Buell Automatics Site

MONROE COUNTY
GATES, NEW YORK

Site Management Plan

NYSDEC Site Number: C828114

Prepared for:
Buell Automatics, Inc.
381 Buell Road
Rochester, New York 14624

Prepared by:
Stantec Consulting Services Inc.
61 Commercial Street, Suite 100
Rochester, New York 14614
585-475-1440

Revisions to Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

DECEMBER 2015

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CERTIFICATION STATEMENT

I, Peter Nielsen of Stantec Consulting Services, Inc., certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

STATE OF NEW YORK
PETER NIELSEN
No. 061499-1
LICENSED PROFESSIONAL ENGINEER

_______________ P.E.

12/2/15 DATE

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SITE MANAGEMENT PLAN

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ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	below ground surface
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EC	Engineering Control
ECL	Environmental Conservation Law
EISB	Enhanced In-Situ Bioremediation
ELAP	Environmental Laboratory Approval Program
EWP	Excavation Work Plan
FLDA	Former Loading Dock Area
FTDA	Former Trench Drain Area
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IAM	Indoor Air Monitoring
IC	Institutional Control
IRM	Interim Remedial Measure
LNAPL	Light Non-Aqueous Phase Liquid
MNA	Monitored Natural Attenuation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operations and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PIA	Petroleum Impacts Area
PID	Photoionization Detector
POGW	Protection of groundwater
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act

RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
RWP	Remedial Work Plan
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
SVMS	Soil Vapor Mitigation System
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCE	Trichloroethene (also known as trichloroethylene)
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
USEPA	United States Environmental Protection Agency
$\mu g/m^3$	micrograms per cubic meter
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan (SMP):

Site Identification:	BCP Site No. C828114 - Buell Automatics Site Address: 381 and 385 Buell Road, Gates, Monroe County, NY
Institutional Controls (ICs):	A. 1. The Controlled Properties as defined in this SMP may be used for Industrial land use as described in New York Codes, Rules and Regulations at 6 NYCRR Part 375-1.8(g)(2)(iv). In the case of the Controlled Property at 385 Buell Road, Industrial land use includes use as a paved parking lot with no occupied structures. 2. All Engineering Controls (ECs) must be operated and maintained in accordance with this SMP. 3. All ECs must be inspected at a frequency and in a manner defined in this SMP. 4. The use of groundwater underlying the Controlled Properties is prohibited without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval from the New York State Department of Environmental Conservation (NYSDEC, also referred to herein as "the Department"). 5. Groundwater and other environmental or public health monitoring must be performed as defined in this SMP. 6. Data and information pertinent to Site Management of the Controlled Properties must be reported at the frequency and in a manner defined in this SMP. 7. All future activities on the Controlled Properties that will disturb remaining contaminated material must be conducted in accordance with this SMP. 8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP. 9. Operation, maintenance, monitoring, inspection and reporting of any mechanical or physical components of the remedy shall be performed as defined in this SMP.

Site Identification:	BCP Site No. C828114 - Buell Automatics Site Address: 381 and 385 Buell Road, Gates, Monroe County, NY
Institutional Controls (continued):	10. Access to the Controlled Properties must be provided to agents, employees or others representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions herein. B. The Controlled Properties shall not be used for Residential, Restricted Residential or Commercial purposes as defined in 6 NYCRR Part 375-1.8(g)(2)(i), (ii) and (iii), and the Engineering Controls defined herein may not be discontinued without amendment or extinguishment of the Environmental Easements granted to the Department on the Controlled Properties. C. The Owner of the Controlled Properties and the Owner's successors and assigns are obligated to comply with this SMP. The Owner's assumption of the obligation to comply with this SMP is and remains a fundamental element of the Department's determination that the Controlled Properties are safe for a specific use, but not all uses. The Owner and all successors and assigns have the burden of complying with this SMP and obtaining an up-to-date version of the SMP from: Site Control Section NYSDEC Division of Environmental Remediation 625 Broadway Albany, NY 12233 Phone: (518) 402-9553 D. The Owner shall provide all persons who acquire any interest in the Controlled Properties a true and complete copy of the SMP that the Department approves for the Controlled Properties and all Department-approved amendments to that SMP. E. The Controlled Properties are subject to Environmental Easements that the Owner has granted to the Department. Copies of the Environmental Easements are appended to this SMP. Until such time as the Environmental Easements are extinguished in accordance with the requirements of Environmental Conservation Law (ECL) Article 71, Title 36, the property deeds for the Controlled Properties and all subsequent issuances of conveyance relating to the Controlled Properties shall state the following in at least 15-point bold-faced type: **This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of Environmental Conservation Law.** F. The Environmental Easements shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Properties.

Site Identification:	BCP Site No. C828114 - Buell Automatics Site Address: 381 and 385 Buell Road, Gates, Monroe County, NY
Institutional Controls (continued):	G. The Owner shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that: 1. the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3). 2. the institutional and engineering controls employed at the site: (i) are in place; (ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in Department-approved format; and (iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment; 3. the owner will continue to allow access to the Controlled Properties to evaluate the continued maintenance of the controls; 4. nothing has occurred that would constitute a violation or failure to comply with the SMP; 5. the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification; 6. to the best of his or her knowledge and belief, the work and conclusions described in the certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and 7. the information presented is accurate and complete. H. The site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) must be adhered to for the activities covered by this SMP. I. The potential for vapor intrusion must be evaluated for any buildings constructed at the Controlled Properties or for any changes in the current use of existing buildings at 381 Buell Road (Buell Automatics). Any potential impacts that are identified must be monitored or mitigated. J. The Department must be notified prior to any change of use at the Controlled Properties. K. Vegetable gardens and farming on the Controlled Properties are prohibited.

Site Identification:	BCP Site No. C828114 - Buell Automatics Site Address: 381 and 385 Buell Road, Gates, Monroe County, NY
Engineering Controls:	A. Cover system: Exposure to contamination in soil/fill at the Site is currently prevented by existing cover. This cover is comprised of soil, asphalt pavement, concrete-covered sidewalks, and buildings. Removal of existing site cover (asphalt, concrete, and buildings) and/or excavations not associated with remedial activities constitute a change of use and will be addressed following the procedures of New York State Codes, Rules and Regulations (NYCRR) Part 375-1.11(d). Upon NYSDEC request, Buell will prepare and submit, for NYSDEC approval, a work plan for the excavation including project specific HASP, CAMP, procedures for managing excavated soil, groundwater and backfill management, etc. B. Soil Vapor Intrusion (SVI) controls: Prior to changes in use of existing buildings or the construction of any enclosed structures, an evaluation will be performed to determine whether any actions are necessary to minimize the potential for soil vapor intrusion to occur. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier (for construction of any new enclosed structures only) and passive sub-slab depressurization system that is capable of being converted to an active system. If no preconstruction SVI investigation is completed on any new building structures/additions and a passive sub-slab depressurization system is installed, an air monitoring program will be implemented to evaluate the effectiveness of the passive system and determine whether it should be converted to an active system. C. Oil Collection System: Potential westward migration of light non-aqueous phase liquid (LNAPL) petroleum product from the west end of the Petroleum Impacts Area is currently managed with an oil collection system installed along the west well of the Buell building. The system consists of two 8-inch diameter wells (oil collection sumps) installed in a gravel-filled trench, with a geocomposite curtain installed between and wrapping around the two sumps to promote migration of LNAPL to the sumps and a barrier geomembrane lining the west, downgradient wall of the trench. D. Enhanced In-Situ Bioremediation (EISB) Program Wells: The ongoing EISB program is addressing remaining soil and groundwater contamination within and downgradient of the Former Loading Dock Area (FLDA) and Former Trench Drain Area (FTDA). ECs involved in the EISB program include the network of site monitoring wells used in the ongoing groundwater monitoring program and the 20 EISB-program injection wells that will be used for additional injections of organic acid solution should it be necessary.

Site Identification:	BCP Site No. C828114 - Buell Automatics Site Address: 381 and 385 Buell Road, Gates, Monroe County, NY
Inspections:	**Frequency**
1. Cover inspection	Annually
2. Groundwater monitoring wells	Annually
Monitoring:	
1. Groundwater monitoring	Quarterly through April 2017, then semi-annually
2. Soil Vapor Intrusion Assessment Monitoring at Buell Automatics facility (381 Buell Road)	Annually (during the heating season)
3. Indoor air sampling at 395 and 383 Buell Road	Annually (during the heating season)
Reporting:	
1. Monitoring Reports: a. Electronic Data Deliverables (EDDs) for the NYSDEC Electronic Information Management System (EIMS) b. Data transmittal letters for annual indoor air sampling at 395 and 383 Buell Road	Following each monitoring event listed above Following each indoor air monitoring event (provide drafts to NYSDEC for review prior to finalizing)
2. Periodic Review Report	Annually

Further descriptions of the requirements listed above are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Buell Automatics Site located in the Town of Gates in Monroe County, New York. See Figure 1. The Buell Automatics Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C828114, which is administered by the New York State Department of Environmental Conservation (NYSDEC). Buell Automatics, Inc. (Buell Automatics) and Lawton Family, LLC (hereinafter referred to as the "Owner") entered as joint applicants into a Brownfield Cleanup Agreement (BCA) with the NYSDEC to remediate the Site. The effective date of the BCA was December 22, 2003.

The street addresses of the two properties which make up the Buell Automatics BCP Site are 381 Buell Road and 385 Buell Road. (The postal code for the site is Rochester, New York zip code 14624.) One of the properties, with the address of 381 Buell Road, is a 1.674-acre portion of Town of Gates tax lot # 135.050-0001-036.1. (The remaining 0.254-acre portion of tax lot # 135.05-01-036.1, which is the portion located in the center of the tax parcel beneath the footprint of the most recent addition to the Buell Automatics facility building, is not included as part of the BCP site.)

When the BCA was entered into, the BCP site included only the 381 Buell Road property. After the BCA was entered into, Lawton Family LLC acquired the property that adjoins the southern boundary of the 381 Buell Road property. The adjoining property, a 0.632-acre property located at 385 Buell Road, is Town of Gates tax lot # 135.05-0001-040. The 385 Buell Road property is affected by groundwater contamination which has migrated south from contaminant source areas located on the southern portion of the 381 Buell Road property. The contamination on the 385 Buell Road property is being addressed by the Buell Automatics Site remedial program, and in 2015 the BCA was amended to add the 385 Buell Road parcel to the BCP Site.

A figure showing the Site location and its boundaries is provided in Figure 2. The boundaries of the two properties which the BCP site comprises are more fully described in the metes and bounds site descriptions that are part of the Environmental Easements, one each for the 381 Buell Road property and the 385 Buell Road property, which the Owner has granted to the NYSDEC. Copies of the two easements are provided in Appendix A.

After completion of the remedial work, some contamination was left at the Site. That contamination is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. Environmental Easements granted to the NYSDEC for the 381 and 385 Buell Road properties, and recorded with the Monroe County Clerk, require compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage contamination at the Site (including impacted off-site properties) until the Environmental Easements are extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easements and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index B8-0576-00-04A; Site # V-00330-8 as listed on the BCA, later designated as BCP Site # C828114) for the Buell Automatics site, and thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in Appendix B of this SMP.

Furthermore, under New York's Environmental Conservation Law (ECL), Buell Automatics is obligated to provide to any identifiable owner of real property that has been tested the results of any test undertaken within thirty days of validation of the test undertaken. (For documentation samples, test results will be considered "validated" upon completion of a Data Usability Summary Report. For all other samples, test results will be considered validated upon receipt of the laboratory data package.)

This SMP was prepared by Stantec Consulting Services Inc. (Stantec), on behalf of Buell Automatics, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easements for the Site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. NYSDEC may also request revisions in writing to the Remedial Party or property owner, as appropriate. Revisions will be necessary upon, but not limited to, the following occurrences: a change in media monitoring requirements, upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the Site conditions. In accordance with the Environmental Easements for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.

- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the BCA and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table 1: Notifications*

Name	**Contact Information**
Frank Sowers, P.E. NYSDEC Project Manager	(585) 226-5357 frank.sowers@dec.ny.gov
Bernette Schilling, P.E. NYSDEC Regional Hazardous Waste Remediation Engineer	(585) 226-5315 bernette.schilling@dec.ny.gov
Kelly Lewandowski, P. E. Chief, NYSDEC Site Control Section	(518) 402-9569 kelly.lewandowski@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The Site which is the Subject of this SMP comprises two adjacent properties located in the Town of Gates, Monroe County, New York:

- a 1.674-acre portion of the property located at 381 Buell Road and identified as Town of Gates tax lot # 135.050-0001-036.1. (The remaining 0.254-acre portion of tax lot # 135.050-0001-036.1, which is the portion located in the center of the tax parcel beneath the footprint of the most recent addition to the Buell Automatics facility building, is not included as part of the Site.)
- a 0.632-acre property located at 385 Buell Road, adjoining the southern boundary of the 381 Buell Road property, and identified as Town of Gates tax lot # 135.050-0001-040.

The Site is an approximately 2.3-acre area. The Site is bounded to the north by a remote airport parking lot located at 333 Buell Road, to the south by a hotel (Best Western Inn) located at 395 Buell Road, and to the east by Buell Road. The 381 Buell Road parcel is bounded to the west by an industrial facility (aScribe Laser) located at 383 Buell Road. The west end of 385 Buell Road parcel is bounded to the north by the aScribe Laser facility and to the west by a commercial property located at 1166 Brooks Avenue. The layout of the Site and adjacent properties is shown on attached Figure 2 – Site Layout Map. The boundaries of the Site are more fully described in the Environmental Easements for the 381 and 385 Buell Road parcels presented in Appendix A. The owner of the Site parcels at the time of issuance of this SMP is:

- Lawton Family, LLC.

2.2 Physical Setting

2.2.1 Land Use

The Buell Automatics facility uses automatic screw machines to produce machined parts for automotive components and other applications. The original manufacturing building at the Buell Automatics Site was constructed at 381 Buell Road in 1957. Additions to the original structure were completed in 1981 and 1983 which brought the facility footprint to 13,000 square feet. An 11,000 square foot addition was completed by Buell in 2000 on the northern side of the facility; however, the footprint of the 2000 building addition is excluded from the area subject to the environmental easement for the 381 Buell Road parcel. The Buell Automatics building occupies roughly 29% of the subject portion of the 381 Buell Road parcel, while the majority of the remaining surface area is covered by asphalt parking lots and access roads.

The 385 Buell Road parcel is occupied by a paved parking lot. The All-Around Travel commercial building that was formerly present on this parcel was demolished in 2008.

The Site and each of the surrounding properties are zoned General Industrial. No residential structures are located in the surrounding area. Areas downgradient of the Site are occupied by commercial and industrial uses and the Greater Rochester International Airport (see Figure 1). As indicated above, the Site is bounded to the north by a remote airport parking lot, and a second remote airport parking lot is located on the east side of Buell Road opposite the Buell Automatics facility. To the west, the Site is bounded by the aScribe industrial facility. The site of the Best Western Inn located adjacent to the south side of the 385 Buell Road parcel was also a BCP site (with contamination unrelated to the Buell Automatics Site).

2.2.2 Geology

The underlying subsurface geology of the Site is characterized by proglacial lake sediments and glacial till underlain by Paleozoic sedimentary rocks of the Lockport Dolomite Formation.

The thickness of individual overburden units varies across the Site. Granular fill material is the uppermost overburden unit. Fill thickness measured at RI test borings ranged from 0.0 to 3.0 ft. and averaged 1.6 ft. across the Site. Typical fill material is asphalt road base, and consists of dry to moist, gray coarse to fine sand and gravel, with some silt.

Site fill is underlain by a sequence of lacustrine sediments. The uppermost unit is brown silty fine sand ranging in thickness from 0.4 to 19.2 ft. and averaging 6.4 ft. across the Site. Lacustrine sands are occasionally interbedded with denser varved silt seams at depth. Numerous RI test borings indicated that lacustrine sands were underlain by a few to several feet of lacustrine silty clay or clayey silt beds. Thin lacustrine sand intervals were on occasion found within the upper few feet of the silty clay or clayey silt beds, and were often found to underlie the silty clay or clayey silt beds.

The lacustrine units are underlain by dense gray glacial till. Where it was encountered, the depth to the top of the till ranged from 11 to 29 feet below ground surface (bgs). Bedrock was encountered in one (the deepest) Site boring (the test boring for monitoring well MW-2D) at a depth of 37.3 ft. bgs.

A site plan showing the location of monitoring wells at the Site is presented on Figure 3. A series of three geologic cross sections are presented in Figures 4A through 4C. Site specific boring logs are provided in Appendix C.

2.2.3 Hydrogeology

The Site's surficial geology provides for a low permeability hydrogeologic setting characterized by a shallow water table. Unconfined water table conditions exist within the shallow lacustrine sand unit, and generally speaking, the water table at the Site was found to be within 5 feet of ground surface. Groundwater elevation monitoring results indicate that the direction of groundwater flow in the surficial deposits is generally to the south-southwest.

Recent groundwater contour maps are presented in Figures 5A and 5B. Groundwater elevation data is provided in Table 2A. Groundwater monitoring well construction logs are provided in Appendix C.

2.3 Investigation and Remedial History

The narrative presented below in Sections 2.3.1 through 2.3.3 provides a remedial history timeline and a brief summary of the available BCP project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced in Sections 2.3.1 through 2.3.3 are provided in Section 8.0 - References.

A separate remedial activity unrelated to the BCP remedial program for the Site was completed to address a petroleum release at the 385 Buell Road property. The petroleum spill remediation was completed to address NYSDEC requirements related to Spill No. 0209109. The petroleum spill was identified in December 2002 when an underground tank used to store heating oil for the former All Around Travel office building failed a tightness test. Subsurface investigations, removal and off-site disposal of the tank and accessible contaminated soil, and follow-up monitoring were completed from 2003 through 2007. The final phase of remedial activity, which involved additional removal and off-site disposal of remaining petroleum-contaminated soil following removal of the floor slab and foundation of the former All Around Travel building, was completed in 2010. Following receipt of a Corrective Action Report (Stantec, March 30, 2010), NYSDEC closed the spill file and issued a letter to Buell Automatics, Inc. dated April 12, 2010 stating that the known petroleum contamination had been remediated to the Department's satisfaction and that no further remedial action in regards to the petroleum contamination was needed at that time.

Because the petroleum spill remedial activities were completed outside the BCP remedial program, further documentation of these activities is not provided herein. However, a copy of the Department's no-further-action letter of April 12, 2010 is presented in Appendix D.

The history of the investigation and remedial activities completed under the BCP remedial program is described below.

2.3.1 Remedial Investigation

Environmental investigations were first conducted at the Buell Automatics Site in 1989, and additional environmental site investigation was performed in 1999. The results of these investigations were used as the basis for the design of a remedial investigation (RI) program begun in March 2002 under the terms of a Voluntary Cleanup Agreement (VCA) executed by the Department on February 22, 2002 (Index #B8-0576-00-04). The RI was performed to characterize the nature and extent of contamination at the Site. RI field investigations continued through 2006, during which time Buell also completed an interim remedial measure (IRM) to remove accessible soil contamination from a contaminant source area present beneath the building. The results of the RI, as well of pre-RI environmental investigations and the IRM, were described in detail in the December 5, 2007 Remedial Investigation Report, which was approved by the Department on February 5, 2008.

The RI determined that there were three source areas of subsurface contamination at the Site: the Former Trench Drain Area (FTDA), the Former Loading Dock Area (FLDA) and the Petroleum Impacts Area (PIA). As shown on attached Figure 3, the three source areas are located in the southwest quadrant of the 381 Buell Road parcel.

In two of the source areas, impacts are predominantly from trichloroethene (TCE) and related chlorinated volatile organic compounds (collectively VOCs). The two areas where TCE contamination was present are the Former Trench Drain Area, which includes an area inside the southwest portion of Buell's manufacturing building and the adjacent area located outside the south wall of the building, and the Former Loading Dock Area, which is located outside the west end of the facility.

In the Petroleum Impacts Area, impacts from petroleum solvent compounds and cutting oil were found to be largely confined to the area beneath the footprint of the facility building to the north of the Former Trench Drain Area and east of the Former Loading Dock Area. While odors and other indications of petroleum impacts were observed in soil samples, the concentrations of petroleum compounds in the soils were not found to exceed the Department’s SCOs. During the RI, a thin layer of oily product was observed intermittently in FLDA monitoring well MW-10, and the occurrence of oil at that location is presumed to be related to the Petroleum Impacts Area. Other groundwater impacts by petroleum compounds were not observed downgradient of the Petroleum Impacts Area during the RI.

In both the Former Trench Drain Area (FTDA) and the Former Loading Dock Area (FLDA), TCE and other chlorinated VOCs were found to be present in soil at concentrations above the Department's soil cleanup objectives (SCOs) for protection of groundwater (POGW). In one soil sample interval in the Former Loading Dock area (test boring B-23, sample depth of 1 to 2 ft. bgs), TCE was detected at a concentration that exceeded the Department's SCOs for protection of public health at sites restricted to industrial uses, but otherwise VOCs detected were below SCOs for industrial use sites. Groundwater in the FTDA and FLDA and downgradient groundwater in adjacent areas to the southwest were found to have been impacted by chlorinated VOCs. Chlorinated VOCs were also detected off-Site in soil vapor beneath the aScribe Laser (former Five Star Tool) building located at 383 Buell Road. The eastern end of that building is located at the western edge of an area where groundwater contamination has been detected west of the Former Loading Dock Area.

A more detailed description of the extent of contamination follows.

2.3.1.1 Former Trench Drain Area

In December 2003 and January 2004, an IRM was performed in the Former Trench Drain Area that involved the removal of 123.4 tons of soil with elevated concentrations of TCE and related chlorinated VOCs. The concrete floor slab and underlying soil were removed from a 20 ft. by 25 ft. by 6- to 7- ft. deep excavation in the most significantly impacted portions of this source area. The excavated material was disposed off-site in accordance with applicable regulations at licensed facilities. The IRM was performed in accordance with the NYSDEC-approved December 2003 Revised Interim Remedial Measures Work Plan (IRMWP). Additional details about the IRM can be found in the Sear-Brown (now Stantec) March 2004 Interim Remedial Measures Final Engineering Report.

Significant contamination was not detected in post-excavation floor or sidewall samples or in test boring samples collected in and around the north half of the excavation, although a lens of contamination was found to remain in soil present beneath the footing for a structural support column located in the north-central portion of the IRM area. However, in the south half of the excavated area, structural considerations meant that some impacted soil in the excavated floor and sidewalls could not be removed during the IRM. Impacted soils were found to extend 2 to 3 feet below the bottom of the excavated backfill (from 7 to 10 feet below floor grade) in the southern portion of the IRM area, and along the south and southeast walls of the excavation and such impacted soil was left in place as it was inaccessible beneath foundation grade beams/footers.

RI and IRM data indicated that substantial levels of chlorinated VOC or other impacts did not extend laterally more than a few feet beyond the western, southern and eastern limits of the south portion of the IRM excavation, although VOC contaminants were detected at test boring B-11, located approximately 20 feet to the east of the southeast corner of the excavated area, at concentrations that were slightly above the Department's Part 375 soil cleanup objectives (SCOs). The contaminated soil remaining in the Former Trench Drain Area following the IRM was found to occur primarily in the saturated zone at and below the water table, in the interval from approximately 5 to approximately 10 ft. below the building floor grade. The water table in area wells was found to range from 4 to 6.2 feet below the building floor grade of 563.7 feet.

The compounds detected above SCOs in the soils that remained in place in the Former Trench Drain Area following completion of the IRM excavation included the following:

Compound	Maximum concentration detected in parts per million (PPM)
TCE	350
cis-1,2-Dichloroethene (cis-1,2-DCE)	190
Vinyl Chloride	5.1
Tetrachloroethene (PCE)	2.0
1,1,1-Trichloroethane (1,1,1-TCA)	7.7
1,1-Dichloroethane (1,1-DCA)	1.4
Ethylbenzene	1.9
Toluene	0.8
Xylene (sum of o, m & p isomers)	8.3

While none of the VOC contaminant concentrations detected exceeded the SCO for industrial use, soils in this area were impacted by VOCs in concentrations that exceeded the SCOs for protection of groundwater. Indications of petroleum impacts were also noted in boring and sidewall and bottom samples from along the south wall and on the west side of the IRM area. Petroleum impacts observed included staining or sheens in the samples as well as the presence of VOC compounds as noted in the table above, and tentatively-identified non-target VOCs and SVOCs (TICs).

The following compounds were detected above the Department's groundwater quality standards in groundwater samples collected during the RI from locations within or adjacent to the Former Trench Drain source area:

Compound	Maximum concentration detected in parts per billion (ppb)
TCE	13,000
cis-1,2-DCE	27,000
trans-1,2-DCE	27
Vinyl Chloride	1,200
1,1,1-TCA	230
1,1-DCA	250
1,2-DCA	120
Toluene	8

2.3.1.2 Former Loading Dock Area

As shown on Figure 3, the FLDA is located to the west of the northwest corner of the older section of the Buell facility. This source area was estimated to cover an area approximately 40 ft. laterally (east to west) by 45 ft. (north to south). In the north-central portion of the FLDA, where the most concentrated impacts were found, contaminated soil occurred in the shallow interval from 0.5 to 3.5 feet that underlies the pavement that covers the area. In the surrounding areas (beyond the MW-16 and B-23 locations), contaminant concentrations were found to be lower but to extend to depths of 7 to 10 ft. bgs. The elevation of the water table in area wells MW-10 and MW-16 was found to range from 559.4 to 561.6 feet, which is 1 to 3.4 ft. bgs.

At test boring location B-23, in the north-central part of the FLDA source area, concentrations of TCE exceeded the Department's industrial use SCO. TCE and related chlorinated VOCs were found in soil elsewhere in this area at concentrations that were below SCOs applicable to the current industrial use but which exceed the more stringent groundwater protection SCOs. The compounds detected above SCOs included the following:

Compound	Maximum concentration detected (PPM)
TCE	820
cis-1,2-DCE	84
trans-1,2-DCE	0.47
1,1-DCE	0.65
Vinyl Chloride	0.045
1,1,1-TCA	67
1,1-DCA	2.4

The following compounds were detected above the Department's groundwater quality standards in groundwater samples collected during the RI from locations within the FLDA source area:

Compound	Maximum concentration detected in parts per billion (ppb)
TCE	15,000
cis-1,2-DCE	160,000
trans-1,2-DCE	900
1,1-DCE	670
Vinyl Chloride	2,000
1,1,1-TCA	5,800
1,1,2-TCA	65
1,1-DCA	3,600
1,2-DCA	4.5
Benzene	5.6

2.3.1.3 Petroleum Impacts Area

Low levels of petroleum-related Target Compound List VOCs and higher concentrations of tentatively identified VOCs were found to be present in the Petroleum Impacts Area soils. With the exception of one location, no petroleum compounds or other contaminants were detected in RI soil samples in the Petroleum Impacts Area at concentrations exceeding groundwater protection SCOs. However, given the presence of saturation with light non-aqueous phase liquid (LNAPL) oil and strong odors of petroleum, some of the soils sampled met the definition of "grossly contaminated media" as defined in 6 NYCRR Part 375-1.2(u).

The petroleum impacts were observed in thin horizons within the interval from 2 to 8 ft. bgs. The depth and thickness of the impacted horizons varied from location to location. The RI data indicate that most of the impacted interval is saturated with groundwater.

The results of the RI, including LNAPL occurrence and oil saturation observations and groundwater sample analysis data, indicate that the soil contamination in the Petroleum Impacts Area has not had significant, persistent negative impacts on groundwater quality that required groundwater-focused remedial measures in or downgradient of the Petroleum Impacts source area.

2.3.1.4 Downgradient Groundwater Plume

Groundwater impacts from the chlorinated VOC contamination in the Former Trench Drain and Loading Dock source areas was found to extend approximately 120 to 200 feet to the southwest from the southwest corner of the Buell Automatics building. South of the Former Trench Drain Area, chlorinated VOCs that exceed groundwater standards extend downgradient onto the adjacent 385 Buell Road property. West of the Former Loading Dock Area, low-level chlorinated VOC impacts were found to extend from the source area off-Site to the west onto the adjacent 383 Buell Road property.

Limits to the extent of downgradient impacts were established by monitoring wells MW-3, -4, and -5, located to the east and southeast, MW-17, located southwest of the Site on the 1166 Brooks Avenue property, and MW-15, which is located at the southeast corner of the aScribe Laser building (formerly Five Star Tool) west of the Site. The lateral extent of impacts is shown on the attached Figure 3.

The impacts occur in the saturated overburden deposits, extending vertically from the water table to approximately 20 ft. bgs.

The following contaminants were detected at concentrations exceeding the Department's groundwater quality standards in RI groundwater samples collected from within the downgradient plume areas:

Compound	Maximum concentration detected in parts per billion (ppb)
PCE	18
TCE	3,300
cis-1,2-DCE	3,300
1,1-DCE	6
Vinyl Chloride	150
1,1,1-TCA	25
1,1,2-TCA	2
1,1-DCA	170
cis-1,3-Dichloropropene	510

Contaminants were generally not detected at concentrations above NYSDEC SCOs in RI soil samples from test borings installed within the downgradient plume areas. The one exception was at well MW-8, located on the 385 Buell Road parcel south of the FTDA. TCE and cis-1,2-DCE were detected at concentrations exceeding protection of groundwater SCOs in MW-8 soil in the sample interval from 16 to 18 ft. bgs.

2.3.1.5 Sub-Slab Soil Vapor

At the off-site former Five Star Tool facility located at 383 Buell Road (currently the location of aScribe Laser), TCE was detected in sub-slab soil vapor at a concentration of 340 micrograms per cubic meter (ug/m^3). TCE was not detected in the indoor air sample taken inside the Five Star facility at the same time as the sub-slab soil vapor sample, and the RI results indicated that vapor intrusion was not causing an adverse impact on conditions in the Five Star Tool building.

2.3.2 Remedial Alternatives Analysis and Preparation of Remedial Work Plan

A Remedial Work Plan (RWP) proposing remedial actions to be taken to address the Site contamination identified by the RI was submitted to NYSDEC in February 2010 and approved in March 2010. The RWP was based on the results of an analysis of remedial alternatives documented in a 2008 Alternatives Analysis (AA) report (Stantec, October 2008) and an AA supplemental information letter dated December 22, 2008.

The RWP specified the following remedial actions:

1. In the Former Loading Dock Area, excavation and off-site disposal of VOC-contaminated soil to address unsaturated soils exceeding the protection of groundwater SCOs and saturated soils in the primary source area.

2. Soil vapor extraction for the Former Trench Drain Area to address residual unsaturated zone VOC contamination under the Buell Automatics building.

3. In the Former Trench Drain Area and the Former Loading Dock Area, enhanced in-situ bioremediation (EISB) to address areas of saturated soil contamination by chlorinated VOCs and the core of the groundwater plume extending from the Site to the 395 Buell Road property.

4. The installation of additional shallow monitoring wells around the perimeter of the Buell Automatics building to allow for monitoring for the presence of LNAPL in and around the Petroleum Impacts Area.

5. Sub-slab depressurization (SSD) and/or indoor air monitoring (IAM) to address the potential for soil vapor intrusion in the Buell Automatics building.

6. SSD or IAM for the former Five Star Tool building (383 Buell Road, currently occupied by aScribe Laser but vacant at the time the RWP was prepared) once the building was scheduled to be occupied.

7. Annual IAM for the hotel located at 395 Buell Road.

The RWP also called for preparation of an interim SMP that was to be followed during implementation of the remedial program (the remedy). The RWP specified that the interim SMP would include a number of IC and EC provisions.

The remedy also includes a contingency for additional remedial actions in the event that either of the following occurs:

- LNAPL monitoring results indicate petroleum-impacted groundwater is migrating beyond the footprint of the Buell building, or
- changes to the existing cover system (e.g. demolition of some or all of the existing on-site building) allow for reasonably cost effective actions (e.g. additional excavation and off-site disposal of impacted soil under the on-site building) to address remaining contamination in the Petroleum Impacts Area.

2.3.3 Remedy Implementation

2.3.3.1 Soil Vapor Intrusion Assessment, Buell Automatics Building

A 'Pre-Design SVI Assessment Work Plan' was prepared in June 2010 and approved by NYSDEC in November 2010. The purposes of the SVI Assessment were:

- to determine whether there was a potential for intrusion of soil vapor containing VOCs into the indoor air of the Buell Automatics building;
- to determine if additional actions were needed to monitor, mitigate or further define the extent of potential SVI concerns; and
- to develop information on which to base the design for monitoring programs and/or mitigation systems that may be needed to control the potential for SVI during and after the implementation of the remedy.

SVI assessment activities were conducted in December 2010. Sub-slab vapor and indoor air were sampled at six locations inside the building. Sample locations A through F are shown on attached Figure 3. Results for the sample point located in the FTDA (SVI sample point A) indicated that contamination by TCE and cis-1,2-DCE was present in sub-slab vapor at concentrations of 20,000 and 24,000 micrograms per cubic meter (µg/m3), respectively. TCE, DCE and other chlorinated VOCs were detected in the sub-slab vapor samples from the 5 other locations, but the concentrations (a maximum concentration of 190 µg/m3) were much lower than those detected in the FTDA sub-slab vapor sample. TCE exceeded the current New York State Department of Health (NYSDOH) air guideline of 2 µg/m3 at one of the six indoor air sampling locations (sample A - 2.5 µg/m3). Otherwise, very low levels of other VOCs were detected in each of the 6 indoor air samples.

On the basis of those results, it was proposed (and subsequently approved by NYSDEC) that design of a monitoring program or SVI mitigation (SSD) system for the Buell building be deferred until after the completion of planned remedial activities in the FTDA.

As described below in Section 2.3.3.4, an SVE system was subsequently installed and operated in the FTDA, and another round of SVI assessment sampling was performed in the Buell building in 2014 following completion of the SVE operations.

2.3.3.2 Interim Site Management Program

An Interim Site Management Plan (ISMP) for the Buell Automatics Site was issued on February 10, 2011 and approved by NYSDEC on June 7, 2011. Monitoring activities that were implemented under the SMP included:

- a periodic groundwater level and groundwater quality monitoring program involving on- and off-site monitoring wells,
- a periodic well monitoring program to check for the presence and/or migration of petroleum LNAPL at the perimeter of the Buell building and the Petroleum Impacts Area,
- annual monitoring of indoor air quality in the aScribe Laser building (383 Buell Road), and
- annual monitoring of indoor air quality in the northwestern section of the Best Western Inn building (395 Buell Road).

2.3.3.2.1 <u>Summary of Results of Groundwater and LNAPL Monitoring Programs</u>

Groundwater and LNAPL monitoring activities related to the implementation of the Buell Automatics Site remedial program were initiated in August 2011. Groundwater monitoring events were performed quarterly for two years and then semi-annually through November 2014. The November 2014 monitoring event also represented the event used to document baseline conditions prior to the initiation of the EISB program at the site. Groundwater quality monitoring was suspended until after the initial EISB program remedial injection activities were completed in April 2015, and sampling events then resumed in May 2015 in accordance with the schedule of monitoring called for in the EISB program work plan described below in Section 2.3.3.6.

Groundwater elevation monitoring results are presented in attached Table 2A. A summary of groundwater quality monitoring results is presented in attached Table 2B. As shown on Table 2b, groundwater quality conditions throughout the area affected by the Buell Automatics contaminant plume have improved significantly relative to those documented in 2006 at the completion of the RI.

LNAPL monitoring also was initiated in August 2011. An accumulation of LNAPL was present in RI monitoring well MW-10 when it was checked, for the first time since 2006, during the initial August 2011 event, and thin layers of LNAPL were also present in RI monitoring well MW-9 and non-RI monitoring well MW-4.

To address these occurrences of LNAPL, a monthly LNAPL recovery program was initiated in August 2011 which has continued to date. LNAPL recovery data is presented in attached Table 2C. As shown on Tables 2A and 2C, LNAPL has not been encountered in site wells since March of 2014.

The LNAPL monitoring network was supplemented in November 2012 with the installation of four additional monitoring wells at locations on the downgradient perimeter of the Petroleum Impacts Area. That component of the remedy implementation is described below in Section 2.3.3.3.

2.3.3.2.2 Summary of Results of IAM Programs at Neighboring Properties

Annual indoor air monitoring was initiated in the spring of 2012 at the two neighboring properties, 383 and 395 Buell Road, to assess the potential for vapor intrusion into the buildings located at these properties. Consistent with standard VI assessment practices and the requirements of the Interim SMP, each event was performed during the cold-weather heating season and included the collection of one indoor air sample per building and one ambient outdoor air sample per event.

Based on the results of the IAM sampling events, actions have not been needed to address exposures related to soil vapor intrusion. The IAM results for both off-site properties have been consistent with levels of VOCs commonly observed in the indoor air of buildings.

The March 2012 IAM program monitoring event at the aScribe Laser building (located at 383 Buell Road) also involved sampling of sub-slab vapor at this location. Consistent with the requirements of the RWP, the purpose of the sub-slab vapor sampling during this event was to allow for evaluation of whether SSD or IAM was the appropriate remedial approach for this property. Slightly elevated concentrations of TCE (210 ug/m3) and 1,1,1-TCA (130 ug/m3), VOCs related to the groundwater plume associated with the Buell Automatics Site, were detected in the sub-slab vapor sample collected from beneath the building. A low concentration of TCE was detected in the indoor air sample (0.32 ug/m3); TCA was not detected in the indoor air sample. These results indicated that actions to address exposures related to SVI were not needed.

In summary, the results each of the annual IAM programs at both the 383 and 395 Buell properties and the sub-slab vapor sampling performed in 2012 at the 383 Buell Road property, taken together, have all indicated that remedial actions have not been needed to address exposures related to soil vapor intrusion. Therefore, because of the continued presence of groundwater contamination related to the Buell Automatics Site, it was concluded that annual IAM was an appropriate remedial approach going forward for both the 383 and 395 Buell Road properties.

Results of each IAM program monitoring event were documented in the appropriate subsequent monthly progress report for the remedial program at the Buell Automatics Site. Property-specific letter reports presenting the results of each event were also sent to the owner of each property.

2.3.3.3 LNAPL Monitoring Well Installation Activities

Subsurface contamination by LNAPL derived from metal-working lubricant (cutting oil) and petroleum-based solvent is present in the PIA (the area beneath and immediately adjacent to the western half of the southern section of the Buell Automatics building). As specified in the LNAPL Monitoring Well Construction Completion Report (Stantec, November 2012), four new wells were installed to supplement the coverage of the Buell building perimeter and the PIA that was provided by previously-existing wells in the groundwater monitoring network for the Site.

Well installation activities were performed in September 2012. The locations of the new monitoring wells (wells MW-19, MW-20, MW-21, and MW-22) are shown on the site plan presented in Figure 3. The new wells were then added to the ongoing periodic groundwater-level and LNAPL monitoring and recovery program described in Section 2.3.3.2.1.

2.3.3.4 Soil Vapor Extraction Remedial Activities

A SVE system was implemented in the FTDA to remediate residual contaminant impacts present in unsaturated soil that could not be excavated during the 2003 FTDA IRM because of limitations related to the need to maintain structural support of building foundation elements. As described in the Soil Vapor Extraction Design Document and Work Plan (Stantec, December 2011, approved by NYSDEC in January 2012), the goals of the system were as follows:

- to achieve sufficient vacuum propagation to treat the contaminated soil in the unsaturated zone (above the water table) in the FTDA; and
- to achieve Protection of Groundwater Soil Cleanup Objectives (POGW SCOs), to the extent practicable, for soils above the water table in the FTDA.

