: Concentration of 1.08 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Restricted Commercial Use SCO of 1 mg/kg.

Benzo(b)fluoranthene: Concentration of 1.11 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg.

Benzo(k)fluoranthene: Concentration of 0.897 mg/kg exceeded the Unrestricted Use SCO of 0.8 mg/kg.

Chrysene: Concentration of 1.11 mg/kg exceeded the Unrestricted Use SCO of 1 mg/kg and Protection of Groundwater SCO of 1 mg/kg.

Indeno(1,2,3-cd)pyrene: Concentration of 0.715 mg/kg exceeded the Unrestricted Use SCO of 0.5 mg/kg.

Lead

As shown on Table 4, lead was detected in the nine soil samples tested. The concentration of lead in soil samples collected from TP3, TMW3 and TMW5 exceeded the Unrestricted Use SCO, but did not exceed the Restricted Commercial Use SCO or the Protection of Groundwater SCO. The concentrations of lead detected in the other six soil samples were below the Unrestricted Use SCO. Lead concentrations detected in the soil samples tested are shown on Figure 4.

3.2 Groundwater

The water levels measured from the temporary groundwater monitoring wells on July 14, 2015, ranged from 3.33 ft. bgs. (TMW5) to 0.97 ft. bgs. (TMW10). Given the variation in depth to groundwater, as well as the proximity of the temporary groundwater monitoring wells to each other, these measurements may not be representative of true static water levels, hence an elevation survey of the temporary monitoring wells was not completed. LNAPL and DNAPL were not encountered in the groundwater monitoring wells.

VOCs

As shown on Table 5, TCL VOCs were detected in four of the ten groundwater samples tested (i.e., TMW1, GM-MW-16A, TMW5 and TMW7). TICs were also detected in these four groundwater samples. The maximum concentration of TCL VOCs and TICs was 1,723.22 parts per billion (ppb) (TMW5). The total TCL VOCs and TICs results are shown on Figure 5. Detected VOCs were typical of petroleum products, such as benzene, cyclohexane, ethylbenzene, isopropylbenzene, xylenes and toluene. The ratio of TICs to total VOCs from groundwater sample TMW5 was approximately 5.8:1 (i.e., 1470 ppb:253 ppb), indicating that the petroleum contamination is likely weathered. The TCL VOCs acetone and trans-1,3-dichloropropene were also detected in one or more of the four samples. The concentration of benzene in the groundwater samples from TMW1, GM-MW-16A, TMW5 and TMW7 exceeded groundwater standards or guidance values referenced in the NYSDEC document titled “*Division of Water Technical and Operational Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*” (TOGS 1.1.1) dated June 1998, amended April 2000 and June 2004. The concentrations of xylenes in the groundwater sample from GM-MW-16A also exceeded groundwater standards or guidance values. The concentrations of ethylbenzene, isopropylbenzene, xylenes, toluene and trans-1,3-dichloropropene in the groundwater sample from TMW5 also exceeded groundwater standards or guidance values.

3.3 Quality Assurance/Quality Control

The test results of the QA/QC samples are provided in the analytical laboratory reports included in Appendix E, and the test results for the field QA/QC samples are summarized on Table 6, Table 7 and Table 8. VOC TICs and SVOC TICs were detected in field blank FB-06-19-2015, but at concentrations that do not significantly affect the analytical results of soil or groundwater samples that were collected as part of the RDI.

The information presented in the DUSRs included in Appendix E was used to qualify the analytical laboratory data as appropriate. These qualifications are incorporated into the summary tables presented in this document. A discussion of qualifiers resulting from the DUSR is provided below:

- Acetone in soil samples TP1-06-18-2015 and TP3-06-22-2015 was qualified UJ and J respectively, due to deficiency with the surrogate.

- Acetone, ethylbenzene, methylcyclohexane and trans-1,3-dichloropropene in soil sample TMW5-14-07-15(2-4) was qualified J due to deficiency with the surrogate.
- Lead was qualified J in soil samples TMW1-13-07-15(7-8), TMW3-13-07-15(6-8), GM-MW-16A-13-07-15(4-8), TP4-13-07-15(2.5), TMW5-14-07-15(2-4) and TMW7-14-07-15(4-6) due to deficiency with the matrix spike.
- A number of VOCs and SVOCs were qualified UJ due to deficiency with calibration quality control, laboratory control sample or surrogates. The affected VOCs and SVOCs are not listed on the summary tables since they were not detected in one or more sample.

3.4 CAMP Monitoring

No exceedances of VOC or particulate action monitoring levels were measured at the downwind Site perimeter CAMP monitoring locations during ground intrusive activities. CAMP monitoring logs as well as figures indicating locations, wind direction and approximate speed are provided in Appendix D.

3.5 Investigation Derived Wastes

Detectable concentrations of purgeable organics and SVOCs were not reported for the IDW samples.

4.0 CONCLUSIONS

DAY performed the RDI in substantial conformance with Section 2.1 of the Remedial Action Work Plan – Phase 2, as modified by the NYSDEC’s September 19, 2013 conditional approval letter. The scope of work included the initial advancement of three test pits, the removal of piping associated with two concrete-filled USTs, advancement of a fourth test pit, advancement and soil sampling at eleven test boring locations, installation of ten groundwater monitoring wells and groundwater sampling of the ten groundwater monitoring wells. One of the groundwater monitoring wells was completed as a permanent monitoring well (GM-MW-16A). Soil samples from test pits and test borings were submitted for laboratory analysis of TCL VOCs and TICs and TCL SVOCs and TICs. Lead was also analyzed on one-half of the soil samples. Groundwater samples were submitted for laboratory analysis of TCL VOCs and TICs.

Based on the findings of the RDI, provided below are conclusions:

- Two concrete-filled USTs, each approximately 550-gallon in size, were identified in test pit TP1. These USTs are located approximately one foot east of Building 6 and in proximity to a foundation footer. A structural engineer concluded that removal of the concrete-filled USTs would compromise the structural integrity of the building, so with the concurrence of the NYSDEC, the USTs were not removed. A pipe was connected to the tops of both USTs and entered the south wall of a large concrete slab. Additional piping was present running from the large concrete slab to the east.
- During pipe removal work, an assumed former pump dispenser concrete pad was identified to the east of the concrete-filled USTs (refer to Figure 3).
- Evidence of petroleum contamination in soil (i.e., staining, odors, elevated PID readings) appeared to be greatest within the area of the two concrete-filled USTs, and in the location of the assumed former pump dispenser and pipe elbow located adjacent to test pit TP4. The majority of soil contamination is present within the saturated zone.
- Based on TCL VOC and TICs analytical results, petroleum contamination in groundwater also appears to be greatest within the location of the concrete-filled USTs and in the location of the assumed former pump dispenser,
- Based on analytical results (i.e., the ratio of concentrations of VOC TICs versus total VOCs, and SVOC TICs versus total SVOCs), the petroleum contamination appears to be weathered (i.e., comprised mostly of non-target petroleum-related compounds).
- In general, petroleum contamination in soil and groundwater appears to be delineated to the west, north and south, and is bounded to the east by the Genesee River.
- Samples of IDWs did not have detectable concentrations of purgeable organics or SVOCs. IDWs will be disposed of off-site in accordance with applicable regulations.

The concentrations of VOC contamination in saturated soil and groundwater appears to be suitable for remediation through in-situ technology. Further details regarding remediation of this area will be provided in the Remedial Design Work Plan (RDWP) that will be completed, as outlined in Section 2.2 of the Remedial Action Work Plan – Phase 2.

5.0 REFERENCES

NYSDEC Division of Water, Technical and Operational Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (TOGS 1.1.1), June 1998, Addended April 2000 and June 2004.

NYSDEC, 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NYSDEC Division of Environmental Remediation, DER-10 / Technical Guidance for Site Investigation and Remediation, May 3, 2010.

NYSDEC CP-43: Groundwater Monitoring Well Decommissioning Policy, November 3, 2009.

NYSDEC CP-51: Soil Cleanup Guidance, October 21, 2010.

Remedial Action Work Plan – Phase 2, Former Underground Storage Tank Area; 118 Petten Street, Rochester, New York; Brownfield Cleanup Program, NYSDEC Site ID. C828130, December 2012; Day Environmental, Inc., as modified by NYSDEC conditional approval letter dated September 19, 2013.

6.0 ACRONYMS

BCP	Brownfield Cleanup Program
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
DAY	Day Environmental, Inc.
DNAPL	Dense Non-Aqueous Phase Liquid
DUSR	Data Usability Summary Report
EDV	Environmental Data Validation, Inc.
ELAP	Environmental Laboratory Approval Program
eV	Electron Volt
Ft.	Feet
HAZWOPER	Hazardous Waste Operations and Emergency Response
LNAPL	Light Non-Aqueous Phase Liquid
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
Paradigm	Paradigm Environmental Services, Inc.
PID	Photoionization Detector
PPB	Parts Per Billion
PPM	Parts Per Million
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RAWP	Remedial Action Work Plan
RDI	Remedial Design Investigation
RDWP	Remedial Design Work Plan
SCO	Soil Cleanup Objective
SVOC	Semi-Volatile Organic Compound
TCL	Target Compound List
TIC	Tentatively Identified Compound
TOGS	Technical and Operational Guidance Series
TREC	TREC Environmental, Inc.
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

TABLES

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)

Table 1
118 Petten Street
Rochester, New York
Site No: C828130

Analytical Laboratory Program for Field and QA/QC Samples

Sample ID	Laboratory Sample ID	Collection Date	Collection Time	Composite or Grab	PID Reading (ppm)	Depth (ft bgs)	Matrix	MS/MSD Collected	Analytical Test Parameters		
									TCL VOCs & TICs	TCL SVOCs & TICs	Lead
TP1-06-18-2015	152526-01	6/18/2015	13:25	Grab	681	4.5	Soil	Yes	•	•	•
TP2-06-19-2015	152526-02	6/19/2015	15:30	Grab	49.5	3.5	Soil	No	•	•	•
TP3-06-22-2015	152535-01	6/22/2015	13:40	Grab	4.3	5	Soil	No	•	•	•
TMW1-13-07-15(7-8)	152971-11	7/13/2015	11:10	Grab	0.0	7-8	Soil	No	•	•	•
TMW2-13-07-15(7-8)	152971-12	7/13/2015	12:25	Grab	0.0	7-8	Soil	No	•	•	
TMW3-13-07-15(6-8)	152971-13	7/13/2015	14:33	Grab	0.0	6-8	Soil	No	•	•	
GM-MW-16A-13-07-15(4-8)	152971-14	7/13/2015	15:30	Grab	0.0	4-8	Soil	No	•	•	•
TP4-13-07-15(2.5)	152971-15	7/13/2015	12:00	Grab	248	2.5	Soil	No	•	•	•
TMW5-14-07-15(2-4)	152977-01	7/14/2015	8:31	Grab	270	2-4	Soil	No	•	•	•
TMW5-14-07-15(10-12)	152977-08	7/14/2015	8:35	Grab	0.8	10-12	Soil	No	•	•	
TMW6-14-07-15(4-6)	152977-09	7/14/2015	9:42	Grab	0.5	4-6	Soil	No	•	•	
TMW7-14-07-15(4-6)	152977-03	7/14/2015	10:25	Grab	3.9	4-6	Soil	No	•	•	•
TMW8-14-07-15(3-4)	152977-04	7/14/2015	11:32	Grab	0.0	3-4	Soil	No	•		
TMW8-14-07-15(4-8)	152977-05	7/14/2015	11:34	Grab	0.0	4-8	Soil	No		•	
TMW9-14-07-15(4-6)	152977-06	7/14/2015	11:48	Grab	1.1	4-6	Soil	No	•	•	
TMW10-14-07-15(6-8)	152977-07	7/14/2015	12:50	Grab	1.1	6-8	Soil	No	•	•	
TMW1-14-07-15	152971-02	7/14/2015	15:31	Grab	3.2	NA	Groundwater	No	•		
TMW2-14-07-15	152971-03	7/14/2015	15:40	Grab	1.7	NA	Groundwater	No	•		
TMW3-14-07-15	152971-04	7/14/2015	15:50	Grab	0.4	NA	Groundwater	No	•		
GM-MW-16A-14-07-15	152971-05	7/14/2015	16:00	Grab	2.5	NA	Groundwater	Yes	•		
TMW5-14-07-15	152971-06	7/14/2015	16:15	Grab	115	NA	Groundwater	No	•		
TMW6-14-07-15	152971-07	7/14/2015	16:25	Grab	0	NA	Groundwater	No	•		
TMW7-14-07-15	152971-08	7/14/2015	16:33	Grab	1.3	NA	Groundwater	No	•		
TMW8-14-07-15	152971-09	7/14/2015	16:40	Grab	0.8	NA	Groundwater	No	•		
TMW9-14-07-15	152971-10	7/14/2015	16:50	Grab	2.9	NA	Groundwater	No	•		
TMW10-14-07-15	152971-16	7/14/2015	16:55	Grab	1.7	NA	Groundwater	No	•		
FB-06-19-2015	152526-03	6/19/2015	11:30	Grab	NA	NA	Water	No	•	•	•
FB-14-07-15	152971-01	7/14/2015	13:01	Grab	NA	NA	Water	No	•	•	•
Trip Blank (T-634)	152971-17	NA	NA	NA	NA	NA	Water	NA	•		

Notes:
NA = Not Available

Table 2
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Detected Volatile Organic Compounds in mg/kg or ppm
Soil Samples

Compound	Unrestricted Use SCO	Restricted Commercial SCO	Protection of Groundwater SCO	TP1-06-18-2015		TP2-06-19-2015		TP3-06-22-2015		TMW1-13-07-15(7-8)		TMW2-13-07-20-15(7-8)		TMW3-13-07-15(6-8)		GM-MW-16A-13-07-15(4-8)		TP4-13-07-15(2.5)			
				4.5		3.5		5.0		7-8		7-8		6-8		4-8		2.5			
				152526-01		152526-02		152535-01		152971-11		152971-12		152971-13		152971-14		152971-15			
				6/18/2015		6/19/2015		6/22/2015		7/13/2015		7/13/2015		7/13/2015		7/13/2015		7/13/2015			
Acetone	0.05	500	0.05	U	J		0.0148	J		0.0259	J		0.0209	J		0.158	AC	U		U	
Benzene	0.06	44	0.06	U			U			U			U			U		0.00453		U	
2-Butanone	NS	NS	0.3	U			U			U			U			0.0451		U		U	
Carbon Disulfide	NS	NS	2.7	U			U			U			0.00437			U		U		U	
Cyclohexane	NS	NS	NS	11.7			U			0.0196	J		0.0371			U		0.141		U	
Ethylbenzene	1	390	1	1.66	AC		U			U			U			U		0.027		U	
Isopropylbenzene	NS	NS	2.3	0.845			U			U			0.00366	J		U		0.0143		U	
Xylenes (mixed)	0.26	500	1.6	6.605	AC		U			U			0.01338	J		U		0.08251		U	
Methylcyclohexane	NS	NS	NS	54.4			U			0.0125			0.0386			0.0303	J	U		0.449	
Methylene Chloride	0.05	500	0.05	U			U			U			U			0.00597		U		U	
trans-1,3-Dichloropropene	NS	NS	NS	U			U			U			U			U		0.00349	J	U	
Toluene	0.7	500	0.7	U			U			U			U			U		0.00604		U	
Total VOCs				75.21		0.0148		0.0580		0.11324		0.05557		0.20907		0.47887		0.449			
Total TICs ⁽¹⁾				647.00		U		0.097		1		U		U		1.91		30.9			
Total VOCs and TICs ⁽¹⁾				722.21		0.0148		0.155		1.11324		0.05557		0.20907		2.38887		31.349			

Compound	Unrestricted Use SCO	Restricted Commercial SCO	Protection of Groundwater SCO	TMW5-14-07-15(2-4)		TMW5-14-07-15(10-12)		TMW6-14-07-15(4-6)		TMW7-14-07-15(4-6)		TMW8-14-07-15(3-4)		TMW9-14-07-15(4-6)		TMW10-14-07-15(6-8)							
				2-4		10-12		4-6		4-6		3-4		4-6		6-8							
				152977-01		152977-08		152977-09		152977-03		152977-04		152977-06		152977-07							
				7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015							
Acetone	0.05	500	0.05	0.426	J	AC	0.0173		0.0184		0.0207		0.0925	AC	0.033		0.0134						
Benzene	0.06	44	0.06	U			U		U		U		U		U		U						
2-Butanone	NS	NS	0.3	U			U		U		U		0.0188		U		U						
Carbon Disulfide	NS	NS	2.7	U			U		0.0288		0.00466		U		U		U						
Cyclohexane	NS	NS	NS	U			U		U		U		U		0.0177		U						
Ethylbenzene	1	390	1	0.113	J		U		U		U		U		U		U						
Isopropylbenzene	NS	NS	2.3	0.165	J		U		U		U		U		U		U						
Xylenes (mixed)	0.26	500	1.6	U			U		U		U		U		0.00348		U						
Methylcyclohexane	NS	NS	NS	3.34	J		U		0.0058		0.00626		U		0.0804		U						
Methylene Chloride	0.05	500	0.05	U			U		U		U		0.00684		U		0.00546						
trans-1,3-Dichloropropene	NS	NS	NS	0.0798	J		U		U		U		U		0.00482		U						
Toluene	0.7	500	0.7	U			U		U		U		U		U		U						
Total VOCs				4.1238			0.0173			0.053			0.03162			0.11814			0.1394			0.01886	
Total TICs ⁽¹⁾				67.6			U			0.0257			0.0805			U			1.05			U	
Total VOCs and TICs ⁽¹⁾				71.7238			0.0173			0.0787			0.11212			0.11814			1.1894			0.01886	

Note

U = Not Detected

NS = No Standard

A = Exceeds Unrestricted Use SCO

B = Exceeds Commercial Use SCO

C = Exceeds Protection of Groundwater SCO

Units in milligrams per kilogram (mg/kg) or parts per million (ppm)

Soil cleanup objectives (SCOs) are as referenced in 6 NYCRR Part 375-6, Remedial Program Cleanup Objectives, dated December 14, 2006, as supplemented by CP-51 dated October 21, 2010.

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

UJ = Not Detected at an estimated detection limit as qualified by the data validator.

(1) Refer to the analytical laboratory report for individual TICs detected and associated flags.