The main components of the SVE system included two horizontal vapor extraction wells installed beneath the building floor slab. The extraction wells were piped to a vacuum blower and pre-discharge treatment system located outside the building. As shown on Figure 6B, the extraction wells were installed along the east and south edges of the FTDA where the highest levels of residual contamination were indicated by the post-excavation sampling performed during the 2003 IRM activities.

The FTDA SVE system was commissioned in May 2012 and was operated from then until February 2014. Following cessation of the SVE system operation, a work plan for an assessment of the effectiveness of the SVE system was prepared (Sub-Slab Vapor and Soil Sampling Work Plan for Evaluating SVE System Effectiveness, Stantec, May 9, 2014, approved by NYSDEC in July 2014). The sampling program included:

- the drilling and sampling of soil test borings at the locations in the FTDA where residual contamination had been documented at the completion of the December 2003 remedial excavation, and
- sampling of sub-slab vapor and indoor air at the six SVI assessment sample points sampled in 2010.

Soil sampling activities were performed in September 2014. The soil sampling was performed at the five test boring locations (FTDA-B1, -B2, -B3a, -B3b, and –B4) shown on attached Figure 6B. To attempt to access and sample the material that previously exhibited high levels of contamination, the borings were drilled as close as feasible to the locations of the 2003 post-IRM excavation sidewall and bottom samples which exhibited the most significant exceedances of NYSDEC's soil cleanup objectives for TCE and its daughter products. Borings were installed to a depth of 8 ft. below ground surface. At each boring, representative soil samples from both above and below the apparent water table were collected and submitted for laboratory analysis. Contaminants were not detected above NYDEC SCOs in the samples collected above the water table. This finding and the significant reduction in contaminant levels evident in sub-slab vapor (as described in the following paragraph) indicated that contamination remaining in soil above the water table in the FTDA is minimal. The results for deeper soil samples indicated that at the location of FTDA-B2, contamination in soil below the water table by TCE (1.1 ppm) and cis-1,2-DCE (0.4 ppm) remains slightly above NYSDEC POGW SCOs. These results compare to concentrations of TCE and cis-1,2-DCE of up to 190 ppm that were detected in 2003 samples from the same locations and depths. Aromatic VOCs (1.1 ppm ethylbenzene, 5.3 ppm total xylene, and isomers of trimethylbenzene at up to 28.5 ppm) were detected at concentrations above POGW SCOs in the deeper sample (6.8 to 7.3 feet) from the FTDA-B3b test boring. These concentrations are consistent with the concentrations of aromatic VOCs detected in the post-IRM documentation samples. The concentrations of aromatic VOCs detected in the deeper samples from the FTDA-B1, -B2 and –B4 borings were well below SCOs, and were considerably lower than the concentrations detected in 2003 samples from the same locations and depths.

The SVI assessment monitoring component of the SVE effectiveness evaluation was conducted in December 2014. Sub-slab vapor sampling and indoor air sampling was performed at the six indoor locations (locations A through F) shown on Figure 3. (Consistent with standard practice in SVI assessments, outdoor air sampling was also performed to assess ambient air conditions.) Results showed a marked decline in the level of contamination by chlorinated VOCs in sub-slab vapor in the FTDA. TCE and cis-1,2-DCE concentrations at SVI sample point A dropped from 20,000 and 24,000 $\mu g/m^3$ (respectively) in 2010 to 330 and 180 $\mu g/m^3$ (respectively) in 2014. Declines in sub-slab vapor contamination levels were also evident at all of the other five locations in the building, where contaminant concentrations were already relatively low in 2010.

As in 2010, indoor air samples in general exhibited either an absence of site contaminants or very low concentrations of contaminants. However, the concentration of 24 $\mu g/m^3$ of TCE detected in the December 2014 indoor air sample from location D represented an exceedance of the current NYSDOH indoor-air guideline value for TCE of 2 $\mu g/m^3$. A program of follow-up floor sealing and resampling of indoor air was implemented to reevaluate whether SVI may have been the direct cause. Resampling of the indoor air at location D was performed in March 2015 after the floor cracks near Location D were sealed. TCE was not detected in the primary sample; a low-level detection of TCE (0.16 $\mu g/m^3$) in the duplicate sample was below the current NYSDOH air guideline value for TCE of 2 $\mu g/m^3$.

Results of the SVE System Effectiveness Evaluation and follow-up sampling of indoor air at location D were documented in the following reports:

- Evaluation of SVE System Effectiveness, Former Trench Drain Area (Stantec report dated March 30, 2015); and
- Monthly Progress Report #52 (Stantec, April 10, 2015).

Laboratory analysis results for the most recent sub-slab vapor and indoor air samples collected in the FTDA are summarized in Table 4.

2.3.3.5 FLDA Remedial Excavation Activities

A conceptual approach for the FLDA remedial excavation component of the remedy was described in the RWP. Specific plans and requirements for the FLDA component of the approved remedy were described in the following work plan documents:

- Work Plan for Remedial Excavation, Former Loading Dock Area (Stantec, July 22, 2013), approved by NYSDEC on July 24, 2013.
- Contained-In Demonstration Work Plan, Remedial Excavation, Former Loading Dock Area (Stantec, July 2, 2013), approved by NYSDEC on July 5, 2013.
- Oil Collection System Design (Stantec, August 29, 2013), approved by NYSDEC on September 3, 2013.
- Request for Postponement (Buell Automatics, Inc., October 24, 2013), approved by NYSDEC on November 13, 2013.
- Modification to the Approved July 2013 Work Plan for Remedial Excavation of Former Loading Dock Area: Stockpiles (Stantec, September 15, 2014), approved by NYSDEC on September 26, 2014.
- FLDA Remedial Implementation Schedule and Guar Gum Replacement (Stantec, September 24, 2014), approved by NYSDEC on September 26, 2014.
- Notification of Variance in Stockpile Design and Request for Approval, Remedial Excavation of Former Loading Dock Area: Stockpiles (Stantec, October 3, 2014), approved by NYSDEC on October 16, 2014.
- Request for Approval of Modification for Design of Supplemental Stockpile, Remedial Excavation of Former Loading Dock Area (Stantec, October 6, 2014), approved by NYSDEC on October 17, 2014.

The purpose of the remedial excavation and removal of contaminated FLDA soil was to address presence of contamination by TCE and related chlorinated VOCs. The

FLDA remedial excavation activities were implemented in 2014 and included the following components:

1. removal of existing concrete and asphalt pavement from an approximately 40-foot wide by 60-foot long, roughly-rectangular area to permit access to the underlying soil/fill in the FLDA;
2. careful field screening of soil as the excavation was advanced laterally and vertically to identify where contamination was present and determine the apparent limits of the contamination;
3. excavation of all soil/fill exceeding NYSDEC industrial-site SCOs;
4. excavation of soil/fill exhibiting visible evidence of contamination or elevated readings on field screening instruments (and therefore potentially representing grossly contaminated material);
5. excavation of soil/fill exceeding NYSDEC POGW SCOs according to the following rationale:
   - to a minimum depth of 5 feet (the estimated depth of the seasonal low water table);
   - to a depth of 8 feet in the apparent source area (the portion of the remedial area where previous borings identified the highest levels of contamination);
   - to a depth of 8 feet in those areas beyond the source area where both of the following conditions applied:
     - field screening results indicated the potential presence of contamination at levels exceeding POGW SCOs, and
     - excavation below a depth of 5 feet was possible without jeopardizing the stability of the foundation of the Buell Automatics building;

6. Placement of a carbon substrate (a mixture of guar gum and sucrose) in the completed excavation to promote EISB of residual contamination in soil/fill and groundwater in and downgradient of the FLDA;

7. Installation of an oil collection system at the eastern edge of the completed excavation to capture and collect light non-aqueous phase liquid (LNAPL) petroleum product that may migrate westward into the FLDA from beneath the facility building; and

8. Restoration of the pavement cover over the FLDA to prevent future exposure to contaminated soil/fill remaining at the Site.

The FLDA remedial excavation was successful in achieving the removal of source area contamination. The total volume of material removed was approximately 450 cubic yards (cu. yds.) including approximately 23 cu. yds. of asphalt and concrete pavement material and approximately 427 cu. yds. of underlying gravel (pavement sub-base) and soil. Results of post-excavation soil sampling indicated that contamination by chlorinated VOCs is no longer present in soil above the water table, and minor exceedances of POGW SCOs remain in soil below the water table. It is presumed that the SCO exceedances identified by the post-excavation sampling will be remediated further by the EISB process that, as described in the next section of this plan, is currently ongoing.

FLDA remedial excavation activities and results were documented in the Construction Completion Report - Remedial Excavation, Former Loading Dock Area dated May 2015.

2.3.3.6 Enhanced In-Situ Bioremediation Activities

EISB was implemented to address the residual chlorinated VOC impacts in the FTDA and FLDA source areas and in the downgradient groundwater plume area. The approach selected involved placement of an electron donor solution of organic acids into the subsurface to stimulate naturally-occurring bacteria to biodegrade groundwater contaminants. Placement of the EISB substrate was performed through direct application of a mixture of guar gum and sucrose in the completed FLDA excavation (as described in the previous section) and through injection of a fermented aqueous solution of guar gum and sucrose in FTDA monitoring and injection wells located in the FTDA and in the downgradient plume areas south and southwest of the FLDA and FTDA.

A work plan for implementation of the EISB program was submitted to NYSDEC in December 2014 and approved on January 6, 2015. Twenty new injection wells (IW-1 through IW-20) were then installed in the downgradient plume area between the south wall of the Buell Automatics building and the southern boundary of the 385 Buell Road Parcel. (Injection well locations are shown on Figure 3.)

Injection of the organic solution was begun in March and completed on April 28, 2015. In total, 1,140 gallons of fermented organic acid stock solution were prepared using 142.5 pounds of guar gum and 47.8 pounds of sugar. The stock solution was used to prepare approximately 109,000 gallons of injection solution which was injected into the 20 recently installed injection wells and existing monitoring wells RW-1, RW-2, MW-2, MW-6, MW-8, and MW-11.

As indicated above, post-injection groundwater monitoring activities were initiated in May 2015, and the post-injection monitoring program was ongoing at the time this SMP was prepared. Sampling results from initial monitoring events, which are summarized in attached Table 2B and shown on Figure 7, indicated that anaerobic and reducing conditions conducive to the EISB process had been established in the aquifer and contaminant levels were significantly lower than the levels detected in the November 2014 pre-injection baseline sampling event.

EISB post-injection groundwater monitoring activities that remain to be completed have been included as an element of the Monitoring and Sampling Plan presented in Section 4.0 of this SMP. Results of the EISB monitoring program will be evaluated as part of the Periodic Review Report (PRR) process to determine whether an additional EISB injection event will be necessary.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Remedial Work Plan dated February 16, 2010 (approved by NYSDEC in its letter dated March 30, 2010) are as follows:

GROUNDWATER

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.
- Restore groundwater to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the further migration of contaminated groundwater.
- Remove the source of groundwater contamination.

SOIL

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure from, contaminants volatilizing from contaminants in soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Remediate impacted soils to a level that is protective of public health and the environment for the contemplated use.

2.5 Remaining Contamination

2.5.1 Soil

Soil sampling data indicate that exceedances of Industrial Use SCOs do not remain at the Site after completion of remedial action. However, the data indicate that exceedances of Unrestricted Use SCOs remain in soil in four areas of the site. These are described below.

2.5.1.1 MW-8 Area

Outside the three contaminant source areas (the FLDA, FTDA and PIA), the location of monitoring well MW-8 is the only area of the Site where exceedances of

SCOs may remain. At MW-8, exceedances of Unrestricted Use SCOs for TCE and cis-1,2-DCE were detected in soil from 16 to 18 feet bgs when the well was installed in 2002. Table 3 and Figure 6 summarize the results of that sampling, and show all soil samples collected at the Site outside of the FLDA, FTDA, and PIA that exceeded the Unrestricted Use SCOs. (No exceedances of Industrial Use SCOs remain at the Site.)

The EISB remedial injection program conducted in 2015 was centered on MW-8, and subsequent groundwater monitoring has indicated that groundwater contaminant levels at MW-8 have been significantly reduced. It is presumed that the EISB remedial activities performed in the area surrounding MW-8 in 2015 will reduce the levels of residual soil contamination over time. The concentrations reported on Table 3 and Figure 6 may therefore no longer be representative of current conditions; actual contaminant concentrations in soil may be lower and remaining exceedances of SCOs may be fewer or absent.

2.5.1.2 Former Loading Dock Area

Exceedances of Unrestricted Use SCOs for TCE , cis-1,2-DCE, vinyl chloride and acetone were identified in post-excavation samples collected from the sidewalls and bottom of the completed FLDA remedial excavation. Table 3A and Figure 6A summarize all soil samples collected in the FLDA that exceeded the Unrestricted Use SCOs after completion of the FLDA remedial excavation activities. (No exceedances of Industrial Use SCOs remain at the Site.)

Exceedances of SCOs for chlorinated VOCs were identified at depths ranging from 5 to 10 feet bgs. Acetone SCO exceedances were detected in soil along the west sidewall of the completed excavation at depths of from 2 to 4 feet bgs.

Prior to backfilling of the FLDA excavation, plastic orange construction fence was placed along the bottom and interior sidewalls of the excavation as a visual demarcation layer between the clean backfill placed in the excavation and the adjacent and underlying unexcavated soil in which remaining soil contamination may be present.

In accordance with the requirements of DER-10 and the RAWP for the FLDA Remedial Excavation, the post-excavation documentation samples collected in the FLDA were collected in the fall of 2014 prior to the placement of EISB substrate materials in the excavation. It is presumed that the EISB process that was subsequently activated by the placement of the substrate will reduce the levels of residual soil contamination in this area over time, and subsequent groundwater monitoring at FLDA source area well MW-16R has indicated that groundwater contaminant levels have been significantly reduced. The concentrations reported on Table 3A and Figure 6A may therefore no longer be representative of current conditions; actual contaminant concentrations in soil may be lower and remaining exceedances of SCOs may be fewer or absent.

2.5.1.3 Former Trench Drain Area

Exceedances of Unrestricted Use (UU) SCOs for acetone, the chlorinated VOCs TCE and cis-1,2-DCE, and aromatic VOCs including ethylbenzene, xylene isomers and trimethylbenzene isomers were identified in soil samples collected in the FTDA in 2014 following completion of the SVE remedial activities. Table 3B and Figure 6B summarize all soil samples collected in the FTDA that exceeded SCOs after completion of SVE remedial activities. Exceedances of SCOs were identified at depths ranging from 5 to 8 feet bgs. No exceedances of Industrial Use SCOs remain at the Site.

In 2003, following completion of the FTDA IRM remedial excavation, VOCs exceeding SCOs had been detected in soils which remained in this area, and concentrations had been higher than those listed on Table 3B and Figure 6B. Contamination had been identified at depths of 6.5 to 9.5 feet in soil beneath the bottom of the excavation at the D323-02, BU-SEBOTT-S, GP-5 and GP-8 sample locations shown on Figure 6B. TCE and/or cis-1,2-DCE concentrations of 140 to 350 ppm had been detected in these samples. However, as the data presented on Figure 6B indicate, the soil sampling conducted following completion of the SVE component of the remedy in 2014 at the FTDA-B1 through-B4 test borings showed that residual contamination in the soil below the level of the bottom of the 2003 excavation had been reduced by factors of 200 times or more.

In 2003, a relatively high concentration of residual TCE contamination exceeding SCOs had also been found to be present in shallow soil which could not be excavated during the IRM because it was present beneath the footing for a structural column located in the center of the FTDA. This occurrence was noted at a depth of 2.8 feet bgs at the BU-PIER-NSHAL-S sample location shown on Figure 6B, where a concentration of 140 ppm of TCE had been detected. However, it is likely that the shallow contamination beneath the footing was addressed by the SVE remedial activities to a similar (or greater) degree as the residual contamination present in deeper soils. The 2014 test boring FTDA-B4 was drilled adjacent to the footing in question, and no contaminants other than TCE at a concentration of 0.003 ppm, well below the SCOs for TCE, were detected in the soil sample collected from that boring at a depth 2.5 to 3.0 feet.

A demarcation layer was not placed in between the backfill in the completed 2003 IRM excavation and the surrounding soils, but the two soil types may be distinguishable by the type and uniformity of the backfill material relative to that of the surrounding soil.

The soil samples collected in the FTDA following the IRM and SVE remedial activities were collected prior to injection of EISB substrate solution in FTDA wells RW-1 and RW-2 in April 2015. It is expected that the EISB process that was subsequently activated by the injection of the substrate will result in reduced levels of residual soil contamination in this area, especially in soils present below a depth of 5 to 6 feet bgs. The concentrations reported on Table 3B and Figure 6B may therefore no longer be representative of current conditions; actual contaminant concentrations in soil may be lower.

2.5.1.4 Petroleum Impacts Area

Minor exceedances of the Unrestricted Use SCO for acetone and a single location with exceedances of the Unrestricted Use SCOs for TCE and cis-1,2-DCE were identified in soil samples collected in the PIA in 2002 and 2003 during the RI. In addition to these minor occurrences of SCO exceedances, indications of the presence of petroleum impacts, including the presence of petroleum sheen, oil saturation and detections of moderate to high levels of VOC and SVOC TICs, were noted at several test borings in the area. These occurrences of petroleum impacts were encountered at depths ranging from 2 to 7 feet bgs.

Table 3C and Figure 6C summarize the results of all remaining soil samples collected in the PIA that exceed the Unrestricted Use SCOs. (No exceedances of

Industrial Use SCOs remain at the Site.) Note that these samples were collected in 2002 and 2003; current conditions may be different.

2.5.2 Groundwater

Contamination of site groundwater by TCE and 1,1,1-TCA, and by related chlorinated VOCs which are the products of the degradation of those compounds in the environment, is present at levels above NYSDEC ambient water quality standards. Table 5 and Figure 7 summarize the results of recent samples of groundwater that exceed the SCGs. As shown on Figure 7, the groundwater contaminant plume extends off-site to the west on to the adjacent aScribe Laser property located at 383 Buell Road, and extends off-site to the south to the northern edge of the adjacent Best Western Inn property located at 395 Buell Road.

In the past, the presence of LNAPL has been observed in the area immediately to the west of the southwest section of the Buell Automatics building. LNAPL occurrences had been noted in this area in monitoring wells MW-9 and MW-10, although it has not been observed in these or other site monitoring wells since March of 2014. It is presumed, however, based on observations from test borings installed inside the building during the RI, that LNAPL may be present at the water table in portions of the Petroleum Impacts Area that are within the footprint of the Buell Automatics building.

As described above in Section 2.3, the EISB program is the component of the remedy that is addressing residual groundwater contamination by chlorinated VOCs. The remedial action associated with the EISB program (including the first EISB injection event) is complete, but effectiveness monitoring and evaluations regarding the need and timing of future injections are ongoing and are elements of this SMP. Table 5 and Figure 7 present the most-recent available analytical results for groundwater samples collected in post-injection monitoring events.

2.5.3 Soil Vapor

Table 4 and Figure 8 list the site-related compounds of concern detected in samples of sub-slab soil vapor collected in 2014 at locations in the Buell Automatics building and in the sub-slab vapor sample collected in 2012 beneath the aScribe Laser building located at 383 Buell Road. These samples are the most recent samples collected from each area, and therefore represent the available data concerning remaining sub-slab soil vapor contamination at the Site. For ease of reference, Table 4 also presents the most recent indoor air sample analysis results for the sub-slab vapor sample locations.

The EISB component of the remedy is ongoing, and, as the EISB process progresses in the areas where sub-slab soil vapor contamination remains, reductions in levels of groundwater contamination that may occur may in turn cause reduction or elimination of the sub-slab vapor contamination identified on Table 4 and Figure 8.

3.0 INSTITUTIONAL AND ENGINEERING CONTROLS

3.1 General

Since remaining contaminated soil and groundwater/soil vapor exists beneath the Site, Institutional Controls (ICs) and Engineering Controls (EC) are required to protect human health and the environment. This Institutional Engineering Control Plan describes the procedures for the implementation and management of all IC/ECs at the Site. The IC/EC Plan is one component of the SMP and is subject to revision by NYSDEC.

This plan provides:

- A description of all IC/ECs on the Site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix E) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the Site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of Institutional Controls is required by the RWP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to industrial uses only. Adherence to these Institutional Controls on the Site is required by the Environmental Easements and will be implemented under this Site Management Plan. ICs identified in the Environmental Easements may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Figure 10. These ICs are:

- The Controlled Properties as defined in this SMP may be used for Industrial land use as described in New York Codes, Rules and Regulations at 6 NYCRR Part 375-1.8(g)(2)(iv). In the case of the Controlled Property at 385 Buell Road, Industrial land use includes use as a paved parking lot with no occupied structures.
- All ECs must be operated and maintained in accordance with this SMP.
- All ECs must be inspected at a frequency and in a manner defined in this SMP.
- The use of groundwater underlying the Controlled Properties is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval from the NYSDEC.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP.
- Data and information pertinent to Site Management of the Controlled Properties must be reported at the frequency and in a manner defined in this SMP.
- All future activities on the Controlled Properties that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.

- Operation, maintenance, monitoring, inspection and reporting of any mechanical or physical components of the remedy shall be performed as defined in this SMP.
- Access to the Controlled Properties must be provided to agents, employees or others representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions herein.
- The Controlled Properties shall not be used for Residential, Restricted Residential or Commercial purposes as defined in 6 NYCRR Part 375-1.8(g)(2)(i), (ii) and (iii), and the Engineering Controls defined herein may not be discontinued without amendment or extinguishment of the Environmental Easements granted to the Department on the Controlled Properties.
- The Owner of the Controlled Properties and the Owner's successors and assigns are obligated to comply with this SMP. The Owner's assumption of the obligation to comply with this SMP is and remains a fundamental element of the Department's determination that the Controlled Properties are safe for a specific use, but not all uses. The Owner and all successors and assigns have the burden of complying with this SMP and obtaining an up-to-date version of the SMP from:

  Site Control Section
  NYSDEC Division of Environmental Remediation
  625 Broadway
  Albany, NY 12233
  Phone: (518) 402-9553

- The Owner shall provide all persons who acquire any interest in the Controlled Properties a true and complete copy of the SMP that the Department approves for the Controlled Properties and all Department-approved amendments to that SMP.
- The Controlled Properties are subject to Environmental Easements that the Owner has granted to the Department. Copies of the Environmental

Easements are appended to this SMP. Until such time as the Environmental Easements are extinguished in accordance with the requirements of ECL Article 71, Title 36, the property deeds for the Controlled Properties and all subsequent issuances of conveyance relating to the Controlled Properties shall state the following in at least 15-point bold-faced type:

> **This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of Environmental Conservation Law.**

- The Environmental Easements shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Properties.
- The Owner shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

  1. the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).
  2. the institutional and engineering controls employed at the site:

     (i) are in place;

     (ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

3. the owner will continue to allow access to the Controlled Properties to evaluate the continued maintenance of the controls;

4. nothing has occurred that would constitute a violation or failure to comply with the SMP;

5. the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

6. to the best of his or her knowledge and belief, the work and conclusions described in the certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and

7. the information presented is accurate and complete.

- The site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) must be adhered to for the activities covered by this SMP.
- The potential for vapor intrusion must be evaluated for any buildings constructed at the Controlled Properties or for any changes in the current use of existing buildings at 381 Buell Road (Buell Automatics). Any potential impacts that are identified must be monitored or mitigated.
- The Department must be notified prior to any change of use at the Controlled Properties.
- Vegetable gardens and farming on the Controlled Properties are prohibited.

3.3 Engineering Controls

3.3.1 Site Cover

Exposure to contamination in soil/fill at the Site is currently prevented by a cover system comprised of soil, outdoor area pavements including the new asphalt pavement installed over the completed FLDA excavation, and the concrete floor slab of the Buell Automatics building.

Figure 11A presents the location of the cover system. Figure 11B shows the outline of the pavement restoration installed after completion of the FLDA remedial excavation activities and the outline of the area where the FLDA excavation backfill is demarcated by orange plastic construction fencing.

The Excavation Work Plan (EWP) provided in Appendix E outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in the HASP and associated CAMP prepared for the Site and provided in Appendix F.

Removal of existing site cover (asphalt, concrete, and buildings) and/or excavations constitute a change of use and will be addressed following the procedures of 6NYCRR Part 375-1.11(d). Upon NYSDEC request, Buell will prepare and submit, for NYSDEC approval, a work plan for the excavation including project specific HASP, CAMP, procedures for managing excavated soil, groundwater and backfill management, etc.

3.3.2 Other Engineering Controls

Since remaining contaminated soil, groundwater and soil vapor exists beneath the Site, the following additional Engineering Controls are required to protect human health and the environment.

3.3.2.1 Soil Vapor Intrusion Evaluation

At 381 and 385 Buell Road, prior to changes in use of existing buildings or the construction of any enclosed structures, an evaluation will be performed to determine whether any actions are necessary to minimize the potential for soil vapor intrusion to occur. Alternatively, an SVI mitigation system may be installed as an element of the building foundation as a presumptive measure, in which case the foregoing investigation would not be necessary. This mitigation system will include a vapor barrier (for construction of any new enclosed structures only) and sub-slab depressurization system. If no preconstruction SVI investigation is completed on any new building structures/additions and a sub-slab depressurization system is installed, an air monitoring program will be implemented to evaluate the effectiveness of the system.

Prior to conducting an SVI investigation or installing a mitigation system, a design work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH “Guidance for Evaluating Vapor Intrusion in the State of New York” and DER-10. Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

SVI sampling data along with a recommendation for follow-up action, such as mitigation, will be transmitted to the NYSDEC and NYSDOH for review and interpretation. If the SVI sampling involve samples collected from an existing occupied building, preliminary (unvalidated) data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation prior to development of recommendations.

3.3.2.2 FLDA Oil Collection System

An oil collection system was installed adjacent to the building along the east side of the completed FLDA remedial excavation. The purpose of the system is to trap and collect petroleum product LNAPL (primarily machining oil) that may seep westward from beneath the Petroleum Impacts Area of the Buell Automatics building. The base of the building foundation wall is approximately 4 feet below grade.

Following completion of the FLDA remedial excavation and prior to the backfilling of the excavation, a trench was installed to approximately 8 feet below grade. The west wall of the trench was lined with an HDPE geomembrane. Two 8-inch diameter well screens were installed in the trench to serve as oil collection sumps, and a geocomposite curtain was installed between and wrapping around the two sumps to promote migration of the LNAPL to the sumps. The entire area enclosed between the geomembrane and the building was backfilled with washed 2-inch stone.

Procedures for operating and maintaining the oil collection system are documented in the Operation and Maintenance Plan (Section 5.0 of this SMP). A plan and detail record drawing for the FLDA Oil Collection System, signed and sealed by a professional engineer, is included in Appendix G. Figure 11B shows the location of the FLDA Oil Collection System.

3.3.2.3 LNAPL Monitoring Wells

Periodic monitoring for the presence of LNAPL in Site monitoring wells is a component of the Monitoring and Sampling Plan (Section 5.0 of this SMP). The purpose of the LNAPL monitoring is to detect migration of petroleum product LNAPL from beneath the Petroleum Impacts Area of the Buell Automatics building.

Should recoverable LNAPL be encountered in Site wells during the monitoring activities, it will be removed to the extent practicable.

Procedures for maintaining the wells which may become involved in an LNAPL recovery activity are documented in the Monitoring and Sampling Plan (Section 4.0 of this SMP). LNAPL recovery operating procedures are documented in the Operation and Maintenance Plan (Section 5.0 of this SMP). Figure 11C shows the location of the monitoring wells located adjacent to the Buell building which would be used if LNAPL recovery activities are necessary.

3.3.2.4 Enhanced In-Situ Bioremediation (EISB) Program Wells

To address remaining soil and groundwater contamination within and downgradient of the FLDA and FTDA, the EISB component of the site remedy was initiated in the FLDA in the fall of 2014 and in the FTDA and downgradient plume area in March and April 2015. The EISB process is ongoing at the time this SMP is being prepared. Initiation of the EISB program involved placement in the subsurface of the EISB organic acid carbon substrate. The ongoing EISB activity involves the periodic groundwater monitoring program begun in May 2015 that will be used to assess progress and effectiveness of the remedial activity.

The ECs involved in the EISB program include the network of site monitoring wells used in the ongoing monitoring program and the 20 EISB-program injection wells that will be used for additional injections of organic acid solution should it be necessary.

Procedures for maintaining the monitoring and injection well network are documented in the Monitoring and Sampling Plan (Section 4.0 of this SMP). Well completion reports are included in Appendix C. Figure 11D shows the location of the monitoring and injection wells that constitute the EISB program ECs.

3.3.3 Criteria for Completion of Remediation

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

3.3.3.1 Cover

The cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

3.3.3.2 Monitoring Wells Associated with Groundwater Remediation

Groundwater monitoring activities to assess the effectiveness of the EISB program or subsequent natural attenuation will continue, as determined by the NYSDEC with consultation with NYSDOH, until residual groundwater concentrations are found to be consistently below ambient water quality standards, the site SCGs, or have become asymptotic at an acceptable level over an extended period.

Groundwater monitoring activities to assess the effectiveness of the EISB program will be conducted as per the Monitoring and Sampling Plan (Section 4.0 of this SMP). Three monthly groundwater sampling events will follow completion of the injection event, followed by quarterly sampling for the balance of two years. If after two years of quarterly groundwater sampling have been completed, residual groundwater concentrations are found to be consistently below ambient water quality standards, the Site SCGs, or have become asymptotic at an acceptable level over an extended period, a proposal to discontinue the system will be submitted by the remedial party. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC.

If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated. Additional EISB injection events would be completed, if necessary, based on an evaluation of the monitoring results and discussion with NYSDEC.

Groundwater monitoring activities to assess the presence of LNAPL will continue until the LNAPL source(s) have been removed and residual LNAPL is found to be either consistently absent or is present at an acceptable level over an extended period.

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the Site are included in the Quality Assurance Project Plan provided in Appendix H.

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment.

To adequately address these issues, this Monitoring and Sampling Plan provides information on:

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site-wide Inspection

Site-wide inspections will be performed annually (at a minimum of once per year). Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix I – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

Inspections of all remedial components installed at the Site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, verbal notice to the NYSDEC must be given by noon of the following day. In addition, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the Site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

4.3 Post-Remediation Media Monitoring and Sampling

Samples shall be collected on a routine basis from Site groundwater, from indoor air in the buildings at the 383 Buell Road and 395 Buell Road properties, and from indoor air and sub-slab soil vapor at the Buell Automatics building. Sampling locations, required analytical parameters and schedule are provided on the following page in Table 6 – Post-Remediation Sampling Requirements and Schedule. Modification to the frequency or sampling requirements will require approval from the NYSDEC.

Table 6 – Post Remediation Sampling Requirements and Schedule

Sampling Location	Analytical Parameters					Schedule
	VOCs (EPA Method 8260)	TOC (EPA Method 415.1)	Fe^{+2}, Mn^{+2} and As (EPA Method 6010)	CSIA and PCR gene analyses (see notes)	VOCs (EPA Method TO-15)	
Groundwater at these wells: MW-2, RW-2*, MW-6, MW-7, MW-8, MW-11, MW-14, MW-15, and MW-16R *RW-1 to be used as an alternate when necessary	X	X	X			Quarterly through approximately April 2017, then semi-annually unless an alternate sampling frequency is specified in a NYSDEC-approved modification to this SMP
Groundwater at two of the wells listed above (e.g. MW-2 and MW-8)				X		October 2015 and April 2016 (approximately)
Sub-slab soil vapor and indoor air (and outdoor air) at sample points A through F in the Buell Automatics building					X (standard VOC list)	Annually during the heating season
Indoor (and outdoor) air at 383 Buell Road (aScribe Laser building, one location) and 395 Buell Road (Best Western Inn building, one location on first floor of northwest section of bldg.)					X (standard VOC list)	Annually during the heating season

Notes:

CSIA = Carbon stable isotope analysis of $\delta^{13}C$ in TCE
PCR Gene analyses: Polymerase chain reaction analysis of DNA for qualitative and quantitative screening of the abundance of *dehalococcoides* bacteria and the VC reductase gene.

Detailed sample collection and analytical procedures and protocols are provided below in Sections 4.3.1 (groundwater monitoring event procedures) and 4.3.2 (air and sub-slab vapor sampling procedures) and in Appendix H – Quality Assurance Project Plan.

4.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis (as specified above in Table 6) to assess the performance of the remedy. Modifications to the frequency of monitoring or sampling requirements will require approval from NYSDEC.

The network of monitoring wells has been installed to monitor upgradient, on-site and downgradient groundwater conditions at the Site. The network of on-site and off-site wells has been designed based on the following criteria:

- to allow for assessing groundwater quality conditions in and downgradient of the FTDA and FLDA VOC source areas;
- to allow for monitoring of the presence and migration of petroleum LNAPL beyond the footprint of the Buell Automatics building and the Petroleum Impacts Area and,
- to allow for assessment of groundwater elevations and flow directions across the entire Site.

The groundwater monitoring events will consist of:

- Well gauging of water levels and LNAPL levels in all site wells;
- Well purging and sampling for analysis as indicated above in Table 6; and
- Monitoring well inspections.

All site monitoring wells (wells with the prefix MW or RW) are depicted on Figure 11D. Figure 11D also shows the location of EISB program injection wells IW-1 through IW-20. Monitoring and injection well construction logs are presented in Appendix C. A summary of well construction details is presented in Table 7. Previous water level measurement data are presented in Table 2A.

All monitoring activities will be recorded in a field book, a well gauging form, a well gauging/well inspection form, or a monitoring well purging and sampling record form. These forms are presented in Appendix I. During well gauging rounds that do not include an inspection, other observations (e.g., well integrity, etc.) will be noted on the well gauging log.

Water and LNAPL levels will be measured at all monitoring wells on the first day of each sampling event. Water and LNAPL levels will be measured from previously surveyed PVC well risers using an oil/water interface probe with an audible indicator. The water level measurements will be used to develop a groundwater elevation contour map and provide information on groundwater flow directions.

Monitoring wells will be sampled utilizing procedures specified in the Quality Assurance Project Plan (QAPP) presented in Appendix H. Sampling will be performed with submersible bladder-pump equipment using low-flow methods in accordance with USEPA protocols. Field parameters including oxidation/reduction potential (ORP), dissolved oxygen (DO), conductivity, pH, and temperature will be measured during purging using field instrumentation.

Laboratory analysis of all project samples will be performed by an independent laboratory with the experience and certifications appropriate to the analyses to be performed. All standard environmental chemical analyses will be performed by laboratories accredited pursuant to the NYSDOH Environmental Laboratory Accreditation Program (ELAP) for the category of parameters to be analyzed by the laboratory. The specific environmental laboratory or laboratories to be used will be determined at the time the monitoring activities are scheduled.

For sampling events and monitoring activities used to collect documentation samples (as defined in NYSDEC DER-10), duplicates, replicates, and spiked samples will be used as needed to identify the quality of the analytical data. It is currently anticipated that the only documentation samples will be those collected during the last semi-annual event. Results of the laboratory analyses for these samples will be reported using NYSDEC ASP Category B deliverables, and a Data Usability Summary Report (DUSR) will be prepared for analytical results from these monitoring activities. The DUSR will be prepared by an independent consultant with the required experience, in accordance with NYSDEC's "Guidance for the Development of Data Usability Summary Reports," revised 1997 and NYSDEC's DER-10 "Technical Guidance for Site

Investigation and Remediation." For all other monitoring activities, analyses will be reported using Category A deliverables, and the level of QA/QC will be that level appropriate to support a Category A deliverable. DUSRs will not be prepared for Category A deliverables.

Analysis for tentatively identified compounds (TICs) will be performed on documentation samples and otherwise upon NYSDEC request. (TICs will not be analyzed on non-documentation samples unless requested by NYSDEC.)

Analytical summary tables will be prepared which summarize the data and compare them to NYSDEC Class GA Water Quality Standards and Guidance Values for groundwater.

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified immediately if a well requires major repairs (badly damaged surface seals, damaged riser, etc.) or replacement. Minor or major repairs and decommissioning and replacement activities will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC.

An attempt will be made to find and properly decommission monitoring wells MW-17 and 18 before the end of the first PRR certifying period. These wells may need to be replaced in the future if future groundwater monitoring results indicate expansion or migration of the groundwater contaminant plume.

Monitoring wells MW-3 and MW-4, which were covered by parking lot paving activities and subsequently could not be located, will be properly decommissioned if found in the future.

Upon termination of the site monitoring program and with NYSDEC approval, all site-related monitoring wells will be properly decommissioned and other miscellaneous site restoration activities (such as asphalt patching) will be performed.

The sampling frequency may only be modified with the approval of the NYSDEC. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

Deliverables for the groundwater monitoring program are specified in Section 7.0 – Reporting Requirements.

4.3.2 Air Monitoring Programs

IAM and SVI assessment sampling programs will be conducted as described below for the purposes of monitoring the potential for intrusion of chlorinated VOC contaminants into the Buell Automatics building and the buildings at the adjacent 383 and 395 Buell Road properties.

Air monitoring samples will be collected early in the heating season (typically mid-November to mid-December). If necessary based on the results, a NYSDEC approved Corrective Measures Plan may be developed and implemented in time to allow for additional air sampling by the end of the same heating season.

Monitoring will be performed in accordance with the NYSDOH SVI Guidance referenced above, and sampling and analysis will be performed in accordance with the QAPP referenced above. Each sample will be analyzed for VOC's by Method TO-15. Laboratory analysis of all project samples will be performed by an independent laboratory with the experience and certifications appropriate to the analyses to be performed. All standard environmental chemical analyses will be performed by laboratories accredited pursuant to the NYSDOH ELAP for the category of parameters to be analyzed by the laboratory. The specific environmental laboratory or laboratories to be used will be determined at the time the monitoring activities are scheduled. The laboratory will seek to attain detection limits of 1.0 microgram per cubic meter (μg/m3), which are comparable to those typically achieved for indoor air samples. However, depending upon contaminant levels, detection limits may be higher in sub-slab vapor samples. For indoor air samples, the target detection limits for TCE, vinyl chloride, and carbon tetrachloride will be 0.25 μg/m3.

For sampling events and monitoring activities used to collect documentation samples (as defined in NYSDEC DER-10), duplicates, replicates, and spiked samples will be used as needed to identify the quality of the analytical data. It is currently anticipated that the only documentation samples will be those collected during the last annual event. Results of the laboratory analyses for these samples will be reported using NYSDEC ASP Category B deliverables, and a Data Usability Summary Report (DUSR) will be prepared for analytical results from these monitoring activities. The DUSR will be prepared by an independent consultant with the required experience, in accordance with NYSDEC's "Guidance for the Development of Data Usability Summary Reports," revised 1997 and NYSDEC's DER-10 "Technical Guidance for Site Investigation and Remediation." For all other monitoring activities, analyses will be reported using Category A deliverables, and the level of QA/QC will be that level appropriate to support a Category A deliverable. DUSRs will not be prepared for Category A deliverables.

The sampling frequencies may only be modified with the approval of the NYSDEC. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix I - Site Management Forms. Deliverables for the soil vapor intrusion sampling programs are specified in Section 7.0 – Reporting Requirements.

Samples will be collected over an 8-hour period using 6-liter SUMMA® canisters. The canisters will be equipped with flow controllers and vacuum gauges. Airflow into the canisters will be controlled and monitored in accordance with NYSDOH's guidance criteria of 0.2 liters/minute for maximum flow rate. Vacuum levels will be recorded at regular intervals during the sampling event. Indoor air samples will be collected at a height 3 – 5 ft. above ground surface to represent the breathing zone.

Other specific field sampling and laboratory analysis procedures for the air monitoring programs are presented below.