VOC = Volatile Organic Compound

TIC = Tentatively Identified Compound

TMW3-13-07-15(6-8)	Sample ID
6-8	Sample Depth in feet below ground surface
152971-13	Laboratory Sample ID
7/13/2015	Sample Collection Date (mm/dd/yyyy)

Table 3
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Detected Semi-Volatile Organic Compounds in mg/kg or ppm
Soil Samples

Compound	Unrestricted Use SCO	Restricted Commercial SCO	Protection of Groundwater SCO	TP1-06-18-2015	TP2-06-19-2015		TP3-06-22-2015		TMW1-13-07-15(7-8)		TMW2-13-07-15(7-8)		TMW3-13-07-15(6-8)		GM-MW-16A-13-07-15(4-8)		TP4-13-07-15(2.5)		
				152526-01	152526-02		152535-01		152971-11		152971-12		152971-13		152971-14		152971-15		
				4.5	3.5		5		7-8		7-8		6-8		4-8		2.5		
				6/18/2015	6/19/2015		6/22/2015		7/13/2015		7/13/2015		7/13/2015		7/13/2015		7/13/2015		
2-Methylnaphthalene	NS	NS	36.4	3.23		U		U		U		U		0.406		U			
Acenaphthene	20	500	98	0.853		U		U		0.406		0.199	J	U		0.560	U		
Acenaphthylene	100	500	107	0.309	J		U		U		0.174	J		U		0.232	J		
Anthracene	100	500	1000	1.68		U		U		0.792		U		U		1.11	0.54		
Benzo(a)anthracene	1	5.6	1	1.99	AC		U		0.457		AC	0.373		0.217	J	1.58	AC		
Benzo(a)pyrene	1	1	22	2.13	AB		U		0.451		AB	0.367		0.226	J	1.48	AB		
Benzo(b)fluoranthene	1	5.6	1.7	2.51	AC		U		0.531		A	0.451		0.26	J	1.43	A		
Benzo(g,h,i)perylene	100	500	1000	1.32		U		U		0.296	J	0.852		0.266	J	U	0.798		
Benzo(k)fluoranthene	0.8	56	1.7	1.45	A		U		0.328	J	1.06	A	0.322	J	0.195	J	1.18		
Bis(2-ethylhexyl)phthalate	NS	NS	435	U		U		U		0.19	J	0.202	J	0.19	J	0.219	J		
Carbazole	NS	NS	NS	0.681		U		U		0.263	J	U		U		0.353	U		
Chrysene	1	56	1	1.89	AC		U		0.523		AC	0.452		0.262	J	1.66	AC		
Dibenz(a,h)anthracene	0.33	0.56	1000	0.487	A		U		U		0.261	J		U		0.303	J		
Dibenzofuran	7	350	210	0.984		U		U		0.341		U		U		0.553	U		
Fluoranthene	100	500	1000	5.31		U		U		1.26		0.869		0.539		3.97	2.48		
Fluorene	30	500	386	1.72		U		U		0.557		U		U		0.905	0.265		
Indeno(1,2,3-cd)pyrene	0.5	5.6	8.2	2.14	A		U		0.415		A	0.332	J	0.194	J	1.01	A		
Naphthalene	12	500	12	2.87		U		U		U		U		U		0.545	U		
Phenanthrene	100	500	1000	5.89		U		U		0.761		2.9		0.261	J	0.355	3.56		
Pyrene	100	500	1000	4.57	M		U		0.966		2.99		0.76		0.430		3.16		
Total SVOCs				42.014		U		5.988		20.838		4.854		2.868		25.014		13.719	
Total TICs ⁽¹⁾				80.4		18.5		12.00		11.7		8.71		8.95		13.000		28.800	
Total SVOCs and TICs ⁽¹⁾				122.414		18.5		17.988		32.538		13.564		11.818		38.014		42.519	

Compound	Unrestricted Use SCO	Restricted Commercial SCO	Protection of GW SCO	TMW5-14-07-15(2-4)	TMW5-14-07-15(10-12)	TMW6-14-07-15(4-6)	TMW7-14-07-15(4-6)	TMW8-14-07-15(4-8)	TMW9-14-07-15(4-6)	TMW10-14-07-15(6-8)
				152977-01	152977-08	152977-09	152977-03	152977-05	152977-06	152977-07
				2-4	10-12	4-6	4-6	4-8	4-6	6-8
				7/14/2015	7/14/2015	7/14/2015	7/14/2015	7/14/2015	7/14/2015	7/14/2015
2-Methylnaphthalene	NS	NS	36.4	U	U	U	U	U	U	U
Acenaphthene	20	500	98	U	U	U	U	U	U	U
Acenaphthylene	100	500	107	U	U	U	U	U	U	U
Anthracene	100	500	1000	U	U	U	U	U	U	U
Benzo(a)anthracene	1	5.6	1	U	U	U	U	0.363	U	U
Benzo(a)pyrene	1	1	22	U	U	U	U	0.388	U	U
Benzo(b)fluoranthene	1	5.6	1.7	U	U	U	U	0.438	U	U
Benzo(g,h,i)perylene	100	500	1000	U	U	U	U	0.272 J	U	U
Benzo(k)fluoranthene	0.8	56	1.7	U	U	U	U	0.317 J	U	U
Bis(2-ethylhexyl)phthalate	NS	NS	435	0.171 J	U	U	U	0.353	U	U
Carbazole	NS	NS	NS	U	U	U	U	U	U	U
Chrysene	1	56	1	U	U	U	U	0.463	U	U
Dibenz(a,h)anthracene	0.33	0.56	1000	U	U	U	U	U	U	U
Dibenzofuran	7	350	210	U	U	U	U	U	U	U
Fluoranthene	100	500	1000	U	U	U	U	0.957	U	U
Fluorene	30	500	386	U	U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	0.5	5.6	8.2	U	U	U	U	0.288 J	U	U
Naphthalene	12	500	12	U	U	U	U	U	U	U
Phenanthrene	100	500	1000	U	U	U	U	0.56	U	U
Pyrene	100	500	1000	U	U	U	U	0.754	U	U
Total SVOCs				0.171	U	U	U	5.153	U	U
Total TICs ⁽¹⁾				12.800	2.200	5.140	1.71	8.480	6.45	1.25
Total SVOCs and TICs ⁽¹⁾				12.971	2.200	5.140	1.71	13.633	6.45	1.25

Note

U = Not Detected

NS = No Standard

A = Exceeds Unrestricted Use SCO

B = Exceeds Commercial Use SCO

C = Exceeds Protection of Groundwater SCO

Units in milligrams per kilogram (mg/kg) or parts per million (ppm)

Soil cleanup objectives (SCOs) are as referenced in 6 NYCRR Part 375-6, Remedial Program Cleanup Objectives, dated December 14, 2006, as supplemented by CP-51 dated October 21, 2010.

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

UJ = Not Detected at an estimated detection limit as qualified by the data validator.

M = Matrix spike recoveries outside QC limits. Matrix bias indicated.

(1) Refer to the analytical laboratory report for individual TICs detected and associated flags.

SVOC = Semi-Volatile Organic Compound

TMW3-13-07-15(6-8)	Sample ID
6-8	Sample Depth in feet below ground surface
152971-13	Laboratory Sample ID
7/13/2015	Sample Collection Date (mm/dd/yyyy)

Table 4
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Detected Lead Concentrations
Soil Samples

Analyte	Unrestricted Use SCO	Restricted Commercial SCO	Protection of Groundwater SCO	TP1-06-18-2015			TP2-06-19-2015			TP3-06-22-2015			TMW1-13-07-15(7-8)			TMW3-13-07-15(6-8)		
				4.5			3.5			5			7-8			6-8		
				152526-01			152526-02			152535-01			152971-11			152971-13		
				6/18/2015			6/19/2015			6/22/2015			7/13/2015			7/13/2015		
Lead	63	1000	450	31.6			5.7			71.4		A	19.6	J		104	J	A

Analyte	Unrestricted Use SCO	Restricted Commercial SCO	Protection of Groundwater SCO	GM-MW-16A-13-07-15(4-8)			TP4-13-07-15(2.5)			TMW5-14-07-15(2-4)			TMW7-14-07-15(4-6)		
				4-8			2.5			2-4			4-6		
				152971-14			152971-15			152977-01			152977-03		
				7/13/2015			7/13/2015			7/14/2015			7/14/2015		
Lead	63	1000	450	15.6	J		45.1	J		68.9	J	A	7.2	J	

Note
A = Exceeds Unrestricted Use SCO
B = Exceeds Commercial Use SCO
C = Exceeds Protection of Groundwater SCO
Units in milligrams per killigram (mg/kg) or parts per million (ppm)
Soil cleanup objectives (SCOs) are as referenced in 6 NYCRR Part 375-6, Remedial Program Cleanup Objectives, dated December 14, 2006, as supplemented by CP-51 dated October 21, 2010.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

TMW3-13-07-15(6-8)	Sample ID
6-8	Sample Depth in feet below ground surface
152971-13	Laboratory Sample ID
7/13/2015	Sample Collection Date (mm/dd/yyyy)

Table 5
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Detected Volatile Organic Compounds
Groundwater Samples

Compound	TOGS 1.1.1 Groundwater Standard or Guidance Value	TMW1-14-07-15		TMW2-14-07-15		TMW3-14-07-15		GM-MW-16A-14-07-15		TMW5-14-07-15		TMW6-14-07-15		TMW7-14-07-15		TMW8-14-07-15		TMW9-14-07-15		TMW10-14-07-15	
		152971-02		152971-03		152971-04		152971-05		152971-06		152971-07		152971-08		152971-09		152971-10		152971-16	
		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015		7/14/2015	
Acetone	50	U		U		U		9.01 J		11.6		U		7.97 J		U		U		U	
Benzene	1	2.1	X	U		U		5.07	X	23.1	X	U		2.15	X	U		U		U	
Cyclohexane	NS	34.5		U		U		18.3		73.2		U		U		U		U		U	
Ethylbenzene	5	U		U		U		4.74		48.1	X	U		U		U		U		U	
Isopropylbenzene	5	2.86		U		U		1.32 J		15.0	X	U		U		U		U		U	
Xylenes (mixed)	5	3.58 J		U		U		12.94 J	X	9.44 J	X	U		1.12 J		U		U		U	
Methylcyclohexane	NS	12.2		U		U		20.5		65.8		U		U		U		U		U	
Toluene	5	1.75 J		U		U		2.84		5.35	X	U		U		U		U		U	
trans-1,3-Dichloropropene	0.4	U		U		U		U		1.63 J	X	U		U		U		U		U	
Total VOCs		56.99		U		U		74.72		253.22		U		11.24		U		U		U	
TICs ⁽¹⁾		272		U		U		246		1470		U		29.9		U		U		U	
Total VOCs and TICs		328.99		U		U		320.72		1723.22		U		41.14		U		U		U	

Notes:
U = Not Detected
J = Estimated value
X = Exceeds TOGS 1.1.1 Groundwater Standard or Guidance Value
All measurements in micrograms per liter or parts per billion (µg/l or ppb)
VOC = Volatile Organic Compound
Groundwater Standards or Guidance Values referenced in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 dated June 1998 as amended by the NYSDEC's supplemental table dated April 2000.
(1) Refer to the analytical laboratory report for individual TICs detected and associated flags.

TMW3-13-07-15	Sample ID
152971-13	Laboratory Sample ID
7/14/2015	Sample Collection Date (mm/dd/yyyy)

Table 6
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Detected Volatile Organic Compounds in mg/kg or ppm
Field Blank and Trip Blank Samples

Compound	Samples		
	FB-06-19-2015	FB-14-07-15	Trip Blank
	152526-03	152971-01	152971-17
	6/19/2015	7/14/2015	7/14/2015
Total VOCs	U	U	U
Total TICs ⁽¹⁾	0.00617	U	U
Total VOCs and TICs ⁽¹⁾	0.00617	U	U

Note

U = Not Detected

Units in micrograms per liter (µg/l) or parts per billion (ppb)

(1) Refer to the analytical laboratory report for individual TICs detected and associated flags.

VOC = Volatile Organic Compound

TIC = Tentatively Identified Compound

FB-14-07-15	Sample ID
152971-13	Laboratory Sample ID
7/14/2015	Sample Collection Date (mm/dd/yyyy)

Table 7
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Detected Semi-Volatile Organic Compounds in mg/kg or ppm
Field Blank Samples

Compound	FB-06-19-2015	FB-14-07-15
	152526-03	152971-01
	6/19/2015	7/14/2015
Total SVOCs	U	U
Total TICs ⁽¹⁾	0.0047	U
Total SVOCs and TICs ⁽¹⁾	0.0047	U

Note

U = Not Detected

Units in micrograms per liter (µg/l) or parts per billion (ppb)

(1) Refer to the analytical laboratory report for individual TICs detected and associated flags.

SVOC = Semi-Volatile Organic Compound

TIC = Tentatively Identified Compound

FB-14-07-15	Sample ID
152971-13	Laboratory Sample ID
7/14/2015	Sample Collection Date (mm/dd/yyyy)

Table 8
118 Petten Street
Rochester, New York
Site No: C828130

Summary of Lead Concentrations
Field Blank Samples

Analyte	Sample ID	
	FB-06-19-2015	FB-14-07-15
	152526-03	152971-01
	6/19/2015	7/14/2015
Lead	U	U

Note

U = Not Detected

Units in micrograms per liter (µg/l) or parts per billion (ppb)

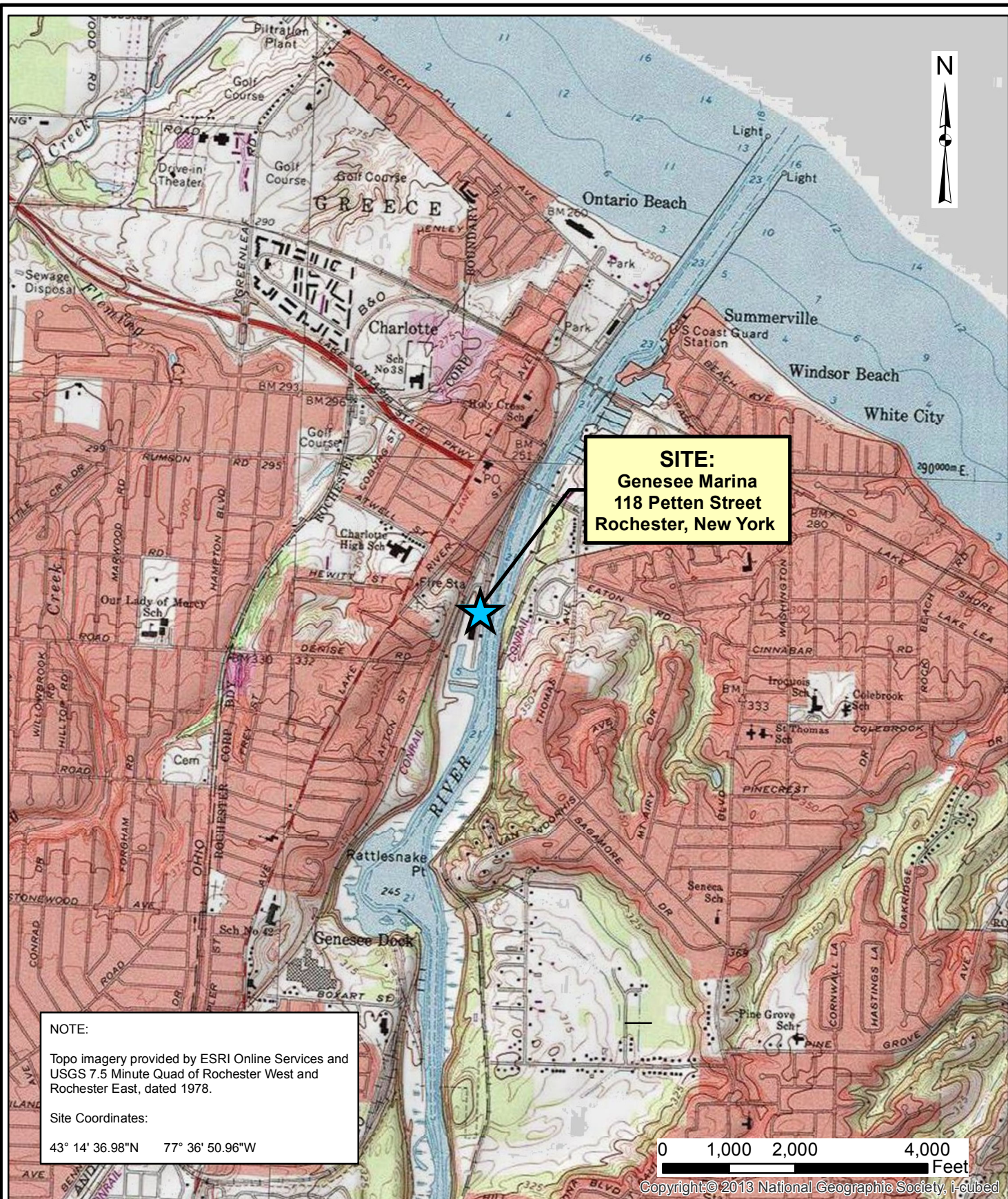
FB-14-07-15	Sample ID
152971-13	Laboratory Sample ID
7/14/2015	Sample Collection Date (mm/dd/yyyy)

FIGURES

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)



Date
08-12-2015

Drawn By
ANM

Scale
AS NOTED

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title
 GENESEE MARINA
 118 PETTEN STREET
 ROCHESTER, NEW YORK
 (NYSDEC SITE No. C828130)

REMEDIAL DESIGN INVESTIGATION

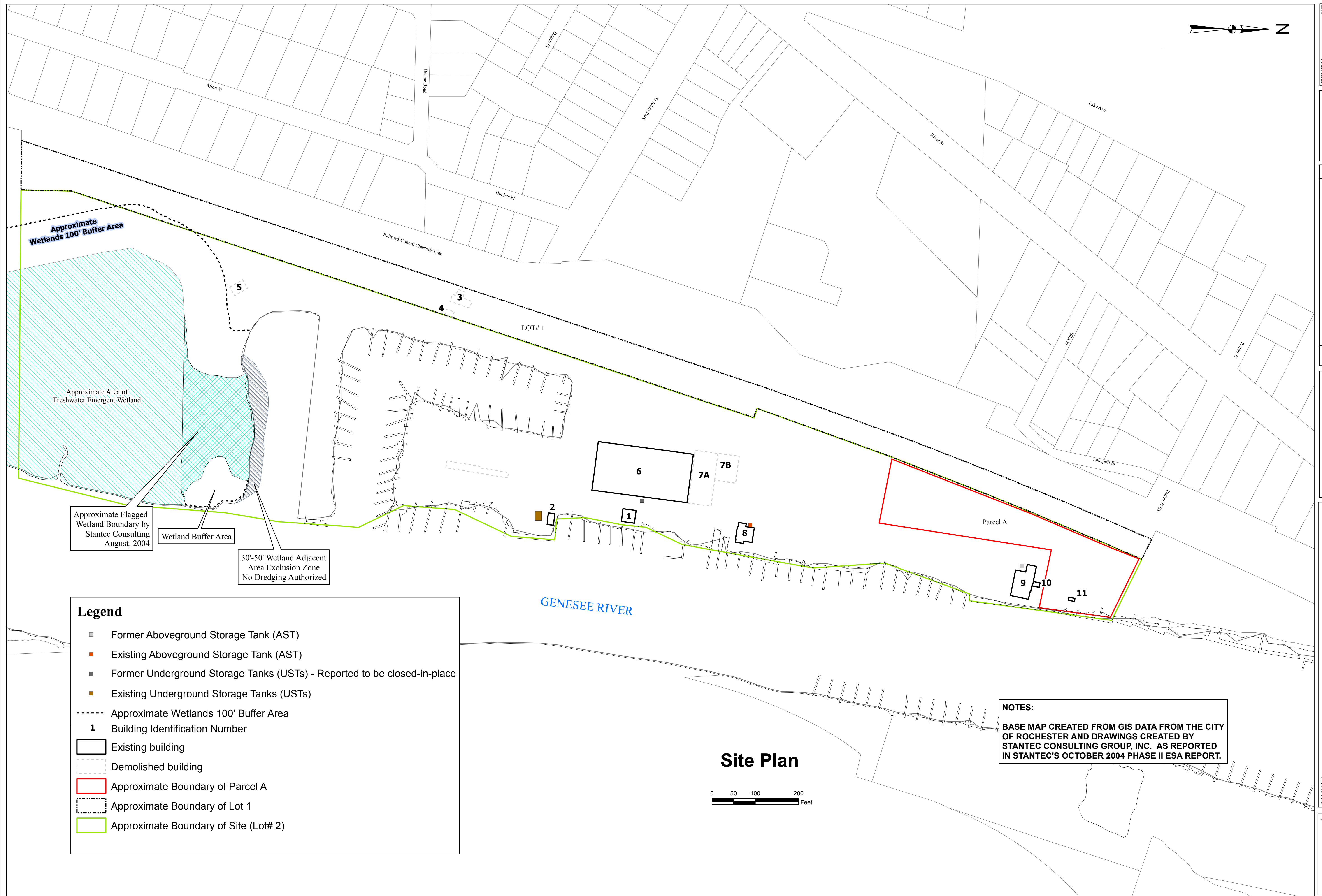
Drawing Title

Project Locus Map

Project No.

5119R-15

FIGURE 1



DESIGNED BY:	DJG	DATE	10-2012
DRAWN BY:	CPS	DATE	10-2012
CHECKED BY:	RJM	DATE	10-2012
APPROVED BY:	TKH	DATE	10-2012
SCALE:	AS NOTED	DATE	10-26-2012

DAY ENVIRONMENTAL, INC.
DRAWING ALTERATION

THIS DOCUMENT MAY NOT BE ALTERED
WITHOUT THE PERMISSION OF
DAY ENVIRONMENTAL, INC.

	REVISIONS	DATE	BY
Addition of Building #6 and Building #4.		09/20/11	CAL

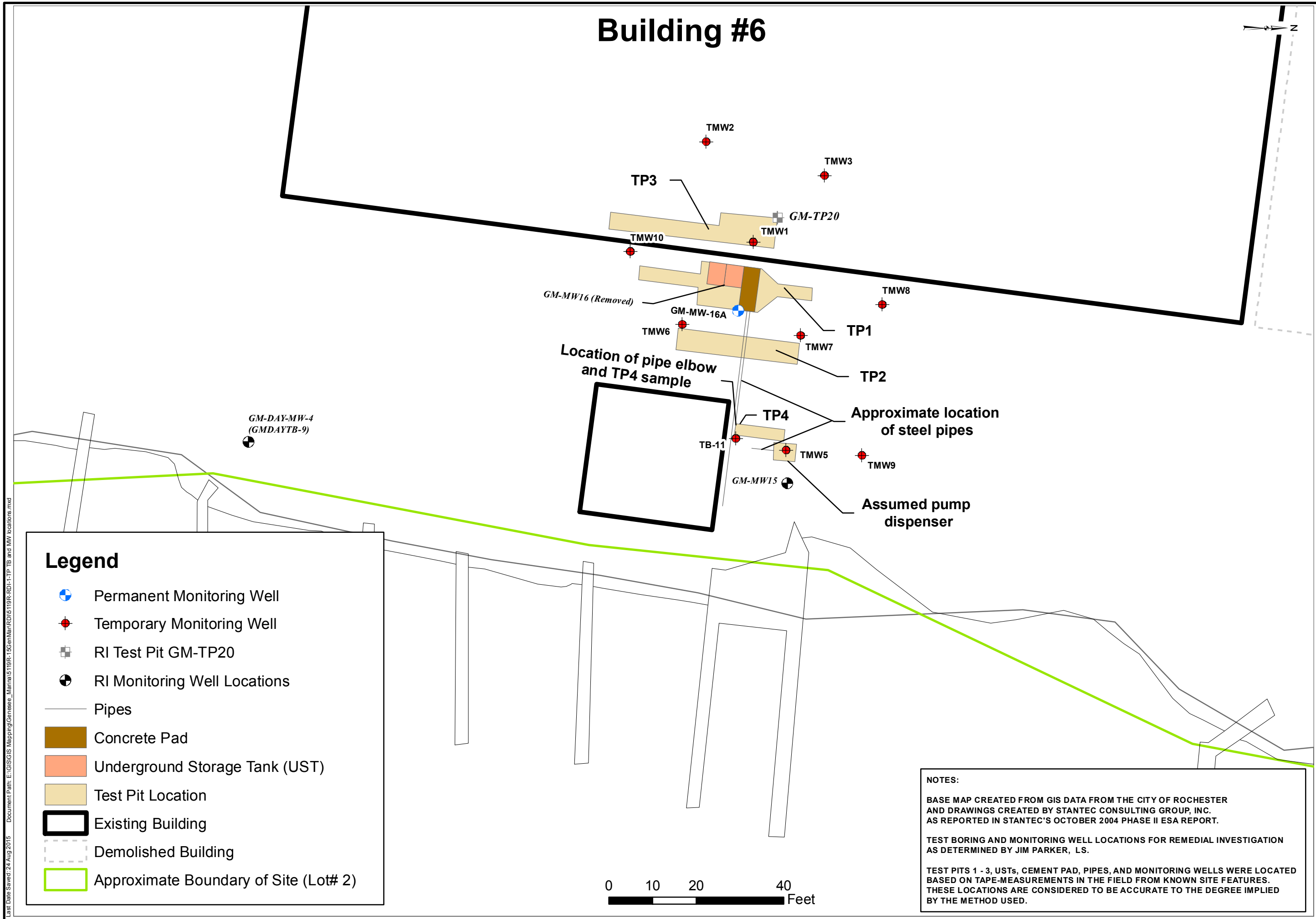
day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

PROJECT: GENESSEE MARINA 118 PETTEN STREET ROCHESTER, NEW YORK	DRAWING TITLE: SITE PLAN
REMEDIATION DESIGN INVESTIGATION (NYSDEC SITE NO. C828130)	

PROJECT NO.: 5119R-15

FIGURE 2

Last Date Saved: 24 Aug 2015 Document Path: E:\GIS\GIS Mapping\Genesee_Marina\1519R-RD-1-TP-TB and MW locations.mxd

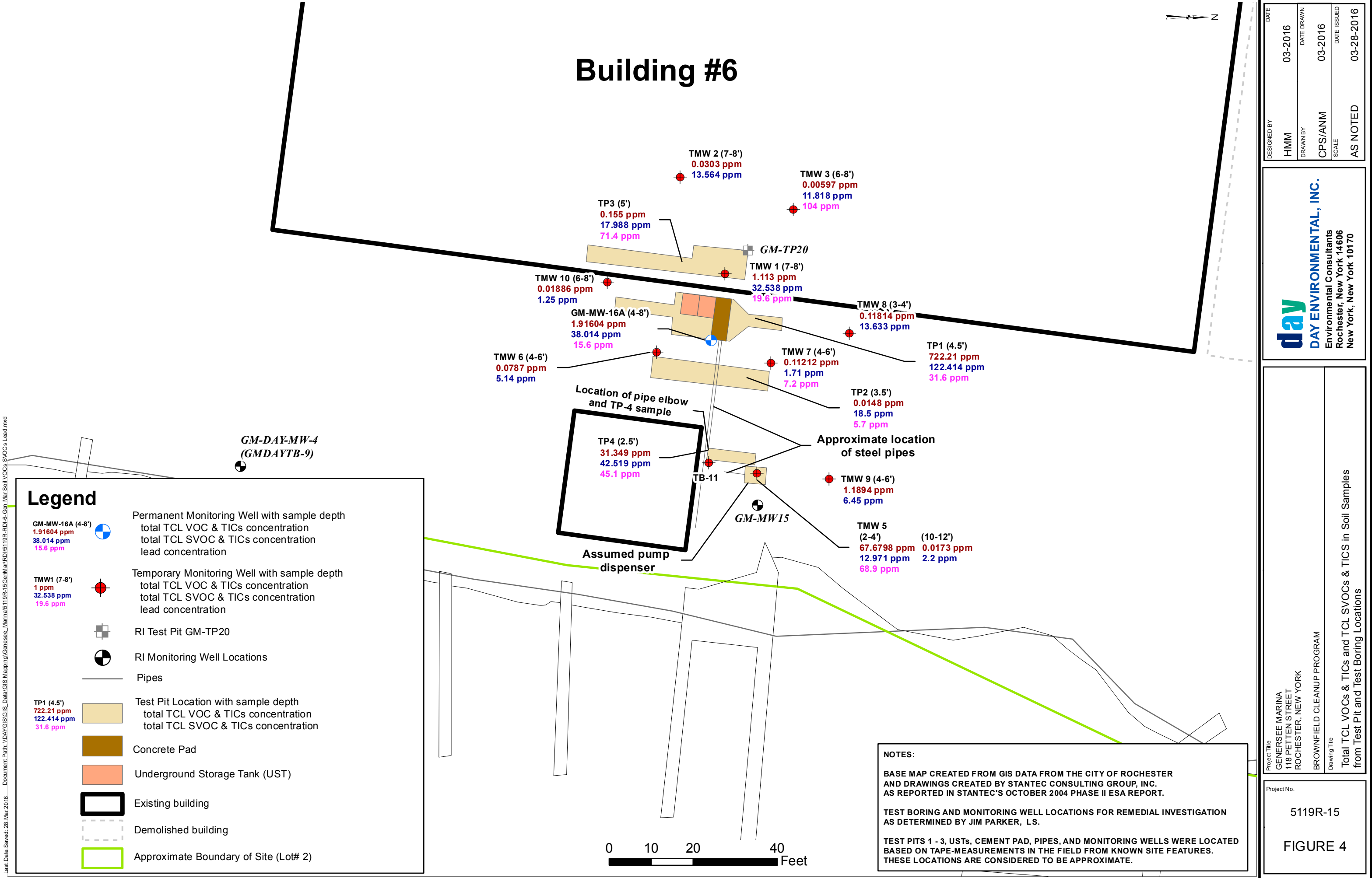


DESIGNED BY	HMM	DATE	07-2015
DRAWN BY	CPS/ANM	DATE DRAWN	07-2015
SCALE	AS NOTED	DATE ISSUED	07-21-2015

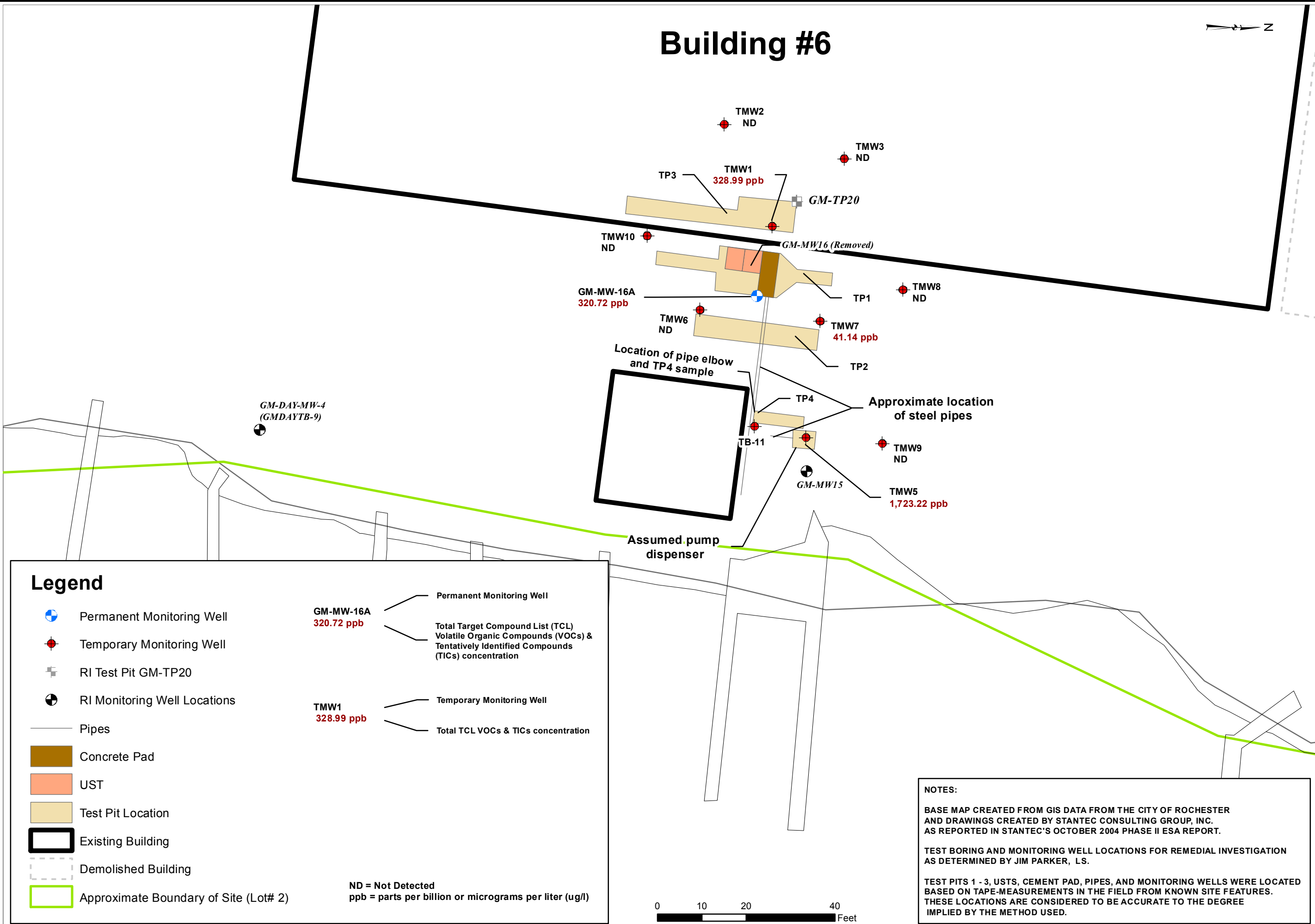
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New York, New York 10170

Project Title GENESEE MARINA 118 PETTEN STREET ROCHESTER, NEW YORK	REMEDIAL DESIGN INVESTIGATION (NYSDEC SITE NO. C828130) Drawing Title Test Pit, Test Boring, and Groundwater Monitoring Well Locations
Project No.	5119R-15
FIGURE 3	

Last Date Saved: 28 Mar 2016 Document Path: \\DAYGIS\GIS_Data\GIS Mapping\Genesee_Marina\5119R-15\GenMap\RD15119R-15-Gen Map Soil VOCs SVOCs Lead.mxd



Last Date Saved: 25 Aug 2015 Document Path: E:\GIS\GIS Mapping\Genesee_Marina\5119R-15\GenMarGW_VOCs.mxd



DESIGNED BY		DATE	
HMM	08-2015	08-2015	

DRAWN BY		DATE DRAWN	
ANM/CPS	08-2015	08-2015	

SCALE		DATE ISSUED	
AS NOTED	08-2015	08-20-2015	

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Environmental Consultants
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New York, New York 10170

Project Title	
GENESEE MARINA 118 PETTEN STREET ROCHESTER, NEW YORK	

Project No.	
5119R-15	

Drawing Title	
REMEDIAL DESIGN INVESTIGATION (NYSDEC SITE NO. C828130)	

Total TCL VOCs & TICs in Detected Groundwater Samples	
FIGURE 5	

APPENDIX A

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)

Project #:	5119R-15	TEST PIT TP1
Project Address:	118 Petten Street	
	Rochester, NY	Date: 6/18/2015 and 6/19/2015
DAY Representative:	Heather McLennan	Test Pit Depth: 6 ft
Contractor:	Genesee Marina (Client)	Depth to Water: ~4.9 ft
Equipment:	Case 5800	

Depth (ft)	PID Reading (ppm)	Samples Collected	PID Headspace (ppm)	Sample Description	Notes
1- 2- 3- 4- 5- 6-	Range from 0.0 to 450. Highest PID readings obtained in location of black stained sand by USTs, PID readings decreasing with increasing distance from USTs	Sample TP1-06-18-2015 collected/submitted to laboratory was collected from material removed from approximate location near northern UST at an approximate depth of 4 ft bgs.	Max = 681 (black stained sand approximately 4 ft. bgs. in location of north UST), maximum PID headspace in north portion of test pit = 4.5, maximum PID headspace in south portion of test pit = 47.1	Asphalt Brown, Sand and Gravel, FILL, trace Wood, trace Brick, trace Shingles, wet 3" asphalt-pavement layer in south portion of test pit Fine Sand FILL, stained black, located above and around USTs ...wet	Final approximate dimensions of test pit: Length: 35 feet Width: 3 feet to 10 feet Depth: maximum depth of 6 feet Two USTs identified approximately 8 to 17 ft. north of south test pit wall. Top of USTs located approximately 4.5 ft bgs. Two concrete pads (2 ft. x 3 ft. x 0.8 ft. thick) located above USTs, removed during excavation Concrete slab located to north of USTs, top of concrete slab approximately 4 ft. bgs. Wood beams noted on east portion opposite USTs, oriented north-south. Petroleum-type odor noted: increasing near UST locations
7- 8- 9- 10- 11- 12-				End of Test Pit	

Notes:	1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp. 4) ft. bgs. = feet below ground surface 5) NA = Not Available or Not Applicable
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TEST PIT TP1

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY Date: 6/19/2015
DAY Representative: Heather McLennan Test Pit Depth: ~5.2 ft
Contractor: Genesee Marina (Client) Depth to Water: ~5 ft
Equipment: Case 5800

TEST PIT TP2

Page 1 of 1

Depth (ft)	PID Reading (ppm)	Samples Collected	PID Headspace (ppm)	Sample Description	Notes
1-	Ranged from 0.0 to 7.6. Increasing PID reading with depth of excavation.	Sample TP2-06-19-2015 was collected from material located below steel pipes at approximate depth of 3.5 ft. bgs.	Max PID reading = 53.5 (taken from base of excavation, north portion of test pit). Max PID reading in south portion of test pit = 47.2	Asphalt	Final approximate dimensions of test pit: Length: 25 feet Width: 3 feet Depth: maximum depth of 5.2 feet Petroleum odor. Metal removed (28" long) from location of electrical line on east wall. Two apparent rubber water lines (cut off) identified. Two 3" steel pipes (3 ft. bgs.) located in line (i.e., east-west configuration) with concrete slab of TP1, approximately 15 feet north of south wall of TP2.
2-				Brown, Sand and Gravel FILL, damp.	
3-				Asphalt	
4-				Brown, Sand and Gravel FILL, damp. Bricks located at 1.5 ft. bgs. in north portion of test pit	
5-				Asphalt	
6-				Black, Sand and Gravel FILL, some bricks	
7-				Blackish-grey, Sand FILL, wet	
8-					
9-					
10-					
11-					
12-				End of test pit.	

Notes:

- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
- 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
- 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
- 4) ft. bgs. = feet below ground surface
- 5) NA = Not Available or Not Applicable

TEST PIT TP2

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DAY ENVIRONMENTAL, INC.