4.3.2.1 Indoor Air Monitoring at Adjacent Properties

An indoor air monitoring program will be conducted for the aScribe Laser and Best Western Inn buildings located at 383 and 395 Buell Road. The air monitoring program in these buildings will be conducted annually unless sampling results indicate more frequent sampling is necessary. Each event will entail collection of one outdoor ambient air sample and one indoor air sample. The indoor sampling point will be changed periodically. Should the Best Western Inn and the aScribe Laser Buildings be sampled on the same day, a single outdoor air sample will be collected.

Prior to collecting the air monitoring samples, documentation of the condition of the floor slab in uncarpeted rooms will be performed as appropriate, and cracks that may represent a potential migration pathway for sub-slab vapors will be noted. As practicable, NYSDOH building questionnaire and product inventory forms will be completed. Given that Buell may not own the buildings in question, it is not feasible to include provisions for sealing of cracks or removal of products in the SMP. Therefore, should results of the pre-sampling activities indicate that the utility or validity of the air sampling planned may be in question as a consequence of the presence of cracks or products containing VOCs, the NYSDEC project manager will be contacted for a discussion of the appropriate steps prior to proceeding with the sampling.

4.3.2.2 SVI Assessment Program in the Buell Automatics Building

A pre-sampling building inspection and product inventory will be performed as part of the evaluation of the effectiveness of the SVE system to document the current use and storage of petroleum products and other solvents, cleaners and chemical products that contain VOCs. The pre-sampling inspection will include the identification and documentation of floor penetrations associated with sump and utility features and floor joints, cracks or seams, if any. Photo-ionization detector (PID) readings of VOCs in indoor air will be collected at locations where chemical or petroleum products are stored or used in the building. The NYSDOH "Indoor Air Quality Questionnaire and Building Inventory" form will be used to document the pre-sampling inspection and inventory.

The SVI Assessment sampling events will involve collection of samples of sub-slab vapor and indoor air at the six existing sample points located in the Buell Building Locations of sampling points A through F are shown on attached Figure 8. Outdoor air sampling will be performed at one location on the upwind side of the building at the time of the sampling event to establish background conditions for ambient air. A duplicate sub-slab soil vapor and duplicate indoor air sample will be collected at one of the six locations.

Sub-slab vapor, indoor air and outdoor air sampling will follow the protocols outlined in Sections 2.7.1, 2.7.2, 2.7.3, and 2.7.4, respectively, of the NYSDOH Guidance document. Individual certification will be used by the project laboratory providing the sampling equipment to confirm that sample canisters and flow controllers are clean before sampling. Prior to sampling, leak testing procedures using a tracer gas will be completed at all sub-slab vapor sampling locations to verify the integrity of the soil vapor probe seal. In addition, to ensure that a proper seal is maintained throughout the entire sampling period, tracer gas readings will also be taken at the end of the sampling duration. To avoid the potential for introduction of VOCs from sub-slab vapors to indoor air samples, purging of sub-slab sampling points prior to sampling will be performed using Tedlar® bags to contain the purged vapor. The purged vapor will be released outside and downwind of the building.

Sub-slab, indoor, and ambient air samples will be submitted for analysis by EPA method TO-15 of VOCs for which the laboratory routinely maintains calibration on its TO-15 instruments. (Generally speaking, the list of analytes will be limited to those TCL VOCs which the laboratory routinely analyzes with the TO-15 method.)

4.4 Investigation Derived Waste

Investigation derived waste will be handled in accordance with applicable guidance contained in Section 3.3(e)(5) of DER-10 and disposed of in accordance applicable law and regulations. Purge water generated during groundwater sampling and LNAPL or spent adsorbent socks generated by LNAPL recovery activities, if necessary, will be containerized in 55-gallon drums and securely stored on-site at a location where the drums will be protected from damage that could result in leaks (e.g. vehicle damage, fork lift damage, expansion from freezing, etc.), and secondary containment for leaks will be provided. Personal protective equipment and disposable supplies (i.e. tubing, PDBs) will be bagged and disposed of in the municipal solid waste stream.

4.5 Monitoring Quality Assurance/Quality Control

All sampling and analyses will be performed in accordance with the requirements of the QAPP referenced above. Main Components of the QAPP include:

- Quality Assurance/Quality Control (QA/QC) Objectives for Data Measurement;
- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) by the analytical laboratory prior to their use. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;
- Calibration Procedures:
    - All field analytical equipment will be calibrated immediately prior to each day's use or per the calibration frequency recommended by the manufacturer. Calibration procedures will conform to manufacturer's standard instructions.

  - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.

- Analytical Procedures; and
- Preparation of a DUSR, as needed, which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

4.6 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file, either in hard copy or electronically, on-site or at Stantec. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted with the annual Periodic Review Report (PRR).

All monitoring results will be reported to NYSDEC in the PRR.

4.7 Inspections

Monitoring well inspections and sub-slab soil vapor sampling port inspections will be performed during each respective monitoring event. Annual site-wide inspections will performed as specified in Section 4.2.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

This Operation and Maintenance Plan provides a brief description of the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the procedures necessary to allow individuals unfamiliar with the site to operate and maintain the FLDA Oil Collection System and to perform LNAPL recovery activities should they become necessary;
- Will be updated periodically to reflect changes in site conditions or the manner in which the FLDA Oil Collection System and LNAPL recovery activities are operated and maintained.

5.2 Operation and Maintenance

The following section provides a description of the operations and maintenance of FLDA Oil Collection System and LNAPL Recovery activities. A plan and details record drawing for the FLDA Oil Collection System is provided in Appendix G.

5.2.1 Monitoring

FLDA Oil Collection System wells MW-LRW-1 and MW-LRW-2 and all site monitoring wells are to be checked for the presence of LNAPL during the water-level measurement activity that is performed at the beginning of each quarterly or semi-annual groundwater monitoring event. Well locations are shown on Figure 11C.

If LNAPL monitoring results indicate petroleum-impacted groundwater is migrating beyond the footprint of the Buell Automatics building (e.g. an accumulation of LNAPL that represents more than a sheen is encountered in one or more of these wells during a groundwater monitoring event), initiation or continuation of oil collection/LNAPL recovery operations must be considered. Professional judgement along with consultation with the NYSDEC project manager will be used in determining whether the thickness of the LNAPL layer encountered is enough to warrant initiating LNAPL recovery activities. LNAPL recovery operations are to be conducted as described on the following page.

5.2.2 Oil Collection and LNAPL Recovery

LNAPL collection and recovery methods, procedures and equipment are described below. The effectiveness of the LNAPL collection and recovery activities will be evaluated in the PRRs. If necessary, additional action will be evaluated and implemented to more effectively address the LNAPL.

5.2.2.1 FLDA Oil Collection System Wells

Oil adsorbent socks are to be installed in the FLDA oil collection system wells MW-LRW-1 and MW-LRW-2 at all times to collect free product that has accumulated, if any. To install the socks in these wells, place three socks inside the dedicated perforated metal cage for the well and tie the cage securely to the top of the well with polypropylene or similar rope. Lower the cage into the top of water column until mostly submerged and secure the suspend cage with the rope to the inner J-plug well cap.

During each groundwater sampling event, the socks are removed from the well in a manner that prevents discharge of water and/or product to the ground surface and inspected for evidence of product. If product is observed, the socks are to be containerized in a 55-gallon drum for proper on-site management and off-site disposal, as described above in Section 4.4, and clean socks re-installed in the well.

If a measurable layer of oil is present in an FLDA oil collection system well after the cage for the adsorbent pads has been withdrawn, the oil layer will be removed to a to the extent practicable before new socks are installed. Removal will be performed by manual bailing or by pumping using a peristaltic pump and disposable tubing. Used bailers and tubing will be drummed with spent socks, and any liquids removed will be drummed separately.

If oil is encountered in the FLDA oil collection system wells or is observed to be saturating one or more of the socks installed in the well, the frequency of monitoring of the wells is to be increased to monthly until such time as evidence of oil accumulation is no longer observed.

Materials and equipment to be used in the FLDA oil collection system wells include the following:

- Metal cage: Geosorb Kit, Model No. 96650002 or equivalent.

- Oil adsorbent socks: Geosorb Socks, Model No. 86650006 or equivalent.

5.2.2.2 Other Monitoring Wells

In the past, petroleum product LNAPL has been observed in monitoring wells MW-9 and MW-10 (a former well replaced by MW-10R). If a measurable layer of oil is detected during a groundwater monitoring event in one or more of the wells listed above in Section 5.2.1, the oil layer will be removed to a thickness to the extent practicable. Removal of LNAPL product layers will be performed by manual bailing or by pumping using a peristaltic pump and disposable tubing.

An oil-adsorbent sock will then be installed in the well. To install the sock, securely tie the sock to the J-plug with polypropylene or similar rope and suspend it in the well so that it floats at the top of the water column in the water column.

Used bailers, tubing spent socks, and any liquids removed will be drummed with materials (if any) from the FLDA oil collection system wells.

As with the FLDA oil collection system wells, if oil is encountered in a monitoring well or is observed to be saturating a sock installed in the well, the frequency of monitoring of the well is to be increased to monthly until such time as evidence of oil accumulation is no longer observed.

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climate change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the Site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

A climate change vulnerability assessment has not been performed for the Buell Automatics Site, and given its setting, the nature of the remedial program for the Site, and the past and current site conditions, it is evident that the Site and its remedial program will not be vulnerable to climate change impacts. The site is not located in a flood plain, and because of the topography of the site area, potential for flooding at the Site is remote. Even in the event of flooding at the Site, or damage from high winds to facility buildings or electrical systems, there is no remedial system in place that would be damaged or have its operation interrupted. Site contamination is confined to the subsurface in areas covered by pavements or buildings, and vulnerability to erosion is therefore not an issue. Similarly, vulnerability to increases in groundwater levels during extreme precipitation events will be managed as at present by removal of storm water in the storm drain system infrastructure presently in place.

This section provides a summary of vulnerability assessments that will be conducted for the Site during periodic assessments, and briefly summarizes the vulnerability of the Site and/or engineering controls to severe storms/weather events and associated flooding.

During the periodic reviews required by this SMP, the integrity of the site cover and area storm drains will be assessed to determine whether changes in site conditions have occurred that could affect vulnerability of the Site to the effects of extreme weather events.

6.2 Remedial System Optimization

A Remedial System Optimization (RSO) study will be conducted any time that the NYSDEC or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- the remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- the management and operation of the remedial system is exceeding the estimated costs;
- the remedial system is not performing as expected or as designed;
- previously unidentified source material may be suspected;
- plume shift has potentially occurred;
- site conditions change due to development, change of use, change in groundwater use, etc.;
- there is an anticipated transfer of the site management to another remedial party or agency; and
- a new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

The RSO study will focus on overall site cleanup strategy, process optimization and management with the intent of identifying impediments to cleanup and improvements to site operations to increase efficiency, cost effectiveness and remedial time frames. Green remediation technology and principals are to be considered when performing the RSO.

Examples of potential future RSO projects include:

- additional EISB injections;
- excavation and off-site disposal of soil from the Petroleum Impact Area in the event of demolition of any significant portion of the existing Buell building; and
- implementation of an alternative method for recovering or addressing LNAPL more efficiently or aggressively.

7.0 REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix I. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 8 and summarized in the Periodic Review Report.

Table 8: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Inspection Report	Annually (to be included in the annual PRR unless otherwise requested by NYSDEC)
Periodic Review Report	Annually, or as otherwise determined by the Department

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);

- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.
- Routine maintenance event reporting forms will include, at a minimum:
- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

NYSDEC will be notified of non-routine maintenance events when they occur. Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;

- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS^{TM} database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

7.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the Department or at another frequency as may be required by the Department. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A summary of any discharge monitoring data, waste characterization data, disposal documentation and/or information generated during the reporting period, with comments and conclusions.

- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.
- A site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
  - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan; and
  - Trends in contaminant levels in the affected media will be evaluated to determine if the remedy continues to be effective in achieving remedial goals as specified by the Decision Document.
  - The overall performance and effectiveness of the remedy.

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:*

- *The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the Site is compliant with the environmental easements;*
- *The engineering control systems are performing as designed and are effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally-accepted engineering practices; and*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as the Designated Site Representative of Buell Automatics and Lawton Family LLC for the Site."

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the Site is located and the NYSDOH Bureau of Environmental Exposure Investigation. The Periodic Review Report may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

7.4 Remedial Site Optimization Report

In the event that an RSO is to be performed (see Section 6.2), upon completion of an RSO, an RSO report must be submitted to the Department for approval. A general outline for the RSO report is provided in Appendix J. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located, Site Control and the NYSDOH Bureau of Environmental Exposure Investigation.

8.0 REFERENCES

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

NYSDEC DER-10 – "Technical Guidance for Site Investigation and Remediation".

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

Interim Remedial Measures Final Engineering Report, Buell Automatics Site, 381 Buell Road, Rochester, New York, NYSDEC Site No. V00330-8, BCA Index #B8-0576-00-04A. Sear-Brown, March 25, 2004.

Remedial Investigation Report, Buell Automatics Site, Index #B8-0576-00-04A, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., December 5, 2007.

Alternatives Analysis Report, Buell Automatics Site, BCP Site No. C828114, Town of Gates, Monroe County, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., October, 2008.

Supplemental Information, Alternatives Analysis, Brownfield Cleanup Program Site #C828114, Buell Automatics, Inc., Town of Gates, Monroe County, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., letter report, December 22, 2008.

Remedial Work Plan, Buell Automatics Site, BCP Site No. C828114, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., February 16, 2010.

Pre-Design SVI Assessment Work Plan, Buell Automatics Site, BCP Site No. C828114, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., June 2010, approved by NYSDEC on November 29, 2010.

Monthly Progress Report #2, Remedial Work Plan Implementation, Brownfield Cleanup Program Site #C828114, Buell Automatics, Inc., 381 Buell Road, Town of Gates, Monroe County, New York. Stantec Consulting Services Inc., February 9, 2011.

Interim Site Management Plan, Buell Automatics Site, Monroe County, New York, NYSDEC Site Number C828114. Stantec Consulting Services Inc., February 10, 2011, approved by NYSDEC on June 7, 2011.

Soil Vapor Extraction Design Document and Work Plan, Buell Automatics Site, Monroe County, New York, NYSDEC Site Number C828114. Stantec Consulting Services Inc., December 2011, approved by NYSDEC on January 12, 2012.

Work Plan for Remedial Excavation, Former Loading Dock Area (Stantec, July 22, 2013), approved by NYSDEC on July 24, 2013.

Contained-In Demonstration Work Plan, Remedial Excavation, Former Loading Dock Area (Stantec, July 2, 2013), approved by NYSDEC on July 5, 2013.

Oil Collection System Design (Stantec, August 29, 2013), approved by NYSDEC on September 3, 2013.

Request for Postponement (Buell Automatics, Inc., October 24, 2013), approved by NYSDEC on November 13, 2013.

Sub-Slab Vapor and Soil Sampling Work Plan for Evaluating SVE System Effectiveness, Former Trench Drain Area Buell Automatics Site, BCP Site No. C828114, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., May 9, 2014, approved by NYSDEC on July 2, 2014.

Modification to the Approved July 2013 Work Plan for Remedial Excavation of Former Loading Dock Area: Stockpiles (Stantec, September 15, 2014), approved by NYSDEC on September 26, 2014.

Enhanced In-Situ Bioremediation Work Plan, Buell Automatics Site, BCP Site No. C828114, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., December 2014), approved by NYSDEC on January 6, 2015.

Evaluation of SVE System Effectiveness, Former Trench Drain Area, Buell Automatics Site, BCP Site No. C828114, 381 Buell Road, Rochester, New York. Stantec Consulting Services Inc., March 30, 2015.

Tables

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	August 1, 2011			August 3, 2011			August 5, 2011			September 9, 2011			September 30, 2011			November 4, 2011		
			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	NP	5.62	557.08	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.81	558.89
MW-2	561.9	561.71	NP	5.14	556.57	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.56	558.15
MW-2 D	562.0	561.56	---†	---†	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---†	---
MW-3	---‡	---‡	NP	1.94	---‡	---	---	---	---	---	---	---	---	---	---	---	---	---	---†	---
MW-4	---‡	---‡	5.25	5.35	---‡	5.30	5.37	---‡	5.29	5.35	---‡	4.78	4.80	---‡	---	---†	---	3.41	3.50	---‡
MW-5	562.1	561.76	NP	4.84	556.92	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.92	557.84
MW-6	560.3	559.78	NP	3.95	555.83	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.19	556.59
MW-7	561.4	560.83	NP	4.95	555.88	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.51	557.32
MW-8	562.0	561.48	NP	5.44	556.04	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.85	557.63
MW-9	561.1	560.36	4.15	4.20	556.21	4.12	4.23	556.23	4.66	4.70	555.70	3.30	3.35	557.06	NP	3.40	557.0	NP	2.76	557.60
MW-10	562.8	562.37	1.92	5.34	560.11	2.20	5.60	559.83	2.85	3.07	559.50	1.52	2.99	560.70	1.87	2.55	560.43	2.61	2.75	559.75
MW-10R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-11	559.3	559.05	NP	5.55	553.50	---	---	---	---	---	---	---	---	---	---	---	---	NP	5.21	553.84
MW-12	562.8	562.30	NP	4.26	558.04	---	---	---	---	---	---	---	---	---	---	---	---	NP	2.61	559.69
MW-13	563.9	563.42	NP	5.85	557.57	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.51	558.91
MW-14	561.3	560.90	NP	5.11	555.79	---	---	---	---	---	---	---	---	---	---	---	---	NP	5.34	555.56
MW-15	560.5	560.10	NP	4.20	555.90	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.21	556.89
MW-16	562.6	561.97	---†	---†	---	---	---	---	NP	1.56	560.41	---	---	---	---	---	---	NP	0.36	561.61
MW-16R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-17	556.6	556.16	NP	3.70	552.46	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.36	552.80
MW-18	556.6	556.48	---	dry	---	---	---	---	---	---	---	---	---	---	---	---	---	NP	2.28	554.20
MW-19	563.51	563.09																		
MW-20	561.44	561.15																		
MW-21	560.28	559.91																		
MW-22	562.16	561.73																		
RW-1	563.7	563.27	NP	4.95	558.32	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.01	559.26
RW-2	563.8	563.25	NP	5.94	557.31	---	---	---	---	---	---	---	---	---	---	---	---	NP	5.54	557.71
LRW-1	562.9	562.72																		
LRW-2	562.8	562.55																		

Notes:
1. Reference elevation based upon vertical datum NGVD 29.
2. ft. btoc = feet below top of casing.
3. * = oily floating product
4. ** = Water table elevation adjusted for thickness and estimated density of floating oil layer
5. (---) = Not measured
6. NP = No product present
7. † = Well inaccessible at time of measurement
8. ‡ = Well installed by others, elevation data not available

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	December 9, 2011			January 9, 2012			February 9, 2012			March 14, 2012			April 5, 2012			May 2, 2012		
			Oil/Water Level			Oil/Water Level			Oil/Water Level			.			Oil/Water Level			Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	---	---	---	---	---	---	---	---	---	NP	3.47	559.23	---	---	---	NP	3.62	559.08
MW-2	561.9	561.71	---	---	---	---	---	---	NP	3.16	558.7	NP	2.60	559.11	---	---	---	NP	2.64	559.07
MW-2 D	562.0	561.56	---	---†	---	---	---	---	---	---	---	---	---†	---	---	---	---	---	---†	---
MW-3	---‡	---‡	---	---†	---		Debris in well			Debris in well			Debris in well			Debris in well			Debris in well	
MW-4	---‡	---‡	NP	3.14	---‡	---	---	---	---	---	---	2.63	2.70	---‡	NP	3.34	---‡	NP	2.56	---‡
MW-5	562.1	561.76	---	---	---	---	---	---	---	---	---	NP	2.20	559.56	---	---	---	NP	2.32	559.44
MW-6	560.3	559.78	---	---	---	---	---	---	---	---	---	NP	1.96	557.82	---	---	---	NP	1.99	557.79
MW-7	561.4	560.83	---	---	---	---	---	---	---	---	---	NP	2.69	558.14	---	---	---	NP	2.68	558.15
MW-8	562.0	561.48	---	---	---	---	---	---	---	---	---	NP	2.91	558.57	---	---	---	NP	2.89	558.59
MW-9	561.1	560.36	NP	1.88	558.5	NP	3.10	557.3	NP	2.34	558.0	NP (see note)	1.93	558.43	NP	2.66	557.7	NP	1.45	558.91
MW-10	562.8	562.37	See note below		560.23	NP	2.33	560.0	NP	2.34	560.0	NP	1.79	560.58	NP	2.45	559.9	NP	1.87	560.50
MW-10R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-11	559.3	559.05	---	---	---	---	---	---	---	---	---	NP	4.08	554.97	---	---	---	NP	4.44	554.61
MW-12	562.8	562.30	---	---	---	---	---	---	---	---	---	NP	1.79	560.51	---	---	---	NP	1.93	560.37
MW-13	563.9	563.42	---	---	---	---	---	---	---	---	---	NP	3.40	560.02	---	---	---	NP	3.52	559.90
MW-14	561.3	560.90	---	---	---	---	---	---	---	---	---	NP	1.77	559.13	---	---	---	NP	2.38	558.52
MW-15	560.5	560.10	---	---	---	---	---	---	---	---	---	NP	1.47	558.63	---	---	---	NP	1.62	558.48
MW-16	562.6	561.97	---	---	---	---	---	---	---	---	---	NP	0.90	561.07	---	---	---	NP	0.80	561.17
MW-16R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-17	556.6	556.16	---	---	---	---	---	---	---	---	---	NP	1.91	554.25	---	---	---	NP	1.89	554.27
MW-18	556.6	556.48	---	---	---	---	---	---	---	---	---	NP	20.00	536.48	---	---	---	NP	20.00	536.48
MW-19	563.51	563.09																		
MW-20	561.44	561.15																		
MW-21	560.28	559.91																		
MW-22	562.16	561.73																		
RW-1	563.7	563.27	---	---	---	---	---	---	---	---	---	NP	3.46	559.81	---	---	---	NP	3.50	559.77
RW-2	563.8	563.25	---	---	---	---	---	---	---	---	---	NP	1.45	561.80	---	---	---	NP	4.21	559.04
LRW-1	562.9	562.72																		
LRW-2	562.8	562.55																		

Notes on measurement at MW-10 on 12/9/2011:
The oil/water interface probe readings indicated water from 2.14 ft. to 2.51 ft., then oil to 3.76 ft, then water below the oil. Oil was confirmed as present with a bailer. Refer to Table 2 for additional information.

Notes on measurement at MW-9 and MW-10 on 3/8/12:
One monitoring well sock was removed from both MW-9 and MW-10. Both socks were saturated with approximately 50% oily residue and 50% water. No floating product was measured in either well and no oil was visible on the oil/water interface probe.

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	June 8, 2012			July 3, 2012			July 25, 2012			July 26, 2012			August 3, 2012			September 7, 2012		
			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	---	---	---	---	---	---	NP	6.19	556.51	---	---	---	---	---	---	---	---	---
MW-2	561.9	561.71	---	---	---	---	---	---	NP	6.04	555.67	---	---	---	---	---	---	---	---	---
MW-2 D	562.0	561.56	---	---	---	---	---	---	---	---†	---	---	---	---	---	---	---	---	---	---
MW-3	---‡	---‡		Debris in well			Debris in well			Debris in well			Debris in well			Debris in well			Debris in well	
MW-4	---‡	---‡	NP	3.17	---‡	NP	3.05	---‡	4.73	4.75	---‡	---	---	---	NP	3.68	---‡	NP	2.72	---‡
MW-5	562.1	561.76	---	---	---	---	---	---	NP	5.44	556.32	---	---	---	---	---	---	---	---	---
MW-6	560.3	559.78	---	---	---	---	---	---	NP	5.19	554.59	NP	5.54	554.24	---	---	---	---	---	---
MW-7	561.4	560.83	---	---	---	---	---	---	NP	5.75	555.08	NP	5.59	555.24	---	---	---	---	---	---
MW-8	562.0	561.48	---	---	---	---	---	---	NP	6.14	555.34	NP	5.86	555.62	---	---	---	---	---	---
MW-9	561.1	560.36	NP	2.68	557.7	NP	2.37	558.0	5.15	5.15	555.21	NP	4.75	555.61	3.96	3.98	556.38	2.85	2.87	557.49
MW-10	562.8	562.37	NP	2.46	559.9	NP	2.18	560.2	4.14	6.25	558.02	3.65	3.80	558.71	2.88	3.11	559.47	1.99	2.11	560.37
MW-10R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-11	559.3	559.05	---	---	---	---	---	---	NP	6.34	552.71	NP	6.65	552.40	---	---	---	---	---	---
MW-12	562.8	562.30	---	---	---	---	---	---	NP	4.87	557.43	---	---	---	---	---	---	---	---	---
MW-13	563.9	563.42	---	---	---	---	---	---	NP	6.36	557.06	---	---	---	---	---	---	---	---	---
MW-14	561.3	560.90	---	---	---	---	---	---	NP	3.95	556.95	---	---	---	---	---	---	---	---	---
MW-15	560.5	560.10	---	---	---	---	---	---	NP	5.47	554.63	---	---	---	---	---	---	---	---	---
MW-16	562.6	561.97	---	---	---	---	---	---	NP	3.75	558.22	---	---	---	---	---	---	---	---	---
MW-16R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-17	556.6	556.16	---	---	---	---	---	---		Well destroyed										
MW-18	556.6	556.48	---	---	---	---	---	---	NP	18.27	538.21	---	---	---	---	---	---	---	---	---
MW-19	563.51	563.09																		
MW-20	561.44	561.15																		
MW-21	560.28	559.91																		
MW-22	562.16	561.73																		
RW-1	563.7	563.27	---	---	---	---	---	---	NP	5.20	558.07	---	---	---	---	---	---	---	---	---
RW-2	563.8	563.25	---	---	---	---	---	---	NP	dry	---	---	---	---	---	---	---	---	---	---
LRW-1	562.9	562.72																		
LRW-2	562.8	562.55																		

Notes on measurement at MW-9 and MW-10 on 7/25/12:
One LNAPL recovery sock was removed from each well. Both socks were saturated with approximately 50% oily residue and 50% water. Floating product was encountered in both wells.

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	October 5, 2012 Oil/Water Level			November 16, 2012 Oil/Water Level			January 4, 2013 Oil/Water Level			February 21, 2013 Oil/Water Level			April 12, 2013 Oil/Water Level			May 8, 2013 Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	---	---	---	NP	4.6	558.1	---	---	---	---†	---†	---	---	---	---	---	---	---
MW-2	561.9	561.71	---	---	---	NP	4.63	557.08	---	---	---	NP	3.33	---	---	---	---	---	---	---
MW-2 D	562.0	561.56	---	---	---	---	--- †	---	---	---	---	---†	---†	---	---	---	---	---	---	---
MW-3	---‡	---‡		Debris in well			Debris in well													
MW-4	---‡	---‡	NP	5.41	---‡	NP	3.36	---‡	---†	---†	---‡	---†	---†	---‡	3.54	3.57	---‡	NP	3.90	---‡
MW-5	562.1	561.76	---	---	---	NP	3.84	557.92	---	---	---	---†	---†	---	---	---	---	---	---	---
MW-6	560.3	559.78	---	---	---	NP	3.57	556.21	---	---	---	---†	---†	---	---	---	---	---	---	---
MW-7	561.4	560.83	---	---	---	NP	4.42	556.41	---	---	---	NP	3.65	---	---	---	---	---	---	---
MW-8	562.0	561.48	---	---	---	NP	4.52	556.96	---	---	---	NP	3.35	---	---	---	---	---	---	---
MW-9	561.1	560.36	NP	4.68	555.68	NP	3.72	556.64	NP	2.73	557.63	NP	2.49	557.87	---	---	---	---	---	---
MW-10	562.8	562.37	3.15	4.68	559.07	NP	4.62	557.75	2.29	3.35	559.97	2.00	2.50	560.32	1.86	2.69	559.68	NP	2.10	560.27
MW-10R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-11	559.3	559.05	---	---	---	NP	3.40	555.65	---	---	---	NP	6.03	553.02	---	---	---	---	---	---
MW-12	562.8	562.30	---	---	---	NP	3.45	558.85	---	---	---	---†	---†	---	---	---	---	---	---	---
MW-13	563.9	563.42	---	---	---	NP	4.96	558.46	---	---	---	NP	4.07	559.35	---	---	---	---	---	---
MW-14	561.3	560.90	---	---	---	NP	2.84	558.06	---	---	---	NP	1.73	559.17	---	---	---	---	---	---
MW-15	560.5	560.10	---	---	---	NP	3.15	556.95	---	---	---	NP	1.84	558.26	---	---	---	---	---	---
MW-16	562.6	561.97	---	---	---	NP	1.88	560.09	---	---	---	NP	0.60	561.37	---	---	---	---	---	---
MW-16R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-17	556.6	556.16																		
MW-18	556.6	556.48	---	---	---	NP	17.57	538.91	---	---	---	---	---	---	---	---	---	---	---	---
MW-19	563.51	563.09	NP	5.68	557.41	NP	3.96	559.13	NP	4.03	559.06	NP	4.40	558.69	NP	2.88	560.21	NP	3.37	559.72
MW-20	561.44	561.15	NP	5.05	556.10	NP	4.02	557.13	NP	3.39	557.76	NP	3.26	557.89	NP	2.77	558.38	NP	3.19	557.96
MW-21	560.28	559.91	NP	4.22	555.69	NP	3.41	556.5	NP	2.56	557.35	NP	2.23	557.68	NP	2.37	557.54	NP	3.09	556.82
MW-22	562.16	561.73	NP	5.44	556.29	NP	4.49	557.24	NP	4.59	557.14	NP	3.71	558.02	NP	2.54	559.19	NP	3.06	558.67
RW-1	563.7	563.27	---	---	---	NP	3.66	559.61	---	---	---	NP	3.50	559.77	---	---	---	---	---	---
RW-2	563.8	563.25	---	---	---	NP	dry	---	---	---	---	NP	4.25	559.00	---	---	---	---	---	---
LRW-1	562.9	562.72																		
LRW-2	562.8	562.55																		

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	June 5, 2013 Oil/Water Level			July 8, 2013 Oil/Water Level			August 6, 2013 Oil/Water Level			September 5, 2013 Oil/Water Level			October 4, 2013 Oil/Water Level			November 6, 2013 Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	---	---	---	NP	3.71	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	561.9	561.71	---	---	---	NP	3.23	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2 D	562.0	561.56	---	---	---	---†	---†	---	---†	---†	---	---†	---†	---	---	---	---	---	---	---
MW-3	---‡	---‡							---											
MW-4	---‡	---‡	3.59	3.64	---‡	NP	3.20	---‡	4.55	4.60	---‡									
MW-5	562.1	561.76	---	---	---	NP	2.61	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	560.3	559.78	---	---	---	NP	2.31	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-7	561.4	560.83	---	---	---	NP	2.29	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	562.0	561.48	---	---	---	NP	3.35	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-9	561.1	560.36	---	---	---	NP	2.44	557.92	NP	3.85	556.51	NP	4.46	555.90	NP	4.91	555.45	NP	4.40	555.96
MW-10	562.8	562.37	NP	2.09	560.28	NP	1.84	560.53	NP	2.66	559.71	NP	3.42	558.95	NP	3.71	558.66	NP	2.66	559.71
MW-10R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-11	559.3	559.05	---	---	---	NP	4.80	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-12	562.8	562.30	---	---	---	NP	2.35	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-13	563.9	563.42	---	---	---	NP	3.39	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-14	561.3	560.90	---	---	---	NP	1.89	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-15	560.5	560.10	---	---	---	NP	1.40	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-16	562.6	561.97	---	---	---	NP	0.88	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-16R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-17	556.6	556.16																		
MW-18	556.6	556.48	---	---	---	NP	13.90	542.58												
MW-19	563.51	563.09	NP	3.41	559.68	NP	3.30	559.79	NP	3.60	559.49	NP	4.51	558.58	NP	4.80	558.29	NP	4.65	558.44
MW-20	561.44	561.15	NP	3.21	557.94	NP	3.30	557.85	NP	3.64	557.51	NP	4.86	556.29	NP	5.28	555.87	NP	4.33	556.82
MW-21	560.28	559.91	NP	2.48	557.43	NP	2.02	557.89	NP	3.46	556.45	NP	4.14	555.77	NP	4.35	555.56	NP	3.73	556.18
MW-22	562.16	561.73	NP	3.34	558.39	NP	3.35	558.38	NP	3.60	558.13	NP	5.21	556.52	NP	5.68	556.05	NP	5.12	556.61
RW-1	563.7	563.27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RW-2	563.8	563.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LRW-1	562.9	562.72																		
LRW-2	562.8	562.55																		

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	December 5, 2013 Oil/Water Level			January 6, 2014 Oil/Water Level			February 3, 2014 Oil/Water Level			March 7, 2014 Oil/Water Level			March 20, 2014 Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.53	559.17
MW-2	561.9	561.71	---	---	---	---	---	---	---	---	---	---	---	---	NP	2.27	559.44
MW-2 D	562.0	561.56	---	---	---	---	---	---	---	---	---	---	---	---	---†	---†	---
MW-3	---‡	---‡															
MW-4	---‡	---‡															
MW-5	562.1	561.76	---	---	---	---	---	---	---	---	---	---	---	---	NP	2.39	559.37
MW-6	560.3	559.78	---	---	---	---	---	---	---	---	---	---	---	---	NP	1.59	558.19
MW-7	561.4	560.83	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.15	557.68
MW-8	562.0	561.48	---	---	---	---	---	---	---	---	---	---	---	---	NP	2.53	558.95
MW-9	561.1	560.36	NP	3.43	556.93	NP	3.76	556.60	NP	4.66	555.70	5.02	5.03	555.33	NP	1.31	559.05
MW-10	562.8	562.37	NP	1.95	560.42	NP	3.13	559.24	4.21	5.05	557.32	4.35	4.62	557.75	NP	1.32	561.05
MW-10R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-11	559.3	559.05	---	---	---	---	---	---	---	---	---	---	---	---	NP	9.10	549.95
MW-12	562.8	562.30	---	---	---	---	---	---	---	---	---	---	---	---	---†	---†	---
MW-13	563.9	563.42	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.14	559.28
MW-14	561.3	560.90	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.94	555.96
MW-15	560.5	560.10	---	---	---	---	---	---	---	---	---	---	---	---	NP	0.88	559.22
MW-16	562.6	561.97	---	---	---	---	---	---	---	---	---	---	---	---	NP	0.10	561.87
MW-16R	562.8	562.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-17	556.6	556.16															
MW-18	556.6	556.48															
MW-19	563.51	563.09	NP	4.36	558.73	NP	3.74	---	---	---	---	---	---	---	NP	3.33	559.76
MW-20	561.44	561.15	NP	3.94	557.21	NP	3.80	---	---	---	---	---	---	---	NP	2.43	558.72
MW-21	560.28	559.91	NP	2.64	557.27	NP	3.34	---	---	---	---	---	---	---	NP	1.48	558.43
MW-22	562.16	561.73	NP	4.72	557.01	NP	3.83	---	---	---	---	---	---	---	NP	3.18	558.55
RW-1	563.7	563.27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RW-2	563.8	563.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LRW-1	562.9	562.72															
LRW-2	562.8	562.55															

Notes:
1. Reference elevation based upon vertical datum NGVD 29.
2. ft. btoc = feet below top of casing.
3. * = oily floating product
4. ** = Water table elevation adjusted for thickness and estimated density of floating oil layer
5. (---) = Not measured
6. NP = No product present
7. † = Well inaccessible at time of measurement
8. ‡ = Well installed by others, elevation data not available

Table 2A
Groundwater Monitoring Program Summary - Elevation Measurements
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	Ground Elevation	Reference Elevation	November 12, 2014 Oil/Water Level			May 26, 2015 Oil/Water Level			June 23, 2015 Oil/Water Level			July 20, 2015 Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	NP	5.83	556.87	NP	4.95	557.75	NP	4.33	558.37	NP	4.62	558.08
MW-2	561.9	561.71	NP	5.19	556.52	NP	5.89	555.82	NP	5.24	556.47	NP	6.02	555.69
MW-2 D	562.0	561.56	---†	---†	---	---†	---†	---	---†	---†	---	---†	---†	---
MW-3	---‡	---‡												
MW-4	---‡	---‡												
MW-5	562.1	561.76	NP	4.75	557.01	NP	4.35	557.41	NP	3.67	558.09	NP	4.11	557.65
MW-6	560.3	559.78	NP	3.01	556.77	NP	6.23	553.55	NP	4.77	555.01	NP	5.71	554.07
MW-7	561.4	560.83	NP	5.02	555.81	NP	5.92	554.91	NP	5.29	555.54	NP	6.01	554.82
MW-8	562.0	561.48	NP	5.19	556.29	NP	3.39	558.09	NP	5.69	555.79	NP	6.53	554.95
MW-9	561.1	560.36	NP	4.70	555.66	NP	5.32	555.04	NP	5.04	555.32	NP	5.66	554.70
MW-10	562.8	562.37	---	---	---	---	---	---	---	---	---	---	---	---
MW-10R	562.8	562.51	NP	3.81	558.70	NP	1.94	560.57	NP	1.75	560.76	NP	1.88	560.63
MW-11	559.3	559.05	NP	9.53	549.52	NP	10.93	548.12	NP	9.60	549.45	NP	10.40	548.65
MW-12	562.8	562.30	NP	4.50	557.80	NP	4.02	558.28	NP	3.14	559.16	NP	3.35	558.95
MW-13	563.9	563.42	NP	6.29	557.13	NP	5.57	557.85	NP	4.66	558.76	NP	4.82	558.60
MW-14	561.3	560.90	NP	5.52	555.38	NP	3.60	557.30	NP	2.66	558.24	NP	3.19	557.71
MW-15	560.5	560.10	NP	4.13	555.97	NP	5.35	554.75	NP	4.42	555.68	NP	5.32	554.78
MW-16	562.6	561.97	---	---	---	---	---	---	---	---	---	---	---	---
MW-16R	562.8	562.51	NP	3.78	558.73	NP	2.04	560.47	NP	1.75	560.76	NP	1.89	560.62
MW-17	556.6	556.16												
MW-18	556.6	556.48												
MW-19	563.51	563.09	NP	5.50	557.59	NP	5.19	557.90	NP	4.38	558.71	NP	4.61	558.48
MW-20	561.44	561.15	NP	4.62	556.53	NP	5.63	555.52	NP	4.94	556.21	NP	5.80	555.35
MW-21	560.28	559.91	NP	3.82	556.09	NP	5.66	554.25	NP	4.94	554.97	NP	5.80	554.11
MW-22	562.16	561.73	NP	5.44	556.29	NP	5.49	556.24	NP	5.45	556.28	NP	5.54	556.19
RW-1	563.7	563.27	---	dry	---	NP	4.48	558.79	NP	4.29	558.98	NP	4.62	558.65
RW-2	563.8	563.25	---	dry	---	NP	5.73[9]	---	NP	5.71[9]	---	NP	5.74[9]	---
LRW-1	562.9	562.72							NP	1.84	560.88	NP	2.41	560.31
LRW-2	562.8	562.55							NP	1.66	560.89	NP	2.09	560.46

Notes:
1. Reference elevation based upon vertical datum NGVD 29.
2. ft. btoc = feet below top of casing.
3. * = oily floating product
4. ** = Water table elevation adjusted for thickness and estimated density of floating oil layer
5. (---) = Not measured
6. NP = No product present
7. † = Well inaccessible at time of measurement
8. ‡ = Well installed by others, elevation data not available
9. Notes on measurements at RW-2 on 5/26/2015, 6/23/2015 and 7/20/2015: The water levels measured were a few inches above the bottom of the well and appeared to represent water present in the end cap rather than an indication of the water table depth.