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AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #:	5119R-15			TEST PIT TP3
Project Address:	118 Petten Street			
	Rochester, NY	Date:	6/21/2015	Page 1 of 1
DAY Representative:	Heather McLennan	Test Pit Depth:	5 ft bgs	
Contractor:	Genesee Marina (Client)	Depth to Water:	~ 5 ft bgs	
Equipment:	Case 5800			

Depth (ft)	PID Reading (ppm)	Samples Collected	PID Headspace (ppm)	Sample Description	Notes
1-	Range from 0.8 to 8.7. Maximum of 8.7 obtained from 4 ft. bgs. in north portion of test pit (i.e., opposite concrete slab of TP-1)	Sample TP3-06-22-2015 was collected from location opposite concrete slab observed in Test Pit TP1 at an approximate depth of 5 ft bgs.	Maximum of 9.7. located in north portion of test pit (i.e., opposite concrete slab of TP1) at approximate depth of 4.5 ft. bgs.	Dark brown, coarse Sand, medium to coarse Gravel, FILL, moist	Final approximate dimensions of test pit: Length: 27 feet Width: 3 feet to 7 feet Depth: maximum depth of 5 feet Two concrete pads in test pit approximately 2 ft. bgs., each approximately 5 ft x 3.8 ft, 1 ft thick. One concrete pad removed during excavation, other remained due to proximity of building wall
2-				...little Concrete, Rebar, Wood Chips, Brick, Wires, Concrete	
3-				Blackish brown Sand, little fine Gravel, (FILL), some organics/wood chunks, moist	
4-				...Asphalt	
5-				...little Brick some Asphalt	
6-				...some fine to medium Gravel, wet	
7-				End of Test Pit	
8-					
9-					
10-					
11-					
12-					

Notes:

- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
- 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
- 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
- 4) ft. bgs. = feet below ground surface
- 5) NA = Not Available or Not Applicable

TEST PIT TP3

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY Date: 7/13/2015
DAY Representative: Heather McLennan Test Pit Depth: 5 ft bgs
Contractor: Genesee Marina (Client) Depth to Water: ~4 ft. bgs.
Equipment: Case 5800

TEST PIT TP4

Page 1 of 1

Depth (ft)	PID Reading (ppm)	Samples Collected	PID Headspace (ppm)	Sample Description	Notes
1- 2- 3- 4- 5- 6- 7- 8- 9- 10- 11- 12-	Range from 0.8 to 101, increasing with depth and at location of pipe elbow	Sample TP4-13-07-15(2.5) was collected from location beneath observed pipe elbow at an approximate depth of 2.5 ft bgs.	Maximum of 248, obtained from south portion of TP4 beneath pipe elbow approximately 2.5 ft. bgs. Maximum PID Headspace from central portion of test pit = 238 ppm, approximately 3 ft. bgs.	Brown, Sand and Gravel, FILL, moist ...some fine to medium Gravel, wet End of Test Pit	Final approximate dimensions of test pit: Length: 10 feet Width: 1.3 ft. Depth: maximum depth of 5 feet Black staining, petroleum-type odor observed throughout test pit below 3 ft. bgs.

Notes:

- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
- 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
- 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
- 4) ft. bgs. = feet below ground surface
- 5) NA = Not Available or Not Applicable

TEST PIT TP4

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW1

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 2.54 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1								Brown, Sand and Gravel, moist (FILL)	
2	NA	S-1	0-4	12	NA	0.0	0.0		
3							0.0		
4							0.0	Dark Brown, Sand and Gravel, wet (FILL)	
5							0.0		
6	NA	S-2	4-8	50	NA	0.7	0.0		
7							0.0	Black, stained Sand (FILL)	
8							0.0		
9									
10	NA	S-3	8-12	0	NA	NA	NA		
11									
12								End of Test Boring @ 12.0'	
13									
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW1

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW2

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.09 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Brown, Sand and Gravel, damp (FILL)	
2	NA	S-1	0-4	65	NA	0.0	0.0		
3							0.0		
4							0.0	Olive-Brown, Silty Clay, some Sand, trace Gravel (FILL)	
5							0.0	Brown, Sand and Gravel (FILL)	
6	NA	S-2	4-8	60	NA	0.0	0.0		Petroleum-type Odor, Stained
7							0.0		
8							0.0	Black, Sand, some Gravel (FILL)	
9							0.0		
10	NA	S-3	8-12	75	NA	0.0	0.0	Brown, Silty Sand (possibly FILL)	
11							0.0		
12								End of Test Boring @ 12.0'	
13									
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW2

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AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW3

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.15 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Brown, Sand and Gravel, damp (FILL)	
2	NA	S-1	0-4	75	NA	0.0	0.0		
3							0.0		
4							0.0		
5							0.0	Sand and Gravel, wet (FILL)	
6	NA	S-2	4-8	55	NA	0.0	0.0	Brown-Gray, SAND ...trace Wood	Black Staining 6 - 6.5'
7							0.0		
8							0.0		
9							0.0	Gray, CLAY, some Silt, some Sand, wet, loose	
10	NA	S-3	8-12	65	NA	0.0	0.0		
11							0.0		
12								...Vegetation and Wood	
13								End of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW3

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Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring GM-MW-16A

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.29 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Dark Gray, Sand and Gravel (FILL)	
2	NA	S-1	0-4	30	NA	14.6	0.0		
3							7.7		
4							0.0		
5							0.0	Dark Brown to Black, Sand, wet (FILL)	
6	NA	S-2	4-8	30	NA	0.0	0.0		
7							0.0		
8							0.0		
9							0.0		
10	NA	S-3	8-12	65	NA	0.0	0.0	Brown to Black, SILT, some Clay, some Sand	
11							0.3		
12							0.0	...Organics	
13								End of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring GM-MW-16A

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Project Address: 118 Petten Street
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DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW5

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 3.53 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							3.1	Brown-Red, Sand and Gravel (FILL)	
2	NA	S-1	0-4	40	NA	284	7.9		
3							19.6	Dark Brown to Black, Sand and Gravel, moist (FILL)	
4							270		
5							25		
6	NA	S-2	4-8	100	NA	2.7	6.0	Brown-Gray, CLAY, some Silt, some Sand, wet, very loose	Stained, Petroleum-type Odor
7							6.3		
8							1.7		
9							1.3		
10	NA	S-3	8-12	100	NA	2.4	0.5		
11							1.8		
12							1.5		
13							...		
14							0.7		
15							0.8		
16							0.6		
							0.8		
								End of Test Boring @ 12.0'	

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW5

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Project Address: 118 Petten Street
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DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW6

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.395 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							1.3	Light Brown, Sand and Gravel, damp (FILL)	
2	NA	S-1	0-4	75	NA	1.3	0.2		
3							0.2	Dark Gray to Black, Sand, moist (FILL)	
4							0.0		
5							0.5	...wet	Petroleum-type Odor throughout
6	NA	S-2	4-8	75	NA	1.0	0.3		
7							0.2		
8							0.1	Black, Gravel, wet (FILL)	Stained
9							0.4	Dark Gray to Black, coarse Sand (FILL)	
10	NA	S-3	8-12	75	NA	0.8	0.5		
11							0.5	Dark Gray-Brown, CLAY, some Silt, loose, wet	
12							0.5		
13								End of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW6

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Project #: 5119R-15
Project Address: 118 Petten Street
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DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW7

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.48 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.6	Gray-Black, Sand and Gravel (FILL)	
2	NA	S-1	0-4	85	NA	12.7	1.7		
3							3.7		
4							4.2		
5							2.5	Gray with Black Speckles, Sand, wet (FILL)	
6	NA	S-2	4-8	65	NA	2.5	3.9		
7							2.6	Black, Gravel (FILL)	
8							1.0		
9									
10	NA	S-3	8-12	30	NA	2.5	1.1		
11							1.5	Dark Gray, coarse Sand, wet (FILL)	
12								End of Test Boring @ 12.0'	
13									
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW7

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Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW8

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.80 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Black and Brown, Sand and Gravel (FILL)	
2	NA	S-1	0-4	26	NA	0.8	0.0		
3							0.0		
4							0.0	Brown, medium Sand, some silt, some Clay, moist (FILL)	
5							0.0		
6	NA	S-2	4-8	9	NA	0.8	0.0		
7							0.0	...4" coarse Sand,, moist to wet	
8									
9							0.0		
10	NA	S-3	8-12	13	NA	0.2	0.0		
11							0.0	...Silt and Clay content increasing, wet	
12								End of Test Boring @ 12.0'	
13									
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW8

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Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW9

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 2.22 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Brown, Sand and Gravel, moist to damp (FILL)	
2	NA	S-1	0-4	50	NA	3.5	0.0		
3							0.6		
4						6.8	5.1	3" coarse Sand Seam	Petroleum-type Odor
5							1.2		
6	NA	S-2	4-8	65	NA		1.1		
7							0.6		
8							0.2		
9									No Recovery, sleeve contained water
10	NA	S-3	8-12	0	NA	NA	NA		
11									
12								End of Test Boring @ 12.0'	
13									
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW9

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Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Test Boring TMW10

Page 1 of 1

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☒ Well Installed ☐ Backfilled with Grout ☐ Backfilled with Cuttings
Water Level (Date): 1.67 ft bTOC (7/14/15)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.6	Brown, Sand and Gravel, moist (FILL)	
2	NA	S-1	0-4	50	NA	3.2	0.2	...some Clay	
3							0.7		
4							1.4	Gray, Sand, wet (FILL)	
5							1.1		
6	NA	S-2	4-8	50	NA	2.7	1.1		
7							0.7		
8							0.8		
9							0.4		
10	NA	S-3	8-12	100	NA	2.5	0.2	Brown, PEAT, some Vegetation	
11							0.1		
12								End of Test Boring @ 12.0'	
13									
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TMW10

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Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY
DAY Representative: H. McLennan
Drilling Contractor: TREC
Sampling Method: Direct Push

Ground Elevation: N/A Datum: N/A
Date Started: 7/13/2015 Date Ended: 7/13/2015
Borehole Depth: 12.0' Borehole Diameter: 2.25"
Completion Method: ☐ Well Installed ☐ Backfilled with Grout ☒ Backfilled with Cuttings
Water Level (Date): NA

Test Boring TB11

Page 1 of 1

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1									
2	NA	S-1	0-4	0	NA	NA	NA		
3									
4									
5								Brown, Sand and Gravel (FILL)	
6	NA	S-2	4-8	8	NA	NA	NA		
7									
8									
9									
10	NA	S-3	8-12	8	NA	NA	0.1		
11									
12									
13								End of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to an isobutylene standard measured in the headspace above the sample using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable
5) Headspace PID readings may be influenced by moisture
6) ft bTOC = feet below Top of Casing

Test Boring TB11

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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 5119R-15
Project Address: 118 Petten Street
Rochester, NY

DAY Representative: H. McLennan
Drilling Contractor: TREC

Date Started: 7/13/2015 Date Ended: 7/13/2015

Water Level (Date): 2.54 ft bTOC (7/14/15)

MONITORING WELL TMW1

Refer to Test Boring Log TMW1 for Soil Description

1.0 Height of Stickup (ft)

← Ground Surface

Backfill Type Bentonite

0.0 Depth to Top of Bentonite Seal (ft)

1.0 Depth to Bottom of Bentonite Seal (ft)

2.0 Depth to Top of Well Screen (ft)

2.25 Diameter of Borehole (in)

Backfill Type Sand

1.0 Inside Diameter of Well (in)

Type of Pipe Schedule 40 PVC

Screen slot size 10 Slot

12.0 Depth to Bottom of Well Screen (ft)

12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW1

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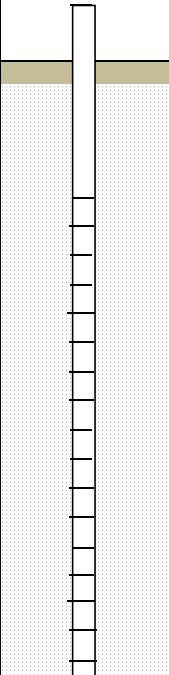


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MONITORING WELL CONSTRUCTION DIAGRAM

Project #:	5119R-15	MONITORING WELL TMW2			
Project Address:	118 Petten Street				
	Rochester, NY				
DAY Representative:	H. McLennan				
Drilling Contractor:	TREC	Date Started:	7/13/2015	Date Ended:	7/13/2015
		Water Level (Date):	1.09 ft bTOC (7/14/15)		

Refer to Test Boring Log TMW2 for Soil Description		<u>0.1</u> Height of Stickup (ft)
		← Ground Surface
		Backfill Type <u>Bentonite</u>
		<u>0.0</u> Depth to Top of Bentonite Seal (ft)
		<u>1.0</u> Depth to Bottom of Bentonite Seal (ft)
		<u>2.0</u> Depth to Top of Well Screen (ft)
		<u>2.25</u> Diameter of Borehole (in)
		Backfill Type <u>Sand</u>
		<u>1.0</u> Inside Diameter of Well (in)
		Type of Pipe <u>Schedule 40 PVC</u>
	Screen slot size <u>10 Slot</u>	
		<u>12.0</u> Depth to Bottom of Well Screen (ft)
		<u>12.0</u> Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW2

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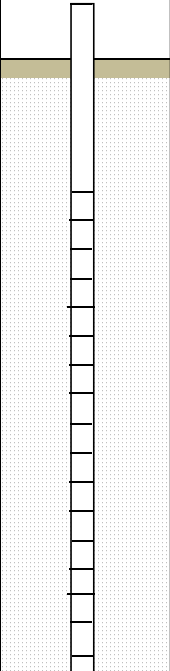
DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

MONITORING WELL CONSTRUCTION DIAGRAM

Project #:	5119R-15	MONITORING WELL TMW3			
Project Address:	118 Petten Street				
	Rochester, NY				
DAY Representative:	H. McLennan				
Drilling Contractor:	TREC	Date Started:	7/13/2015	Date Ended:	7/13/2015
		Water Level (Date):	1.15 ft bTOC (7/14/15)		

Refer to Test Boring Log TMW3 for Soil Description		0.1 Height of Stickup (ft)
	← Ground Surface	
	Backfill Type Bentonite	
	0.0 Depth to Top of Bentonite Seal (ft)	
	1.0 Depth to Bottom of Bentonite Seal (ft)	
	2.0 Depth to Top of Well Screen (ft)	
	2.25 Diameter of Borehole (in)	
	Backfill Type Sand	
	1.0 Inside Diameter of Well (in)	
	Type of Pipe Schedule 40 PVC	
Screen slot size 10 Slot		
12.0 Depth to Bottom of Well Screen (ft)		
12.0 Depth to Bottom of Borehole (ft)		

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW3

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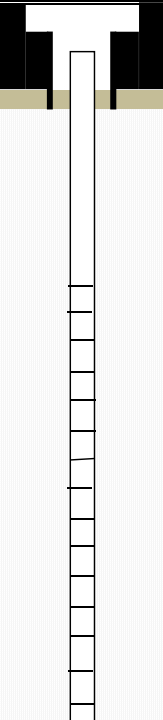
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MONITORING WELL CONSTRUCTION DIAGRAM

Project #:	5119R-15	MONITORING WELL GM-MW-16A
Project Address:	118 Petten Street	
	Rochester, NY	
DAY Representative:	H. McLennan	Date Started: 7/13/2015 Date Ended: 7/13/2015
Drilling Contractor:	TREC	Water Level (Date): 1.29 (7/14/2015)

Refer to Test Boring Log GM-MW-16A for Soil Description		Flush Mounted Roadbox 0.3 Depth to Top of Riser Pipe (ft) 0.3 Depth to Bottom of Cement Surface Patch (ft) Backfill Type <u>Bentonite</u> 0.3 Depth to Top of Bentonite Seal (ft) 1.0 Depth to Bottom of Bentonite Seal (ft) 2.0 Depth to Top of Well Screen (ft) 2.25 Diameter of Borehole (in) Backfill Type <u>Sand</u> 1.0 Inside Diameter of Well (in) Type of Pipe <u>Schedule 40 PVC</u> Screen slot size <u>10 Slot</u> 12.0 Depth to Bottom of Well Screen (ft)
---	--	--

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) NA = Not Available or Not Applicable
 3) ft bTOC = feet below Top of Casing

MONITORING WELL GM-TMW16A

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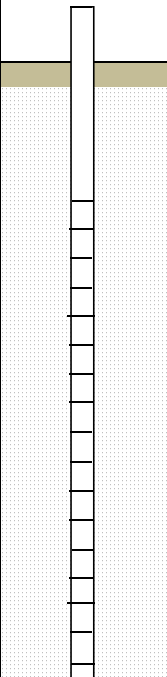


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MONITORING WELL CONSTRUCTION DIAGRAM

Project #:	5119R-15	MONITORING WELL TMW5
Project Address:	118 Petten Street	
	Rochester, NY	
DAY Representative:	H. McLennan	
Drilling Contractor:	TREC	Date Started: 7/14/2015 Date Ended: 7/14/2015
		Water Level (Date): 3.53 ft bTOC (7/14/15)

Refer to Test Boring Log TMW5 for Soil Description		0.2 Height of Stickup (ft)
		← Ground Surface
		Backfill Type Bentonite
		0.0 Depth to Top of Bentonite Seal (ft)
		1.0 Depth to Bottom of Bentonite Seal (ft)
		2.0 Depth to Top of Well Screen (ft)
		2.25 Diameter of Borehole (in)
		Backfill Type Sand
		1.0 Inside Diameter of Well (in)
		Type of Pipe Schedule 40 PVC
Screen slot size 10 Slot		
		12.0 Depth to Bottom of Well Screen (ft)
		12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW5

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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 5119R-15

Project Address: 118 Petten Street

Rochester, NY

DAY Representative: H. McLennan

Drilling Contractor: TREC

Date Started: 7/14/2015

7/14/2015

Water Level (Date): 1.395 ft bTOC (7/14/15)

MONITORING WELL TMW6

Refer to Test Boring Log TMW6 for Soil Description

0.12 Height of Stickup (ft)

← Ground Surface

Backfill Type Bentonite

0.0 Depth to Top of Bentonite Seal (ft)

1.0 Depth to Bottom of Bentonite Seal (ft)

2.0 Depth to Top of Well Screen (ft)

2.25 Diameter of Borehole (in)

Backfill Type Sand

1.0 Inside Diameter of Well (in)

Type of Pipe Schedule 40 PVC

Screen slot size 10 Slot

12.0 Depth to Bottom of Well Screen (ft)

12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW6

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS
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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 5119R-15

Project Address: 118 Petten Street

Rochester, NY

DAY Representative: H. McLennan

Drilling Contractor: TREC

Date Started: 7/14/2015

Date Ended: 7/14/2015

Water Level (Date): 1.48 ft bTOC (7/14/15)

MONITORING WELL TMW7

Refer to Test Boring Log TMW7 for Soil Description

0.12 Height of Stickup (ft)

← Ground Surface

Backfill Type Bentonite

0.0 Depth to Top of Bentonite Seal (ft)

1.0 Depth to Bottom of Bentonite Seal (ft)

2.0 Depth to Top of Well Screen (ft)

2.25 Diameter of Borehole (in)

Backfill Type Sand

1.0 Inside Diameter of Well (in)

Type of Pipe Schedule 40 PVC

Screen slot size 10 Slot

12.0 Depth to Bottom of Well Screen (ft)

12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW7

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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 5119R-15

Project Address: 118 Petten Street

Rochester, NY

DAY Representative: H. McLennan

Drilling Contractor: TREC

Date Started: 7/13/2015

Date Ended: 7/13/2015

Water Level (Date): 2.54 ft bTOC (7/14/15)

MONITORING WELL TMW8

Refer to Test Boring Log TMW8 for Soil Description

0.75 Height of Stickup (ft)

← Ground Surface

Backfill Type Bentonite

0.0 Depth to Top of Bentonite Seal (ft)

1.0 Depth to Bottom of Bentonite Seal (ft)

2.0 Depth to Top of Well Screen (ft)

2.25 Diameter of Borehole (in)

Backfill Type Sand

1.0 Inside Diameter of Well (in)

Type of Pipe Schedule 40 PVC

Screen slot size 10 Slot

12.0 Depth to Bottom of Well Screen (ft)

12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.

2) NA = Not Available or Not Applicable

3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW8

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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 5119R-15

Project Address: 118 Petten Street

Rochester, NY

DAY Representative: H. McLennan

Drilling Contractor: TREC

Date Started: 7/14/2015

Date Ended: 7/14/2015

Water Level (Date): 2.22 ft bTOC (7/14/15)

MONITORING WELL TMW9

Refer to Test Boring Log TMW9 for Soil Description

0.7 Height of Stickup (ft)

← Ground Surface

Backfill Type Bentonite

0.0 Depth to Top of Bentonite Seal (ft)

1.0 Depth to Bottom of Bentonite Seal (ft)

2.0 Depth to Top of Well Screen (ft)

2.25 Diameter of Borehole (in)

Backfill Type Sand

1.0 Inside Diameter of Well (in)

Type of Pipe Schedule 40 PVC

Screen slot size 10 Slot

12.0 Depth to Bottom of Well Screen (ft)

12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW9

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ENVIRONMENTAL CONSULTANTS

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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 5119R-15

Project Address: 118 Petten Street

Rochester, NY

DAY Representative: H. McLennan

Drilling Contractor: TREC

Date Started: 7/14/2015

Date Ended: 7/14/2015

Water Level (Date): 1.67 ft bTOC (7/14/15)

MONITORING WELL TMW10

Refer to Test Boring Log TMW10 for Soil Description

0.7 Height of Stickup (ft)

← Ground Surface

Backfill Type Bentonite

0.0 Depth to Top of Bentonite Seal (ft)

1.0 Depth to Bottom of Bentonite Seal (ft)

2.0 Depth to Top of Well Screen (ft)

2.25 Diameter of Borehole (in)

Backfill Type Sand

1.0 Inside Diameter of Well (in)

Type of Pipe Schedule 40 PVC

Screen slot size 10 Slot

12.0 Depth to Bottom of Well Screen (ft)

12.0 Depth to Bottom of Borehole (ft)

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable
3) ft bTOC = feet below Top of Casing

MONITORING WELL TMW10

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APPENDIX B

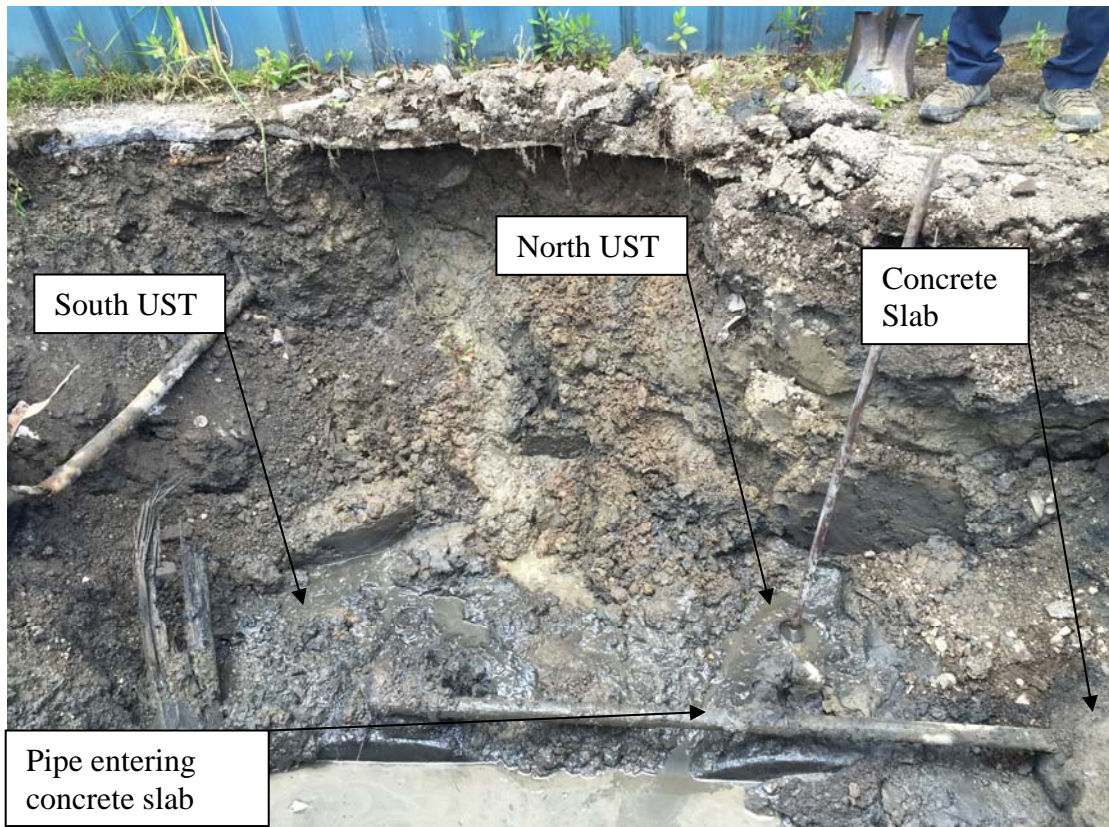
REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)



Test Pit 1, taken looking west against east wall of Building 6



Concrete filled USTs and concrete slab located in Test Pit TP1, taken looking west



Pipes oriented
east-west in TP2

Test Pit TP2 taken looking north



Building
foundation
support

Test Pit TP3 taken looking east



Pipe elbow



Assumed pipe dispenser location

APPENDIX C

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW1

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 3.2 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 11.60 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 2.54 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 1.0
SWL [FT]: 1.54 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 9.06 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.37 **CASING DIA.:** 1"

CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.1 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3
PURGE METHOD: Peristaltic Pump **PURGE START:** 13:34 **END:** 13:56

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW1-14-07-15	7-14-15 / 15:31	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
2.57	19.61	6.18	0.886	N/M	5.52	-80	Gray/Turbid Petroleum-type Odor

N/M = Not Measured
ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW2

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 1.7 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 9.45 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.09 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.1
SWL [FT]: 0.99 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 8.36 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.34 **CASING DIA.:** 1"
CALCULATIONS:

CASING DIA. (FT)	WELL CONSTANT(GAL/FT)	CALCULATIONS
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.0 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3
PURGE METHOD: Peristaltic Pump **PURGE START:** 13:59 **END:** 14:25

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW2-14-07-15	7-14-15 / 15:40	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.20	19.34	6.43	0.771	N/M	5.56	-193	Gray, Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW3

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 0.4 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 10.36 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.15 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.1
SWL [FT]: 1.05 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 9.21 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.38 **CASING DIA.:** 1"
CALCULATIONS:

CASING DIA. (FT)	WELL CONSTANT(GAL/FT)	CALCULATIONS
¾" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1¼" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4½" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.1 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3
PURGE METHOD: Peristaltic Pump **PURGE START:** 14:27 **END:** 14:43

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW3-14-07-15	7-14-15 / 15:50	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.12	24.33	6.29	0.553	N/M	5.25	-176	Gray, Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL GM-MW16A

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 2.5 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 10.93 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.29 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: -0.3
SWL [FT]: 1.59 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 9.64 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.40 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.2 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3.1
PURGE METHOD: Peristaltic Pump **PURGE START:** 09:23 **END:** 09:56

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
GM-TMW16-A	7-14-15 / 16:00	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.22	24.68	6.34	0.002	N/M	3.09	-160	Brownish-Gray, Petroleum-type Odor

N/M = Not Measured
ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW5

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 115 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 11.65 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 3.53 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.2
SWL [FT]: 3.33 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 8.12 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.33 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.0 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 1.0
PURGE METHOD: Peristaltic Pump **PURGE START:** 10:58 **END:** 13:20

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW5-14-07-15	7-14-15 / 16:15	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
3.32	21.13	6.45	0.833	N/M	5.86	-125	Gray/Brown, Strong Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW6

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 0.0 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 9.58 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.40 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.12
SWL [FT]: 1.28 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 8.19 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.34 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.0 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3.5
PURGE METHOD: Peristaltic Pump **PURGE START:** 12:50 **END:** 13:15

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW6-14-07-15	7-14-15 / 16:25	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.40	21.49	6.46	0.953	N/M	6.33	-168	Grayish, Faint Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW7

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 1.3 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 11.90 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.48 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.12
SWL [FT]: 1.36 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 10.42 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.43 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.3 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3.5
PURGE METHOD: Peristaltic Pump **PURGE START:** 12:17 **END:** 12:48

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW7-14-07-15	7-14-15 / 16:33	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVIT Y (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.48	23.06	6.6	0.64	N/M	4.05	-238	Light Gray, Faint Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW8

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Light Rain **PID IN WELL (PPM):** 0.8 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 12.20 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.80 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.75
SWL [FT]: 1.05 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 10.4 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.43 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.3 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 1.3
PURGE METHOD: Peristaltic Pump **PURGE START:** 14:46 **END:** 15:08

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW8-14-07-15	7-14-15 / 16:40	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.54	21.41	6.85	0.288	N/M	7.27	-88	Light Gray, Very faint Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW9

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 2.9 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 11.10 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 2.22 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.7
SWL [FT]: 1.52 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 8.88 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.36 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.1 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 1.50
PURGE METHOD: Peristaltic Pump **PURGE START:** 15:10 **END:** 15:26

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW9-14-07-15	7-14-15 / 16:50	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
2.24	23.38	6.69	1.02	N/M	5.65	-158	Gray, Strong Petroleum-type Odor

N/M = Not Measured

ND = Not Detected

**DAY ENVIRONMENTAL, INC.
MONITORING WELL SAMPLING LOG**

WELL TMW10

SECTION 1 - SITE INFORMATION

SITE LOCATION: 118 Petten Street **JOB #:** 5119R-15
Rochester, NY **DATE:** 7/14/15
SAMPLE COLLECTOR(S): H. McLennan
WEATHER CONDITIONS: Raining **PID IN WELL (PPM):** 1.7 **LNAPL** ND **DNAPL** ND

SECTION 2 - PURGE INFORMATION

DEPTH OF WELL [FT]: 10.38 (MEASURED FROM TOP OF CASING - T.O.C.)
STATIC WATER LEVEL (SWL) [FT]: 1.67 (MEASURED FROM T.O.C.)
DISTANCE FROM T.O.C. TO GROUND [FT]: 0.7
SWL [FT]: 0.97 (MEASURED FROM GROUND)
THICKNESS OF WATER COLUMN [FT]: 8.71 (DEPTH OF WELL - SWL)
CALCULATED VOL. OF H₂O PER WELL CASING [GAL]: 0.36 **CASING DIA.:** 1"
CALCULATIONS:

<u>CASING DIA. (FT)</u>	<u>WELL CONSTANT(GAL/FT)</u>	<u>CALCULATIONS</u>
3/4" (0.0625)	0.023	VOL. OF H ₂ O IN CASING = DEPTH OF WATER COLUMN X WELL CONSTANT
1" (0.0833)	0.041	
1 1/4" (0.1041)	0.063	
2" (0.1667)	0.1632	
3" (0.250)	0.380	
4" (0.3333)	0.6528	
4 1/2" (0.375)	0.826	
6" (0.5000)	1.4688	
8" (0.666)	2.611	

CALCULATED PURGE VOLUME [GAL]: 1.1 (3 TIMES CASING VOLUME)
ACTUAL VOLUME PURGED [GAL]: 3.2
PURGE METHOD: Peristaltic Pump **PURGE START:** 15:28 **END:** 15:55

SECTION 3 - SAMPLE IDENTIFICATION AND TEST PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
TMW10-14-07-15	7-14-15 / 16:55	Bailer	TCL VOCs + TICs

SECTION 4 - WATER QUALITY DATA

SWL (FT)	TEMP (°C)	pH	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	ORP (mV)	VISUAL
1.35	22.25	6.77	0.411	N/M	5.58	-170	Cloudy, no noticeable odor

N/M = Not Measured

ND = Not Detected

APPENDIX D

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)

7-23-08

12:40 MKD onsite to
check MW-4.

Depth from TOC 20.22
Riser AGS. 3.26
Depth from GS. 16.96.

12:50 MKD offsite

GenMas
06/08/2015 5119R-15

1400 JAD + HMM on-site, meet with
Steve Gibbs of Genesee Marine

re RAMP Phase 2

1405 go to Bldg 5 - have workers remove
material as best as possible
from inside/corridor portion of Bldg 6
where work to be performed.

1430 - conduct magnetic locator survey
outside (East of Bldg 6 in area of
suspected USTs)

1435 - Fairly small magnetic anomaly - 0.57

N and 0.3 South of GM-MW-16

1436 conduct magnetic locator inside Bldg
6 in area of suspected USTs - misc
anomalies near well - nothing
conclusive.

5/19R-15

Genevise Manna

RA Phase 2

June 18/15

6:50 F. clear
v. light breeze

8:10

Himm + ANM on-site

met Tom from K1+E

cleared location

purpose: TPs as per RAMP-Phase I

8:20 began CAMP

wind direction variable

- choose West - will also

allow evaluation of
residential dwellings8:30 calibrated portable meter
and PIDtook 36 readings. began CAMP
monitoring

8:45-8:55 marked out TP-1

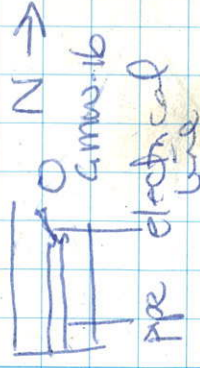
- 28' long marked MW-16 to
prevent damage

8:57

calibrated "Maguire" AD

9:20 Rick (employee of Gen Mar)
began TP1 south end9:35 cut off pipe observed at
depth 2.5' 2.5' bgs

~ 2-3" dia, contained cut off

electrical line - located south
of Gmw-169:40 spl from ~2' bgs. West
wall - south end ~ 0.0 ppm

9:48 - MW-16 damaged / removed

9:54 - Concrete slab 3' x 2' x 10"
thick encountered at
~ 35' bgs hasloose pipe ~ 3" dia and
large pipe - appeared to be
fill pipe that is concrete filled,
stained black, wood encounter
strong odor of petroleum
no PID > 0.010:04 depth of 6' bgs water
leap and wet material

45

10:06 sample from 6" bgs, 85" in

PID = 27.1 ppm

Brown to black

Sand and gravel ~~fill~~ some wood
some cobbles some concrete
apparent UST based on feel

10:10 CAH on-site

black sand at ~ 5' bgs

petroleum odor PID = 450 ppm

ARM changed location
re camp based on change
in wind direction

discussed in Rick and CAH
agreed to continue digging to
determine dimensions of extent
of UST - moving to the east

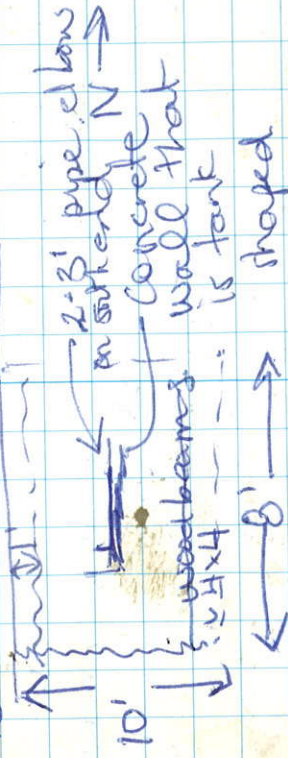
10:45 CAH off-site

10:57 took another stained
black sand PID = 557 ppm
4 bgs joined 2-4 oz jars

11:06 ~ approx. 10' east of
Building 6 east wall
- heavy amounts of wood
~ 4' bgs

Rick reported that based on
feel he had reached the
end of the tank digging
further to confirm

11:18 east wall



moving test pit to North
to chase the pipe

- water in excavator bgs

sample of stained black sand = 77 ppm

11:32 Concrete slab at ~2.5-3' bgt located to north of MW-16 similar to the previously identified and removed slab
 11:40 3.5" dia riser pipe identified ~26" long - does not appear to be concrete filled knocked out dirt - not concrete filled

12:00 stopped for Rick to have lunch
 12:20 call is D³ - decided to

~~stop~~ continue chasing concrete slab and scrape off top of USTs to look for fill ports.

4.5' $\frac{4.5' \times 11.5' \times 11.5'}{4} = 14.7$ concrete slab

12:22 Sample of sand above UST 2 sand is black and petroleum odor PID = 85.2 ppm

stratigraphy is sand and gravel w wood fill, fine sand in areas of USTs. is black staining

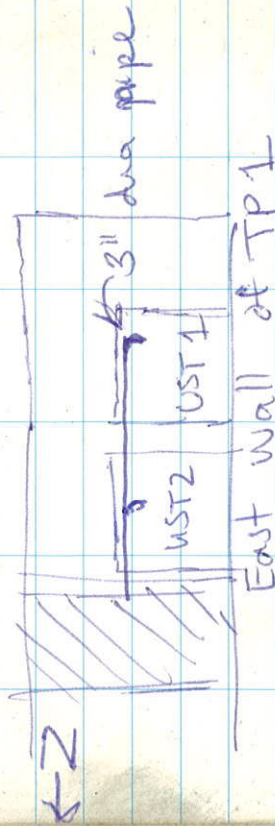
12:55 began excavation again asked Rick to clear tops of USTs

13:02 obtained another soil sample from deeper to UST 2 ~ medium to fine SAND, black wet, petroleum odor PID = 10.7 ppm

13:23 concrete slab running E-W is 3' thick wide, ~~not~~ located directly north of UST 2

13:25 black sand - UST 2 area ~ 4' bgt 681 ppm - Sampled + MSD - labeled JTS-B52
 13:27 brown sand and gravel FILL, wet PID = 9.3 ppm from area to N of concrete slab

13:55-shoveled off top of UST 2 but fill part filling w water. Risk moving to other side



14:15 call in D3-return call deviation to backfill w excavated material

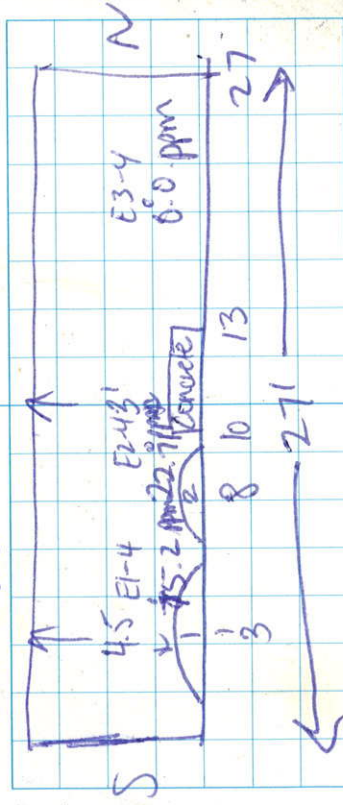
14:50 took wall base sampler
14:58 started measurements