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-2														RW-1		RW-2	MW-3	MW-5
Sample Date			1-May-06	4-Aug-11	3-Nov-11	9-Mar-12	3-May-12	26-Jul-12	16-Nov-12	22-Feb-13	8-Jul-13	20-Mar-14	13-Nov-14	27-May-15	24-Jun-15	20-Jul-15	2-May-06	21-Jul-15	2-May-06	1-May-06	4-Aug-11
Sample ID			BU-MW2-GW	MW-2	MW-2	MW-2	MW-2	BU-MW-2	MW-2	BU-MW-2-02222013	MW-2	BU-MW2-W-R1	BU-MW2-W-111314	BU-MW2-W-PI1	BU-MW2-W-PI2	BU-MW2-W-PI3	RW-1	BU-RW1-W-PI3	RW-2	BU-MW3-GW	MW-5
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Sample Type	Units	TOGS																			
Field Parameters																					
Dissolved Oxygen	mg/L	n/v	-	0	0.7	2.35	0.27	0.27	0.86	0.85	0.12	0.01	0.92	0.12	0.80	0.30	-	1.41^	-	-	0
ORP	eV	n/v	-	-171	-113	-62	-72	-81.7	-52.1	-12.6	-220.4	-14	-12.7	-162.4	-167.7	-180.4	-	-210.0^	-	-	-133
pH	S.U.	n/v	6.92	7.09	7.19	7.15	7.22	7.12	7.21	7.23	7.14	7	7.13	6.29	6.56	6.89	6.49	7.01^	6.97	6.97	6.99
Ferrous Iron	mg/L	n/v	-	0.07	-	-	-	-	-	-	-	-	0.63	-	-	-	-	-	-	-	0.56
Laboratory			CASR	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CASR	PARAROCH	CASR	CASR	PARAROCH
Laboratory Work Order			R2631499	11-3254A	P11-4774	12:1051	12:1907	12:3152	12:4815	130677	132537	141040	145009	152087	152596	153048	R2631499	153048	R2631499	R2631499	11-3254A
Laboratory Sample ID			UNKNOWN	10645	16038	12:1051-04	12:1907-03	12:3152-01	12:4815-04	130677-02	132537-04	141040-01	145009-02	152087-07	152596-07	153048-04	UNKNOWN	153048-09	UNKNOWN	UNKNOWN	10644
TCL Volatile Organic Compounds Detected in Site Groundwater																					
Tetrachloroethylene (PCE)	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Trichloroethylene (TCE)	µg/L	5**[B]	240[B]	5.52[B]	3.00	5.86[B]	4.53	1.05 JB	4.50	18[B]	12.2[B]	13.8[B]	11.6[B]	1.7	2.09	2.00 U	400[B]	20.0 U	13000[B]	10 U	2.00 U
Dichloroethylene, cis-1,2-	µg/L	5**[B]	3800[B]	148[B]	66.2[B]	30.0[B]	43.8[B]	13.7[B]	18.4[B]	30[B]	24.3[B]	25.7[B]	22.8[B]	2.85	5.84[B]	8.97[B]	4600 D[B]	1130[B]	27000[B]	10 U	2.00 U
Dichloroethylene, trans-1,2-	µg/L	5**[B]	26 J[B]	6.66[B]	5.36[B]	3.14	5.98[B]	3.44	5.54[B]	3.5	6.64[B]	3.75	3.61	2.00 U	2.00 U	2.00 U	27 J[B]	12.8 J[B]	2000 U	10 U	2.00 U
Vinyl chloride	µg/L	2[B]	560[B]	146[B]	35.5[B]	7.33[B]	11.9[B]	4.00[B]	2.66[B]	4.1[B]	9.03[B]	5.60[B]	2.74[B]	2.00 U	5.55[B]	8.79[B]	1200[B]	961[B]	2000 U	10 U	2.00 U
Trichloroethane, 1,1,1-	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	230 J[B]	10 U	2.00 U
Dichloroethane, 1,1-	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	250[B]	195[B]	160 J[B]	10 U	2.00 U
Dichloroethene, 1,1-	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	1.11 J	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Chloroethane	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Dichloroethane, 1,2-	µg/L	0.6[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Chloroform (Trichloromethane)	µg/L	7[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.14	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Benzene	µg/L	1[B]	200 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	1.00 U	1.00 U	200 U	10.0 U	2000 U	10 U	0.700 U
Xylene, m & p-	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Toluene	µg/L	5**[B]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Methylcyclohexane	µg/L	n/v	-	2.00 U	-	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	-	20.0 U	-	-	2.00 U
Acetone	µg/L	50[A]	200 U	10.0 U	10.0 U	10.0 U	7.05 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	7.15 J	8.24 J	18.8	200 U	10.0 U	2000 U	10 U	10.0 U
Butanone, -2 (MEK)	µg/L	50[A]	200 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	9.12 J	10.0 U	10.0 U	200 U	100 U	2000 U	10 U	10.0 U
Carbon Disulfide	µg/L	60[A]	200 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	12.5	1.33 J	2.00 U	200 U	20.0 U	2000 U	10 U	2.00 U
Methylene Chloride	µg/L	5**[B]	200 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	4.9	5.00 U	5.00 U	200 U	50.0 U	2000 U	10 U	5.00 U
VOC - Tentatively Identified Compounds																					
Total VOC TICs	µg/L	n/v	-	5 U	-	-	-	5 U	-	-	5 U	-	5 U	-	-	-	-	-	-	-	5 U
Volatile Gases																					
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Inorganics																					
Arsenic	mg/L	25[D]	-	-	-	-	-	-	-	-	-	-	0.0772	0.14	0.0488	0.0286	-	0.120	-	-	-
Iron	mg/L	300[D]	-	-	-	-	-	-	-	-	-	-	6.25	26.7	20.8	11.9	-	99.8	-	-	-
Manganese	mg/L	500[D]	-	-	-	-	-	-	-	-	-	-	0.893	4.76	3.57	3.83	-	0.917	-	-	-
Sodium	mg/L	20000[D]	-	-	-	-	-	-	-	-	-	-	58.3	-	-	-	-	-	-	-	-
General Chemistry Parameters																					
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	305	-	-	-	-	-	-	-	-	340	-	-	-	-	-	-	-	285
Chloride	mg/L	250[B]	-	90.5	-	-	-	-	-	-	-	-	152	-	-	-	-	-	-	-	627[B]
Nitrate (as N)	mg/L	n/v	-	0.02 U	-	-	-	-	-	-	-	-	0.16	-	-	-	-	-	-	-	0.02
Sulfate	mg/L	250[B]	-	57.9	-	-	-	-	-	-	-	-	94.7	-	-	-	-	-	-	-	204
Total Organic Carbon	mg/L	n/v	-	7.7	-	-	-	-	-	-	-	-	5.4	340	78.4	18	-	46	-	-	5.5
Laboratory											SIREM			SIREM					
Laboratory Work Order											S-3420			S-3637					
Laboratory Sample ID											DHC-11005			DHC-12012					
Gene-Trac Dehalococcoides Assay																					
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	0.008-0.02	-	-	0.003-0.009	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	100000	-	-	500000	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	0.02-0.07	-	-	0.02-0.05	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	300000	-	-	3000000	-	-	-	-	-
Laboratory													OU			OU					
Laboratory Work Order													872			935					
Laboratory Sample ID													MW-2			MW-2					
Carbon Stable Isotope Analysis (CSIA)																					
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-10.0	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-15.4	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-26.2	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-6												
Sample Date			**1-May-06**	**3-Aug-11**	**2-Nov-11**	**8-Mar-12**	**2-May-12**	**25-Jul-12**	**15-Nov-12**	**9-Jul-13**	**20-Mar-14**	**13-Nov-14**	**27-May-15**	**23-Jun-15**	**21-Jul-15**
Sample ID			**BU-MW6-GW**	**MW-6**	**MW-6**	**MW-6**	**MW-6**	**BU-MW-6**	**MW-6**	**MW-6**	**BU-MW6-W-R1**	**BU-MW6-W-111314**	**BU-MW6-W-PI1**	**BU-MW6-W-PI2**	**BU-MW6-W-PI3**
Sampling Company			**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**
Sample Type	**Units**	**TOGS**													
Field Parameters															
Dissolved Oxygen	mg/L	n/v	-	2.35	1	2.25	0.38	0.37	0.6	0.26	0.58	0.71	0.15	0.50	0.15
ORP	eV	n/v	-	51	104	147	87.9	82.3	-57.9	-134.8	138.4	121.7	-188.6	-277.3	-331.0
pH	S.U.	n/v	7.19	7.15	7.14	7.07	7.33	7.2	7.21	7.19	7.25	7.06	6.97	6.97	7.09
Ferrous Iron	mg/L	n/v	-	0.1	-	-	-	-	-	-	-	0	-	-	-
Laboratory			**CASR**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**
Laboratory Work Order			**R2631499**	**11-3216A**	**P11-4734**	**12:1025**	**12:1882**	**12:3126**	**12:4794**	**132537**	**141040**	**145009**	**152087**	**152596**	**153048**
Laboratory Sample ID			**UNKNOWN**	**10548**	**15928**	**12:1025-04**	**12:1882-02**	**12:3126-01**	**12:4794-02**	**132537-06**	**141040-03**	**145009-04**	**152087-03**	**152596-04**	**153048-06**
TCL Volatile Organic Compounds Detected in Site Groundwater															
Tetrachloroethylene (PCE)	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethylene (TCE)	µg/L	5_{**}^{B}	**2400^{B}**	2.00 U	2.00 U	2.00 U	2.00 U	1.50 J	2.00 U	2.00 U	2.00 U	2.00 U	**33.0^{B}**	2.00 U	2.00 U
Dichloroethylene, cis-1,2-	µg/L	5_{**}^{B}	**720^{B}**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	**15.1^{B}**	2.00 U	2.00 U
Dichloroethylene, trans-1,2-	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2^{B}	**50^{B}**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	**3.14^{B}**	2.00 U	2.00 U
Trichloroethane, 1,1,1-	µg/L	5_{**}^{B}	**25 J^{B}**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,1-	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethene, 1,1-	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Chloroethane	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1^{B}	***200 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Dichloroethane, 1,2-	µg/L	0.6^{B}	***200 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Chloroform (Trichloromethane)	µg/L	7^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Benzene	µg/L	1^{B}	***200 U***	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	1.00 U	1.00 U
Xylene, m & p-	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	1.10 J B	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Toluene	µg/L	5_{**}^{B}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylcyclohexane	µg/L	n/v	-	2.00 U	-	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Acetone	µg/L	50^{A}	***200 U***	10.0 U	10.0 U	10.0 U	7.55 J	10.0 U	9.48 J	10.0 U	10.0 U	10.0 U	10.0 U	7.14 J	6.95 J
Butanone, -2 (MEK)	µg/L	50^{A}	***200 U***	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon Disulfide	µg/L	60^{A}	***200 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	1.98 J	1.44 J	2.00 U
Methylene Chloride	µg/L	5_{**}^{B}	***200 U***	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
VOC - Tentatively Identified Compounds															
Total VOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-	-	5 U	-	-	-
Volatile Gases															
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	0.67 J	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	<1	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	<1	-	-	-
Inorganics															
Arsenic	mg/L	25^{P}	-	-	-	-	-	-	-	-	-	0.01U	0.01U	0.00754 J	0.00996 J
Iron	mg/L	300^{P}	-	-	-	-	-	-	-	-	-	0.0781 J	2.07	2.24	3.21
Manganese	mg/L	500^{P}	-	-	-	-	-	-	-	-	-	1.92	29.2	11.7	5.93
Sodium	mg/L	20000^{P}	-	-	-	-	-	-	-	-	-	51.5	-	-	-
General Chemistry Parameters															
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	220	-	-	-	-	-	-	-	210	-	-	-
Chloride	mg/L	250^{B}	-	215	-	-	-	-	-	-	-	148	-	-	-
Nitrate (as N)	mg/L	n/v	-	1.61	-	-	-	-	-	-	-	0.6	-	-	-
Sulfate	mg/L	250^{B}	-	69.3	-	-	-	-	-	-	-	39.4	-	-	-
Total Organic Carbon	mg/L	n/v	-	3.2	-	-	-	-	-	-	-	2.5	62	6.2	6.7
Laboratory															
Laboratory Work Order															
Laboratory Sample ID															
Gene-Trac Dehalococcoides Assay															
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory															
Laboratory Work Order															
Laboratory Sample ID															
Carbon Stable Isotope Analysis (CSIA)															
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			**MW-7**													
Sample Date			**1-May-06**	**4-Aug-11**	**2-Nov-11**	**9-Mar-12**	**3-May-12**	**25-Jul-12**	**15-Nov-12**	**22-Feb-13**	**9-Jul-13**	**20-Mar-14**	**12-Nov-14**	**27-May-15**	**23-Jun-15**	**21-Jul-15**
Sample ID			**BU-MW7-GW**	**MW-7**	**MW-7**	**MW-7**	**MW-7**	**BU-MW-7**	**MW-7**	**BU-MW-7-02222013**	**MW-7**	**BU-MW7-W-R1**	**BU-MW7-W-111214**	**BU-MW7-W-PI1**	**BU-MW7-W-PI2**	**BU-MW7-W-PI3**
Sampling Company			**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**
Sample Type	**Units**	**TOGS**														
Field Parameters																
Dissolved Oxygen	mg/L	n/v	-	0	1.0	2.91	0.94	0.27	0.24	0.82	0.17	3.13	0.30	0.21	1.00	0.38
ORP	eV	n/v	-	-80	70	49	64.4	38.9	-77.8	105.6	-142.1	153.6	129.5	-64.9	18.8	-121.1
pH	S.U.	n/v	6.95	7.13	7.13	6.79	7.18	7.11	7.13	7.17	7.15	7.1	6.91	7.02	7.02	7.11
Ferrous Iron	mg/L	n/v	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory			**CASR**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**
Laboratory Work Order			**R2631499**	**11-3254A**	**P11-4734**	**12:1051**	**12:1907**	**12:3126**	**12:4794**	**130677**	**132537**	**141040**	**144993**	**152087**	**152596**	**153048**
Laboratory Sample ID			**UNKNOWN**	**10647**	**15927**	**12:1051-01**	**12:1907-04**	**12:3126-02**	**12:4794-01**	**130677-05**	**132537-08**	**141040-02**	**144993-01**	**152087-06**	**152596-05**	**153048-07**
TCL Volatile Organic Compounds Detected in Site Groundwater																
Tetrachloroethylene (PCE)	µg/L	5_{**}^{B}	2 J	4.34	2.04	1.67 J	2.09	2.01	2.00 U	2.00 U	1.07 J	2.00 U	1.24J	2.00 U	1.64 J	2.00 U
Trichloroethylene (TCE)	µg/L	5_{**}^{B}	**10^{B}**	**11.8^{B}**	**6.84^{B}**	**6.35^{B}**	**6.45^{B}**	**7.43^{B}**	4.96	3.0	**6.89^{B}**	4.26	**7.73^{B}**	3.79	**11.3^{B}**	2.99
Dichloroethylene, cis-1,2-	µg/L	5_{**}^{B}	**20^{B}**	**6.22^{B}**	4.17	**5.80^{B}**	4.46	**5.39^{B}**	**5.67^{B}**	3.3	**5.50^{B}**	4.50	**6.57^{B}**	4.45	**8.29^{B}**	2.95
Dichloroethylene, trans-1,2-	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2^{B}	2 J	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,1-	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,1-	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethene, 1,1-	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Chloroethane	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1^{B}	***10 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Dichloroethane, 1,2-	µg/L	0.6^{B}	***10 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Chloroform (Trichloromethane)	µg/L	7^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Benzene	µg/L	1^{B}	***10 U***	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	1.00 U	1.00 U
Xylene, m & p-	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Toluene	µg/L	5_{**}^{B}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylcyclohexane	µg/L	n/v	-	2.00 U	-	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Acetone	µg/L	50^{A}	10 U	10.0 U	10.0 U	10.0 U	9.88 J	10.0 U	6.33 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Butanone, -2 (MEK)	µg/L	50^{A}	10 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon Disulfide	µg/L	60^{A}	***10 U***	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene Chloride	µg/L	5_{**}^{B}	***10 U***	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
VOC - Tentatively Identified Compounds																
Total VOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	49.1	-	-	-
Volatile Gases																
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																
Arsenic	mg/L	25^{D}	-	-	-	-	-	-	-	-	-	-	0.01U	0.00646	0.00726	0.00680
Iron	mg/L	300^{D}	-	-	-	-	-	-	-	-	-	-	0.319	0.353	0.134	0.537
Manganese	mg/L	500^{D}	-	-	-	-	-	-	-	-	-	-	1.54	2.95	2.87	3.44
Sodium	mg/L	20000^{D}	-	-	-	-	-	-	-	-	-	-	115	-	-	-
General Chemistry Parameters																
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	215	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/L	250^{B}	-	161	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	n/v	-	0.02 U	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	250^{B}	-	**890^{B}**	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	n/v	-	7.3	-	-	-	-	-	-	-	-	<1.0	5.1	5.7	6.4
Laboratory																
Laboratory Work Order																
Laboratory Sample ID																
Gene-Trac Dehalococcoides Assay																
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory																
Laboratory Work Order																
Laboratory Sample ID																
Carbon Stable Isotope Analysis (CSIA)																
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-8														MW-9		MW-10	MW-10R
Sample Date			1-May-06	3-Aug-11	2-Nov-11	8-Mar-12	2-May-12	25-Jul-12	16-Nov-12	22-Feb-13	9-Jul-13	20-Mar-14	13-Nov-14	27-May-15	24-Jun-15	21-Jul-15	1-May-06	12-Nov-14	1-May-06	13-Nov-14
Sample ID			BU-MW8-GW	MW-8	MW-8	MW-8	MW-8	BU-MW-8	MW-8	BU-MW-8-02222013	MW-8	BU-MW8-W-R1	BU-MW8-W-111314	BU-MW8-W-PI1	BU-MW8-W-PI2	BU-MW8-W-PI3	BU-MW9-GW	BU-MW9-W-111214	BU-MW10-GW	BU-MW10R-W-111214
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Sample Type	Units	TOGS																		
Field Parameters																				
Dissolved Oxygen	mg/L	n/v	-	4.76	1.67	1.84	0.99	0.94	0.56	1	0.49	3.65	2.29	0.22	0.52	0.43	-	1.97	-	0.44
ORP	eV	n/v	-	76	202	149	128.9	76.2	-51.7	84.7	-67.2	106.6	99.9	-201.4	-150.8	-201.4	-	102.2	-	-135.2
pH	S.U.	n/v	7.58	7.47	7.55	7.3	7.38	7.4	7.39	7.42	7.44	7.56	7.3	7.44	7.32	7.47	6.79	7.91	6.55	6.45
Ferrous Iron	mg/L	n/v	-	0.05	-	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-	-
Laboratory			CASR	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CASR	PARAROCH	CASR	PARAROCH
Laboratory Work Order			R2631499	11-3216A	P11-4734	12:1025	12:1882	12:3126	12:4815	130677	132537	141040	145009	152087	152596	153048	R2631499	144993	R2631499	145009
Laboratory Sample ID			UNKNOWN	10549	15929	12:1025-03	12:1882-04	12:3126-03	12:4815-01	130677-03	132537-07	141040-08	145009-03	152087-05	152596-06	153048-08	UNKNOWN	144993-04	UNKNOWN	145009-01
TCL Volatile Organic Compounds Detected in Site Groundwater																				
Tetrachloroethylene (PCE)	µg/L	5** [B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Trichloroethylene (TCE)	µg/L	5** [B]	1700[B]	449[B]	442[B]	315[B]	150[B]	84.0[B]	361[B]	1100[B]	15000[B]	18400[B]	3970[B]	20.8[B]	49.2[B]	50.5[B]	21[B]	2.00 U	160 J[B]	792 J[B]
Dichloroethylene, cis-1,2-	µg/L	5** [B]	3300[B]	241[B]	215[B]	163[B]	91.8[B]	86.8[B]	192[B]	240[B]	1990[B]	2380[B]	611[B]	134[B]	99.6[B]	59.5[B]	250[B]	2.00 U	3000[B]	3880[B]
Dichloroethylene, trans-1,2-	µg/L	5** [B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	1.16 J	2.00 U	1.9 J	2.00 U	200 U	200 U
Vinyl chloride	µg/L	2[B]	150 J[B]	22.0[B]	18.6[B]	12.5[B]	4.84[B]	5.81[B]	12.6[B]	20 U	1000 U	1000 U	24.2 J[B]	15.9[B]	11.1[B]	6.53[B]	53[B]	2.00 U	910[B]	260[B]
Trichloroethane, 1,1,1-	µg/L	5** [B]	200 U	3.81 J	5.00 U	2.92 J	1.5 J	2.00 U	2.73 J	20 U	1000 U	1000 U	20.2 J[B]	2.00 U	2.00 U	2.00 U	9 J[B]	2.00 U	200 U	200 U
Dichloroethane, 1,1-	µg/L	5** [B]	14 J[B]	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	170[B]	2.00 U	330[B]	137 J[B]
Dichloroethene, 1,1-	µg/L	5** [B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Chloroethane	µg/L	5** [B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	5.4 J[B]	2.00 U	200 U	200 U
Trichloroethane, 1,1,2-	µg/L	1[B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Dichloroethane, 1,2-	µg/L	0.6[B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Chloroform (Trichloromethane)	µg/L	7[B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.67	2.02	1.52 J	20 U	2.00 U	200 U	200 U
Benzene	µg/L	1[B]	200 U	1.75 U	1.75 U	1.40 U	0.700 U	0.700 U	1.40 U	7 U	350 U	350 U	14 U	0.700 U	1.00 U	1.00 U	20 U	0.700 U	200 U	200 U
Xylene, m & p-	µg/L	5** [B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Toluene	µg/L	5** [B]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Methylcyclohexane	µg/L	n/v	-	5.00 U	-	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	-	2.00 U	-	200 U
Acetone	µg/L	50[A]	200 U	25.0 U	25.0 U	20.0 U	8.58 J	10.0 U	20.0 U	53 J[A]	3600 J[A]	5000 U	200 U	10.0 U	10.0 U	10.0 U	8.9 J	10.0 U	200 U	200 U
Butanone, -2 (MEK)	µg/L	50[A]	200 U	25.0 U	25.0 U	20.0 U	8.58 J	10.0 U	20.0 U	100 U	5000 U	5000 U	200 U	10.0 U	10.0 U	10.0 U	100 U	10.0 U	200 U	200 U
Carbon Disulfide	µg/L	60[A]	200 U	5.00 U	5.00 U	4.00 U	2.00 U	2.00 U	4.00 U	20 U	1000 U	1000 U	40 U	2.00 U	2.00 U	2.00 U	20 U	2.00 U	200 U	200 U
Methylene Chloride	µg/L	5** [B]	200 U	12.5 U	12.5 U	10.0 U	5.00 U	5.00 U	10.0 U	50 U	2500 U	2500 U	100 U	5.00 U	5.00 U	5.00 U	20 U	5.00 U	200 U	200 U
VOC - Tentatively Identified Compounds																				
Total VOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	100 U	-	-	-	-	25.4	-	500 U
Volatile Gases																				
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	190	-	-	-	-	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	5.8	-	-	-	-	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	1.6	-	-	-	-	-	-	-
Inorganics																				
Arsenic	mg/L	25[B]	-	-	-	-	-	-	-	-	-	-	0.01 U	0.0085	0.0116	0.0121	-	0.01U	-	0.0324
Iron	mg/L	300[B]	-	-	-	-	-	-	-	-	-	-	1.42	4.39	2.70	2.39	-	8.39	-	40.1
Manganese	mg/L	500[B]	-	-	-	-	-	-	-	-	-	-	0.912	6.06	2.90	1.68	-	0.27	-	1.76
Sodium	mg/L	20000[B]	-	-	-	-	-	-	-	-	-	-	912	-	-	-	-	78.1	-	567
General Chemistry Parameters																				
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	155	-	-	-	-	-	-	-	-	220	-	-	-	-	-	-	-
Chloride	mg/L	250[B]	-	221	-	-	-	-	-	-	-	-	1480	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	n/v	-	0.57	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-
Sulfate	mg/L	250[B]	-	40.3	-	-	-	-	-	-	-	-	89.1	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	n/v	-	3.1	-	-	-	-	-	-	-	-	2.2	10	5.6	4.6	-	2.2	-	86.2
Laboratory											SIREM			SIREM				
Laboratory Work Order																				
Laboratory Sample ID																				
Gene-Trac Dehalococcoides Assay																				
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	NA	-		NA	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	3000 U	-		3000 U	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Laboratory													OU			OU				
Laboratory Work Order													872			935				
Laboratory Sample ID													MW-8			MW-8				
Carbon Stable Isotope Analysis (CSIA)																				
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-31.3	-	-	-28.5	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-25.0	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-34.2	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-11													
Sample Date			1-May-06	4-Aug-11	3-Nov-11	8-Mar-12	2-May-12	25-Jul-12	15-Nov-12	22-Feb-13	9-Jul-13	20-Mar-14	13-Nov-14	27-May-15	23-Jun-15	21-Jul-15
Sample ID			BU-MW11-GW	MW-11	MW-11	MW-11	MW-11	BU-MW-11	MW-11	BU-MW-11-02222013	MW-11	BU-MW11-W-R1	BU-MW11-W-111314	BU-MW11-W-PI1	BU-MW11-W-PI2	BU-MW11-W-PI3
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Sample Type	Units	TOGS														
Field Parameters																
Dissolved Oxygen	mg/L	n/v	-	0	1.4	0.81	0.3	0.29	0.29	7.19	2.19	5.55	6.78	0.27	0.47	1.57
ORP	eV	n/v	-	-30	30	51	-27.2	128.5	-31.9	121.9	-52.7	167.4	143.3	-225.6	-195.3	-174.7
pH	S.U.	n/v	6.84	7.1	7.13	6.95	7.23	7.04	7.13	7.24	7.15	7.11	7.38	6.99	7.03	7.16
Ferrous Iron	mg/L	n/v	-	0.05	-	-	-	-	-	-	-	-	0	-	-	-
Laboratory			CASR	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			R2631499	11-3254A	P11-4774	12:1025	12:1882	12:3126	12:4794	130677	132537	141040	145009	152087	152596	153048
Laboratory Sample ID			UNKNOWN	10646	16037	12:1025-02	12:1882-03	12:3126-04	12:4794-03	130677-04	132537-05	141040-04	145009-05	152087-04	152596-03	153048-05
TCL Volatile Organic Compounds Detected in Site Groundwater																
Tetrachloroethylene (PCE)	µg/L	5**^{B}	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethylene (TCE)	µg/L	5**^{B}	110^B	33.6^B	10.3^B	14.1^B	8.9^B	10.8^B	14.4^B	27^B	21.5^B	22.0^B	11.3^B	4.87	7.70^B	7.30^B
Dichloroethylene, cis-1,2-	µg/L	5**^{B}	740^B	372^B	78.3^B	131^B	135^B	147^B	140^B	380^B	439^B	546^B	148^B	67.4^B	107^B	108^B
Dichloroethylene, trans-1,2-	µg/L	5**^{B}	4 J	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2^B	45^B	23.5^B	5.29^B	14.2^B	13.9^B	10.8^B	13.0^B	19 J^B	24.4^B	22.0^B	6.99^B	2.86	5.23^B	5.01^B
Trichloroethane, 1,1,1-	µg/L	5**^{B}	21 J^B	3.53 J	2.00 U	1.28 J	1.02 J	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,1-	µg/L	5**^{B}	87^B	58.2^B	9.64^B	26.4^B	22^B	17.6^B	13.0^B	36^B	27.3^B	36.2^B	10.2^B	3.38	8.74^B	9.46^B
Dichloroethene, 1,1-	µg/L	5**^{B}	6 J^B	3.22 J	2.00 U	1.44 J	1.42 J	1.30 J	1.87 J	20 U	10.0 U	20.0 U	1.64 J	2.00 U	1.02 J	2.00 U
Chloroethane	µg/L	5**^{B}	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1^B	2 J^B	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,2-	µg/L	0.6^B	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Chloroform (Trichloromethane)	µg/L	7^B	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Benzene	µg/L	1^B	40 U	1.40 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	7 U	3.50 U	7.00 U	0.700 U	0.700 U	1.00 U	1.00 U
Xylene, m & p-	µg/L	5**^{B}	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Toluene	µg/L	5**^{B}	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylcyclohexane	µg/L	n/v	-	4.00 U	-	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Acetone	µg/L	50^A	40 U	20.0 U	10.0 U	10.0 U	9.84 J	5.45 J	10.1	100 U	39.7 J	100 U	10.0 U	10.0 U	10.0 U	10.0 U
Butanone, -2 (MEK)	µg/L	50^A	40 U	20.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	100 U	50 U	100 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon Disulfide	µg/L	60^A	40 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	20 U	10.0 U	20.0 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene Chloride	µg/L	5**^{B}	40 U	10.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	50 U	25.0 U	50.0 U	5.00 U	5.00 U	5.00 U	5.00 U
VOC - Tentatively Identified Compounds																
Total VOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	5 U	-	-	-
Volatile Gases																
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	<1	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	0.69 J	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	0.51 J	-	-	-
Inorganics																
Arsenic	mg/L	25^B	-	-	-	-	-	-	-	-	-	-	0.01U	0.0102	0.0190	0.0116
Iron	mg/L	300^D	-	-	-	-	-	-	-	-	-	-	1.09	3.37	4.65	3.50
Manganese	mg/L	500^B	-	-	-	-	-	-	-	-	-	-	34.7	16.6	11.5	4.30
Sodium	mg/L	20000^D	-	-	-	-	-	-	-	-	-	-	134	-	-	-
General Chemistry Parameters																
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	295	-	-	-	-	-	-	-	-	230	-	-	-
Chloride	mg/L	250^B	-	194	-	-	-	-	-	-	-	-	341	-	-	-
Nitrate (as N)	mg/L	n/v	-	0.09	-	-	-	-	-	-	-	-	0.2	-	-	-
Sulfate	mg/L	250^B	-	114	-	-	-	-	-	-	-	-	108	-	-	-
Total Organic Carbon	mg/L	n/v	-	4.7	-	-	-	-	-	-	-	-	4.2	14	22.5	4.3
Laboratory																
Laboratory Work Order																
Laboratory Sample ID																
Gene-Trac Dehalococcoides Assay																
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory																
Laboratory Work Order																
Laboratory Sample ID																
Carbon Stable Isotope Analysis (CSIA)																
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Stantec