14:58

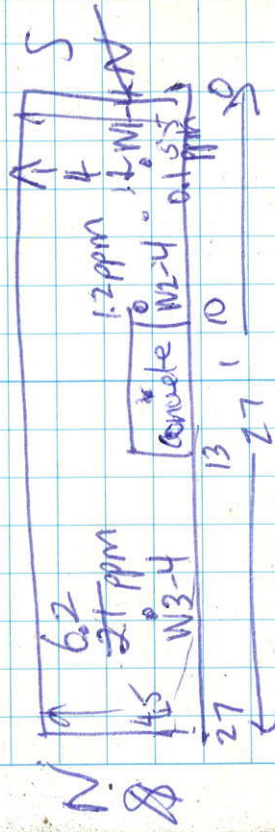
15:30 began backfilling

asked Rick to danger swellier soil at the bottom

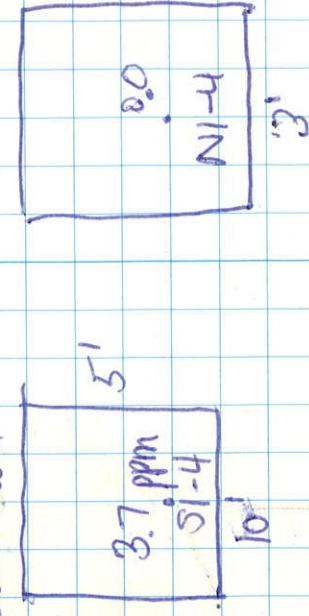
East wall



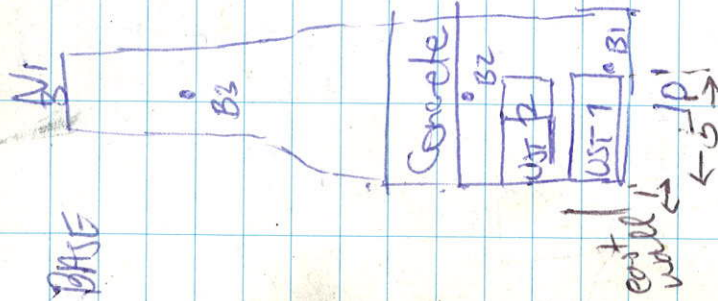
West wall



South wall



BASE
 B1 = 80 ppm
 B2 = 136 ppm
 B3 = 45 ppm



TP 1 backfilled at 4:45 with small amount of soil remaining to go in in bobcat. Covered w/ plastic wrap

4:50 HMM + ANM off-site left tools + plastic in building

5:15 back at office

5/19/15 GenMar

June 19, 2015

118 Pellen St., Rochester

8:45 am HMM on-site

Purpose: continue test pitting as per RAMP Phase II

8:42 Calibrated PM, both PIDs

9:00 completed B&I Air Monitoring

9:10 ANM on-site

9:20 ANM set-up for crane remaining backfilling begun. explained plan for today to continue to south of TP-1

9:30 changed batteries on crane PID

9:45 excavation begun at south end of TP-1

- asked to segregate asphalt from 'clean' from dirty soil. PID from soil ~ 2 bgs 0.0 to 0.3

10:03: TP1 B at 3.5' bgs material

coming up is gray-black, odor,

AD above exc = 0.5 ppm

2nd asphalt layer about 3" thick

~ 6-12 inches bgs

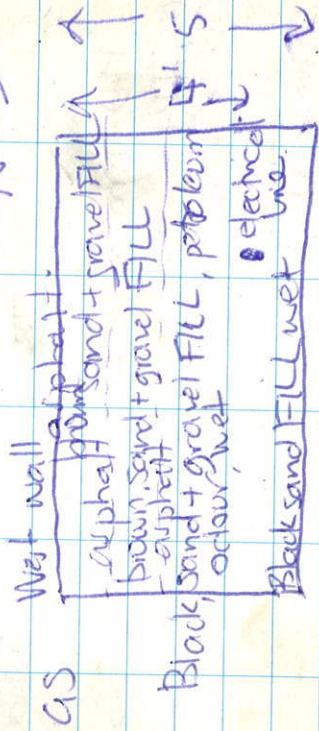
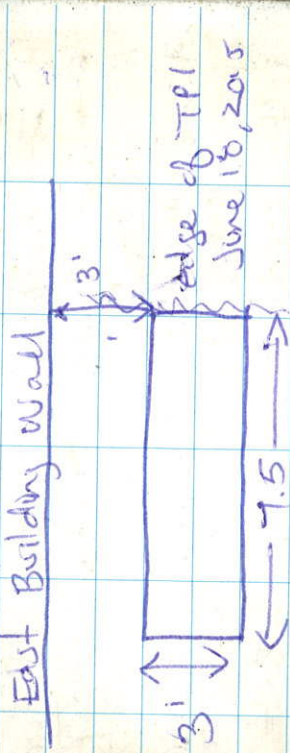
3rd asphalt layer about 3" thick

24" bgs

PID from soil ~ 3 bgs 0.0 to 1.8

Brown-grey soil + gravel FILL
 wet, taken ~ 3.5 bags - PID_{HS} 2.4 ppm
 PID from ~ 4 bags = 0.0 to 2.4 ppm
 Black coarse SAND and gravel FILL
 wet, taken ~ 4 bags PID_{HS} 32.9 ppm
 but maybe moisture influenced

Top View



10:15 am call w JAD, reported no
 sign of 3rd tank

East wall 3.5-4' bags
 black, sand and gravel FILL, wet
 petroleum odor PID_{HS} = 47.1 ppm

North wall 3.5-4' bags
 black, sand and gravel FILL
 wet, petroleum odor PID_{HS} = 16.3 ppm

West wall 3.5-4' bags
 black, sand and gravel FILL
 wet, petroleum odor PID_{HS} = 43.6 ppm

Base, 5 ft by 5 ft Black sand FILL
 wet, petroleum odor, PID_{HS} = 0.5 ppm

10:30 began backfilling

11:30 finished decontaminating
 excavator bucket

11:30 sampled rinseate for VOCs
 SVOCs + Pb
 stirred rinse water in pond

11:45 call w JAD re TP2
 decided to keep original
 distance from buildings west
 cover location of UST 1+2, (permit)

11:55 began TP-2 at south end
 PID of material 0.1" bag
 = 0.0 to 7.6 ppm
 0-1' asphalt then brown sand
 and gravel fill

asphalt at ~1' bag - 4" thick
 1-2" bag - color change from
 brown to black
 PID of material 1-2' bag
 0.0 to 2.4 ppm

12:15 break for lunch.

12:50 resume excavation

13:05 3" dia pipe observed
 1.5' bag

E-W orientation

located 2' south of centerline
 of UST 1

Similar to electrical conduit
 identified in south portion of
 TP1

electrical wires approx 1' south
 and 1' bag

13:19 asphalt layer 1' down
 v. competent - slowing down
 excavation

color change from black to
 grey-black at 4' bag
 fine to medium sand, grey-black
 < wet. PID = 0.0 ppm

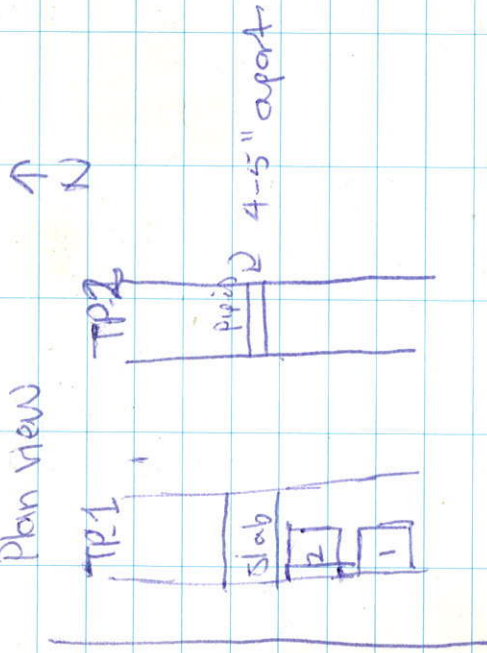
13:40 rubber tube/hose located
 on east wall - equidistant
 b/w UST 1 + UST 2 - approx
 1/2" ID - 2.5' bag, dripping
 but liquid had no odor,
 not apparent petroleum

increasing quantity of binders
 observed in fill below 1.5' bag

14:00 3x pipes approx 2.5-3'
 3' bag

approx dia = 3"
 in line w concrete slab
 observed in TP1

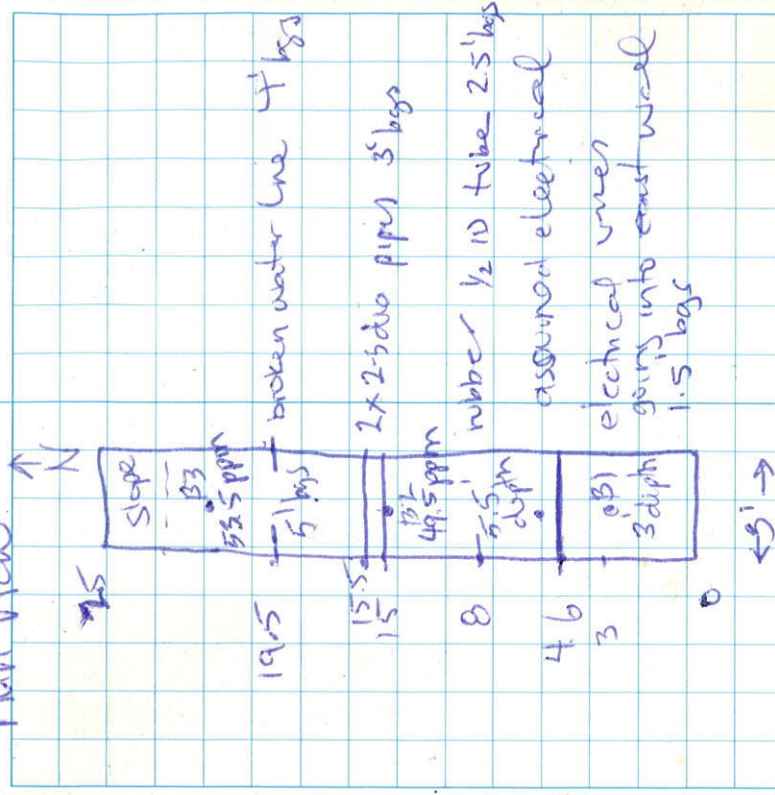
Plan view

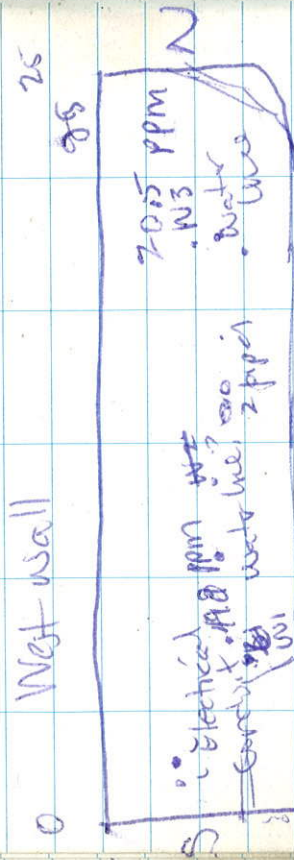


14:08 call to Jeff to mention the pipes / plan for Monday.

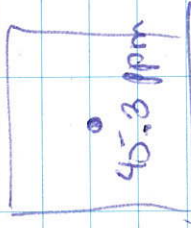
14:20 call from D³ - Will B to start Monday to allow me to pin work - finish to take over at noon June

Plan view

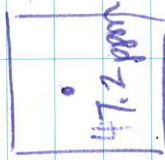




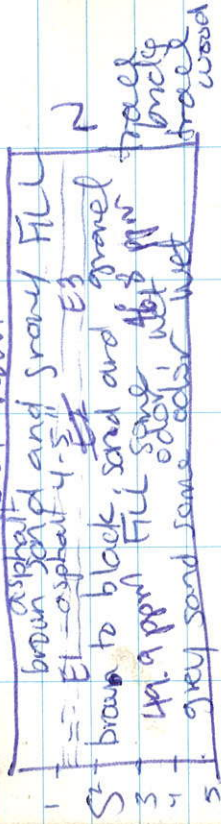
NW wall



South wall



East wall



Sampled grey sandy material
below suspected fuel lines 15
for SVOCs, VOC, lead at 3:30 pm
West wall east wall
3.5' bgs

15:35 backfilling begun

16:15 backfilling complete
HM 26-Site

16:47 at office to unload
prepare samples

TP1 - 06-18-2015

TP2 - 06-19-2015

FB - 06-19-2015

June 22, 2015

- 0630 DAY @ office to load supplies
- 0720 DAY leaves for site
- 0743 DAY on site. Calibrates PID, and Dust meter
- 0820 Rick on site, begins clearing material from digging area
- 0830 Intrusive work begins, PID background inside building = 0.3 ppm
- 0844 Work stops for DAY to take readings and Rick to add fuel to excavator
- 0850 Work resumes
- 0905 First test pit in building dug to about 5' depth in approx location where we expected to see the same 3" pipes as before - none found. DAY instructs Rick to expand pit to the North another 3' at the same 5' depth
- 0915 Second pit dug, work pauses for DAY to evaluate
- 0945 Rick starts backfilling to make room to expand trench along building wall
- 1000 Narrow trench along building wall begins
- 1200 Excavation stops, breaking for lunch

1215 Heather on site, will off site

1230 Call w JAD to update

1248 Rick back

1300 Asked Rick to clean off South concrete pad to confirm similar to other.

1307 Concrete cleared but too close to building wall to be removed - no obvious areas no high PID readings

sampled ~3' depth in similar location as South UST - PID = 3.4 ppm

discussed w Rick - plan to sample 5' box in line w north UST + concrete slab (ext) i.e. location of highest PID reading - Rick needs to shift backfill.



13:40 obtained SP1 TP3-0622-205
5' bgs. adjoining east wall
located w 1.5 - 2' west of east
wall between concrete slab
and north UST (4.3 ppm) headspace

13:45 began backfilling

~~14:05 backfilling complete~~

14:15 spoke to Steve Gibbs re plans
for building 6 - will try to locate
pdf and email

15:15:05 Backfilling complete
HM off-site

HM

June 26th

8:30 am: HM on-site met Chuck
from Hemick-Saylor P.C. and
Paul from TREC

Purpose - evaluate feasibility
of removing concrete filled
USTs in relation to building
support column.

Chuck stated that column and
opposite column will need to be
tied together - may be cable or
beam depending on if the
column is end or friction
could likely remove concrete
containing pipes with no issues
but not concrete filled south
UST as it would disturb north
UST.

Asked Chuck to provide email
w/ estimated costs

Chuck off-site 8:55

Showed Paul locations and photos asked for estimate on VST removal, concrete removal and pipe removal

9:20 HMM off site

HMM

July 13th

7:00 at office to load truck
Sunny 75°F

7:55 HMM + ANM on-site
Purpose: Install 10 test borings
complete all as mws
(1 perm)
remove piping found in TPZ

8:00 am Calibrate PM + PID for CAMP

8:10 background CANNP reading

8:20 set up location for TB1-2015-06-07-13 and GM-mw/6-A

8:45 TREC on-site - exc only
Paul calling keth
TREC scheduled for 2 days
agreed to start in exc of pipes then ~~remove~~
potentially start on mws

9:15 began exc on west
end of pipes by concrete
block

petroleum odor apparent
from material ~ 25-3 ft bgs

broken ~~concrete~~ steel pipe located
~ 4 ft N of center line of N pipe

PID readings from pipe 0.0 ppm
Headspace from sample = 3.2 ppm
dtw in exc ~ 3 ft bgs

extending trench to location of
TP-2 looking for pipes

10:15 Mike C + Justin (TRFC)
on-site w drill rig

broken pipe appeared to be the
south of the two pipes, of
TP-2 - broken about 4' from
building

Showered Justin location of
TBI - 2015-07-13

contamination apparently
lowering ~~near~~ ~~diver~~ ~~forward~~
exit - stained soil and odor
still present

10:35 - pulled end of N pipe
capped - broken area of
pipe approximately
east of east building wall
- no product, odor noted in
location of broken pipe
pulling excavation to east
to chase pipes

10:45 JAD on-site

11:10 sampled TBI

11:30 pipes exposed at to N
of Quonset - N pipe capped
approx

11:50 South pipe pulled out at location of pavers. looks like there is an elbow, ie potentially going to 2nd tank from N pipe.

plan to remove all pipes, backfill then explore potential tank

to elbow is ~3 ft east of NW Quinceff Hot corner pipes ~2 1/2 bags at that location. Very stained

odorless sand fill DID from pipes 0.0 ppm

Headspace from stained sand by elbow 28.3 ppm 248 ppm

12:00

Sampled black stained sand by elbow - 3' east of Quinceff Hot 2.5 bags

Stratigraphy

Brown sand and gravel fill to 2.5 ft bag. black stained

sand below the odor

no obvious signs of Cont 2

past pipe in elbow ie no obvious odor staining

Total length of pipe removed ~69 ft

12:25 - TB-2 installed shifted 3' 5" N of original location due to refusal at 6' bags

12:30 break for lunch.

12:50 began excavating in potential UST area

staining and odor in sand fill observed at ~3' bag, headspace ~238 ppm

13:20 pulled back 10' from
 pipes cent field signs
 of comp act. i.e. odor
 staining no evidence
 of VST

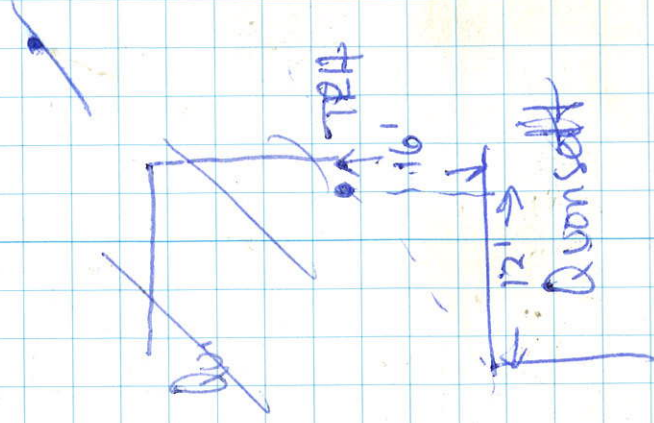
13:30 concrete slab to north
 of bent pipe -
 PID on end of pipe = 1000 ppm
 2nd. beside 1st smaller in
 diameter.

stained soil and odor within
 1 ft bsp. - Sample at 101 ppm

1:55 - concrete slab removed
 - pipe broken
 - apparent staining at
 1 ft bsp.
 Keith on site

Dug to 2 ft bsp. PID ranged
 from 0.8 to 254 ppm

sampled TP-4 directly under
 location of pump island
 at a depth of 2 ft bsp
 (254 ppm)



July 14, 2015

Hamm +

7:30 Hamm + Anm on-site

purpose: install remaining
TBs + mvs - collect groundwater
samples7:30 truck unloaded - Anm to
Eco-RentalHamm calibrate PID, PM.
wind to NINE

8:00 TB-5 begun

8:40 Anm back

8:45 TB-6 begun

9:43 TB-7 begun

10:10 call w/ JAD re location

or next TBs
received figure 10:30

began TB-8

began TB-9

began TB-9.

12:30 TB-10 complete

rain began

8" TB-11 - recovery only
from sample sleeves
4-12' - rained 1x403
possible screen -

TRSC 86 - Site 13:05

15: purged interior wells

15:30 began well sampling

17:02 finished well sampling
began packing17:26 Hamm - Anm
86 - Site

July 17, 2015

9:01 HMM + ANM on-site
 Pipe - waste characterization samples
 and swing ties, decom
 temp wells
 9:02 collected waste charac
 sample

Swing Ties

NE corner of Building 6 to south corner
 of North door 53.5' (A)

SE corner of Building 6 to north
 corner of South door 78.98' (B)

Interior Wells

	A	B
TNW1	59.83	28.80 → 55.4'
TNW2	77.30	29.22, West of interior wall
TNW3	50.10	47.55

* A+B

wall thickness 1.02' ie shift to
 inside wall for interior
 measurements

Exterior Wells	A	B	C
4		30.10	20.50
5	62.30		16.85
6		22.20	20.43
7	45.10		39.45 → 20.10
8	28.25		39.45
9	49.83		31.75
10		1.90	40.80
9:45 began decommissioning TMW1.			
TMW10 - broke w screen in ground			
TMW9 - removed			
TMW8 - broke w 5' screen in ground			
TMW4 - removed			
TMW5 - removed			
TMW2 - removed			
TMW3 - removed			
TMW6 - removed			
TMW7 - removed			
11:30 HMM = ANM offsite			



DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

AIR MONITORING REPORT SHEET

DATE: June 18, 2015PAGE: 1 OF 2JOB #: 5119R-15SITE: Genesee MarinaBY: ANMON-SITE: 0815 OFF-SITE: 1645WEATHER CONDITIONS: 63°F PREVAILING WIND DIRECTION: West ~4 mphPERSONNEL ON-SITE: ANM + hmmNOTES: CAM 1 located on west edge of site on dirt/gravel road; trucks drive by periodically stirring up particulates on road.~~1015 wind direction changes~~1015 wind north ~8 mph, moved to CAM2 @ 10251240 work stops for lunch1300 work restarts1645 work stops

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
BG1	0840	BG1	0.0	0.017
CAMP	0900	CAM1	0.0	0.014
CAMP	0915	CAM1	0.0	0.076
CAMP	0930	CAM1	0.0	0.062
CAMP	0945	CAM1	0.0	0.025
CAMP	1000	CAM1	0.0	0.015
CAMP	1015	CAM1	0.0	0.027
BG2	1018	BG	0.0	0.017
CAMP	1040	CAM2	0.0	0.069
CAMP	1055	CAM2	0.0	0.016
CAMP	1110	CAM2	0.0	0.012
CAMP	1125	CAM2	0.0	0.021
CAMP	1140	CAM2	0.0	0.013
CAMP	1155	CAM2	0.0	0.017
CAMP	1210	CAM2	0.0	0.017
CAMP	1225	CAM2	0.0	0.014
CAMP	1240	CAM2	0.0	0.017
CAMP	1300	CAM2	0.0	0.017
CAMP	1315	CAM2	0.0	0.016
CAMP	1330	CAM2	0.0	0.041

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
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AIR MONITORING REPORT SHEET (Continued)

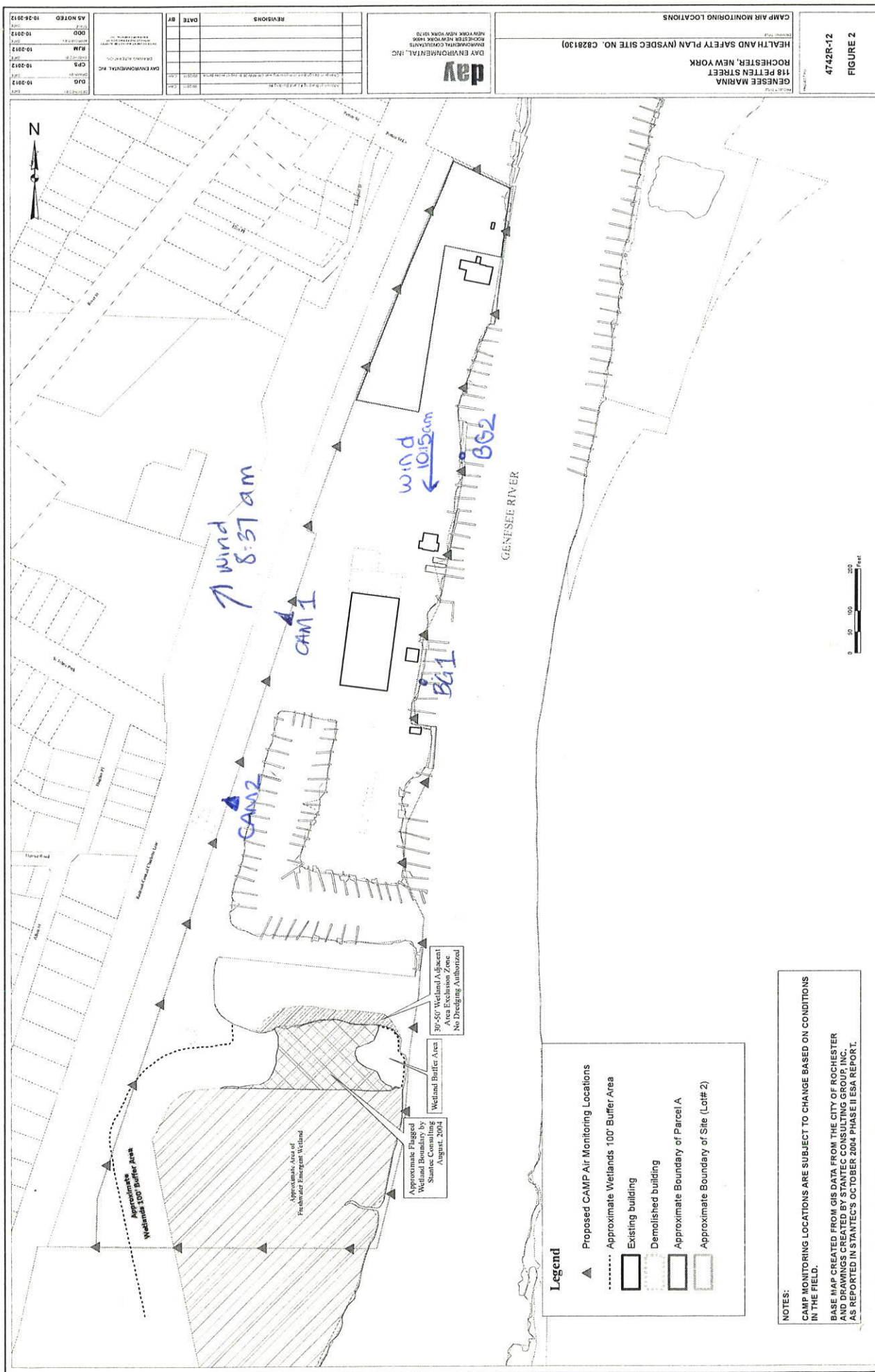
DATE: 6/18/15

PAGE: 2 OF 2

JOB #: 5119R-15

[illegible]

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
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NOTES:
CAMP MONITORING LOCATIONS ARE SUBJECT TO CHANGE BASED ON CONDITIONS IN THE FIELD.
BASE MAP CREATED FROM GIS DATA FROM THE CITY OF ROCHESTER AND DRAWINGS CREATED BY STANTEC CONSULTING GROUP, INC. AS REPORTED IN STANTEC'S OCTOBER 2004 PHASE II ESA REPORT.

AIR MONITORING REPORT SHEET

DATE: June 18

PAGE: 1 OF 12

JOB #: 5119R-15

SITE: Genesee Marina

BY: Hmm

ON-SITE: 08:15 OFF-SITE: 16:45

WEATHER CONDITIONS: 65°F PREVAILING WIND DIRECTION: west 4mph

PERSONNEL ON-SITE: Hmm + ANM

NOTES: measurements taken within breathing zone
in work area

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
BZ	9:10	TP1	0.0	Nm.
	9:30		0.0	
	9:45		0.0	
	10:00		0.0	
	10:15		0.0	
	10:30		0.0	
	10:45		0.0	
	11:00		0.0	
	11:15		0.0	
	11:30		0.0	
	11:45		0.0	
	12:00		0.0	
	12:15		0.0	
	12:30		0.0	
	12:45		0.0	
	13:00		0.0	
	13:15		0.0	
	13:30		0.1	
	13:45		0.0	
	14:00		0.0	

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AIR MONITORING REPORT SHEET

DATE: June 19, 2015

PAGE: 1 OF 2

JOB #: 5119R-15

SITE: Genesee Marina

BY: ANM

ON-SITE: 0845 OFF-SITE: 1615

WEATHER CONDITIONS: 55°F, overcast PREVAILING WIND DIRECTION: ~5 mph N

PERSONNEL ON-SITE: Hmm + ANM

NOTES: _____

1215 work stops for lunch

1300 work resumes

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
BG1	0915	BG1	0.0	0.0
CAMP	0930	CAM2	0.0	0.007
CAMP	0945	CAM2	0.0	0.0
CAMP	1000	CAM2	0.0	0.023
CAMP	1015	CAM2	0.0	0.024
CAMP	1030	CAM2	0.0	0.005
CAMP	1045	CAM2	0.0	0.013
CAMP	1100	CAM2	0.0	0.073
CAMP	1115	CAM2	0.0	0.074
CAMP	1130	CAM2	0.0	0.007
CAMP	1145	CAM2	0.0	0.032
CAMP	1200	CAM2	0.0	0.022
CAMP	1215	CAM2	0.0	0.00
CAMP	1315	CAM2	0.0	0.008
CAMP	1330	CAM2	0.0	0.020
CAMP	1345	CAM2	0.0	0.007
CAMP	1400	CAM2	0.0	0.031
CAMP	1415	CAM2	0.0	0.027
CAMP	1430	CAM2	0.0	0.011
CAMP	1445	CAM2	0.0	0.005

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AIR MONITORING REPORT SHEET (Continued)

DATE: June 19, 2015

PAGE: 2 OF 2

JOB #: 5119R-15

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DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
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AIR MONITORING REPORT SHEET

DATE: June 19, 2015

PAGE: 1 OF 2 ^{flm}

JOB #: 5119R-15

SITE: Genesee Marina

BY: Hmm

ON-SITE: 8:40 OFF-SITE: 16:15

WEATHER CONDITIONS: 55°F overcast PREVAILING WIND DIRECTION: 25 mph N

PERSONNEL ON-SITE: Heather McLennan

NOTES: 11:00 - break for decontamination + collection
of residue
12:15 - 12:50 lunch break.

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
BZ	9:45	TP1B	0.0	
	10:00		0.1	
	10:15		0.0	
	10:30		0.0	
	10:45		0.0	
	11:00		0.0	
	12:00	TP2	TP2 0.0	
	12:15		0.0	
	13:00		0.0	
	13:15		0.0	
	13:30		0.0	
	13:45		0.0	
	14:00		0.0	
	14:15		0.0	
	14:30		0.0	
	14:45		0.0	
	15:00		0.0	
	15:15		0.0	
	15:30		0.0	
	16:00		0.0	

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AIR MONITORING REPORT SHEET

DATE: 22 June 2015

PAGE: 1 OF 2

JOB #: 5119R-15

SITE: Genesee Marina

BY: W. Batiste

ON-SITE: 0743 OFF-SITE: 15:05

WEATHER CONDITIONS: Sunny ~ 80°F PREVAILING WIND DIRECTION: SE

PERSONNEL ON-SITE: DAY

NOTES: Meters calibrated okay. Since sub-surface work is happening inside closed building, CAMP location set up at open door with most likely route for fugitive dust and volatiles. CAMP started @ 0830. Intrusive work pauses @ 0844. Work resumes @ 0856. Work stops @ 0915. Work resumes @ 0931 expanding pit south. Trench complete @ 1200, Rick breaks for lunch. 12:50 Rick began excavating concrete pad. Backfilling complete at 15:05

* Boating Boat Sailing

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
Background	0800	BG-1	0.0	0.009
CAMP	0844	DOOR 1	0.0	0.005
CAMP	0912 0856	DOOR 1	0.0	0.010
CAMP	0945	DOOR 1	0.0	0.017 *
CAMP	0957	DOOR 1	0.0	0.018
CAMP	1010	DOOR 1	0.0	0.012
Breathing Zone	1012	BZ-1	0.0	0.018
CAMP	1030	DOOR 1	0.0	0.015
CAMP	1045	DOOR 1	0.0	0.016
Breathing Zone	1046	BZ-1	0.0	0.018
CAMP	1100	DOOR 1	0.0	0.017
CAMP	1115	DOOR 1	0.0	0.014
Breathing Zone	1116	BZ-1	0.5	0.015
CAMP	1132	DOOR-1	0.0	0.016
CAMP	1146	DOOR 1	0.0	0.018
Breathing Zone	1147	BZ-1	0.3	0.017
CAMP	1200	DOOR 1	0.0	0.014
CAMP	13:07	DOOR 1	0.0	0.017
BZ	13:07	BZ-1	0.2	
Breathing Zone	13:22	BZ-1	0.0	0.0 0.022

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary

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AIR MONITORING REPORT SHEET (Continued)

DATE: June 22, 2015

PAGE: 2 OF 2

JOB #: 5119R-15

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DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
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AIR MONITORING REPORT SHEET

DATE: July 13th, 2015

PAGE: 1 OF 2

JOB #: 5119R-15

SITE: Genesee Marina

BY: ANM

ON-SITE: 07:55 OFF-SITE: 15:55

WEATHER CONDITIONS: 80°F Sunny/Partly Cloudy PREVAILING WIND DIRECTION: 1 mph SW

PERSONNEL ON-SITE: HMM & ANM

NOTES: 08:00 Calibrate PID & PM CAMP1 near Sensitive residential area

08:50 @ CAMP1 site; CAMP begins CAMP1 = same location as CAMP2 (6/15)

09:20 excavation begins

10:45 PWD 5 mph SW

12:30 work stops for lunch

12:45 work restarts

15:33 work ends for day

15:55 DAY offsite

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
BG	8:15	BG1	0.0	0.026
CAMP	9:00	CAMP1	0.0	0.021
CAMP	9:15	CAMP1	0.0	0.021
CAMP	9:30	CAMP1	0.0	0.022
CAMP	9:45	CAMP1	0.0	0.023
CAMP	10:00	CAMP1	0.0	0.023
CAMP	10:15	CAMP1	0.0	0.026
CAMP	10:30	CAMP1	0.0	0.027
CAMP	10:45	CAMP1	0.0	0.027
CAMP	11:00	CAMP1	0.0	0.025
CAMP	11:15	CAMP1	0.0	0.023
CAMP	11:30	CAMP1	0.0	0.022
CAMP	11:45	CAMP1	0.0	0.021
CAMP	12:00	CAMP1	0.0	0.021
CAMP	12:15	CAMP1	0.0	0.020
CAMP	12:30	CAMP1	0.0	0.019
CAMP	13:00	CAMP1	0.4	0.067
CAMP	13:15	CAMP1	0.0	0.060
CAMP	13:30	CAMP1	0.0	0.024
CAMP	13:45	CAMP1	0.0	0.024

motorboat
Towing a
few slips
away

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary

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PWD = prevailing wind direction

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AIR MONITORING REPORT SHEET (Continued)

DATE: July 13th, 2015

PAGE: 2 OF 2

JOB #: 5119R-15

[illegible]

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
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Site Plan

Legend

- Former Aboveground Storage Tank (AST)
- Existing Aboveground Storage Tank (AST)
- Former Underground Storage Tanks (USTs) - Reported to be closed-in-place
- Existing Underground Storage Tanks (USTs)
- Approximate Wetlands 100' Buffer Area
- Building Identification Number
- Existing building
- Demolished building
- Approximate Boundary of Parcel A
- Approximate Boundary of Lot 1
- Approximate Boundary of Site (Lot# 2)

Revisions

NO.	DATE	BY	REVISIONS
1	10-01-10	TKH	Initial Design
2	10-01-10	TKH	Final Design
3	10-01-10	TKH	Final Design
4	10-01-10	TKH	Final Design
5	10-01-10	TKH	Final Design
6	10-01-10	TKH	Final Design
7	10-01-10	TKH	Final Design
8	10-01-10	TKH	Final Design
9	10-01-10	TKH	Final Design
10	10-01-10	TKH	Final Design
11	10-01-10	TKH	Final Design

Notes:

BASE MAP CREATED FROM GIS DATA FROM THE CITY OF ROCHESTER AND DRAWINGS CREATED BY STANTEC CONSULTING GROUP, INC. AS REPORTED IN STANTEC'S OCTOBER 2004 PHASE II ESA REPORT.

Scale: 0 50 100 200 Feet

North Arrow: N

Site Plan

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- Building Identification Number
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- Demolished building
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- Approximate Boundary of Lot 1
- Approximate Boundary of Site (Lot# 2)

Revisions

NO.	DATE	BY	REVISIONS
1	10-01-10	TKH	Initial Design
2	10-01-10	TKH	Final Design
3	10-01-10	TKH	Final Design
4	10-01-10	TKH	Final Design
5	10-01-10	TKH	Final Design
6	10-01-10	TKH	Final Design
7	10-01-10	TKH	Final Design
8	10-01-10	TKH	Final Design
9	10-01-10	TKH	Final Design
10	10-01-10	TKH	Final Design
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Site Plan

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- Building Identification Number
- Existing building
- Demolished building
- Approximate Boundary of Parcel A
- Approximate Boundary of Lot 1
- Approximate Boundary of Site (Lot# 2)

Revisions

NO.	DATE	BY	REVISIONS
1	10-01-10	TKH	Initial Design
2	10-01-10	TKH	Final Design
3	10-01-10	TKH	Final Design
4	10-01-10	TKH	Final Design
5	10-01-10	TKH	Final Design
6	10-01-10	TKH	Final Design
7	10-01-10	TKH	Final Design
8	10-01-10	TKH	Final Design
9	10-01-10	TKH	Final Design
10	10-01-10	TKH	Final Design
11	10-01-10	TKH	Final Design

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- Former Underground Storage Tanks (USTs) - Reported to be closed-in-place
- Existing Underground Storage Tanks (USTs)
- Approximate Wetlands 100' Buffer Area
- Building Identification Number
- Existing building
- Demolished building
- Approximate Boundary of Parcel A
- Approximate Boundary of Lot 1
- Approximate Boundary of Site (Lot# 2)

Revisions

NO.	DATE	BY	REVISIONS
1	10-01-10	TKH	Initial Design
2	10-01-10	TKH	Final Design
3	10-01-10	TKH	Final Design
4	10-01-10	TKH	Final Design
5	10-01-10	TKH	Final Design
6	10-01-10	TKH	Final Design
7	10-01-10	TKH	Final Design
8	10-01-10	TKH	Final Design
9	10-01-10	TKH	Final Design
10	10-01-10	TKH	Final Design
11	10-01-10	TKH	Final Design

Notes:

BASE MAP CREATED FROM GIS DATA FROM THE CITY OF ROCHESTER AND DRAWINGS CREATED BY STANTEC CONSULTING GROUP, INC. AS REPORTED IN STANTEC'S OCTOBER 2004 PHASE II ESA REPORT.