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-14												
Sample Date			**2-Aug-11**	**3-Nov-11**	**9-Mar-12**	**3-May-12**	**26-Jul-12**	**16-Nov-12**	**22-Feb-13**	**8-Jul-13**	**20-Mar-14**	**12-Nov-14**	**26-May-15**	**23-Jun-15**	**20-Jul-15**
Sample ID			**MW-14**	**MW-14**	**MW-714**	**MW-14**	**BU-MW-14**	**MW-14**	**BU-MW-14-02222013**	**MW-14**	**BU-MW14-W-R1**	**BU-MW14-W-111214**	**BU-MW14-W-PI1**	**BU-MW14-W-PI2**	**BU-MW14-W-PI3**
Sampling Company			**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**
Sample Type	**Units**	**TOGS**													
Field Parameters															
Dissolved Oxygen	mg/L	n/v	0	2.1	2.55	1.19	0.28	1.95	2.25	0.26	5.06	0.55	0.27	1.10*	0.26
ORP	eV	n/v	-48	149	59	106.7	99.5	-6.8	167.5	-165.7	88.7	136.3	-37.7	214.1*	39.1
pH	S.U.	n/v	7.12	7.13	7.25	7.22	7.02	7.13	6.94	6.95	6.84	6.9	7.0	7.04*	6.98
Ferrous Iron	mg/L	n/v	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory			**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**
Laboratory Work Order			**11-3190A**	**P11-4774**	**12:1051**	**12:1907**	**12:3152**	**12:4815**	**130677**	**132537**	**141040**	**144993**	**152087**	**152596**	**153048**
Laboratory Sample ID			**10468**	**16036**	**12:1051-03**	**12:1907-02**	**12:3152-02**	**12:4815-02**	**130677-01**	**132537-02**	**141040-07**	**144993-02**	**152087-01**	**152596-02**	**153048-01**
TCL Volatile Organic Compounds Detected in Site Groundwater															
Tetrachloroethylene (PCE)	µg/L	5^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethylene (TCE)	µg/L	5^{B}	**14.7^{B}**	**7.18^{B}**	3.11	3.29	**5.56^{B}**	**5.17^{B}**	2.8	**6.67^{B}**	2.62	**5.62^{B}**	**6.94^{B}**	**6.03^{B}**	**7.36^{B}**
Dichloroethylene, cis-1,2-	µg/L	5^{B}	**172^{B}**	**112^{B}**	**41.8^{B}**	**40.1^{B}**	**54.9^{B}**	**53.4^{B}**	**32^{B}**	**52.4^{B}**	**23.2^{B}**	**51.4^{B}**	**53.9^{B}**	**40.8^{B}**	**48.5^{B}**
Dichloroethylene, trans-1,2-	µg/L	5^{B}	1.65 J	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	1.05 J	2.00 U	1.05 J	1.07 J	1.01 J	1.06 J
Vinyl chloride	µg/L	2^{B}	**15.7^{B}**	**6.15^{B}**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	1.34 J	2.00 U	3.04	**8.30^{B}**	**3.96^{B}**	**4.12^{B}**
Trichloroethane, 1,1,1-	µg/L	5^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,1-	µg/L	5^{B}	**30.0^{B}**	**21.9^{B}**	**11.1^{B}**	**11.3^{B}**	**14.1^{B}**	**16.1^{B}**	**9.1^{B}**	**13.6^{B}**	**5.71^{B}**	**14.6^{B}**	**14.7^{B}**	**12.9^{B}**	**14.3^{B}**
Dichloroethene, 1,1-	µg/L	5^{B}	2.60	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Chloroethane	µg/L	5^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1^{B}	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Dichloroethane, 1,2-	µg/L	0.6^{B}	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Chloroform (Trichloromethane)	µg/L	7^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Benzene	µg/L	1^{B}	0.351 J	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	1.00 U	1.00 U
Xylene, m & p-	µg/L	5^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	1.04 J B	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Toluene	µg/L	5^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylcyclohexane	µg/L	n/v	2.00 U	-	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Acetone	µg/L	50^{A}	10.0 U	10.0 U	10.0 U	8.96 J	10.0 U	10.0 U	10.0 U	6.86 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Butanone, -2 (MEK)	µg/L	50^{A}	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon Disulfide	µg/L	60^{A}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene Chloride	µg/L	5^{B}	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
VOC - Tentatively Identified Compounds															
Total VOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-	-	40.6	-	-	-
Volatile Gases															
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics															
Arsenic	mg/L	25^{D}	-	-	-	-	-	-	-	-	-	0.01U	0.00828 J	0.00699 J	0.00559 J
Iron	mg/L	300^{D}	-	-	-	-	-	-	-	-	-	0.417	0.59	1.67	1.56
Manganese	mg/L	500^{D}	-	-	-	-	-	-	-	-	-	6.56	6.63	3.62	15.5
Sodium	mg/L	20000^{D}	-	-	-	-	-	-	-	-	-	683	-	-	-
General Chemistry Parameters															
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	275	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/L	250^{B}	130	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	n/v	0.02 U	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	250^{B}	**307^{B}**	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	n/v	6.8	-	-	-	-	-	-	-	-	4.7	6.0	7.3	6.5
Laboratory															
Laboratory Work Order															
Laboratory Sample ID															
Gene-Trac Dehalococcoides Assay															
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory															
Laboratory Work Order															
Laboratory Sample ID															
Carbon Stable Isotope Analysis (CSIA)															
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			**MW-15**							
Sample Date			**2-Aug-11**	**26-Jul-12**	**8-Jul-13**	**21-Mar-14**	**12-Nov-14**	**26-May-15**	**23-Jun-15**	**20-Jul-15**
Sample ID			**MW-15**	**BU-MW-15**	**MW-15**	**BU-MW15-W-R1**	**BU-MW15-W-111214**	**BU-MW15-W-PI1**	**BU-MW15-W-PI2**	**BU-MW15-W-PI3**
Sampling Company			**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**
Sample Type	**Units**	**TOGS**								
Field Parameters										
Dissolved Oxygen	mg/L	n/v	0	0.24	1.44	7.06	0.99	0.37	0.80	0.26
ORP	eV	n/v	68	75.1	-113.5	190.1	140.4	-58.1	205.9	10.4
pH	S.U.	n/v	7.26	7.28	7.22	7.12	6.89	7.16	7.13	7.25
Ferrous Iron	mg/L	n/v	0.05	-	-	-	-	-	-	-
Laboratory			**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**
Laboratory Work Order			**11-3190A**	**12:3152**	**132537**	**141040**	**144993**	**152087**	**152596**	**153048**
Laboratory Sample ID			**10467**	**12:3152-03**	**132537-03**	**141040-05**	**144993-03**	**152087-02**	**152596-01**	**153048-02**
TCL Volatile Organic Compounds Detected in Site Groundwater										
Tetrachloroethylene (PCE)	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethylene (TCE)	µg/L	5_{**}^{B}	1.29 J	1.49 J	2.00 U	2.00 U	2.00 U	1.20	2.00 U	2.00 U
Dichloroethylene, cis-1,2-	µg/L	5_{**}^{B}	3.65	4.21	4.26	1.31 J	**13.3^{B}**	3.26	2.06	2.00
Dichloroethylene, trans-1,2-	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,1-	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,1-	µg/L	5_{**}^{B}	1.07 J	1.07 J	2.00 U	2.00 U	1.17 J	2.00 U	2.00 U	2.00 U
Dichloroethene, 1,1-	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Chloroethane	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1^{B}	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Dichloroethane, 1,2-	µg/L	0.6^{B}	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Chloroform (Trichloromethane)	µg/L	7^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Benzene	µg/L	1^{B}	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	0.700 U	1.00 U	1.00 U
Xylene, m & p-	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Toluene	µg/L	5_{**}^{B}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylcyclohexane	µg/L	n/v	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Acetone	µg/L	50^{A}	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Butanone, -2 (MEK)	µg/L	50^{A}	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon Disulfide	µg/L	60^{A}	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene Chloride	µg/L	5_{**}^{B}	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
VOC - Tentatively Identified Compounds										
Total VOC TICs	µg/L	n/v	-	5 U	5 U	-	33.4	-	-	-
Volatile Gases										
Methane	µg/L	n/v	-	-	-	-	-	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-
Inorganics										
Arsenic	mg/L	25^{D}	-	-	-	-	0.01U	0.0102	0.00812 J	0.0100 U
Iron	mg/L	300^{D}	-	-	-	-	0.185	0.258	0.0551 J	0.253
Manganese	mg/L	500^{B}	-	-	-	-	2.13	0.881	0.274	0.753
Sodium	mg/L	20000^{D}	-	-	-	-	602	-	-	-
General Chemistry Parameters										
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	260	-	-	-	-	-	-	-
Chloride	mg/L	250^{B}	**273^{B}**	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	n/v	0.36	-	-	-	-	-	-	-
Sulfate	mg/L	250^{B}	169	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	n/v	3.3	-	-	-	5.5	2.5	8.2	3.1
Laboratory										
Laboratory Work Order										
Laboratory Sample ID										
Gene-Trac Dehalococcoides Assay										
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-
Laboratory										
Laboratory Work Order										
Laboratory Sample ID										
Carbon Stable Isotope Analysis (CSIA)										
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-16													MW-16R			
Sample Date			1-May-06	1-May-06	1-May-06	15-Sep-06	5-Aug-11	2-Nov-11	9-Mar-12	3-May-12	26-Jul-12	16-Nov-12	21-Feb-13	8-Jul-13	20-Mar-14	14-Nov-14	27-May-15	24-Jun-15	20-Jul-15
Sample ID			BU-DUP-GW	BU-MW16-GW	BU-MW16-GW	BU-MW16-GW	MW-16	MW-16	MW-16	MW-16	BU-MW-16	MW-16	BU-MW-16 022113	MW-16	BU-MW16-W-R1	BU-MW16R-W-111414	BU-MW16R-W-PI1	BU-MW16R-W-PI2	BU-MW16R-W-PI3
Sampling Company			STANTEC	DEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Sample Type	Units	TOGS	Field Duplicate																
Field Parameters																			
Dissolved Oxygen	mg/L	n/v	-	-	-	-	3.08	1	5.69	0.09	4.61	0.31	1.95	0.06	0.18	0.23	0.17	0.61	0.07
ORP	eV	n/v	-	-	-	-	-159	-97	-16	10.5	-59.6	-122.2	-78.4	-224.7	-84	-92.2	-302.2	-363.2	-315.6
pH	S.U.	n/v	6.59	-	6.59	6.85	6.82	6.64	6.83	7.12	7.37	6.94	6.96	7.08	6.95	6.53	6.69	6.41	6.59
Ferrous Iron	mg/L	n/v	-	-	-	-	0.12	-	-	-	-	-	-	-	-	1.74	-	-	-
Laboratory			CASR	DECNY	CASR	CASR	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			R2631499	DEC	R2631499	R2633662	11-3269A	P11-4734	12:1051	12:1907	12:3152	12:4815	130663	132537	141040	145019	152087	152596	153048
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	10739	15930	12:1051-02	12:1907-01	12:3152-04	12:4815-03	130663-01	132537-01	141040-06	145019-01	152087-08	152596-08	153048-03
TCL Volatile Organic Compounds Detected in Site Groundwater																			
Tetrachloroethylene (PCE)	µg/L	5**[B]	200 U	5 U	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	5.00 U	100 U	40.0 U
Trichloroethylene (TCE)	µg/L	5**[B]	170 J[B]	7800 D[B]	8200[B]	15000[B]	200 U	500 U	737[B]	610[B]	133[B]	83.1[B]	50[B]	200 U	200 U	1670 J[B]	32.5[B]	264[B]	77.8[B]
Dichloroethylene, cis-1,2-	µg/L	5**[B]	2800[B]	160000 D[B]	120000 D[B]	150000[B]	22900[B]	22700[B]	12400[B]	13900[B]	3240[B]	3210[B]	2900[B]	2590[B]	1060[B]	5070[B]	269[B]	2910[B]	2280[B]
Dichloroethylene, trans-1,2-	µg/L	5**[B]	31 J[B]	900 E[B]	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	4.94 J	100 U	40.0 U
Vinyl chloride	µg/L	2[B]	890[B]	520 E[B]	640 J[B]	1000 U	11800[B]	6100[B]	2430[B]	3620[B]	230[B]	2130[B]	1400[B]	2140[B]	1340[B]	200 U	126[B]	317[B]	687[B]
Trichloroethane, 1,1,1-	µg/L	5**[B]	200 U	3900 D[B]	4000[B]	5800[B]	1610[B]	1540[B]	2310[B]	2220[B]	95.7 J[B]	280[B]	710[B]	421[B]	733[B]	101 J[B]	5.00 U	100 U	40.0 U
Dichloroethane, 1,1-	µg/L	5**[B]	340[B]	3300 D[B]	2800 J[B]	3600[B]	1800[B]	1670[B]	1080[B]	1310[B]	112[B]	410[B]	350[B]	473[B]	268[B]	181 J[B]	22.1[B]	123[B]	98.7[B]
Dichloroethene, 1,1-	µg/L	5**[B]	200 U	670 E[B]	780 J[B]	1600[B]	233[B]	500 U	203[B]	158 J[B]	52.3 J[B]	57.2[B]	39[B]	200 U	200 U	200 U	5.00 U	100 U	33.4 J[B]
Chloroethane	µg/L	5**[B]	200 U	5 U	4000 U	2000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	5.00 U	100 U	40.0 U
Trichloroethane, 1,1,2-	µg/L	1[B]	200 U	65[B]	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	5.00 U	100 U	40.0 U
Dichloroethane, 1,2-	µg/L	0.6[B]	200 U	4.5 J[B]	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	5.00 U	100 U	40.0 U
Chloroform (Trichloromethane)	µg/L	7[B]	200 U	15 U	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	5.00 U	100 U	40.0 U
Benzene	µg/L	1[B]	200 U	5.6[B]	4000 U	1000 U	70.0 U	175 U	70.0 U	70.0 U	35.0 U	14.0 U	18 U	70.0 U	70.0 U	70.0 U	2.89[B]	50.0 U	20.0 U
Xylene, m & p-	µg/L	5**[B]	200 U	15 U	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	108 J B[B]	200 U	200 U	3.27 J	100 U	40.0 U
Toluene	µg/L	5**[B]	200 U	15 U	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	4.69 J	100 U	40.0 U
Methylcyclohexane	µg/L	n/v	-	-	-	-	200 U	-	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	2.81 J	100 U	40.0 U
Acetone	µg/L	50[A]	200 U	25 U	4000 U	10000 U	1000 U	2500 U	1000 U	944 J[A]	777[A]	163 J[A]	250 U	653 J[A]	1000 U	1000 U	25.0 U	500 U	154 J[A]
Butanone, -2 (MEK)	µg/L	50[A]	200 U	25 U	4000 U	10000 U	1000 U	2500 U	1000 U	1000 U	500 U	200 U	250 U	1000 U	1000 U	1000 U	25.0 U	500 U	200 U
Carbon Disulfide	µg/L	60[A]	200 U	15 U	4000 U	1000 U	200 U	500 U	200 U	200 U	100 U	40.0 U	50 U	200 U	200 U	200 U	5.00 U	100 U	40.0 U
Methylene Chloride	µg/L	5**[B]	200 U	5 U	4000 U	1000 U	500 U	1250 U	500 U	500 U	250 U	77.7 J[B]	130 U	500 U	500 U	200 U	12.5 U	250 U	100 U
VOC - Tentatively Identified Compounds																			
Total VOC TICs	µg/L	n/v	-	-	-	-	500 U	-	-	-	250 U	-	-	500 U	-	500 U	-	-	-
Volatile Gases																			
Methane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-
Inorganics																			
Arsenic	mg/L	25[D]	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0312	0.0295	0.0189 D	0.0275
Iron	mg/L	300[D]	-	-	-	-	-	-	-	-	-	-	-	-	-	47	18.3	8.59 M	10.2
Manganese	mg/L	500[D]	-	-	-	-	-	-	-	-	-	-	-	-	-	3.25	1.17	0.740	0.859
Sodium	mg/L	20000[D]	-	-	-	-	-	-	-	-	-	-	-	-	-	1500	-	-	-
General Chemistry Parameters																			
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	-	-	-	340	-	-	-	-	-	-	-	-	380	-	-	-
Chloride	mg/L	250[B]	-	-	-	-	1370[B]	-	-	-	-	-	-	-	-	854	-	-	-
Nitrate (as N)	mg/L	n/v	-	-	-	-	0.02 U	-	-	-	-	-	-	-	-	0.04	-	-	-
Sulfate	mg/L	250[B]	-	-	-	-	39.5	-	-	-	-	-	-	-	-	3490	-	-	-
Total Organic Carbon	mg/L	n/v	-	-	-	-	25.5	-	-	-	-	-	-	-	-	164	8.5	16.0	7.5
Laboratory																			
Laboratory Work Order																			
Laboratory Sample ID																			
Gene-Trac Dehalococcoides Assay																			
Percent Dhc	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory																			
Laboratory Work Order																			
Laboratory Sample ID																			
Carbon Stable Isotope Analysis (CSIA)																			
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location						**MW-17**			
Sample Date			**1-May-06**	**1-May-06**	**15-Sep-06**	**3-Aug-11**	**3-Nov-11**	**8-Mar-12**	**2-May-12**
Sample ID			**BU-MW17-GW**	**BU-MW17-GW**	**BU-MW17-GW**	**MW-17**	**MW-17**	**MW-17**	**MW-17**
Sampling Company			**DEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**	**STANTEC**
Sample Type	**Units**	**TOGS**							
Field Parameters									
Dissolved Oxygen	mg/L	n/v	-	-	-	0	0.7	2.36	8.35
ORP	eV	n/v	-	-	-	-30	-29	138	163.4
pH	S.U.	n/v	-	7.2	7.23	7.16	7.2	6.72	7.41
Ferrous Iron	mg/L	n/v	-	-	-	0	-	-	-
Laboratory			**DECNY**	**CASR**	**CASR**	**PARAROCH**	**PARAROCH**	**PARAROCH**	**PARAROCH**
Laboratory Work Order			**DEC**	**R2631499**	**R2633662**	**11-3216A**	**P11-4774**	**12:1025**	**12:1882**
Laboratory Sample ID			**UNKNOWN**	**UNKNOWN**	**UNKNOWN**	**10550**	**16039**	**12:1025-01**	**12:1882-01**
TCL Volatile Organic Compounds Detected in Site Groundwater									
Tetrachloroethylene (PCE)	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethylene (TCE)	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethylene, cis-1,2-	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethylene, trans-1,2-	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,1-	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethane, 1,1-	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Dichloroethene, 1,1-	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Chloroethane	µg/L	5**[B]	1 U	***10 U***	2 U	2.00 U	2.00 U	2.00 U	2.00 U
Trichloroethane, 1,1,2-	µg/L	1[B]	1 U	***10 U***	1 U	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Dichloroethane, 1,2-	µg/L	0.6[B]	***1 U***	***10 U***	***1 U***	***2.00 U***	***2.00 U***	***2.00 U***	***2.00 U***
Chloroform (Trichloromethane)	µg/L	7[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Benzene	µg/L	1[B]	1 U	***10 U***	1 U	0.700 U	0.700 U	0.700 U	0.700 U
Xylene, m & p-	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Toluene	µg/L	5**[B]	1 U	***10 U***	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylcyclohexane	µg/L	n/v	-	-	-	2.00 U	-	2.00 U	2.00 U
Acetone	µg/L	50[A]	1 U	10 U	10 U	5.70 J	10.0 U	10.0 U	7.02 J
Butanone, -2 (MEK)	µg/L	50[A]	1 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	µg/L	60[A]	1 U	10 U	1 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene Chloride	µg/L	5**[B]	1 U	***10 U***	1 U	5.00 U	5.00 U	5.00 U	5.00 U
VOC - Tentatively Identified Compounds									
Total VOC TICs	µg/L	n/v	-	-	-	-	-	-	-
Volatile Gases									
Methane	µg/L	n/v	-	-	-	-	-	-	-
Ethane	µg/L	n/v	-	-	-	-	-	-	-
Ethene	µg/L	n/v	-	-	-	-	-	-	-
Inorganics									
Arsenic	mg/L	25[B]	-	-	-	-	-	-	-
Iron	mg/L	300[B]	-	-	-	-	-	-	-
Manganese	mg/L	500[B]	-	-	-	-	-	-	-
Sodium	mg/L	20000[B]	-	-	-	-	-	-	-
General Chemistry Parameters									
Alkalinity, Total (As $CaCO_3$)	mg/L	n/v	-	-	-	285	-	-	-
Chloride	mg/L	250[B]	-	-	-	147	-	-	-
Nitrate (as N)	mg/L	n/v	-	-	-	0.02 U	-	-	-
Sulfate	mg/L	250[B]	-	-	-	84.9	-	-	-
Total Organic Carbon	mg/L	n/v	-	-	-	5.1	-	-	-
Laboratory									
Laboratory Work Order									
Laboratory Sample ID									
Gene-Trac Dehalococcoides Assay									
Percent Dhc	%	n/v	-	-	-	-	-	-	-
Dhc 16S rRNA Gene Copies	#/L	n/v	-	-	-	-	-	-	-
Percent vcrA	%	n/v	-	-	-	-	-	-	-
vcrA Gene Copies	#/L	n/v	-	-	-	-	-	-	-
Laboratory									
Laboratory Work Order									
Laboratory Sample ID									
Carbon Stable Isotope Analysis (CSIA)									
Trichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-
cis-1,2-Dichloroethene $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-
Vinyl chloride $\delta^{13}C$	‰, VPDB	n/v	-	-	-	-	-	-	-

Table 2B
Groundwater Monitoring Program Summary - Groundwater Quality
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Notes:

TOGS	NYSDEC Technical and Operational Guidance Series (TOGS) Memorandum 1.1.1, Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1), Reissued June 1998 with errata in January 1999 and addenda in April 2000 and June 2004
A	TOGS 1.1.1 - Table 1 - Guidance
B	TOGS 1.1.1 - Table 1 - Standards
6.5[A]	Concentration exceeds the indicated standard.
15.2	Concentration was detected but did not exceed applicable standards.
0.50 U	Laboratory reportable detection limit exceeded standard.
0.03 U	The analyte was not detected above the laboratory reportable detection limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
**	The principal organic contaminant standard for groundwater of 5 ug/L applies to this substance.
p	Applies to the sum of cis- and trans-1,3-dichloropropene.
B	Indicates analyte was found in associated blank, as well as in the sample.
D	Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.
M	Matrix spike recoveries outside QC limits. Matrix bias indicated.
E	Result exceeded calibration range.
J	The reported result is an estimated value.
δ13C, ‰, VPDB	Carbon 13 delta, parts per thousand, relative to Vienna Pee Dee Belemnite
vcrA	Vinyl chloride reductase
Dhc	Dehalococcoides
*	Unstable parameters and >0.3 ft. drop in water level were observed at MW-14 during low flow purging on June 23, 2015.
	Finished purge by bailer and sampled later in the day on June 23, 2015. Parameters reported above were those measured at end of low flow purge.
^	RW-1 was bailed dry on July 20, 2015 and allowed to recharge over night. Samples were collected on July 21, 2015.
	Parameters were collected after sampling was completed.

Table 2C
Groundwater Monitoring Program Summary - LNAPL Recovery
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	MW - 4	MW - 9					MW - 10				
	LNAPL Thickness oil (ft.)	LNAPL Thickness oil (ft.)	Adjusted Elevation†	Absorbent Socks Removed	Amount Bailed[7] oil & water (gal)	Absorbent Socks Installed	LNAPL Thickness oil (ft.)	Adjusted Elevation†	Absorbent Socks Removed	Amount Bailed[7] oil & water (gal)	Absorbent Socks Installed
August 1, 2011	0.10	0.05	556.21	0	0.0	0	3.42	560.11	0	0.0	0
August 3, 2011	0.07	0.11	556.23	0	0.1	0	3.40	559.83	0	0.3	0
August 5, 2011	0.06	0.04	555.70	0	0.0	0	0.22	559.50	0	0.0	0
September 9, 2011	0.02	0.05	557.06	0	0.3	1	1.47	560.70	0	0.7	1
September 30, 2011	---*	0.00	556.96	1[A]	0.2	1	0.68	560.43	1	0.5	1
November 4, 2011	0.09	0.00	557.60	1[B]	0.0	1	1.12	559.75	1	0.3	1
December 9, 2011	0.00	0.00	558.48	1[A]	0.2	1	1.25	560.23	1	0.4	1
January 9, 2012	---*	0.00	557.26	1[B]	0.0	1	0.00	560.04	1[B]	See Note 8	1
February 9, 2012	---*	0.00	558.02	1[B]	See Note 9	1	0.00	560.03	1[C]	See Note 9	1
March 14, 2012	0.06	0.00	558.43	1[B]	See Note 10	1	0.00	560.58	1[C]	See Note 10	1
April 5, 2012	0.00	0.00	557.70	1[C]	See Note 9	1	0.00	559.92	1[C]	See Note 9	1
May 2, 2012	0.00	0.00	558.91	0	0.0	0	0.00	560.50	0	0.0	0
June 8, 2012	0.00	0.00	557.68	0	0.0	0	0.00	559.91	0	0.0	0
July 3, 2012	0.00	0.00	557.99	0	0.0	0	0.00	560.19	0	0.0	0
July 25, 2012	0.02	sheen	555.21	1[A]	2.5	1	2.11	558.02	1[A]	2.5	1
July 26, 2012	---	0.00	555.61	0	0.0	0	0.15	558.71	0	0.0	0
August 3, 2012	0.00	0.02	556.38	1[A]	1.1	1	0.23	559.47	1[A]	1.5	1
September 7, 2012	0.00	0.02	557.49	1[A]	0.5	1	0.12	560.37	1[A]	1.5	1
October 5, 2012	0.00	0.00	555.68	0	0.0	0	1.53	559.07	1[D]	3.2	1
November 16, 2012	0.00	0.00	556.64	0	0.0	0	0.00	557.75	0	0.0	0

Notes:
1. Reference elevation based upon vertical datum NGVD 29.
2. † = Water table elevation adjusted for thickness and estimated density of floating oil layer
3. ‡ = Well installed by others, elevation data not available
4. * = Well innaccessible at time of measurement
5. --- = Measurement not taken
6. A = Sock removed was 50% oil-saturated
   B = Sock removed was water-saturated
   C = Sock removed was 25% oil-saturated
   D = Sock removed was 75% oil-saturated
7. During each bailing event, oil and water are bailed from the well until oil is no longer being collected (until only water is collected in the bailer)
8. During 1/9/12 bailing event, 5 gallons of water with occassional blebs of oil were bailed from MW-10.
9. During both the 2/9/12 and 4/5/12 events, 5 gallons of water were bailed from each of MW-9 and MW-10, and no oil was observed in the purged water at either well.
10. During 3/14/12 bailing event, 6.9 and 8.4 gallons of water were bailed from MW-9 and MW-10, respectively, and no oil was observed in the purged water at either well. At both wells, the top of the water column dropped and stayed 3 feet or more below the top of the well screen during and immediately after the purge event.

Table 2C
Groundwater Monitoring Program Summary - LNAPL Recovery
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Monitoring Well	MW - 4	MW - 9					MW - 10				
	LNAPL Thickness oil (ft.)	LNAPL Thickness oil (ft.)	Adjusted Elevation†	Absorbent Socks Removed	Amount Bailed[7] oil & water (gal)	Absorbent Socks Installed	LNAPL Thickness oil (ft.)	Adjusted Elevation†	Absorbent Socks Removed	Amount Bailed[7] oil & water (gal)	Absorbent Socks Installed
January 4, 2013	---*	0.00	557.63	0	0.0	0	1.06	559.97	1[D]	1.0	1
February 21, 2013	---*	0.00	557.87	0	0.0	0	0.50	560.32	1[A]	0.0	1
April 12, 2013	0.03	0.00	558.42	0	0.0	0	0.83	559.68	1[A]	0.0	1
May 8, 2013	0.00	0.00	556.73	0	0.0	0	0.00	560.27	1[B]	0.0	1
June 5, 2013	0.05	0.00	557.31	1[B]	0.0	1	0.00	560.28	1[B]	0.0	1
July 8, 2013	0.00	0.00	557.92	0	0.0	0	0.00	560.53	0	0.0	0
August 6, 2013	0.05	0.00	556.51	0	0.0	0	0.00	559.71	0	0.0	0
September 5, 2013	---*	0.00	555.90	0	0.0	0	0.00	558.95	0	0.0	0
October 4, 2013	---*	0.00	555.45	0	0.0	0	0.00	558.66	0	0.0	0
November 6, 2013	---*	0.00	555.96	0	0.0	0	0.00	559.71	0	0.0	0
December 5, 2013	---*	0.00	556.93	0	0.0	0	0.00	560.42	1[B]	0.0	1
January 6, 2014	---*	0.00	556.60	0	0.0	0	0.00	559.24	0	0.0	0
February 3, 2014	---*	0.00	555.70	0	0.0	0	0.84	557.32	1	0.0	1
February 10, 2014	---*	---	---	---	---	---	---	---	1	1.0	1
March 7, 2014	---*	0.01	555.33	1[B]	0.25	1	0.03	557.75	1[D]	0.4	1
March 20, 2014	---*	0.00	559.05	0	0.00	0	0.00	561.05	0	0.0	0
April 28, 2014	---*	0.00	558.89	0	0.00	0	0.00	560.65	0	0.0	0
May 30, 2014	---*	0.00	557.40	0	0.00	0	0.00	559.76	1[B]	0.0	1
June 24, 2014	---*	0.00	556.60	0	0.00	0	0.00	559.54	0	0.00	0
July 25, 2014	---*	0.00	556.66	0	0.00	0	0.00	560.05	0	0.00	0
August 29, 2014	---*	0.00	555.99	0	0.00	0	0.00	558.98	0	0.00	0
September 26, 2014	---*	0.00	555.75	0	0.00	0	0.00	559.34	0	0.00	0
October 24, 2014	---*	0.00	555.45	0	0.00	0	MW-10 was abandoned and removed in connection with FLDA remedial activities				
Totals				12[see A, B, C]	5.10	13			19[see A, B, C, D]	13.26	22

Table 3
Remaining Soil Sample Exceedances
Buell Automatics Site
NYSDEC Site #C828114, Gates, Monroe County, NY

Refer to Tables 3A, 3B and 3C for documentation of remaining soil sample exceedances in the Former Loading Dock Area, Former Trench Drain Area, and Petroleum Impacts Area, respectively.

Remaining exceedances of SCOs in soil samples from other areas of the Site are described below.

Sample Location Sample Date Sample Depth	Units	NYSDEC SCOs	MW-8 05-Sep-02 16 -18 ft
Volatile Organic Compounds (VOCs)			
Dichloroethene, cis-1,2-	μg/kg	250^A 1000000^B	**480**
Trichloroethene (TCE)	μg/kg	470^A 400000^B	**22,000**

Notes:

SCOs	NYSDEC 6 NYCRR Part 375 Soil Clean-up Objectives (SCOs)
A	Restricted Use SCO - Protection of Groundwater
B	Restricted Use SCO - Protection of Human Health - Industrial
6.5	Concentration exceeds the Protection of Groundwater SCO.
μg/kg	micrograms per kilogram

Note: The MW-8 sample documented above was collected in 2002. It is presumed that EISB remedial activities performed in the area surrounding MW-8 in 2015 will have reduced the levels of residual contamination in this area. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations in soil may be lower and remaining exceedances of SCOs may be fewer.

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Table 3A
Remaining Soil Sample Exceedances
Former Loading Dock Area
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Note: The samples documented below were collected prior to implementation of the EISB element of the FLDA remedial program. It is presumed that the subsequent EISB activities are likely to have reduced the levels of residual contamination. The concentrations reported here are therefore unlikely to be representative of current conditions at each location; actual contaminant concentrations in soil may be lower and remaining exceedances of SCOs may be fewer or absent.

Sample Location Sample Date Sample Depth Sample Type	Units	NYSDEC SCOs	MW-10 5-Aug-02 8-10 ft	B-36 20-Sep-05 9-10 ft	EX-S2 3-Oct-14 5 ft	B-1 3-Oct-14 5 ft	B-2 7-Oct-14 2.5 ft	B-3 3-Oct-14 8 ft	B-4 7-Oct-14 5 ft	SW1 3-Oct-14 4 ft	SW2 3-Oct-14 3 ft	SW2 3-Oct-14 3 ft Field Duplicate	SW3 7-Oct-14 4 ft	SW4 3-Oct-14 2.5 ft	SW5 3-Oct-14 4 ft
Semi-Volatile Organic Compounds (SVOCs)			No exceedances	No exceedances	No exceedances	No exceedances	(NA)	(NA)	(NA)	No exceedances	No exceedances	No exceedances	(NA)	(NA)	(NA)
Volatile Organic Compounds (VOCs)			See below	See below	See below	No exceedances	No exceedances	See below	No exceedances	No exceedances	No exceedances	No exceedances	No exceedances	See below	See below
Acetone	µg/kg	50^{A} 1000000^{B}												**109 J**	**186 J**
Dichloroethene, cis-1,2-	µg/kg	250^{A} 1000000^{B}	**890**	**1,900**				**317**							
Trichloroethene (TCE)	µg/kg	470^{A} 400000^{B}		**3,400**											
Vinyl chloride	µg/kg	20^{A} 27000^{B}			**184**										

Sample Location Sample Date Sample Depth Sample Type	Units	NYSDEC SCOs	SW5 3-Oct-14 4 ft	SW6 3-Oct-14 4.5 ft	SW6 3-Oct-14 4.5 ft Field Duplicate	SW7 3-Oct-14 3 ft	SW8 7-Oct-14 6 ft	SW9 3-Oct-14 6.5 ft	SW10 7-Oct-14 2 ft	SW11 7-Oct-14 4 ft	SW12 7-Oct-14 3 ft	SW13 9-Oct-14 7 ft	SW14 9-Oct-14 6 ft	SW15 9-Oct-14 5.5 ft
Semi-Volatile Organic Compounds (SVOCs)			(NA)	(NA)	(NA)	(NA)	No exceedances	No exceedances	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Volatile Organic Compounds (VOCs)			See below	No exceedances	No exceedances	No exceedances	No exceedances	No exceedances	See below	No exceedances	No exceedances	No exceedances	See below	No exceedances
Acetone	µg/kg	50^{A} 1000000^{B}	**186 J**						**64.8 J**					
Dichloroethene, cis-1,2-	µg/kg	250^{A} 1000000^{B}											**300**	
Trichloroethene (TCE)	µg/kg	470^{A} 400000^{B}												
Vinyl chloride	µg/kg	20^{A} 27000^{B}												

Notes:

SCOs	NYSDEC 6 NYCRR Part 375 Soil Clean-up Objectives (SCOs)
A	NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Groundwater
B	NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Industrial
6.5	Concentration exceeds the Protection of Groundwater SCO.
J	The reported result is an estimated value.
(NA)	This sample not analyzed for SVOCs.
µg/kg	micrograms per kilogram

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Table 3B
Remaining Soil Sample Exceedances
Former Trench Drain Area
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Note: The samples documented below were collected prior to implementation of the EISB element of the FTDA remedial program.

Sample Location Sample Date Sample Depth	Units	NYSDEC SCOs	B9 08/12/02 5.0 - 6.5 ft.	B11 08/08/02 7.5 - 8.0 ft.	B13 08/08/02 3.0 - 3.8 ft.	B24 05/03/03 5.5 - 6.0 ft.	B30 05/03/03 3.5 - 4.0 ft.
Volatile Organic Compounds (VOCs)							
Dichloroethene, cis-1,2-	µg/kg	250^{A} 1000000_{d}^{B}	**1,200 J**	**480**		**360 D**	
Vinyl chloride	µg/kg	20^{A} 27000^{B}		**140**			
Acetone	µg/kg	50^{A} 1000000_{d}^{B}		**58 J**	**57 J**		**85 J**

Sample Location			FTDA-B1		FTDA-B2		FTDA-B3a	FTDA-B3b			FTDA-B4	
Sample Date			2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14	2-Sep-14
Sample Depth			4 - 4.5 ft	6 - 6.8 ft	6.5 - 7.1 ft	6.5 - 7.1 ft	3 - 3.5 ft	4.5 - 4.8 ft	6 - 6.5 ft	6.8 - 7.3 ft	2.5 - 3 ft	6 - 7.5 ft
Sample Type	Units	NYSDEC SCOs				Field Duplicate						
Volatile Organic Compounds (VOCs)			**See below**	No exceedances	**See below**		No exceedances	No exceedances	**See below**	**See below**	No exceedances	**See below**
Trichloroethene (TCE)	µg/kg	470^{A} 400000^{B}			**1,090 J**	**731 J**						
Dichloroethene, cis-1,2-	µg/kg	250^{A} 1000000_{d}^{B}			**365 J**	**408 J**						
Ethylbenzene	µg/kg	1000^{AEF} 780000^{B}								**1,050 J**		
Xylene, o-	µg/kg	1600_{p}^{A} $1000000_{d,p}^{B}$								**2,550 J**		
Xylene, m & p-	µg/kg	1600_{p}^{A} $1000000_{d,p}^{B}$								**2,700 J**		
Trimethylbenzene, 1,2,4-	µg/kg	3600^{AEF} 380000^{B}								**28,500 J**		
Trimethylbenzene, 1,3,5-	µg/kg	8400^{AEF} 380000^{B}								**11,100 J**		
Acetone	µg/kg	50^{A} 1000000_{d}^{B}	**59.8**						**62.9**			**105**

Notes:

NYSDEC SCOs	NYSDEC 6 NYCRR Part 375 and CP-51 Soil Clean-up Objectives (SCOs)
A	NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Groundwater
B	NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Industrial
E	CP-51 Table 2 Soil Cleanup Levels for Gasoline Contaminated Soils
F	CP-51 Table 3 Soil Cleanup Levels for Fuel Oil Contaminated Soil
d	The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 mg/kg.
p	The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
6.5	Concentration exceeds the SCO for protection of groundwater (and other equivalent CP-51 SCOs where applicable).
µg/kg	micrograms per kiolgram
	Blank spaces indicate that this compound was not detected at a concentration that exceeds the SCO.
D	Sample re-analyzed at a dilution to bring result for this compound into calibration range.
J	The reported result is an estimated value.

Table 3C
Remaining Soil Sample Exceedances
Petroleum Impacts Area
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			**B15**	**B16**	**B17**	**B18**	**B19**	**B20**	**B21**	**B22**	**B27**	**B28**	**B29**	**B30**	**B31**	**B32**		**B33**	**B34**
Sample Date			**08/09/02**	**08/09/02**	**08/09/02**	**08/09/02**	**05/05/03**	**05/03/03**	**05/03/03**	**05/03/03**	**05/03/03**	**05/03/03**	**05/03/03**	**05/03/03**	**05/03/03**	**05/05/03**		**05/05/03**	**05/05/03**
Sample Depth			**4.5 - 5.0 ft.**	**6.0 - 6.5 ft.**	**4.5 - 5.0 ft.**	**4.5 - 5.0 ft.**	**3.5 - 4.0 ft.**	**3.5 - 4.0 ft.**	**4.5 - 5.0 ft.**	**5.5 - 6.0 ft.**	**3.5 - 4.0 ft.**	**6.5 - 7.0 ft.**	**3.5 - 4.0 ft.**	**3.5 - 4.0 ft.**	**6.0 - 6.5 ft.**	**3.5 - 4.0 ft.**	**3.5 - 4.0 Dup**	**6.0 - 6.5 ft.**	**2.0 - 2.5 ft.**
	Units	**NYSDEC SCOs**																	
Exceedances of compound-specific SCOs:																			
Acetone	µg/kg	50^{A} 1000000^{B}			**64**			NA	**59**			**57**		**85 J**					
cis-1,2-Dichloroethene	µg/kg	250^{A} 1000000^{B}					**1,600**	NA											
Trichloroethene	µg/kg	470^{A} 400000^{B}					**1,900**	NA											
Other indications of petroleum impacts:																			
Laboratory analyses																			
Total VOC TICs	µg/kg	NAC	178,900	5,530	12,150	172,500	340,000	NA	6,000	4,490	NA	22,500	490,000	7,270	743	412,000	398,000	30	363,000
Total SVOC TICs	µg/kg	NAC	27,000	30,810	136,300	92,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH	mg/kg	NAC	NA	NA	NA	NA	NA	19,000	NA	NA	6,600	NA	NA	NA	NA	14,000	8,400	NA	NA
Field observations																			
Petroleum sheen noted		NAC	4.0 - 5.0 ft.	5.2 - 7.0 ft.	None	5.8 - 7.0 ft.	4.0 - 7.2 ft.	2.3 - 7.5 ft.	4.5 - 5.0 ft.	5.8 - 6.0 ft.	5.5 - 7.0 ft.	6.5 ft.	3.5 - 6.5 ft.	None	None	None	None	None	6.0 - 7.0 ft.
Oil saturation noted		NAC	None	Trace	Traces, 0.5 - 3.5 ft. and 5 - 7 ft.	None	None	2.3 - 4 ft.	None	None	None	6.5 ft.	None	Traces, 4.8 - 8 ft.	None	None	None	None	None

Notes:

SCOs NYSDEC 6 NYCRR Part 375 and CP-51 Soil Clean-up Objectives (SCOs)
A NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Groundwater
B NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Industrial
Blank spaces in the upper section of this table indicate that this compound was not detected at a concentration that exceeds the SCO.
Blank spaces in the lower section of this table indicate that evidence of petroleum impacts were not observed.

6.5 Concentration exceeds the SCO for protection of groundwater.
NA NA indicates not analyzed.
J J indicates an estimated value.

VOC Volatile Organic Compound
SVOC Semi-Volatile Organic Compound
TIC Tentatively Identified Compound
TPH Total Petroleum Hydrocarbons
NAC No Applicable Criterion available for this parameter

µg/kg micrograms per kiolgram
mg/kg milligrams per kiolgram

Table 4
Summary of Remaining Soil Vapor Sample Concentrations
(and Recent Indoor Air Sample Concentrations)
Buell Automatics, Inc. - Brownfield Cleanup Program Site #C828114
381 Buell Road, Gates, NY

	SUB-SLAB SOIL VAPOR:		Buell Automatics Building 381 Buell Road							aScribe Laser Bldg 383 Buell Rd
Sample Location			A	B	C	D	E		F	FFS1
Sample Date			18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14	26-Mar-12
Sample ID			BU-SSA-A (CAN NO. 1535)	BU-SSB-A (CAN NO. 4037)	BU-SSC-A (Can No 1371)	BU-SSD-A (Can No 1127)	BU-SSE-A (Can No 5626)	BU-SSE-A/D (Can No 5624)	BU-SSF-A (Can No 5638)	BU-SB-FFS1-A-1
Sample Type	Units	NYSDOH						Field Duplicate		
Site-Related Compounds of Concern										
Carbon Tetrachloride (Tetrachloromethane)	µg/m3		**0.3**	0.9 U	0.9 U	0.9 U	**1**	**1**	0.9 U	**0.51**
Chloroethane (Ethyl Chloride)	µg/m3		0.1 U	0.4 U	0.4 UJ	0.4 U	0.4 UJ	0.4 U	0.4 U	0.4 U
Dichloroethane, 1,1-	µg/m3		**4 NJ**	**5**	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U	1.8 U
Dichloroethane, 1,2-	µg/m3		0.2 U	0.6 U	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U	0.6 U
Dichloroethene, 1,1-	µg/m3		**0.3**	0.6 U	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U	1.8 U
Dichloroethene, cis-1,2-	µg/m3		**180**	**1**	0.6 UJ	**2**	0.6 UJ	0.6 U	0.6 U	1.8 U
Dichloroethene, trans-1,2-	µg/m3		**3**	0.6 U	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U	1.8 U
Tetrachloroethene (PCE)	µg/m3		**3**	**3**	**1 J+**	**3**	**2 J**	**2**	1 U	**0.75**
Trichloroethane, 1,1,1-	µg/m3		**2**	0.8 U	**1**	0.8 U	0.8 U	0.8 U	0.8 U	**130**
Trichloroethene (TCE)	µg/m3		**330**	**2**	**6**	**17**	**4**	**5 J+**	0.8 U	**210**
Vinyl chloride	µg/m3		**0.6**	**1**	0.4 UJ	0.4 U	0.4 UJ	0.4 U	0.4 U	0.24 U

	INDOOR AIR:		Buell Automatics Building 381 Buell Road									aScribe Laser Bldg 383 Buell Rd	
Sample Location			A	B	C	D		E		F		FFS1	AL1
Sample Date			18-Dec-14	18-Dec-14	18-Dec-14	30-Mar-15	30-Mar-15	18-Dec-14	18-Dec-14	18-Dec-14		26-Mar-12	29-Jan-15
Sample ID			BU-IAA-A (CAN NO. 1810)	BU-IAB-A (CAN NO. 4039)	BU-IAC-A (Can No 1051)	BU-IAD-A-Re (Can No 4087)	BU-IAD-A/D-Re (Can No 3609)	BU-IAE-A (Can No 1206)	BU-IAE-A/D (Can No 1128)	BU-IAF-A (Can No 4042)		BU-IA-FFS1-A-1	BU-IA-AL1-A-5
Sample Type	Units	NYSDOH					Field Duplicate		Field Duplicate				
Site-Related Compounds of Concern													
Carbon Tetrachloride (Tetrachloromethane)	µg/m3		**0.3**	0.9 U	**0.4 J**	**0.46**	**0.42**	**0.3 J**	**0.3**	**0.3**		**0.34**	**0.54**
Chloroethane (Ethyl Chloride)	µg/m3		0.1 U	0.4 U	0.1 UJ	1.3 U	1.3 U	0.1 UJ	0.1 U	0.1 UJ		0.1 UJ	0.1 UJ
Dichloroethane, 1,1-	µg/m3		0.2 U	0.6 U	0.2 UJ	0.8 U	0.8 U	0.2 UJ	0.2 U	0.2 UJ		0.6 U	0.8 U
Dichloroethane, 1,2-	µg/m3		0.2 U	0.6 U	0.2 UJ	0.8 U	0.8 U	0.2 UJ	0.2 U	0.2 UJ		0.2 UJ	0.2 UJ
Dichloroethene, 1,1-	µg/m3		0.2 U	0.6 U	0.2 UJ	0.8 U	0.8 U	0.2 UJ	0.2 U	0.2 UJ		0.6 U	0.8 U
Dichloroethene, cis-1,2-	µg/m3		0.2 U	0.6 U	0.2 UJ	0.8 U	0.8 U	**1 J**	0.2 UJ	**0.7 J**		0.6 U	0.8 U
Dichloroethene, trans-1,2-	µg/m3		0.2 U	0.6 U	0.2 UJ	0.8 U	0.8 U	0.2 UJ	0.2 U	0.2 UJ		0.6 U	0.8 U
Tetrachloroethene (PCE)	µg/m3	30^	0.3 U	1 U	**1 J**	1.4 U	1.4 U	**0.6 J**	**3 J**	**1**		0.1 U	1.4 U
Trichloroethane, 1,1,1-	µg/m3		0.2 U	0.8 U	0.2 UJ	1.1 U	1.1 U	0.2 UJ	0.2 U	0.2 U		0.8 U	1.1 U
Trichloroethene (TCE)	µg/m3	2^	0.2 U	0.8 U	**0.4 J**	0.21 U	**0.16 J**	0.2 UJ	**0.3**	**0.3**		**0.32**	0.21 U
Vinyl chloride	µg/m3		0.1 U	0.4 U	0.1 UJ	0.10 U	0.10 U	0.1 UJ	0.1 U	0.1 UJ		0.08 U	0.1 U

Notes:

NYSDOH	New York State Department of Health
^	Air Guildline Value
15.2	Compound was detected at the concentration shown.
0.03 U	Analyte was not detected at a concentration greater than the laboratory reportable detection limit shown.
J	The reported result is an estimated value.
J+	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
µg/m3	micrograms per cubic meter

Note: Results reported here represent conditons prior to implementation of the EISB component of the site remedy. It is presumed that the EISB process may have reduced the levels of residual contamination in both areas. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations may be lower.

Table 5
Remaining Groundwater Sample Exceedances
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Sample Location			MW-2			MW-6			MW-7			MW-8		
Sample Date	Units	TOGS	27-May-15	24-Jun-15	20-Jul-15	27-May-15	23-Jun-15	21-Jul-15	27-May-15	23-Jun-15	21-Jul-15	27-May-15	24-Jun-15	21-Jul-15
Volatile Organic Compounds														
Trichloroethylene (TCE)	µg/L	5				**33.0**				**11.3**		**20.8**	**49.2**	**50.5**
Dichloroethylene, cis-1,2-	µg/L	5		**5.84**	**8.97**	**15.1**				**8.29**		**134**	**99.6**	**59.5**
Dichloroethylene, trans-1,2-	µg/L	5												
Vinyl chloride	µg/L	2		**5.55**	**8.79**	**3.14**						**15.9**	**11.1**	**6.53**
Trichloroethane, 1,1,1-	µg/L	5												
Dichloroethane, 1,1-	µg/L	5												
Dichloroethane, 1,1-	µg/L	5												
Acetone	µg/L	50												
Benzene	µg/L	1												

Sample Location			MW-11			MW-14			MW-16R			RW-1	RW-2	MW-10R
Sample Date	Units	TOGS	27-May-15	23-Jun-15	21-Jul-15	26-May-15	23-Jun-15	20-Jul-15	27-May-15	24-Jun-15	20-Jul-15	21-Jul-15	2-May-06	13-Nov-14
Volatile Organic Compounds													See Note 1 below	
Trichloroethylene (TCE)	µg/L	5		**7.70**	**7.30**	**6.94**	**6.03**	**7.36**	**32.5**	**264**	**77.8**		**13000**	**792 J**
Dichloroethylene, cis-1,2-	µg/L	5	**67.4**	**107**	**108**	**53.9**	**40.8**	**48.5**	**269**	**2910**	**2280**	**1130**	**27000**	**3880**
Dichloroethylene, trans-1,2-	µg/L	5										**12.8 J**		
Vinyl chloride	µg/L	2		**5.23**	**5.01**	**8.30**	**3.96**	**4.12**	**126**	**317**	**687**	**961**		**260**
Trichloroethane, 1,1,1-	µg/L	5											**230 J**	
Dichloroethane, 1,1-	µg/L	5		**8.74**	**9.46**	**14.7**	**12.9**	**14.3**	**22.1**	**123**	**98.7**	**195**	**160 J**	**137 J**
Dichloroethane, 1,1-	µg/L	5									**33.4 J**			
Acetone	µg/L	50									**154 J**			
Benzene	µg/L	1							**2.89**					

Notes:

TOGS	NYSDEC Technical and Operational Guidance Series Memorandum 1.1.1, Ambient Water Quality Standards and Guidance Values
6.5	Concentration exceeds the TOGS standard.
	Blank spaces indicate that this compound was not detected at a concentration that exceeds the TOGS standard.
J	The reported result is an estimated value.

1. Results reported here for RW-2 are for a sample collected in 2006 (the last time RW-2 was sampled), and represent conditons prior to implementation of the SVE and EISB components of the site remedy in 2012 through 2015. Similarly, the MW-10R results are for a sample collected in 2014 shortly after initiation of the EISB program. It is presumed that remedial processes performed subsequent to the sampling will have reduced the levels of residual contamination in both areas. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations may be lower and remaining exceedances of TOGs standards may be fewer.

Table 7
Monitoring Well Construction Details
Buell Automatics Site, NYSDEC Site #C828114, Gates, Monroe County, NY

Well Designation	Completion Date	Horiz. Coordinates (NAD83)		Elevation (ft. amsl) (NGVD 29)		Bentonite Seal	Sandpack Interval	Screened Interval	Lower Seal	Total Depth
		Latitude	Longitude	Ground	Reference	(ft. bgs)	(ft. bgs)	(ft. bgs)	(ft. bgs)	(ft. bgs)
MW-1	5/26/99	43.1321476	-77.6660348	562.9	562.7	8.0-10.0	10.0-22.0	12.0-22.0	-----	22.0
MW-2	5/26/99	43.1320326	-77.6667704	561.9	561.71	7.0-9.0	9.0-21.0	11.0-21.0	-----	21.0
MW-2D	8/8/02	43.1320335	-77.6667532	562.0	561.56	20.8 - 31.3	31.3 - 42.3	32.3 - 42.3	-----	42.3
MW-5	5/26/99	43.1320328	-77.6664095	562.1	561.76	7.0-9.0	9.0-21.0	11.5-21.5	-----	21.5
MW-6	8/8/02	43.1318377	-77.6669919	560.3	559.78	2.0-4.0	4.0-19.0	5.0-19.0	-----	19.0
MW-7	5/21/02	43.1318437	-77.6667196	561.4	560.83	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-8	5/21/02	43.1319353	-77.6668775	562.0	561.48	2.0-4.0	4.0-19.5	5.0-19.0	19.5 - 24.0	24.0
MW-9	8/6/02	43.1320355	-77.6670449	561.1	560.36	2.0-4.0	4.0-16.0	5.0 - 15.0	-----	16.0
MW-10R	10/29/14	43.1321929	-77.6669483	562.76	562.51	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-11	8/7/02	43.1318358	-77.6672581	559.3	559.05	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-12	5/22/02	43.1327587	-77.6669560	562.8	562.3	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-13	5/20/02	43.1327744	-77.6661533	563.9	563.42	2.0-4.0	4.0-21.0	5.2-20.2	21.0 - 34.0	34.0
MW-14	2/25/03	43.1321879	-77.6671971	561.2	560.9	1.5 - 3.0	3.0 - 13.0	4.0 - 13.0	13.0 - 16.0	16.0
MW-15	2/25/03	43.1320634	-77.6672720	560.4	560.1	1.5 - 3.0	3.0 - 10.0	4.0 - 10.0	10.0 - 12.0	12.0
MW-16R	10/29/14	43.1322504	-77.6669790	562.81	562.51	1.0-3.0	3.0-9.0	4.0-9.0	9.0-10.0	10.0
MW-17*	11/22/05	43.1315212	-77.6675785	556.60	556.16	3.0-6.0	6.0-18.0	7.0-17.0	-----	18.0
MW-18*	11/22/05	43.1316529	-77.6676815	557.00	556.48	10.6-13.2	13.2-20.5	15.5-20.5	20.5-21.0	21.0
MW-19	9/20/12	43.1323763	-77.6667736	563.51	563.09	0.5-1.5	1.5-10.0	2.0-9.9	-----	10.0
MW-20	9/20/12	43.1320286	-77.6669089	561.44	561.15	1.0-1.5	1.5-10.7	2.0-10.0	-----	10.7
MW-21	9/20/12	43.1319218	-77.6671650	560.28	559.91	0.5-1.5	1.5-10.0	2.0-9.9	-----	12.0
MW-22	9/20/12	43.1320328	-77.6666399	562.16	561.73	0.5-1.5	1.5-14.0	2.0-13.9	-----	14.0
RW-1	12/30/03	43.1321029	-77.6667979	563.7	563.27	0.5-1.5	1.5-6.0	2.0-6.0	-----	6.0
RW-2	12/30/03	43.1320564	-77.6667596	563.8	563.25	0.5-1.0	1.0-6.5	1.5-6.5	-----	6.5
IW-1	1/21/15	43.1318512	-77.6672631	559.35	558.85	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-2	1/22/15	43.1318526	-77.6671963	559.59	559.34	1.0-3.5	3.5-18.0	4.0-18.0	-----	18.0
IW-3	1/23/15	43.1318508	-77.6671264	559.87	559.67	1.0-3.3	3.3-17.8	3.8-17.8	-----	17.8
IW-4	1/23/15	43.1318526	-77.6670525	560.29	559.89	1.0-3.5	3.5-17.0	4.0-17.0	-----	17.0
IW-5	1/21/15	43.1319058	-77.6672647	559.47	559.12	1.0-3.5	3.5-17.0	4.0-17.0	-----	17.0
IW-6	1/21/15	43.1319060	-77.6671969	559.92	559.52	1.0-2.9	2.9-16.6	3.6-16.6	-----	16.6
IW-7	1/20/15	43.1319061	-77.6671165	560.43	560.10	1.0-3.5	3.5-17.5	4.0-17.5	-----	17.5
IW-8	1/20/15	43.1319047	-77.6670423	560.74	560.41	1.0-3.5	3.5-19.5	5.0-19.0	-----	19.5
IW-9	1/19/15	43.1319496	-77.6670143	561.11	560.89	1.0-3.0	3.0-19.0	4.0-19.0	-----	19.0
IW-10	1/23/15	43.1318833	-77.6670094	560.67	560.27	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-11	1/26/15	43.1318858	-77.6669344	561.14	560.79	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-12	1/16/15	43.1319204	-77.6669311	561.37	560.82	1.5-3.0	3.0-19.0	4.0-19.0	-----	19.0
IW-13	1/13/15	43.1319705	-77.6669059	561.71	561.38	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-14	1/14/15	43.1319678	-77.6668326	561.85	561.45	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-15	1/15/15	43.1319682	-77.6667665	561.84	561.31	1.0-3.0	3.0-19.0	4.0-19.0	-----	19.0
IW-16	1/14/15	43.1320354	-77.6668376	561.71	561.11	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-17	1/16/15	43.1318838	-77.6668598	561.70	561.40	1.5-3.0	3.0-19.0	4.0-19.0	-----	19.0
IW-18	1/15/15	43.1319199	-77.6668164	562.09	561.74	1.5-3.0	3.0-19.0	4.0-19.0	-----	19.0
IW-19	1/26/15	43.1318381	-77.6668981	560.83	560.28	1.0-3.5	3.5-19.0	4.0-19.0	-----	19.0
IW-20	1/16/15	43.1319221	-77.6667536	562.11	561.61	1.0-3.0	3.0-19.0	4.0-19.0	-----	19.0

Notes:
1. ft. bgs = feet below ground surface.
2. ft. amsl = feet above mean sea level.
3. All wells completed with flush-mount protective casings.
4. * - Off-site wells MW-17 and MW-18 were destroyed in 2012.

Figures

1394354

1141730

1141730

1394354

U:\16059\GIS\SMP 2015\Figure 1 - Site Location Map.mxd   Revised: 2015-07-28 By: aless

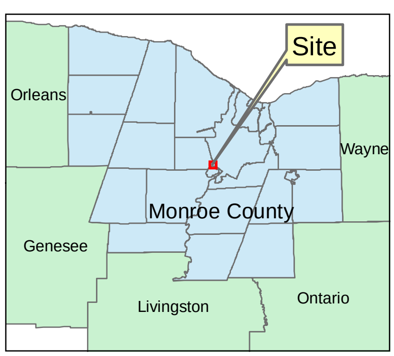
Stantec

Site Boundaries

Notes

1. Project Location : UTM Zone 18
Latitude : 43° 7'56.48"N / Longitude: 77°40'1.10"W

0 500 1,000 Feet



Project Location:
381 BUELL ROAD
GATES, NY

Prepared by APL on 7/23/2015
Technical Review by TW/BH on 7/23/2015
Independent Review by PN on 7/23/2015

190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
1

Title

Site Location Map

Stantec

Legend

Site Parcel Boundaries

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

0 50 100 150 200 Feet

1:1,200 (At Original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet

Project Location:
381 BUELL ROAD
GATES, NY

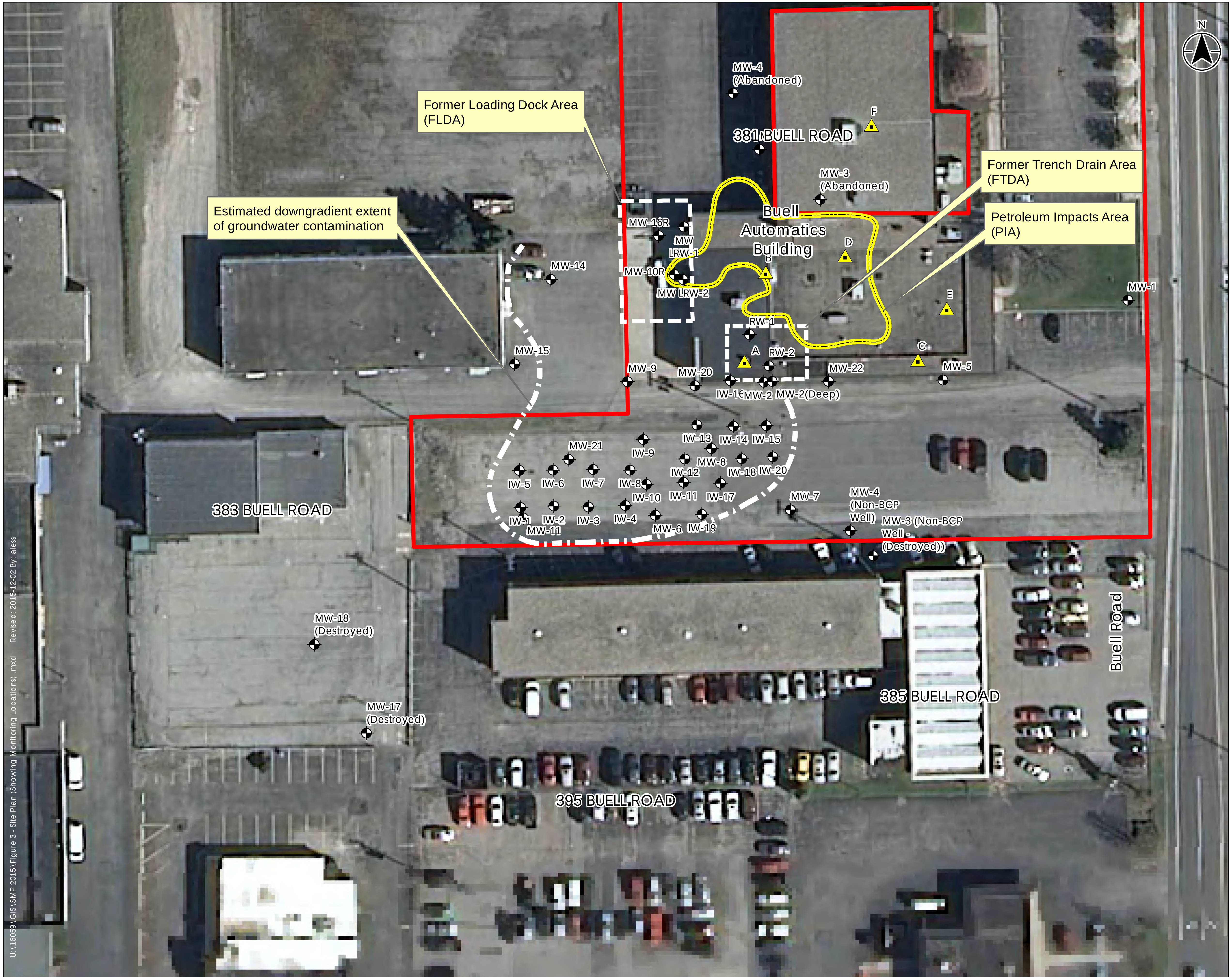
Prepared by AG on 2015-07-23
Technical Review by MPS on 2015-12-02
Independent Review by PN on 2015-12-02

190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
2

Title
Site Layout Map



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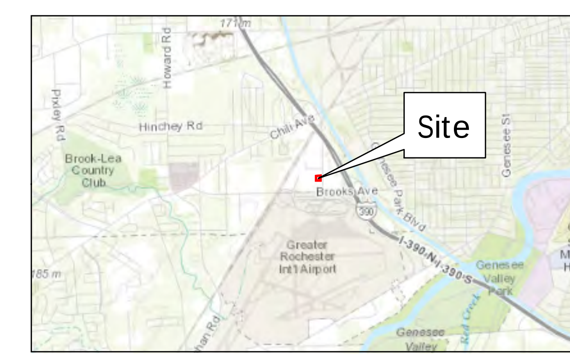
Legend

- Monitoring Wells and EISB Injection Wells
- Sub-Slab Vapor Monitoring Point
- Site Boundaries

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet

0 50 100 Feet

1:600 (At Original document size of 11x17)



Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AG/AL on 2015-07-23
Technical Review by TW on 2015-12-02
Independent Review by PN on 2015-12-02

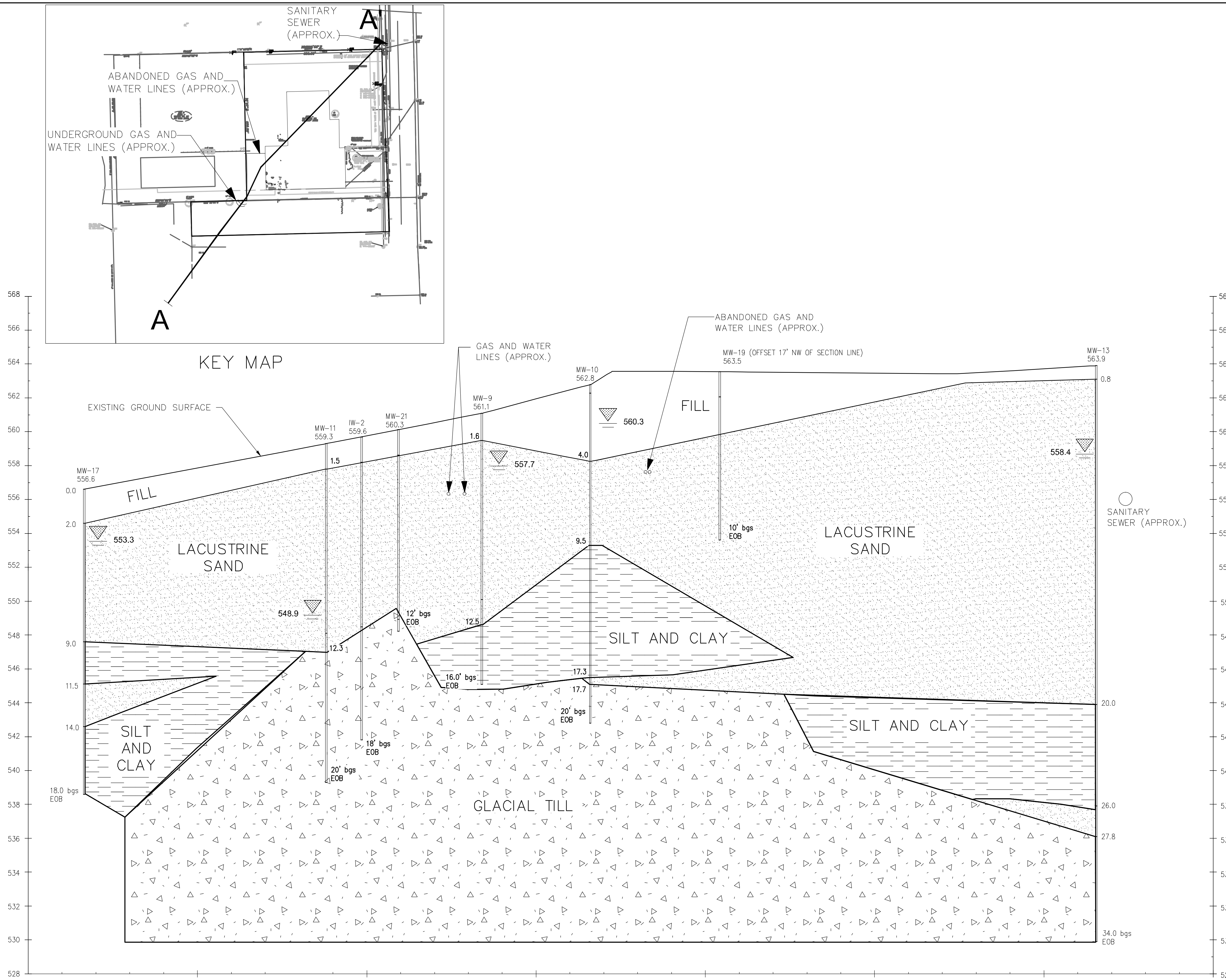
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
3

Title

Site Plan
(Showing Monitoring Locations)



SECTION A-A'
SCALE 1"=60' HORIZONTAL.
1"= 6' VERTICAL

U:\16059\GIS\SMP 2015\Figure 4A - Geologic Cross Section A-A.dwg
2015/07/26 5:20 PM By: Less, Andy

ORIGINAL SHEET - ANSI D

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Fax. (585)272-1814
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Legend

FILL

LACUSTRINE SAND

SILT AND CLAY

GLACIAL TILL

557.9 WATER ELEVATION MEASURED ON MAY 2, 2006

Notes

Issued	By	Appd.	YY.MM.DD

File Name:	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114

Site Mangement Plan

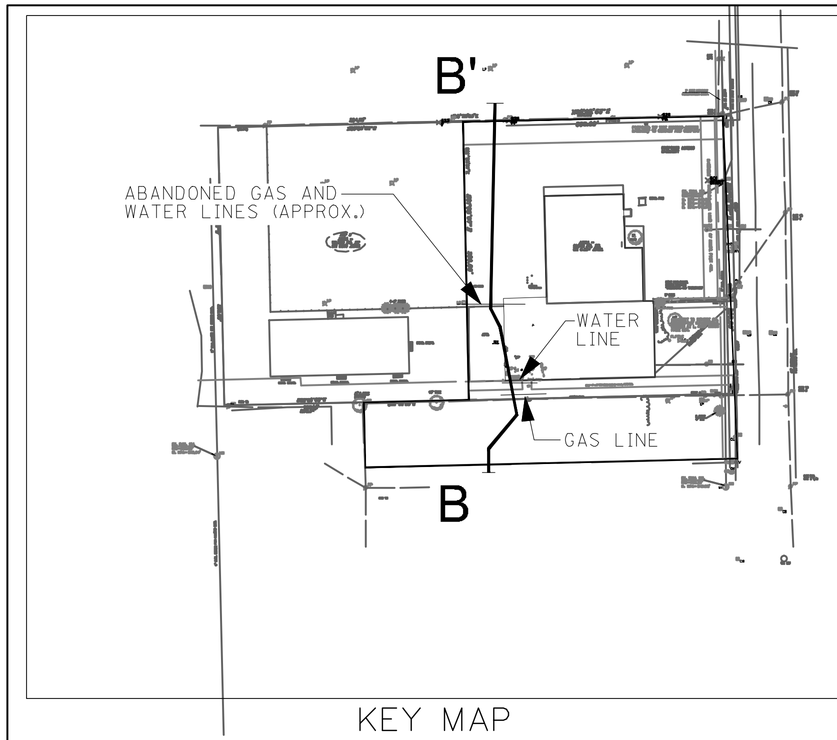
381 Buell Road, Gates, New York

Title

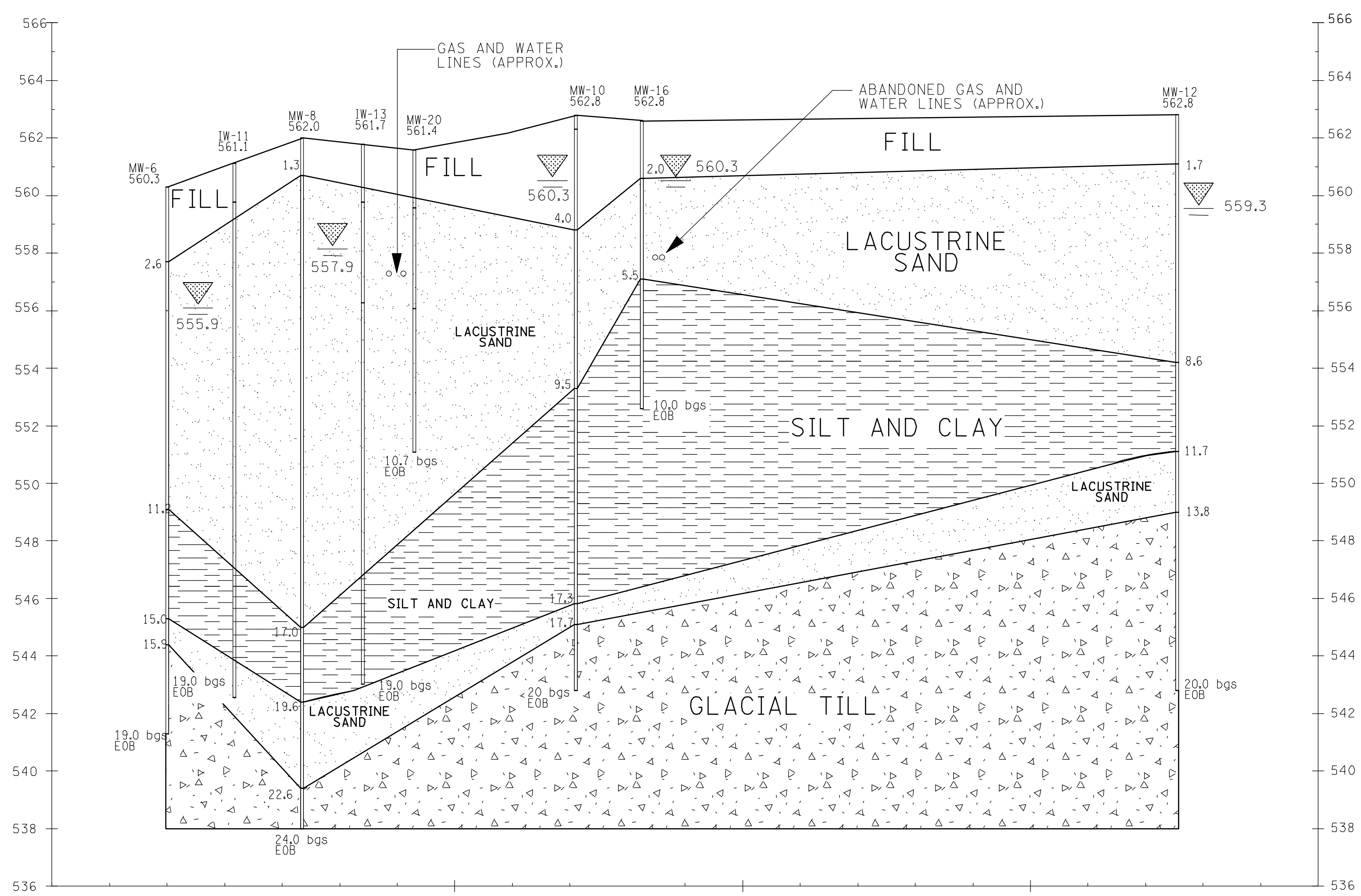
Geologic Cross Section A-A'

Project No.	Scale
190500033	None

Drawing No.	Sheet	Revision
4A	of	



KEY MAP



B

B'

SECTION B-B
SCALE 1"=60' HORIZONTAL
1"= 6' VERTICAL

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FILL
LACUSTRINE SAND
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GLACIAL TILL
557.9 WATER ELEVATION MEASURED ON MAY 2, 2006

Notes

Issued	By	Appd.	YY.MM.DD

File Name:	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114

Site Mangement Plan

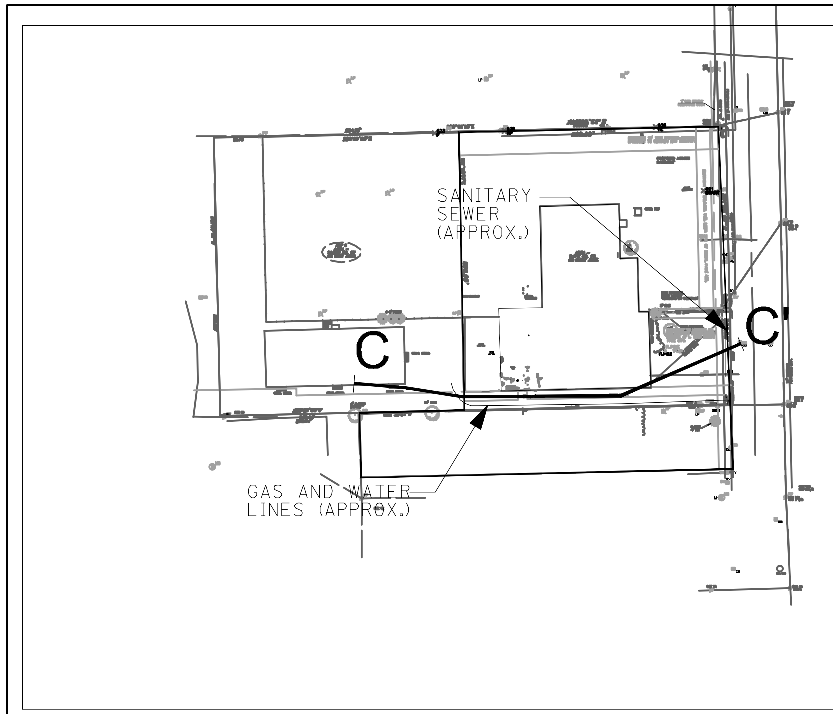
381 Buell Road, Gates, New York

Title

Geologic Cross Section B-B'

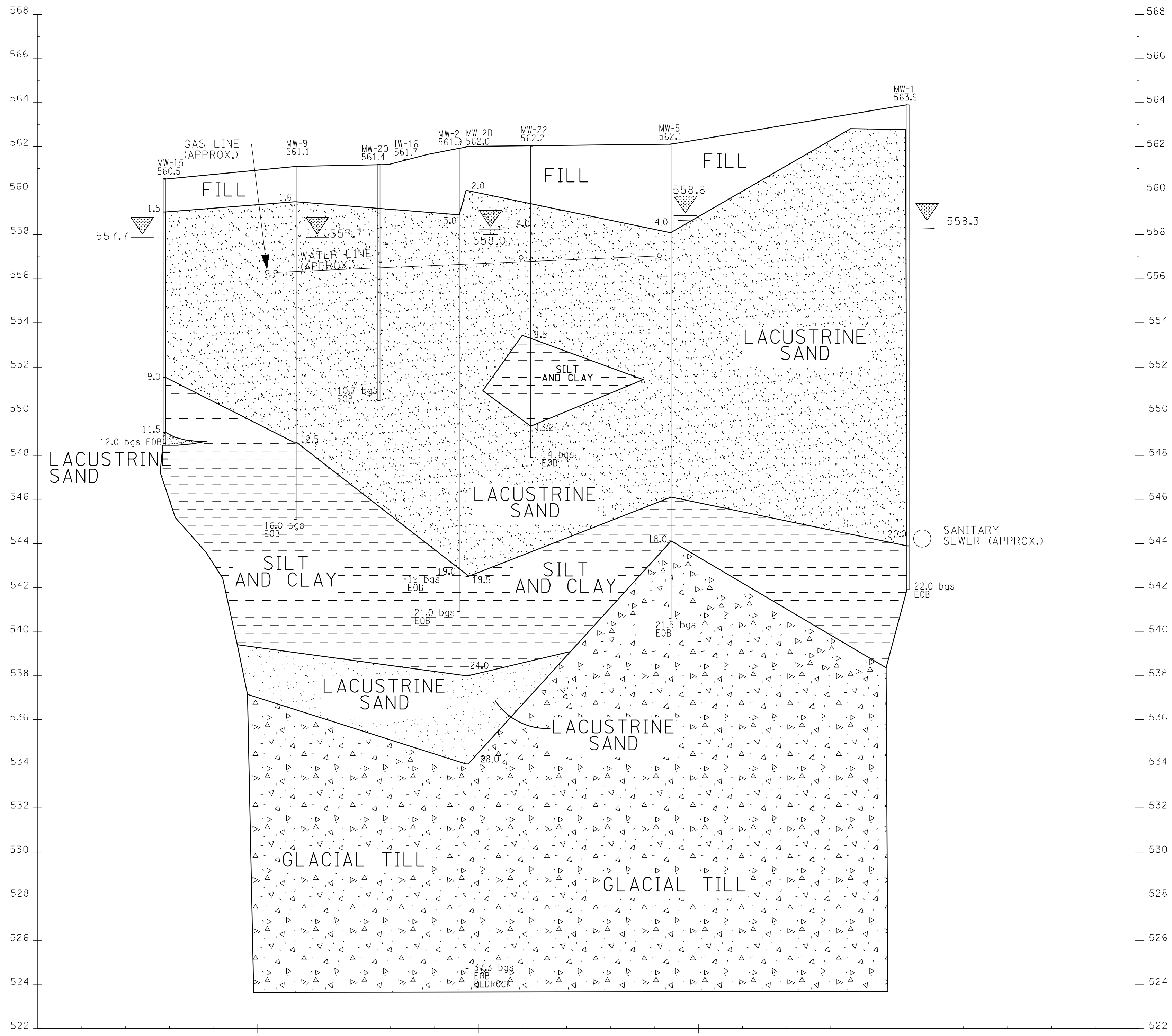
Project No.	Scale
190500033	None

Drawing No.	Sheet	Revision
4B	of	



KEY MAP

NOTE: GEOLOGICAL INFORMATION FROM LOG OF PRE-EXISTING MONITORING WELL MW-2 NOT SHOWN.



SECTION C-C
SCALE 1"=60' HORIZONTAL
1"= 6' VERTICAL

Stantec

61 Commercial Street, Suite 100
Rochester, New York USA 14614

Tel. (585)475-1440
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FILL
LACUSTRINE SAND
SILT AND CLAY
GLACIAL TILL
557.9 WATER ELEVATION MEASURED ON MAY 2, 2006

Notes

Issued | By | Appd. | YY.MM.DD

File Name: | Dwn. | Chkd. | Dsgn. | YY.MM.DD

Permit-Seal

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114

Site Mangement Plan

381 Buell Road, Gates, New York

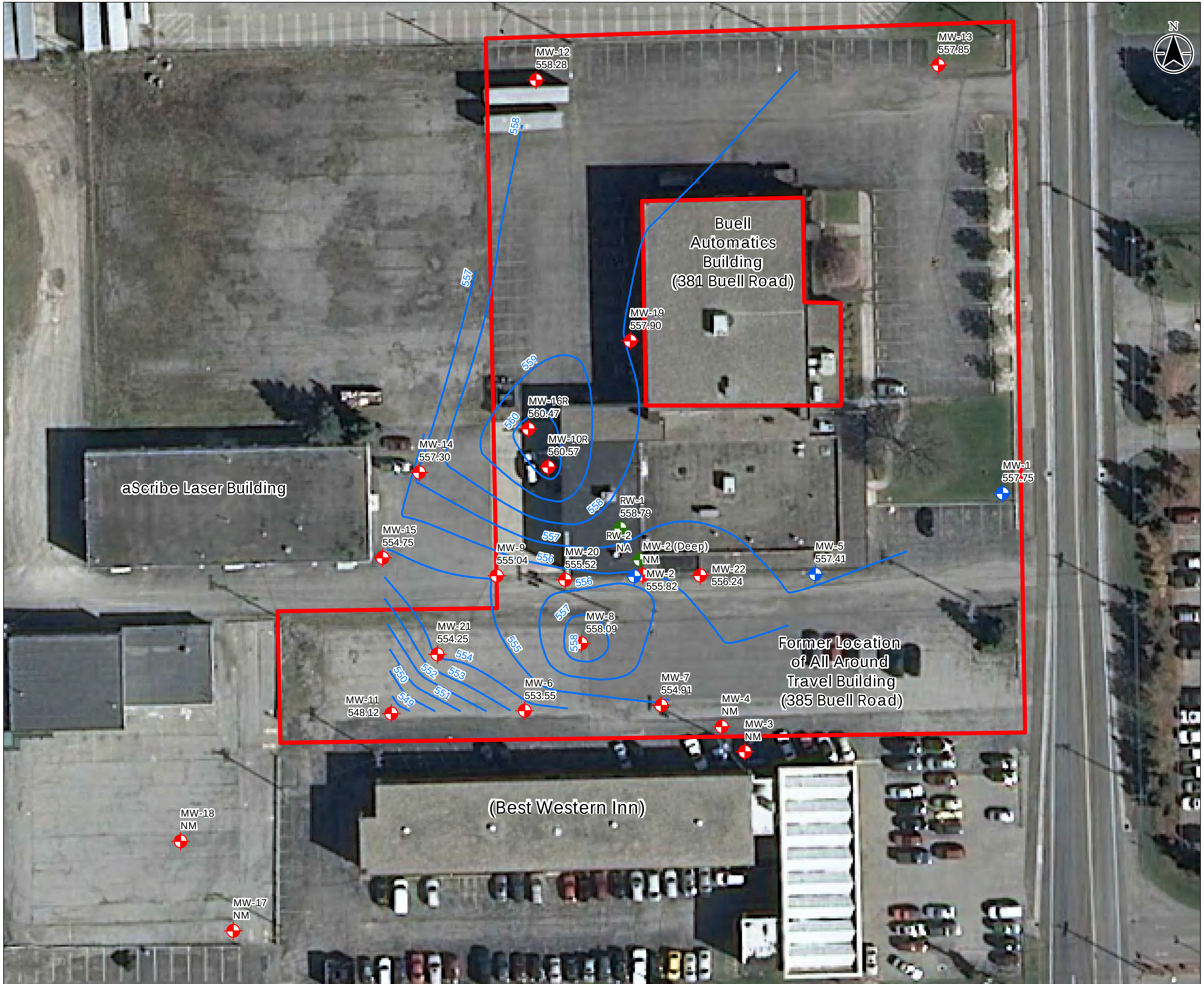
Title

Geologic Cross Section B-B'

Project No. 190500033
Scale None
Drawing No. 4C
Sheet of
Revision

U:\190500033\GIS\SMP 2015\Figure 4C - Geologic Cross Section C-C.dwg
2015/07/26 2:58 PM By: Less, Andy

ORIGINAL SHEET - ANSI D



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Legend

Site Boundaries

Buell Investigation Points

Type

Monitoring Well

Pre-Existing Well

Remediation Well

MW-22
556.24
Monitoring Well Location
Groundwater Elevation Measured on 05/26/2015

557 Groundwater Elevation Contour Line (1 ft. contour interval)

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet
3. NM = not measured
4. NA = static water table reading not available
5. Contours generated by natural neighbor interpolation

0 40 80 Feet
1:600 (At Original document size of 11x17)

Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AG on 2015-06-04
Technical Review by TDW on 2015-06-08
Independent Review by PN on 2015-12-02
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
5A

Title
Groundwater Contour Map
May 2015

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Legend

Site Boundaries

Buell Investigation Points

Type

- Monitoring Well
- Pre-Existing Well
- Remediation Well

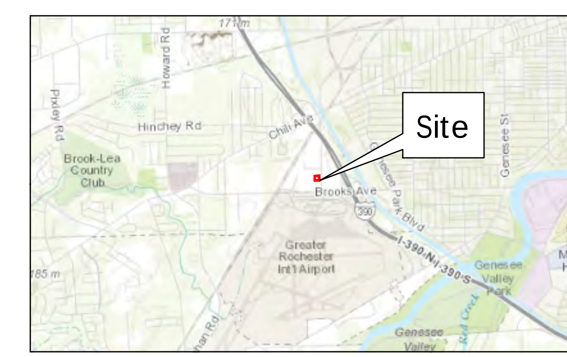
MW-12
559.16
Monitoring Well Location
Groundwater Elevation Measured on 06/23/2015

557
Groundwater Elevation Contour Line (1 ft. contour interval)

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet
3. NM = not measured
4. NA = water table elevation not available
5. Contours generated by natural neighbor interpolation

0 40 80
Feet

1:600 (At Original document size of 11x17)



Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AG on 2015-07-02
Technical Review by TDW on 2015-07-0x
Independent Review by PN on 2014-12-02

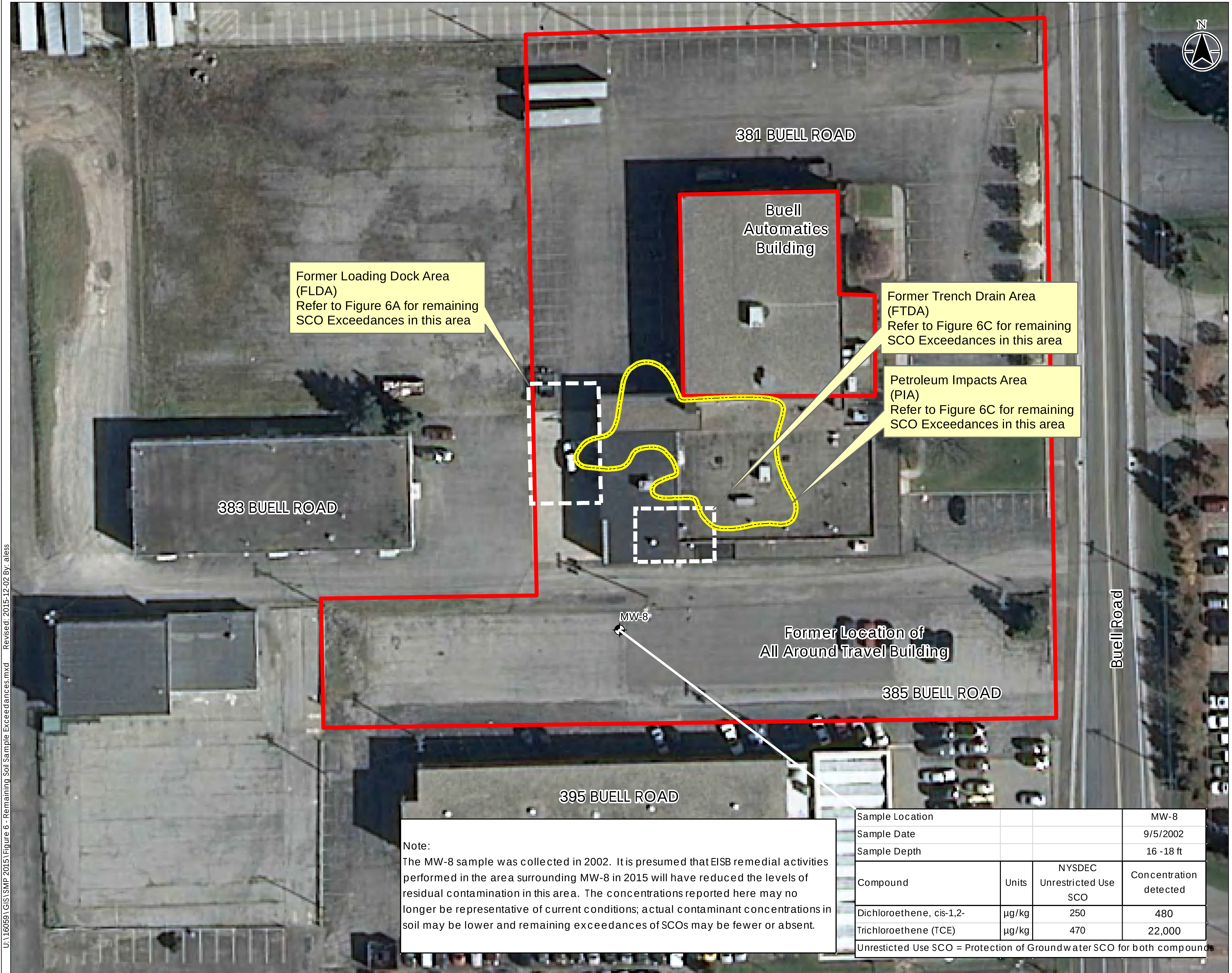
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
5B

Title
Groundwater Contour Map
June 2015

U:\160591\GIS\SMP 2015\Figure 5B - GW Contour Map - June 2015.mxd Revised: 2015-12-02 By: aless



Note:
The MW-8 sample was collected in 2002. It is presumed that EISB remedial activities performed in the area surrounding MW-8 in 2015 will have reduced the levels of residual contamination in this area. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations in soil may be lower and remaining exceedances of SCOs may be fewer or absent.