Scale: 0 50 100 200 Feet

North Arrow: N

Site Plan

Legend

- Former Aboveground Storage Tank (AST)
- Existing Aboveground Storage Tank (AST)
- Former Underground Storage Tanks (USTs) - Reported to be closed-in-place
- Existing Underground Storage Tanks (USTs)
- Approximate Wetlands 100' Buffer Area
- Building Identification Number
- Existing building
- Demolished building
- Approximate Boundary of Parcel A
- Approximate Boundary of Lot 1
- Approximate Boundary of Site (Lot# 2)

Revisions

NO.	DATE	BY	REVISIONS
1	10-01-10	TKH	Initial Design
2	10-01-10	TKH	Final Design
3	10-01-10	TKH	Final Design
4	10-01-10	TKH	Final Design
5	10-01-10	TKH	Final Design
6	10-01-10	TKH	Final Design
7	10-01-10	TKH	Final Design
8			

AIR MONITORING REPORT SHEET

DATE: July ^{14th} ~~13th~~, 2015

PAGE: 1 OF 2

JOB #: 5119R-15

SITE: Genesee Marina

BY: ANM

ON-SITE: 7:30 OFF-SITE: 17:26

WEATHER CONDITIONS: 75°F partly cloudy PREVAILING WIND DIRECTION: N-NE 10mph -15

PERSONNEL ON-SITE: ANM + HMM

NOTES:

11:00 Cloudy 12:30 drilling complete

12:45 Drizzling

~~13:00 Drilling complete~~ 13:00 TREC off Site

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)
Background	7:50	BG-1	0.0	0.024
CAMP	8:15	CAMP-1	0.0	0.023
CAMP	8:30	CAMP-1	0.0	0.023
CAMP	8:45	CAMP-1	0.0	0.024
CAMP	9:00	CAMP-1	0.0	0.025
CAMP	9:15	CAMP-1	0.0	0.025
CAMP	9:30	CAMP-1	0.0	0.026
CAMP	9:45	CAMP-1	0.0	0.024
CAMP	10:00	CAMP-1	0.0	0.021
CAMP	10:15	CAMP-1	0.0	0.017
CAMP	10:30	CAMP-1	0.0	0.013
CAMP	10:45	CAMP-1	0.0	0.015
CAMP	11:00	CAMP-1	0.0	0.017
CAMP	11:15	CAMP-1	0.0	0.016
CAMP	11:30	CAMP-1	0.0	0.015
CAMP	11:45	CAMP-1	0.0	0.017
CAMP	11:56	CAMP-1	0.0	0.018
CAMP	12:16	CAMP-1	0.0	0.017
CAMP	12:30	CAMP-1	0.0	0.012
CAMP	12:45	CAMP-1	0.0	0.017

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
P:\My Documents\Field Forms

AIR MONITORING REPORT SHEET (Continued)

DATE: July 13th, 2015

PAGE: 2 OF 2

JOB #: 5119R-15

[illegible]

DESCRIPTION: BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary
S:/fieldforms/Air Monitoring

Legend

- c Former Aboveground Storage Tank (AST)
- a Existing Aboveground Storage Tank (AST)
- Former Underground Storage Tanks (UST's) - Reported to be closed-in-place
- Existing Underground Storage Tanks (UST's)
- Approximate Wetlands 100' Buffer Area
- 1 Building Identification Number
- [] Existing building
- [] Demolished building
- [] Approximate Boundary of Parcel A
- [] Approximate Boundary of Lot 1
- [] Approximate Boundary of Site (Lot# 2)

Notes:

BASE MAP CREATED FROM GIS DATA FROM THE CITY OF ROCHESTER AND DRAWINGS CREATED BY STATTEC CONSULTING GROUP, INC. AS REPORTED IN STATTEC'S OCTOBER 2004 PHASE II ESA REPORT.

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APPENDIX E

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

AUGUST 2015 (Revised April 2016)



PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report For
Day Environmental, Inc.

For Lab Project ID

160803

Referencing

5119R-15/Genmar

Prepared

Thursday, March 03, 2016

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

A handwritten signature in black ink, reading "K. R. Hansen", is positioned above a horizontal line. The signature is written in a cursive style with a large, stylized "H".

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

Lab Project ID: 160803
Client: Day Environmental, Inc.
Project Reference: 5119R-15/Genmar

Sample Identifier: WC-26-02-2016

Lab Sample ID: 160803-01

Date Sampled: 2/26/2016

Matrix: Wastewater

Date Received: 2/26/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,2,4-Trichlorobenzene	< 10.0	ug/L		3/2/2016 17:19
1,2-Dichlorobenzene	< 10.0	ug/L		3/2/2016 17:19
1,3-Dichlorobenzene	< 10.0	ug/L		3/2/2016 17:19
1,4-Dichlorobenzene	< 10.0	ug/L		3/2/2016 17:19
2,4,6-Trichlorophenol	< 10.0	ug/L		3/2/2016 17:19
2,4-Dichlorophenol	< 10.0	ug/L		3/2/2016 17:19
2,4-Dimethylphenol	< 10.0	ug/L		3/2/2016 17:19
2,4-Dinitrophenol	< 20.0	ug/L		3/2/2016 17:19
2,4-Dinitrotoluene	< 10.0	ug/L		3/2/2016 17:19
2,6-Dinitrotoluene	< 10.0	ug/L		3/2/2016 17:19
2-Chloronaphthalene	< 10.0	ug/L		3/2/2016 17:19
2-Chlorophenol	< 10.0	ug/L		3/2/2016 17:19
2-Nitrophenol	< 10.0	ug/L		3/2/2016 17:19
3,3'-Dichlorobenzidine	< 10.0	ug/L		3/2/2016 17:19
4,6-Dinitro-2-methylphenol	< 20.0	ug/L		3/2/2016 17:19
4-Bromophenyl phenyl ether	< 10.0	ug/L		3/2/2016 17:19
4-Chloro-3-methylphenol	< 10.0	ug/L		3/2/2016 17:19
4-Chlorophenyl phenyl ether	< 10.0	ug/L		3/2/2016 17:19
4-Nitrophenol	< 20.0	ug/L		3/2/2016 17:19
Acenaphthene	< 10.0	ug/L		3/2/2016 17:19
Acenaphthylene	< 10.0	ug/L		3/2/2016 17:19
Anthracene	< 10.0	ug/L		3/2/2016 17:19
Benzidine	< 20.0	ug/L		3/2/2016 17:19
Benzo (a) anthracene	< 10.0	ug/L		3/2/2016 17:19
Benzo (a) pyrene	< 10.0	ug/L		3/2/2016 17:19
Benzo (b) fluoranthene	< 10.0	ug/L		3/2/2016 17:19
Benzo (g,h,i) perylene	< 10.0	ug/L		3/2/2016 17:19
Benzo (k) fluoranthene	< 10.0	ug/L		3/2/2016 17:19
Bis (2-chloroethoxy) methane	< 10.0	ug/L		3/2/2016 17:19

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Page 2 of 9

Report Prepared Thursday, March 03, 2016



Lab Project ID: 160803

Client: Day Environmental, Inc.

Project Reference: 5119R-15/Genmar

Sample Identifier: WC-26-02-2016

Lab Sample ID: 160803-01

Date Sampled: 2/26/2016

Matrix: Wastewater

Date Received: 2/26/2016

Bis (2-chloroethyl) ether	< 10.0	ug/L	3/2/2016 17:19
Bis (2-chloroisopropyl) ether	< 10.0	ug/L	3/2/2016 17:19
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	3/2/2016 17:19
Butylbenzylphthalate	< 10.0	ug/L	3/2/2016 17:19
Chrysene	< 10.0	ug/L	3/2/2016 17:19
Dibenz (a,h) anthracene	< 10.0	ug/L	3/2/2016 17:19
Diethyl phthalate	< 10.0	ug/L	3/2/2016 17:19
Dimethyl phthalate	< 20.0	ug/L	3/2/2016 17:19
Di-n-butyl phthalate	< 10.0	ug/L	3/2/2016 17:19
Di-n-octylphthalate	< 10.0	ug/L	3/2/2016 17:19
Fluoranthene	< 10.0	ug/L	3/2/2016 17:19
Fluorene	< 10.0	ug/L	3/2/2016 17:19
Hexachlorobenzene	< 10.0	ug/L	3/2/2016 17:19
Hexachlorobutadiene	< 10.0	ug/L	3/2/2016 17:19
Hexachlorocyclopentadiene	< 10.0	ug/L	3/2/2016 17:19
Hexachloroethane	< 10.0	ug/L	3/2/2016 17:19
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	3/2/2016 17:19
Isophorone	< 10.0	ug/L	3/2/2016 17:19
Naphthalene	< 10.0	ug/L	3/2/2016 17:19
Nitrobenzene	< 10.0	ug/L	3/2/2016 17:19
N-Nitrosodimethylamine	< 10.0	ug/L	3/2/2016 17:19
N-Nitroso-di-n-propylamine	< 10.0	ug/L	3/2/2016 17:19
N-Nitrosodiphenylamine	< 10.0	ug/L	3/2/2016 17:19
Pentachlorophenol	< 20.0	ug/L	3/2/2016 17:19
Phenanthrene	< 10.0	ug/L	3/2/2016 17:19
Phenol	< 10.0	ug/L	3/2/2016 17:19
Pyrene	< 10.0	ug/L	3/2/2016 17:19



Lab Project ID: 160803

Client: Day Environmental, Inc.

Project Reference: 5119R-15/Genmar

Sample Identifier: WC-26-02-2016

Lab Sample ID: 160803-01

Date Sampled: 2/26/2016

Matrix: Wastewater

Date Received: 2/26/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	72.1	36.8 - 127		3/2/2016 17:19
2-Fluorobiphenyl	40.7	20.3 - 108		3/2/2016 17:19
2-Fluorophenol	33.2	6.08 - 107		3/2/2016 17:19
Nitrobenzene-d5	56.5	48 - 101		3/2/2016 17:19
Phenol-d5	25.0	0 - 106		3/2/2016 17:19
Terphenyl-d14	73.7	52.7 - 113		3/2/2016 17:19

Method Reference(s): EPA 625
Preparation Date: 3/2/2016
Data File: B10491.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		2/29/2016 14:53
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		2/29/2016 14:53
1,1,2-Trichloroethane	< 2.00	ug/L		2/29/2016 14:53
1,1-Dichloroethane	< 2.00	ug/L		2/29/2016 14:53
1,1-Dichloroethene	< 2.00	ug/L		2/29/2016 14:53
1,2-Dichlorobenzene	< 2.00	ug/L		2/29/2016 14:53
1,2-Dichloroethane	< 2.00	ug/L		2/29/2016 14:53
1,2-Dichloropropane	< 2.00	ug/L		2/29/2016 14:53
1,3-Dichlorobenzene	< 2.00	ug/L		2/29/2016 14:53
1,4-Dichlorobenzene	< 2.00	ug/L		2/29/2016 14:53
2-Chloroethyl vinyl Ether	< 10.0	ug/L		2/29/2016 14:53
Benzene	< 1.00	ug/L		2/29/2016 14:53
Bromodichloromethane	< 2.00	ug/L		2/29/2016 14:53
Bromoform	< 5.00	ug/L		2/29/2016 14:53
Bromomethane	< 2.00	ug/L		2/29/2016 14:53
Carbon Tetrachloride	< 2.00	ug/L		2/29/2016 14:53
Chlorobenzene	< 2.00	ug/L		2/29/2016 14:53
Chloroethane	< 2.00	ug/L		2/29/2016 14:53
Chloroform	< 2.00	ug/L		2/29/2016 14:53
Chloromethane	< 2.00	ug/L		2/29/2016 14:53

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, March 03, 2016



Lab Project ID: 160803

Client: Day Environmental, Inc.

Project Reference: 5119R-15/Genmar

Sample Identifier: WC-26-02-2016

Lab Sample ID: 160803-01

Date Sampled: 2/26/2016

Matrix: Wastewater

Date Received: 2/26/2016

cis-1,3-Dichloropropene	< 2.00	ug/L	2/29/2016 14:53
Dibromochloromethane	< 2.00	ug/L	2/29/2016 14:53
Ethylbenzene	< 2.00	ug/L	2/29/2016 14:53
Methylene chloride	< 5.00	ug/L	2/29/2016 14:53
Tetrachloroethene	< 2.00	ug/L	2/29/2016 14:53
Toluene	< 2.00	ug/L	2/29/2016 14:53
trans-1,2-Dichloroethene	< 2.00	ug/L	2/29/2016 14:53
trans-1,3-Dichloropropene	< 2.00	ug/L	2/29/2016 14:53
Trichloroethene	< 2.00	ug/L	2/29/2016 14:53
Trichlorofluoromethane	< 2.00	ug/L	2/29/2016 14:53
Vinyl chloride	< 2.00	ug/L	2/29/2016 14:53

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	104	81.6 - 118		2/29/2016 14:53
4-Bromofluorobenzene	83.5	79.5 - 115		2/29/2016 14:53
Pentafluorobenzene	89.0	91.4 - 111	*	2/29/2016 14:53
Toluene-D8	92.0	89.8 - 108		2/29/2016 14:53

Method Reference(s): EPA 624

Data File: x29867.D

The analyte 2-Chloroethyl vinyl Ether does not recover from acid preserved VOA vials.



Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.

"E" = Result has been estimated, calibration limit exceeded.

"Z" = See case narrative.

"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.

"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.

"B" = Method blank contained trace levels of analyte. Refer to included method blank report.

"J" = Result estimated between the quantitation limit and half the quantitation limit.

"L" = Laboratory Control Sample recovery outside accepted QC limits.

"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.

"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.

"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

"(1)" = Indicates data from primary column used for QC calculation.

"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.

"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS

LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation.

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.

Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility.

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Page 7 of 9

Report Prepared Thursday, March 03, 2016

1 of 2

CHAIN OF CUSTODY



REPORT TO:		INVOICE TO:	
CLIENT: <u>DAY</u>	ADDRESS: <u>1563 Lyell Ave</u>	CLIENT: <u>DAY</u>	ADDRESS: <u>1563 Lyell Ave</u>
CITY: <u>Rochester</u>	STATE: <u>NY</u>	CITY: <u>Rochester</u>	STATE: <u>NY</u>
PHONE: <u>454-0210</u>	ZIP: <u>14606</u>	PHONE: <u>454-0210</u>	ZIP: <u>14606</u>
ATTN: <u>Jeff Danziger</u>		ATTN: <u>Jeff Danziger</u>	
Matrix Codes: <u>AA - Aqueous Liquid</u>		Matrix Codes: <u>AA - Aqueous Liquid</u>	
<u>NQ - Non-Aqueous Liquid</u>		<u>NQ - Non-Aqueous Liquid</u>	
WA - Water	DW - Drinking Water	SO - Soil	SD - Solid
WG - Groundwater	WW - Wastewater	SL - Sludge	PT - Paint
LAB PROJECT ID: <u>160803</u>		Quotation #: <u>160803</u>	
Email: <u>jeff.danziger@daymail.net</u>		Email: <u>jeff.danziger@daymail.net</u>	

DATE COLLECTED	TIME COLLECTED	C O M P O S I T E	G R A B	SAMPLE IDENTIFIER	M C A O T D R E I S	C O N T A I N E R S	REQUESTED ANALYSIS	REMARKS	PARADIGM LAB SAMPLE NUMBER
1 Feb 26/16	8:55	X		WC-26-02-2016	WW	X	X	Plungeable Organic	01
2									
3									
4									
5									
6									
7									
8									
9									
10									

Turnaround Time		Report Supplements	
Availability contingent upon lab approval; additional fees may apply.			
Standard 5 day	<input checked="" type="checkbox"/>	Batch QC	<input type="checkbox"/>
Rush 3 day	<input type="checkbox"/>	Category A	<input type="checkbox"/>
Rush 2 day	<input type="checkbox"/>	Category B	<input type="checkbox"/>
Rush 1 day	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other		Other EDD	
Please indicate:		Please indicate:	

Sampled By: <u>H Miller</u>		Date/Time: <u>Feb 26, 2016 / 8:55</u>	
Relinquished By: <u>H Miller</u>		Date/Time: <u>Feb 26, 2016 / 15:22</u>	
Received By: <u>Jeff Danziger</u>		Date/Time: <u>2/26/16 15:25</u>	
Received @ Lab By: <u>Jeff Danziger</u>		Date/Time: <u>2/26/16 15:37</u>	
Total Cost:		P.L.F.	

202



Chain of Custody Supplement

Client: DayCompleted by: Molly VailLab Project ID: 160803Date: 2/26/16

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input checked="" type="checkbox"/> <u>VOA</u>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			
Preservation	<input checked="" type="checkbox"/> <u>VOA</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/> <u>SVOA</u>
Comments			
Chlorine Absent (<0.10 ppm per test strip)	<input checked="" type="checkbox"/> <u>SVOA</u>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	<u>VOA - Cl⁻ neg.</u>		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			
Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	<u>2°C 2/26/16 1535 hrs</u>		
Sufficient Sample Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			

APPENDIX F

REMEDIAL DESIGN INVESTIGATION

*118 PETTEN STREET,
ROCHESTER, NY*

APRIL 2016

CK # 14505

SPECIALTY SHORT TERM DISCHARGE PERMITCounty of Monroe Pure Waters District No. 8575ST- Permit No: 6T-305Expires: 4/15/16

Fee: \$125.00

Firm Name Day Environmental, Inc.
Address 1563 Lyell Avenue
Rochester, New York 14606

Type of Business or Service Environmental Consulting

I. The above-named applicant is permitted to discharge wastes into the Pure Waters Sewer system or Tributary thereto as applied for by an application dated _____ and verified by the applicant except the Director of Pure Waters requires the following terms and conditions to govern the permitted discharge:

A. _____
B. _____
C. _____

II. The applicant further agrees to:

1. Accept and abide by all provisions of the Sewer Use Law of Monroe County and of all pertinent rules or regulations now in force or shall be adopted in the future.
2. Notify the Director of Pure Waters in writing of any revision to the plant sewer system or any change in industrial wastes discharge to the public sewers as listed in the application. The latter encompasses either (1) an increase or decrease in average daily volume or strength of wastes listed in the application or (2) new wastes that were not listed in the application.
3. Furnish the Director of Pure Waters upon request any additional information related to the installation or use of sewer or drain for which this permit is sought.
4. Operate and maintain any waste pretreatment facilities, as may be required as a condition of the acceptance into the public sewer of the industrial wastes involved, in an efficient manner at all times, and at no expense to the County.
5. Cooperate with the Director of Pure Waters or his representatives in their inspecting, sampling, and study of wastes, or the facilities provided for pretreatment.
6. Notify the Director of Pure Waters immediately of any accident, negligence, breakdown of pretreatment equipment, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this permit.

Applicant's Name (please print) David D. DayApplicant's Signature David D. Day, Pres. Date 3/14/16Applicant's Title President Phone (585) 454-0210Emergency Contact Jeff Danzinger Phone (585) 454-0210Renewal Approved by: Michael J. Garland Issued this 22 day of MARCH 2016.

Michael J. Garland, P.E.
Director of Environmental Services-Pure Waters
Monroe County



COUNTY OF MONROE
SEWER USE PERMIT ENCLOSURE

Day Environmental
1563 Lyell Ave
Rochester, NY 14606

PERMIT NUMBER: ST-305
DISTRICT NUMBER: 8575

SITE LOCATION: Genesee Marina
118 Petten Street
Rochester, NY

TYPE OF BUSINESS: Operating Marina
SAMPLE POINT: Two 55-gal Drums

REQUIRED MONITORING

SELF MONITORING FREQUENCY: Each and every batch discharge

SAMPLING PROTOCOL: Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. In the absence of 40 CFR Part 136 testing methodology, a New York State Department of Health, approved method is acceptable. A representative grab sample, collected from the above noted sample point shall be analyzed for the following:

<u>Analyte</u>	<u>Limit</u>
Semi-Volatile Organic Compounds	*
Purgeable Organics	*

* The summation of all Semi-volatile organic compounds and Purgeable Organics reported greater than 10 µg/l shall not exceed 2.13 mg/L.

SPECIAL CONDITIONS:

1. A discharge location must be approved by Monroe County at the Van Lare Waste Water Treatment Facility.
2. Monroe County staff must be notified prior to discharge event.
3. All future discharges must be approved by Monroe County.