Sample Location			MW-8
Sample Date			9/5/2002
Sample Depth			16 -18 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250	480
Trichloroethene (TCE)	µg/kg	470	22,000
Unresticted Use SCO = Protection of Groundwater SCO for both compounds			

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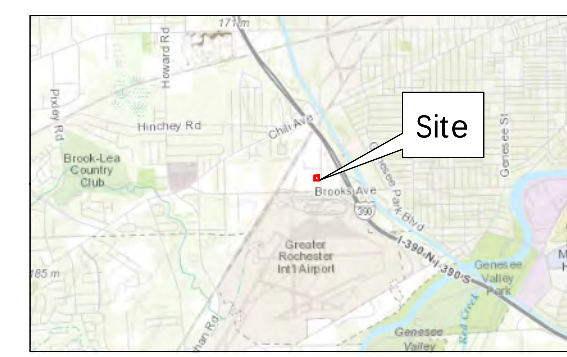
Legend
Site Boundaries

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet

0 50 100 Feet
1:600 (At Original document size of 11x17)



Project Location:
381 BUELL ROAD
GATES, NY

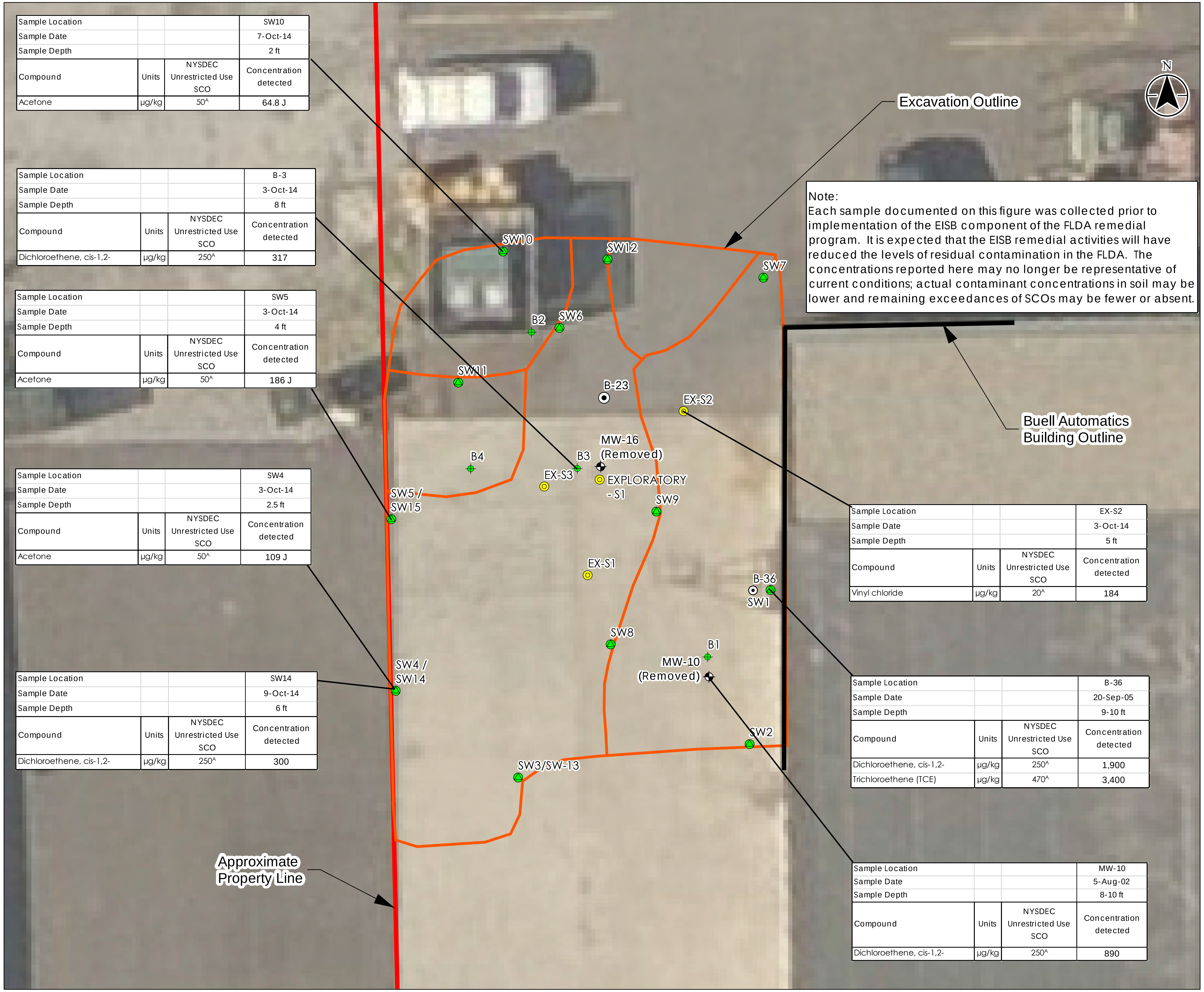
Prepared by AG/AL on 2015-07-23
Technical Review by TW on 2015-12-02
Independent Review by mmm on 2015-12-02
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
6

Title
Remaining Soil Sample Exceedances

U:\16059\GIS\SMP 2015\Figure 6 - Remaining Soil Sample Exceedances.mxd Revised: 2015-12-02 By: aless



Sample Location			SW10
Sample Date			7-Oct-14
Sample Depth			2 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50^	64.8 J

Sample Location			B-3
Sample Date			3-Oct-14
Sample Depth			8 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250^	317

Sample Location			SW5
Sample Date			3-Oct-14
Sample Depth			4 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50^	186 J

Sample Location			SW4
Sample Date			3-Oct-14
Sample Depth			2.5 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50^	109 J

Sample Location			SW14
Sample Date			9-Oct-14
Sample Depth			6 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250^	300

Note:
Each sample documented on this figure was collected prior to implementation of the EISB component of the FLDA remedial program. It is expected that the EISB remedial activities will have reduced the levels of residual contamination in the FLDA. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations in soil may be lower and remaining exceedances of SCOs may be fewer or absent.

Sample Location			EX-S2
Sample Date			3-Oct-14
Sample Depth			5 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Vinyl chloride	µg/kg	20^	184

Sample Location			B-36
Sample Date			20-Sep-05
Sample Depth			9-10 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250^	1,900
Trichloroethene (TCE)	µg/kg	470^	3,400

Sample Location			MW-10
Sample Date			5-Aug-02
Sample Depth			8-10 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250^	890

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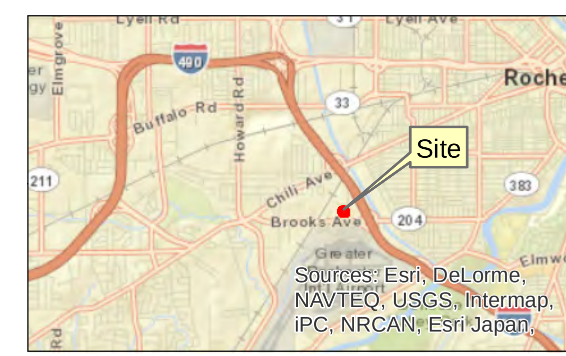
Legend
- Site Boundaries
- Previous Sample Locations
- Test Boring
- Monitoring Well

Notes

1. Sidewall samples pairs SW3/SW13, SW4/SW14, SW5 / SW15 have the same horizontal location but different depths.

0 10 20 Feet

Notes:	
A	Unresticted SCO = Protection of Groundwater SCO in this case.
J	The reported result is an estimated v alue.



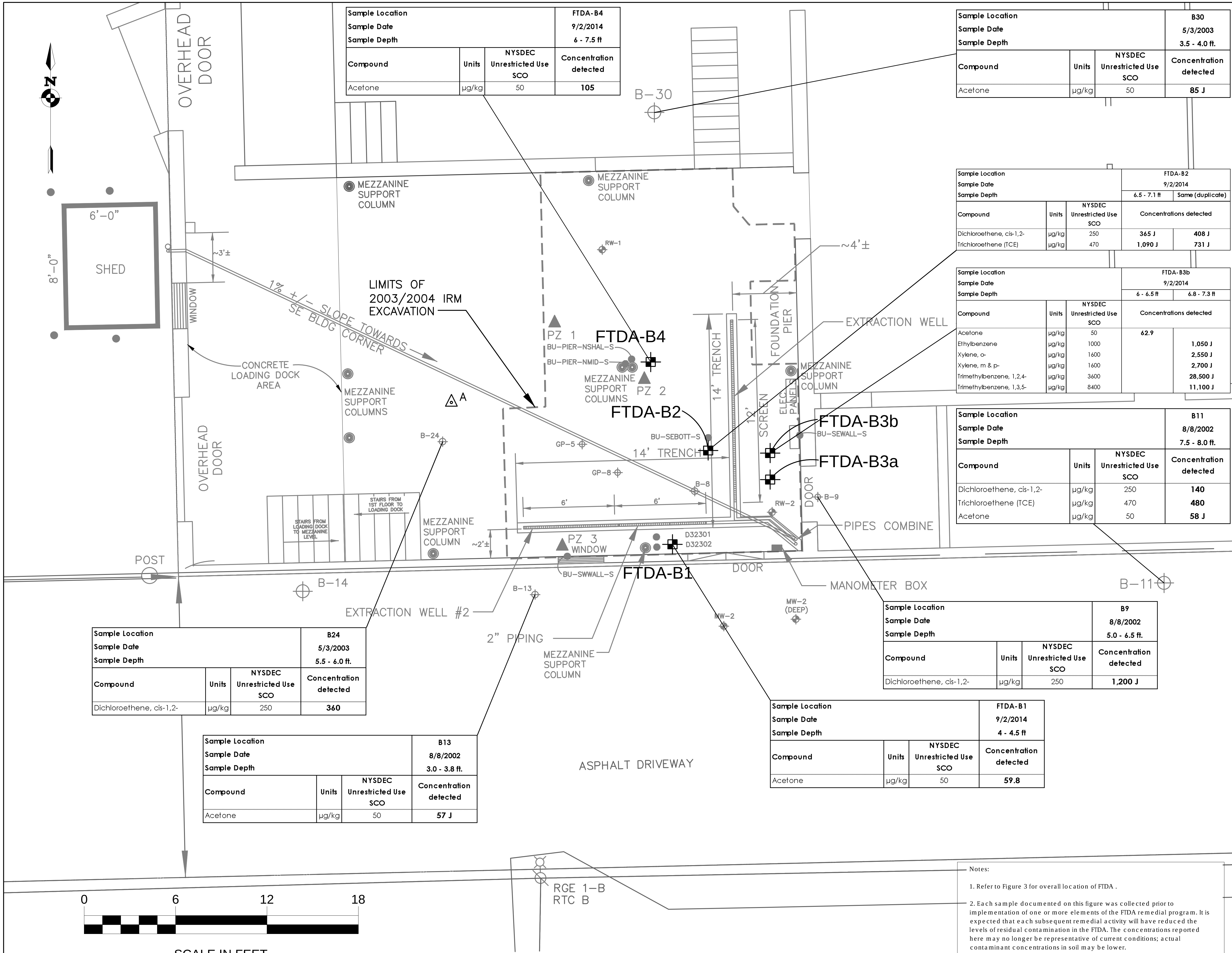
Project Location:
381 BUELL ROAD
GATES, NY

Prepared by APL on 5/7/2015
Technical Review by TW/BH on 12/02/2015
Independent Review by PN/MS on 12/02/2015
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
6A

Title
Remaining Soil Sample Exceedances
Former Loading Dock Area



Sample Location			FTDA-B4
Sample Date			9/2/2014
Sample Depth			6 - 7.5 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50	105

Sample Location			B30
Sample Date			5/3/2003
Sample Depth			3.5 - 4.0 ft.
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50	85 J

Sample Location			FTDA-B2	
Sample Date			9/2/2014	
Sample Depth			6.5 - 7.1 ft	Same (duplicate)
Compound	Units	NYSDEC Unrestricted Use SCO	Concentrations detected	
Dichloroethene, cis-1,2-	µg/kg	250	365 J	408 J
Trichloroethene (TCE)	µg/kg	470	1,090 J	731 J

Sample Location			FTDA-B3b	
Sample Date			9/2/2014	
Sample Depth			6 - 6.5 ft	6.8 - 7.3 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentrations detected	
Acetone	µg/kg	50	62.9	
Ethylbenzene	µg/kg	1000		1,050 J
Xylene, o-	µg/kg	1600		2,550 J
Xylene, m & p-	µg/kg	1600		2,700 J
Trimethylbenzene, 1,2,4-	µg/kg	3600		28,500 J
Trimethylbenzene, 1,3,5-	µg/kg	8400		11,100 J

Sample Location			B11
Sample Date			8/8/2002
Sample Depth			7.5 - 8.0 ft.
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250	140
Trichloroethene (TCE)	µg/kg	470	480
Acetone	µg/kg	50	58 J

Sample Location			B24
Sample Date			5/3/2003
Sample Depth			5.5 - 6.0 ft.
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250	360

Sample Location			B9
Sample Date			8/8/2002
Sample Depth			5.0 - 6.5 ft.
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Dichloroethene, cis-1,2-	µg/kg	250	1,200 J

Sample Location			FTDA-B1
Sample Date			9/2/2014
Sample Depth			4 - 4.5 ft
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50	59.8

Sample Location			B13
Sample Date			8/8/2002
Sample Depth			3.0 - 3.8 ft.
Compound	Units	NYSDEC Unrestricted Use SCO	Concentration detected
Acetone	µg/kg	50	57 J

Notes:

1. Refer to Figure 3 for overall location of FTDA.

2. Each sample documented on this figure was collected prior to implementation of one or more elements of the FTDA remedial program. It is expected that each subsequent remedial activity will have reduced the levels of residual contamination in the FTDA. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations in soil may be lower.

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Consultants

Legend

- IRM POST-EXCAVATION SAMPLE LOCATION (AND DEPTH) WITH VOCs >1PPM
- B-13 PREVIOUS TEST BORINGS (WHERE SAMPLE DEPTH IS SHOWN, VOCs WERE >1PPM)
- MW-2 EXISTING MONITORING WELLS
- A EXISTING SUB-SLAB VAPOR MONITORING POINT
- EXISTING SOIL-VAPOR AND VACUUM MONITORING PIEZOMETER
- SEPTEMBER 2014 TEST BORING LOCATIONS

Notes

SITE MANAGEMENT PLAN	AL/TW	MS/PN	15.12.02
Issued	By	Appd.	YY.MM.DD

File Name: Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project

Buell Automatics Site
Brownfield Cleanup Program Site No. C828114

Site Management Plan

381 Buell Road, Gates, New York

Title

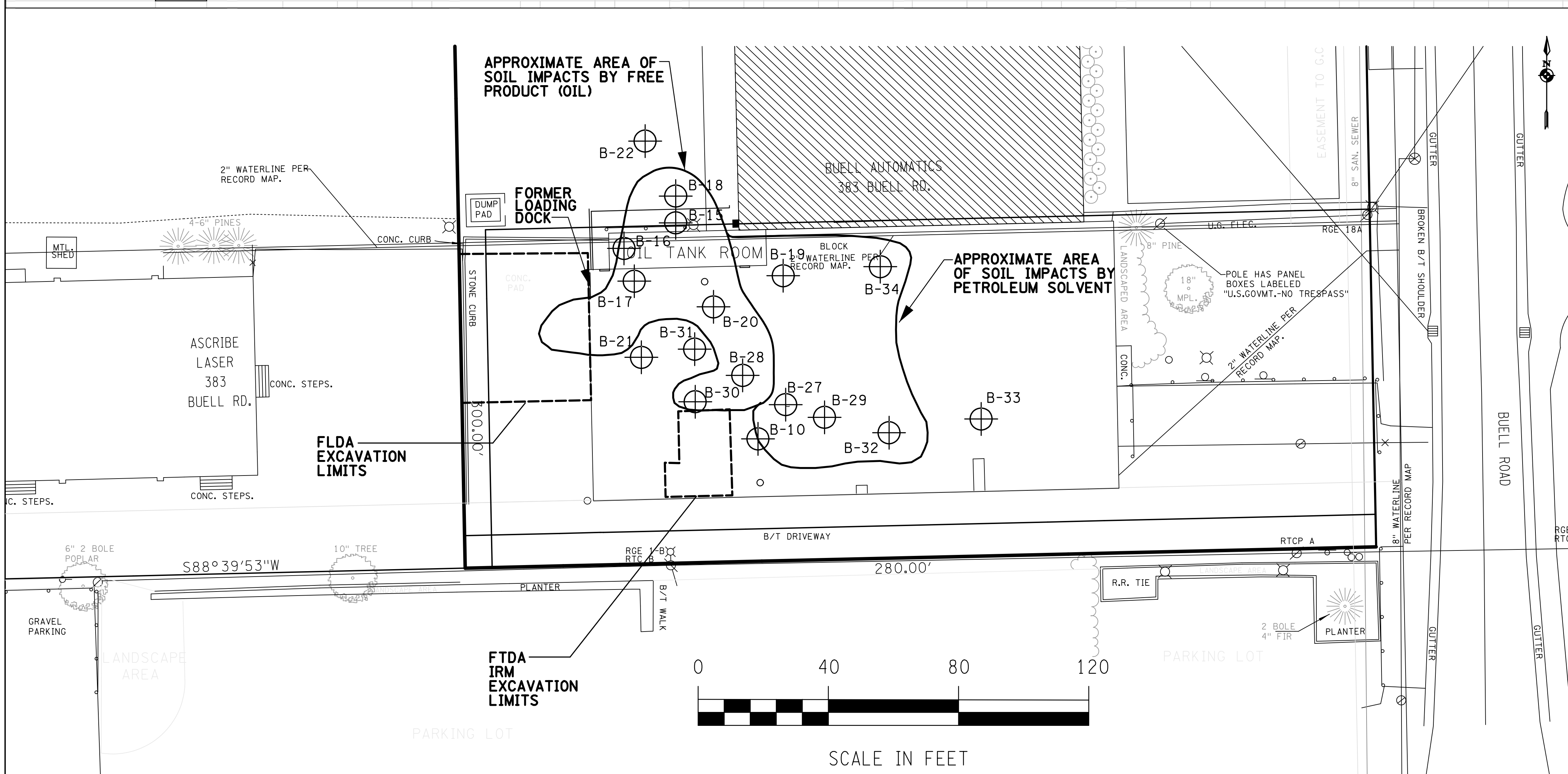
Remaining Soil Sample Exceedances
Former Trench Drain Area (FTDA)

Project No.	Scale	
190500033	See scale bar	
Drawing No.	Sheet	Revision
6B	of	

Sample Location			B15	B16	B17	B18	B19	B20	B21	B22	B27	B28	B29	B30	B31	B32		B33	B34
Sample Date			08/09/02	08/09/02	08/09/02	08/09/02	05/05/03	05/03/03	05/03/03	05/03/03	05/03/03	05/03/03	05/03/03	05/03/03	05/03/03	05/05/03		05/05/03	05/05/03
Sample Depth			4.5 - 5.0 ft.	6.0 - 6.5 ft.	4.5 - 5.0 ft.	4.5 - 5.0 ft.	3.5 - 4.0 ft.	3.5 - 4.0 ft.	4.5 - 5.0 ft.	5.5 - 6.0 ft.	3.5 - 4.0 ft.	6.5 - 7.0 ft.	3.5 - 4.0 ft.	3.5 - 4.0 ft.	6.0 - 6.5 ft.	3.5 - 4.0 ft.	3.5 - 4.0 Dup	6.0 - 6.5 ft.	2.0 - 2.5 ft.
Exceedances of SCOs:	**Units**	**NYSDEC Unrestricted Use SCO**																	
Acetone	µg/kg	50			**64**				**59**			**57**		**85 J**					
cis-1,2-Dichloroethene	µg/kg	250					**1,600**												
Trichloroethene	µg/kg	470					**1,900**												
Other indications of petroleum impacts:																			
Laboratory analyses																			
Total VOC TICs	µg/kg	NAC	178,900	5,530	12,150	172,500	340,000	NA	6,000	4,490	NA	22,500	490,000	7,270	743	412,000	398,000	30	363,000
Total SVOC TICs	µg/kg	NAC	27,000	30,810	136,300	92,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH	mg/kg	NAC	NA	NA	NA	NA	NA	19,000	NA	NA	6,600	NA	NA	NA	NA	14,000	8,400	NA	NA
Field observations																			
Petroleum sheen noted		NAC	4.0 - 5.0 ft.	5.2 - 7.0 ft.		5.8 - 7.0 ft.	4.0 - 7.2 ft.	2.3 - 7.5 ft.	4.5 - 5.0 ft.	5.8 - 6.0 ft.	5.5 - 7.0 ft.	6.5 ft.	3.5 - 6.5 ft.						6.0 - 7.0 ft.
Oil saturation noted		NAC		Trace	Traces, 0.5 - 3.5 ft. and 5 - 7 ft.			2.3 - 4 ft.				6.5 ft.		Traces, 4.8 - 8 ft.					

Notes:

64	Concentration listed in bold text exceeds the Unrestricted Use SCO.	VOC - Volatile Organic Compound
12,150	Concentration listed in plain text is the concentration detected of a parameter for which there is not an applicable SCO.	SVOC - Semi-Volatile Organic Compound
	Blank spaces in the upper section of this table indicate that this compound was not detected at a concentration that exceeds the SCO.	TIC - Tentatively Identified Compound
	Blank spaces in the lower section of this table indicate that evidence of petroleum impacts were not observed.	TPH - Total Petroleum Hydrocarbons
NA	NA indicates not analyzed. J indicates an estimated value.	NAC - No Applicable Criterion available for this parameter



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B-22 GEOPROBE BORING LOCATION

MW-8 MONITORING WELL LOCATION

MAPPING SOURCE :

1. EXISTING OFF-SITE CONDITIONS WERE OBTAINED FROM TRACING AERIAL PHOTOGRAPHS OBTAINED FROM PICTOMETRY INTERNATIONAL

2. BASEMAP WAS OBTAINED FROM PASSERO ASSOCIATES, P.C. , DRAWING NAMED "BROWNFIELD CLEANUP PROGRAM, SITE # C828114 METES AND BOUNDS DESCRIPTION ", PROJECT NO. 2007687.01, DRAWING NO. DEC-1 SCALE 1"=30' , DATED, APRIL 12, 2007

Revision By Appd. YY.MM.DD

SITE MANAGEMENT PLAN TW/AL MS/PN 15.12.02

Issued By Appd. YY.MM.DD

File Name: Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project

Title

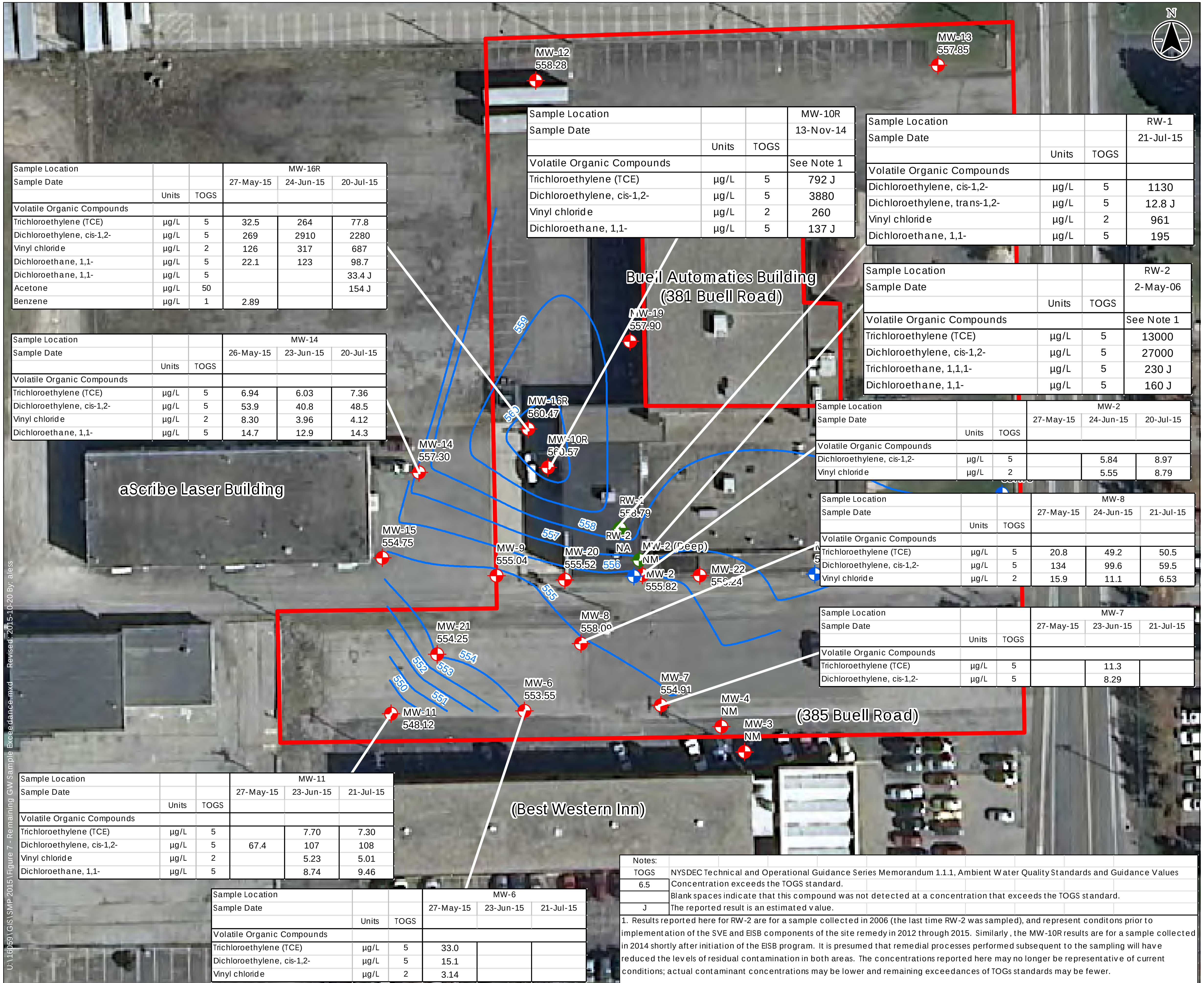
Remaining Soil Sample Exceedances Petroleum Impact Areas

Project No. Scale

Drawing No. 6C Sheet of Revision

ORIGINAL SHEET - 24 x 36

U: 16059\GIS\SMP 2015\FIGURE 6C Remaining Soil Sample Exceedances Petroleum Impact Areas.dgn



Sample Location			MW-16R		
Sample Date			27-May-15	24-Jun-15	20-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Trichloroethylene (TCE)	µg/L	5	32.5	264	77.8
Dichloroethylene, cis-1,2-	µg/L	5	269	2910	2280
Vinyl chloride	µg/L	2	126	317	687
Dichloroethane, 1,1-	µg/L	5	22.1	123	98.7
Dichloroethane, 1,1-	µg/L	5			33.4 J
Acetone	µg/L	50			154 J
Benzene	µg/L	1	2.89		

Sample Location			MW-14		
Sample Date			26-May-15	23-Jun-15	20-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Trichloroethylene (TCE)	µg/L	5	6.94	6.03	7.36
Dichloroethylene, cis-1,2-	µg/L	5	53.9	40.8	48.5
Vinyl chloride	µg/L	2	8.30	3.96	4.12
Dichloroethane, 1,1-	µg/L	5	14.7	12.9	14.3

Sample Location			MW-10R
Sample Date			13-Nov-14
	Units	TOGS	
Volatile Organic Compounds			See Note 1
Trichloroethylene (TCE)	µg/L	5	792 J
Dichloroethylene, cis-1,2-	µg/L	5	3880
Vinyl chloride	µg/L	2	260
Dichloroethane, 1,1-	µg/L	5	137 J

Sample Location			RW-1
Sample Date			21-Jul-15
	Units	TOGS	
Volatile Organic Compounds			
Dichloroethylene, cis-1,2-	µg/L	5	1130
Dichloroethylene, trans-1,2-	µg/L	5	12.8 J
Vinyl chloride	µg/L	2	961
Dichloroethane, 1,1-	µg/L	5	195

Sample Location			RW-2
Sample Date			2-May-06
	Units	TOGS	
Volatile Organic Compounds			See Note 1
Trichloroethylene (TCE)	µg/L	5	13000
Dichloroethylene, cis-1,2-	µg/L	5	27000
Trichloroethane, 1,1,1-	µg/L	5	230 J
Dichloroethane, 1,1-	µg/L	5	160 J

Sample Location			MW-2		
Sample Date			27-May-15	24-Jun-15	20-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Dichloroethylene, cis-1,2-	µg/L	5		5.84	8.97
Vinyl chloride	µg/L	2		5.55	8.79

Sample Location			MW-8		
Sample Date			27-May-15	24-Jun-15	21-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Trichloroethylene (TCE)	µg/L	5	20.8	49.2	50.5
Dichloroethylene, cis-1,2-	µg/L	5	134	99.6	59.5
Vinyl chloride	µg/L	2	15.9	11.1	6.53

Sample Location			MW-7		
Sample Date			27-May-15	23-Jun-15	21-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Trichloroethylene (TCE)	µg/L	5		11.3	
Dichloroethylene, cis-1,2-	µg/L	5		8.29	

Sample Location			MW-11		
Sample Date			27-May-15	23-Jun-15	21-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Trichloroethylene (TCE)	µg/L	5		7.70	7.30
Dichloroethylene, cis-1,2-	µg/L	5	67.4	107	108
Vinyl chloride	µg/L	2		5.23	5.01
Dichloroethane, 1,1-	µg/L	5		8.74	9.46

Sample Location			MW-6		
Sample Date			27-May-15	23-Jun-15	21-Jul-15
	Units	TOGS			
Volatile Organic Compounds					
Trichloroethylene (TCE)	µg/L	5	33.0		
Dichloroethylene, cis-1,2-	µg/L	5	15.1		
Vinyl chloride	µg/L	2	3.14		

Notes:	
TOGS	NYSDEC Technical and Operational Guidance Series Memorandum 1.1.1, Ambient Water Quality Standards and Guidance Values
6.5	Concentration exceeds the TOGS standard.
	Blank spaces indicate that this compound was not detected at a concentration that exceeds the TOGS standard.
J	The reported result is an estimated value.

1. Results reported here for RW-2 are for a sample collected in 2006 (the last time RW-2 was sampled), and represent conditons prior to implementation of the SVE and EISB components of the site remedy in 2012 through 2015. Similarly, the MW-10R results are for a sample collected in 2014 shortly after initiation of the EISB program. It is presumed that remedial processes performed subsequent to the sampling will have reduced the levels of residual contamination in both areas. The concentrations reported here may no longer be representative of current conditions; actual contaminant concentrations may be lower and remaining exceedances of TOGs standards may be fewer.

U:\190500033\GIS\SMP 2015\Figure 7 - Remaining GW Sample Exceedance.mxd Revised: 2015-10-20 By: aless

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Legend

Site Boundaries

Buell Investigation Type

Monitoring Well

Pre-Existing Well

Remediation Well

MW-19
558.48
Monitoring Well Location
Groundwater Elevation Measured on 07/20/2015

557 Groundwater Elevation Contour Line (1 ft. contour interval)

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet
3. NM = not measured
4. NA = static water table reading not available
5. Contours generated by natural neighbor interpolation

0 40 80 Feet

Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AL/AG on 2015-10-20
Technical Review by TW/MS on 2015-10-20
Independent Review by PN on 2015-10-20
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
7

Title

Remaining Groundwater Exceedances

Notes:	
0.51	Compound was detected at the concentration shown.
0.4 U	Analyte was not detected at a concentration greater than the laboratory reportable detection limit shown.
J	The reported result is an estimated value.
J+	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
µg/m3	micrograms per cubic meter
1.	The samples documented on this figure were collected prior to implementation of the EISB component of the remedial program for the Buell Automatics Site.

		aScribe Laser Bldg 383 Buell Rd	Buell Automatics Building 381 Buell Road						
Sample Location		FFS1	A	B	C	D	E		F
Sample Date		26-Mar-12	18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14	18-Dec-14 Field Duplicate	18-Dec-14
	Units								
Site-Related Compounds of Concern									
Carbon Tetrachloride (Tetrachloromethane)	µg/m3	0.51	0.3	0.9 U	0.9 U	0.9 U	1	1	0.9 U
Chloroethane (Ethyl Chloride)	µg/m3	0.4 U	0.1 U	0.4 U	0.4 UJ	0.4 U	0.4 UJ	0.4 U	0.4 U
Dichloroethane, 1,1-	µg/m3	1.8 U	4 NJ	5	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U
Dichloroethane, 1,2-	µg/m3	0.6 U	0.2 U	0.6 U	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U
Dichloroethene, 1,1-	µg/m3	1.8 U	0.3	0.6 U	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U
Dichloroethene, cis-1,2-	µg/m3	1.8 U	180	1	0.6 UJ	2	0.6 UJ	0.6 U	0.6 U
Dichloroethene, trans-1,2-	µg/m3	1.8 U	3	0.6 U	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U
Tetrachloroethene (PCE)	µg/m3	0.75	3	3	1 J+	3	2 J	2	1 U
Trichloroethane, 1,1,1-	µg/m3	130	2	0.8 U	1	0.8 U	0.8 U	0.8 U	0.8 U
Trichloroethene (TCE)	µg/m3	210	330	2	6	17	4	5 J+	0.8 U
Vinyl chloride	µg/m3	0.24 U	0.6	1	0.4 UJ	0.4 U	0.4 UJ	0.4 U	0.4 U

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Legend

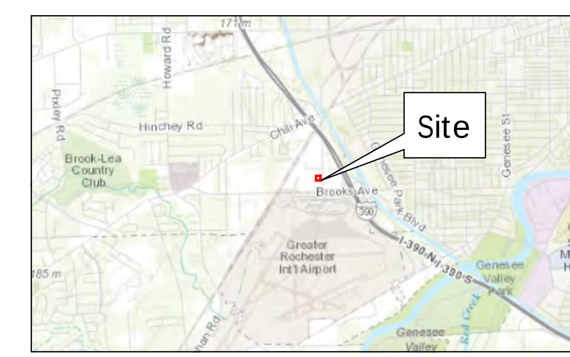
Sub-Slab Vapor Monitoring Point

Site Boundaries

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet

0 50 100 Feet

1:600 (At Original document size of 11x17)



Project Location:
381 BUELL ROAD
GATES, NY

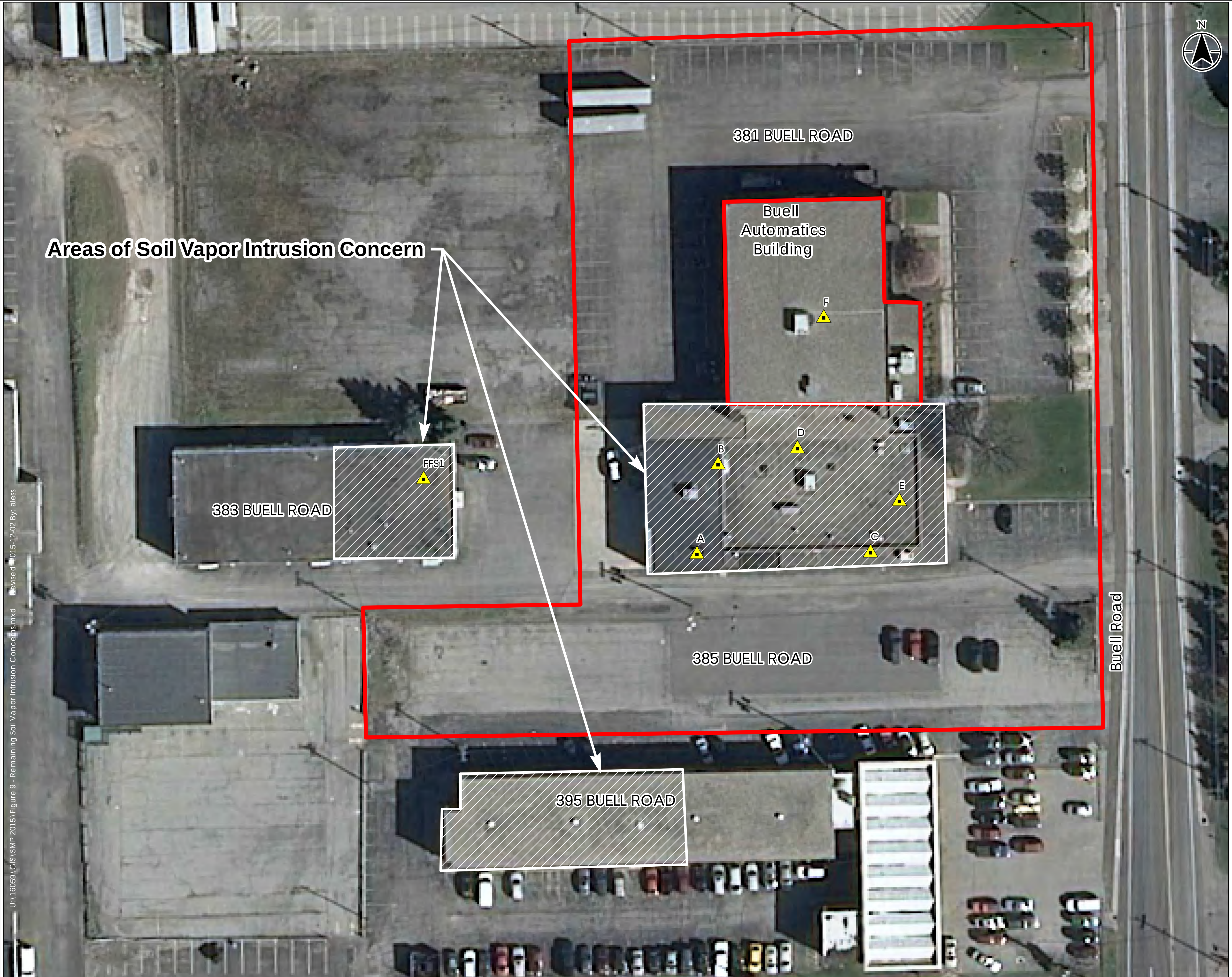
Prepared by AG/AL on 2015-07-23
Technical Review by TW on 2015-12-02
Independent Review by PN on 2015-12-02
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
8

Title

Remaining Sub-Slab Soil Vapor Sample Concentrations



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Legend

Site Boundaries

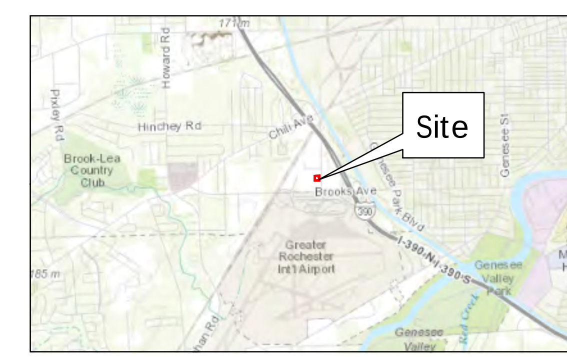
Sub-Slab Vapor Monitoring Point

Notes

1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet

0 50 100 Feet

1:600 (At Original document size of 11x17)



Project Location:

381 BUELL ROAD
GATES, NY

Prepared by AG/AL on 2015-07-23
Technical Review by TW on 2015-12-02
Independent Review by PN on 2015-12-02

190500033

Client/Project

Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.

9

Title

Areas of Soil Vapor Intrusion Concerns

U:\16059\GIS\SMP 2015\Figure 9 - Remaining Soil Vapor Intrusion Concerns.mxd Revised: 2015-12-02 By: aless

Stantec

Legend

Site Parcel and Institutional Control Boundaries

0 50 100 150 200 Feet

1:1,200 (At Original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet

Project Location:

381 BUELL ROAD
GATES, NY

Prepared by AG on 2015-07-23
Technical Review by MPS on 2015-12-02
Independent Review by PN on 2015-12-02

190500033

Client/Project

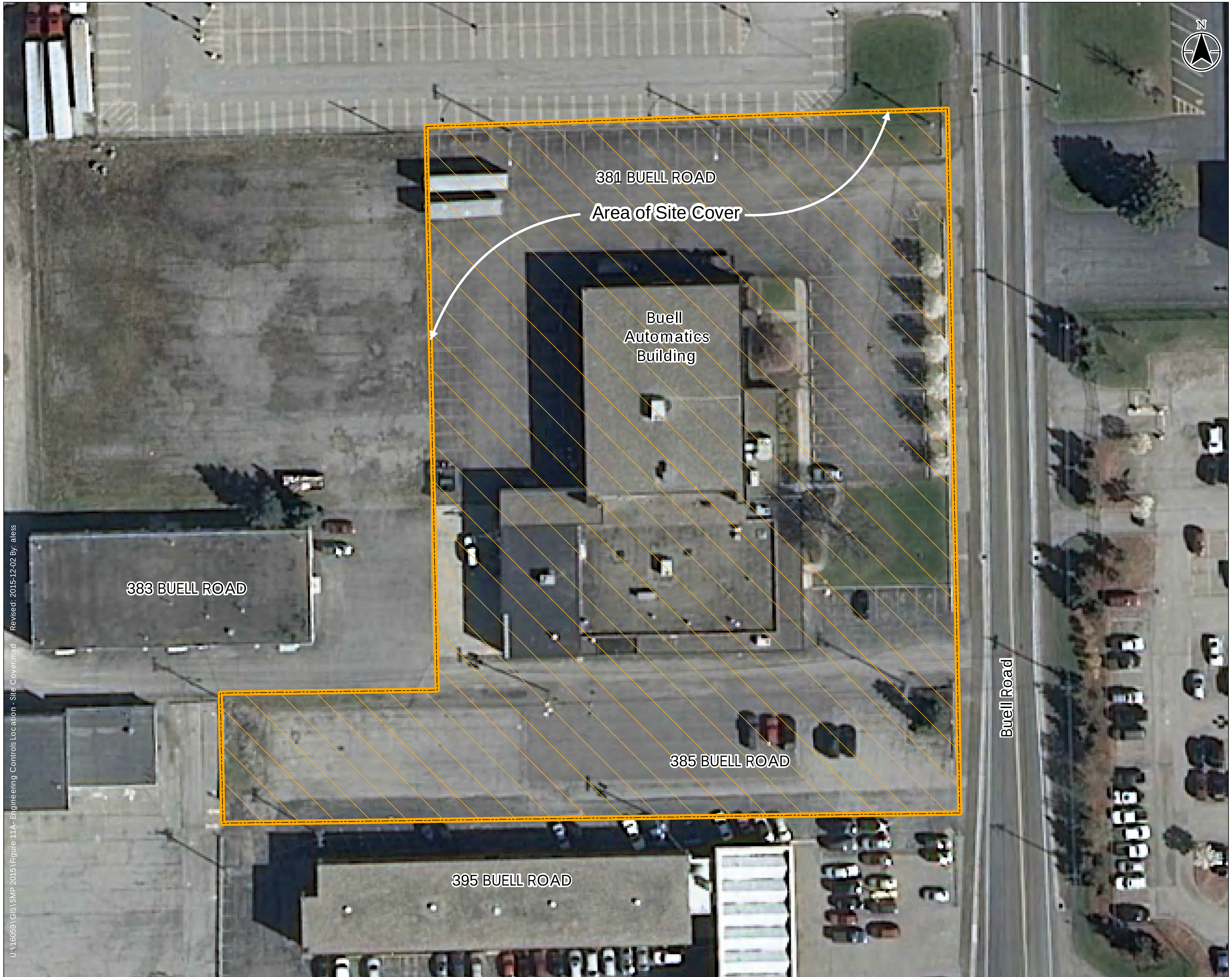
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.

10

Title

Institutional Control Boundaries



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Legend

Engineering Controls Location - Site Cover

STATE OF NEW YORK
PETER NIELSEN
No. 061499-1
LICENSED PROFESSIONAL ENGINEER

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Notes

1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet

0 50 100 Feet

Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AG/AL on 2015-09-18
Technical Review by TW/MS on 2015-12-02
Independent Review by PN on 2015-12-02

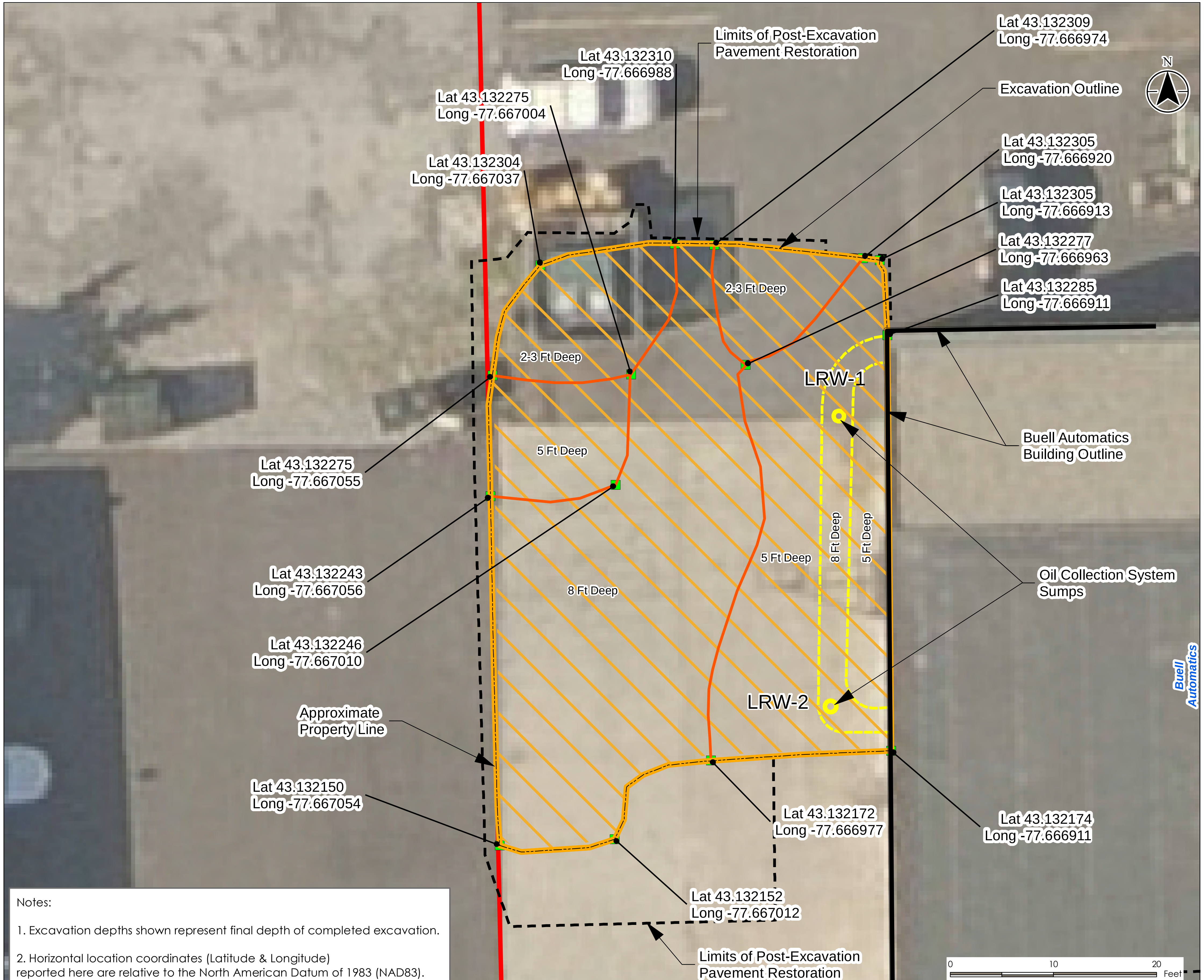
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
11A

Title

Engineering Controls Location - Site Cover



Notes:

1. Excavation depths shown represent final depth of completed excavation.

2. Horizontal location coordinates (Latitude & Longitude) reported here are relative to the North American Datum of 1983 (NAD83).

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Legend

- Limits of Demarcation Layer between FLDA Excavation Backfill and Surrounding Soil
- Site Boundary
- Oil Collection Sumps

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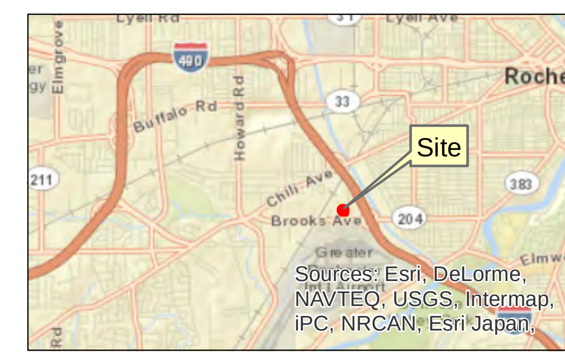

Project Location:
381 BUELL ROAD
GATES, NY

Revised by APL on 2015-09-18
Technical Review by TW/BH on 2015-12-02
Independent Review by PN/MS on 2015-12-02
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
11B

Title
Engineering Controls Location - Former Loading Dock Area

U:\16059\GIS\SMP 2015\Figure 11B – Engineering Controls Location - Former Loading Dock Area.mxd Revised: 2015-12-02 By: aless

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Legend

- Monitoring Wells to be used for LNAPL recovery if / when necessary
- Site Boundaries

STATE OF NEW YORK · PETER NIELSEN · No. 061499-1 · LICENSED PROFESSIONAL ENGINEER

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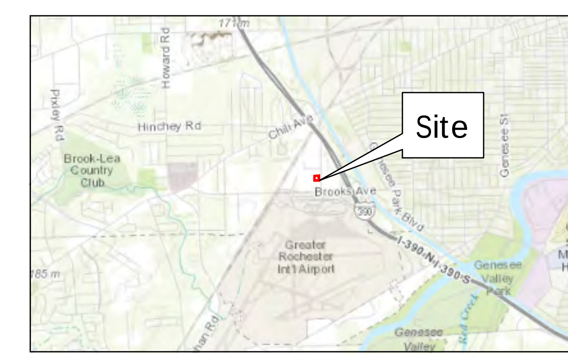
Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. All elevations in feet

0 50 100
Feet



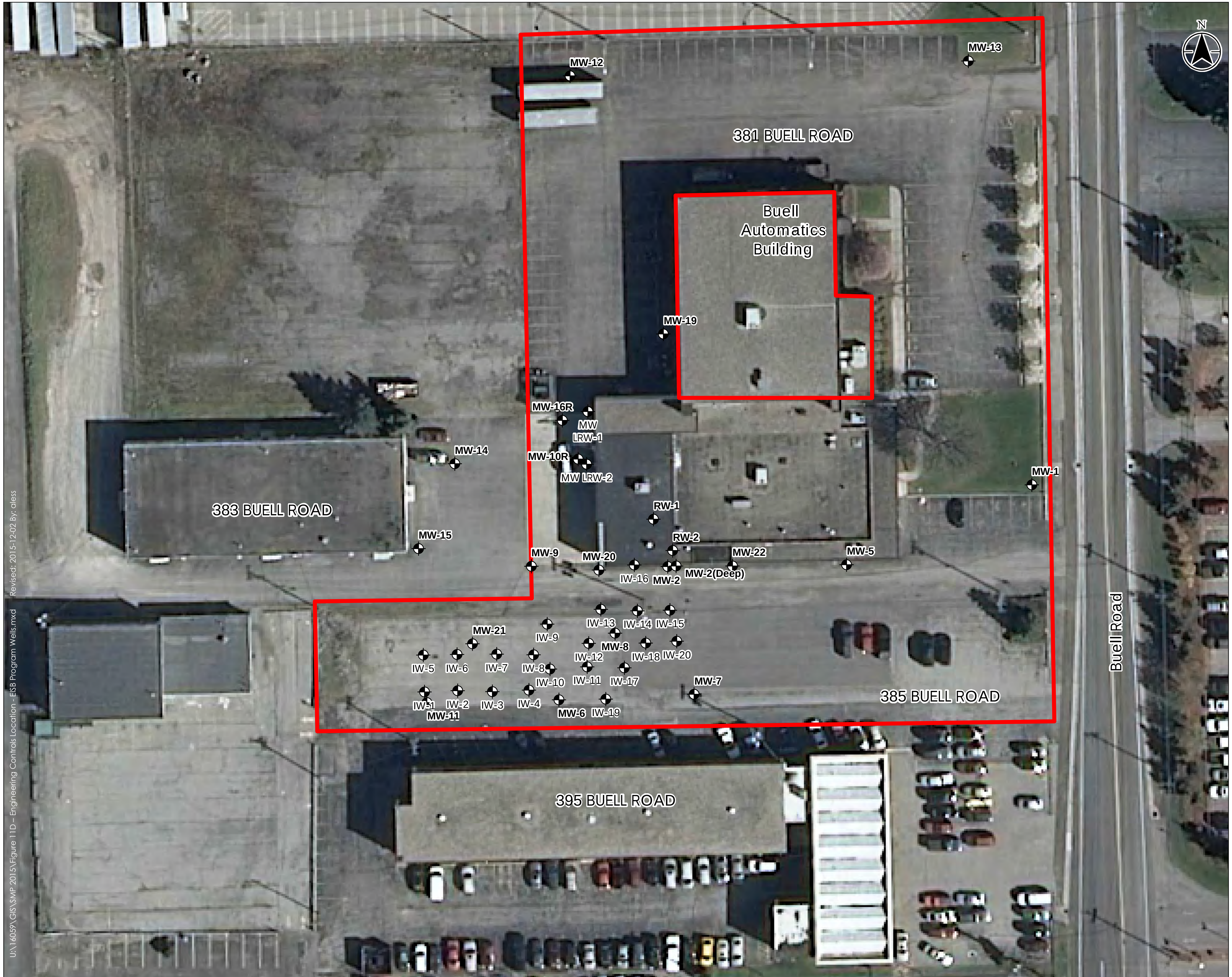
Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AG/AL on 2015-09-18
Technical Review by TW/MS on 2015-12-02
Independent Review by PN on 2015-12-02
190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
11C

Title
Engineering Controls Location - LNAPL Monitoring Wells



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Legend

Monitoring Wells and EISB Injection Wells

Site Boundaries

STATE OF NEW YORK · PETER NIELSEN · No. 061499-1 · LICENSED PROFESSIONAL ENGINEER

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Notes
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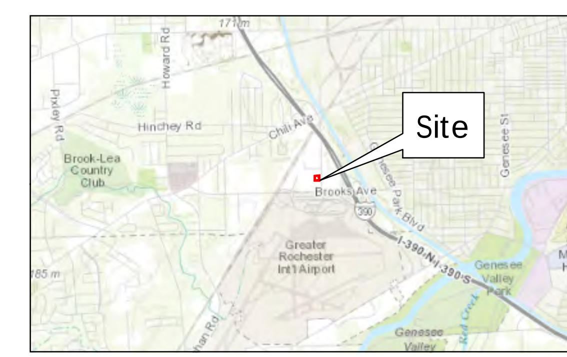
2. All elevations in feet

0 50 100 Feet



Project Location:
381 BUELL ROAD
GATES, NY

Prepared by AG/AL on 2015-09-18
Technical Review by TW/MS on 2015-12-02
Independent Review by PN on 2015-12-02
190500033

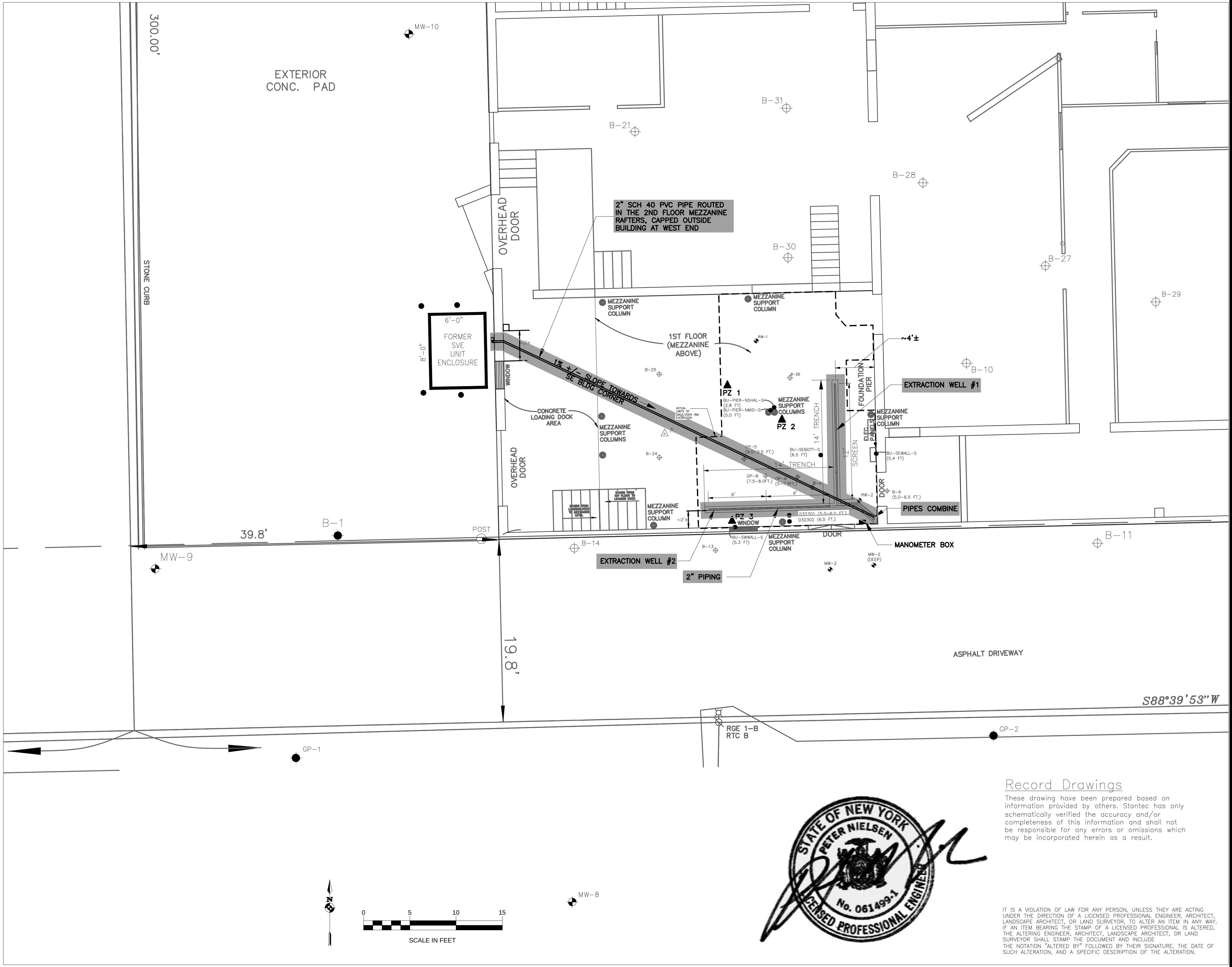
Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

Figure No.
11D

Title

Engineering Controls Location - Monitoring and EISB Injection Wells

U:\190500033\GIS\SMP 2015\Figure 11D – Engineering Controls Location - EISB Program Wells.mxd Revised: 2015-12-02 By: aless



Record Drawings

These drawing have been prepared based on information provided by others. Stantec has only schematically verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.

STATE OF NEW YORK
PETER NIELSEN
No. 061499-1
LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

U:\16059\GIS\SMP 2015\Figure 11E – Engineering Controls Location – Soil Vapor Discharge Piping to Remain.dwg
2015-12-02 10:23 AM By:Less, Andy

ORIGINAL SHEET – 22 X 34

Stantec

61 Commercial Street, Suite 100
Rochester, New York USA 14614
www.stantec.com

Consultants

Legend

- IRM POST-EXCAVATION SAMPLE LOCATION
- B-13 PREVIOUS TEST BORINGS
- MW-2 EXISTING MONITORING WELLS
- EXISTING SUB-SLAB VAPOR MONITORING POINT
- SOIL-VAPOR AND VACUUM MONITORING PIEZOMETER
- PIPING TO BE PRESERVED FOR POTENTIAL FUTURE USE IN SVE MITIGATION

Notes

SITE MANAGEMENT PLAN	AL/TW	PN	15.12.02
Issued	By	Appd.	YY.MM.DD

Permit-Seal

Project/ Client

SITE MANAGEMENT PLAN

BUELL AUTOMATICS

Rochester, New York

Title

ENGINEERING CONTROLS LOCATION-
SOIL VAPOR DISCHARGE
PIPING TO REMAIN

Project No.	Scale	
190500033	SEE SCALE BAR	
Drawing No.	Sheet	Revision
11E	1 of 1	

Appendices

APPENDIX A - ENVIRONMENTAL EASEMENTS

381 BUELL ROAD PROPERTY

AND

385 BUELL ROAD PROPERTY

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 24th day of August, 2015, between Owner(s) Lawton Family, LLC, having an office at 381 Buell Road, Rochester, NY 14624, County of Monroe, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 381 Buell Road in the Town of Gates, County of Monroe and State of New York, known and designated on the tax map of the County Clerk of Monroe as tax map parcel numbers: Section 135.05 Block 1 Lot 36.1, being the same as a portion of property conveyed to Grantor by deeds dated March 3, 1998 and July 2, 1998 and recorded in the Monroe County Clerk's Office in Liber and Page 8979/138 and 9029/247, respectively. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.670 +/- acres, and is hereinafter more fully described in the Land Title Survey dated April 12, 2007 and last revised May 5, 2015 prepared by Edward J. Freeman, NYSPLS # 049771, further amended by Robert A. Vento, NYSPLS #049701 of Passero Associates, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: B8-0576-00-04A, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential, Restricted Residential or Commercial purposes as defined in 6NYCRR 375-1.8(g)(i), (ii) and (iii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:	Site Number: C828114 Office of General Counsel NYSDEC 625 Broadway Albany New York 12233-5500
With a copy to:	Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Lawton Family, LLC:

By: ______________________

Print Name: GARY B. LAWTON

Title: Member | Owner | Pres. Date: 8/6/15

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Monroe)

On the 6th day of August, in the year 2015, before me, the undersigned, personally appeared Gary B. Lawton, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

William J. Creary
Notary Public - State of New York

WILLIAM J. CREARY, JR.
Notary Public, State of New York
Monroe County, Reg# 02CR4840048
Commission Expires February 28, 2018

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: ______________________________
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 24th day of August, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, SITUATED IN THE GREAT LOT32, TOWNSHIP 1, 4000 ACRE TRACT, TOWN OF GATES, COUNTY OF MONROE, AND STATE OF NEW YORK, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEING ON THE WESTERLY RIGHT OF WAY OF BUELL RD,(66' ROW) AT THE NORTHEASTERLY PROPERTY CORNER OF LOT 1 OF THE BUELL AUTOMATICS RESUBDIVISION, AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 297 OF MAPS, PAGE 55; THENCE,

1. SOUTH 01 08'07" EAST, ALONG SAID WESTERLY RIGHT OF WAY, A DISTANCE OF 300.00 FEET TO A POINT; THENCE,
2. SOUTH 88 39'53" WEST, ALONG THE NORTHERLY PROPERTY LINE OF LANDS OF NOW OR FORMERLY MICHAEL T. WEBB AND JAMES W. WEBB, A DISTANCE OF 280.00 FEET TO A POINT; THENCE,
3. NORTH 01 08'07" WEST, ALONG THE EASTERLY PROPERTY LINE OF LANDS OF NOW OR FORMERLY GERSTEV AND COMPANY, A DISTANCE OF 300.00 FEET TO A POINT; THENCE,
4. NORTH 88 39'53" EAST, ALONG THE SOUTHERLY PROPERTY LINE OF LANDS OF NOW OR FORMERLY 333 BUELL ROAD, A DISTANCE OF 280.00 FEET TO THE PONT OF BEGINNING, ENCOMPASSING 1.928 ACRES OF LAND, MORE OR LESS.

EXCEPTING FROM THE ABOVE DESCRIPTION THE FOLLOWING PARCEL OF LAND:

COMMENCING ON THE WESTERLY RIGHT OF WAY OF BUELL ROAD, (66' ROW) AT THE NORTHEASTERLY PROPERTY CORNER OF LOT 1 OF THE BUELL AUTOMATICS RESUBDIVISION, AS FILED IN THE MONROE CLERK'S OFFICE AT LIBER 297 OF MAPS, PAGE 55; THENCE SOUTH 51 41' 25" WEST, A DISTANCE OF 136.28 FEET TO THE POINT OF BEGINNING; THENCE,

NOTE: THE FIRST 7 COURSES RUN ALONG THE FACE OF THE BUILDING.

1. SOUTH 01 18' 20" EAST, A DISTANCEE 16.80 FEET TO A POINT; THENCE,
2. NORTH 88 41' 40" EAST, A DISTANCE OF 7.70 FEET TO A POINT; THENCE,
3. SOUTH 01 18' 20" EAST, A DISTANCE OF 7.70 FEET TO A POINT; THENCE,
4. SOUTH 88 41' 40" WEST A DISTANCE OF 7.70 FEET TO A POINT; THENCE,
5. SOUTH 01 18' 20" EAST, A DISTANCE OF 33.73 FEET TO A POINT; THENCE,
6. NORTH 88 37' 36" EAST, A DISTANCE OF 18.60 FEET TO A POINT; THENCE,
7. SOUTH 01 22' 24" EAST, A DISTANCE OF 57.91 FEET TO A POINT; THENCE,
8. SOUTH 88 49' 32" WEST, A DISTANCE OF 104.09 FEET TO A POINT; THENCE,

NOTE THE FOLLOWING 2 COURSES RUN ALONG THE FACE OF THE BUILDING.

9. NORTH 01 21' 37" WEST, A DISTANCE OF 115.76 FEET TO A POINT; THENCE,
10. NORTH 88 36' 47" EAST, A DISTANCE OF 85.54 FEET TO THE POINT OF BEGINNING, ENCOMPASSING 0.254 ACRES OF LAND, MORE OR LESS.

THE TOTAL REMAINING AREA OF THE ORIGINAL PARCEL MINUS THE ADDITION IS 1.674 ACRES OF LAND, MORE OR LESS.

ALL AS SHOWN ON A MAP PREPARED BY PASSERO ASSOCIATES, ENTITLED "BROWNFIELD CLEANUP PROGRAM, SITE #C828114, METES AND BOUNDS DESCRIPTION" DRAWING NO. DEC-1, AND DATED APRIL 12, 2007.

MONROE COUNTY CLERK'S OFFICE

ROCHESTER, NY

THIS IS NOT A BILL. THIS IS YOUR RECEIPT

Receipt # 1293097

Index DEEDS

Book 11586 Page 106

No. Pages : 11

Instrument EASEMENT AGREEMENT

Date : 09/01/2015

Time : 03:38:17PM

Control # 201509010796

TT # TT0000001954

Ref 1 #

Employee : RebeccaZ

Return To:
BOX 8

LAWTON FAMILY LLC

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COUNTY FEE TP584	$	5.00
COUNTY FEE NUMBER PAGES	$	50.00
RECORDING FEE	$	45.00
STATE FEE TRANSFER TAX	$	0.00
Total	$	100.00

State of New York

MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

CHERYL DINOLFO

MONROE COUNTY CLERK

PI182-201509010796-11

TRANSFER AMT

TRANSFER AMT $1.00

LEGEND	
CB	CATCHBASIN
C/O	CLEANOUT (UNKNOWN TYPE)
DCO	CLEANOUT DRAINAGE SEWER
SCO	CLEANOUT SANITARY SEWER
▷	END SECTION DRAINAGE PIPE
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHTPOLE
MH	MANHOLE (UNKNOWN TYPE)
(E) MH	MANHOLE ELECTRIC
MH	MANHOLE DRAINAGE INLET
(D) MH	MANHOLE DRAINAGE SEWER
(S) MH	MANHOLE SANITARY SEWER
	MONITORING POINT
	SIGN POST (SINGLE)
SP	TRAFFIC LIGHT SPAN POLE
PP	UTILITY POLE
	UTILITY POLE ANCHOR WIRE
	UTILITY POLE WITH LIGHT
CC	WATER SERVICE
WV	WATER VALVE

ENVIRONMENTAL EASEMENT NOTE:

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DERWEB@DEC.NY.GOV".

SURVEY NOTES

THE HORIZONTAL DATUM IS REFERENCED TO THE N.Y.S. PLANE COORDINATE SYSTEM, WEST ZONE, TRANSVERSE MERCATOR SYSTEM.

BEARINGS SHOWN HEREON ARE REFERENCED TO GRID BEARINGS. DISTANCES SHOWN ARE GROUND DISTANCES.

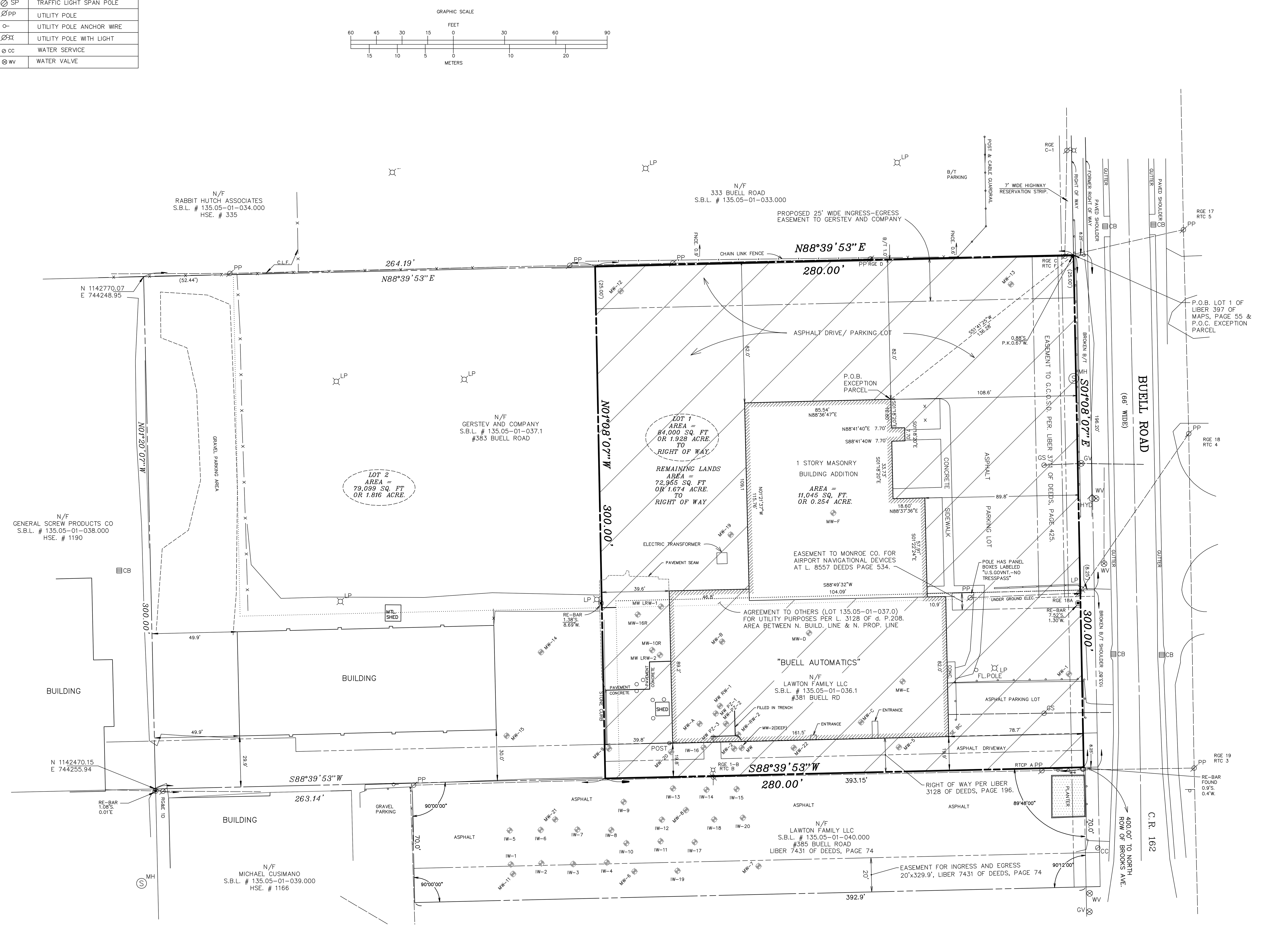
MONUMENTS USED

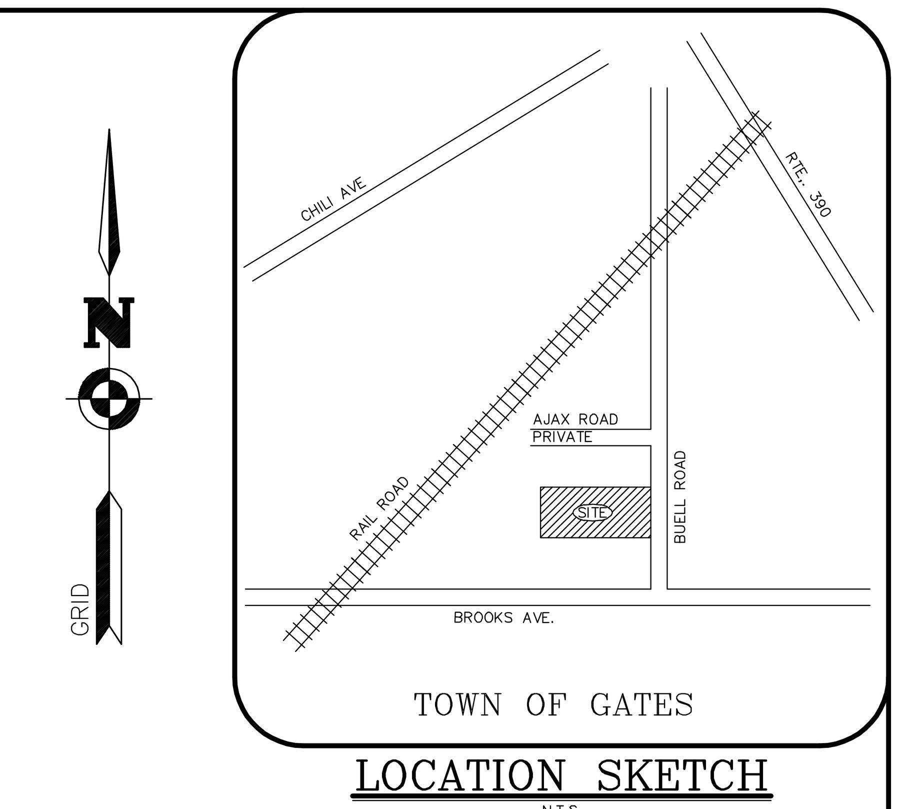
MCGS 311 1975 ELEV.=565.16' N = 1,142,121.555 E = 745,966.133 N.A.D. 1927

NYSDOT 4-1-303 N = 1,142,790.49 E = 744,796.72 N.A.D. 1927.

GRID FACTOR = 1.0000059 ELEVETION FACTOR = 0.9999730

SURVEY FIELD WORK ON THIS SURVEY WAS DONE TO AN ACCURACY GREATER THAN ONE PART IN 10,000 (1 : 10,000), USING ESTABLISHED CONTROL REFERENCED HEREON.





LOCATION SKETCH

N.T.S.

REFERENCES:

1. MAP BY HERMAN J. KLINGENBERGER ENTITLED " BUELL AUTOMATICS SUBDIVISION " , FILED IN LIBER 224 OF MAPS, PAGE 17.
2. MAP BY CARMICHAEL & MUERB ASSOC. ENTITLED "...MAP SHOWING PROPERTY OF A. F. TADDEO CORP." LAST DATED JAN. 29, 1979.
3. MAP BY ROBERT M. DUNN. ENTITLED "...MAP SHOWING INSTRUMENT LOCATION... ... BUELL AUTOMATICS INC." LAST DATED APRIL 20, 1974.
4. MAP BY RONALD W. STAUB. ENTITLED "INSTRUMENT SURVEY MAP 351 BUELL ROAD" LAST DATED NOV. 12, 1990.
5. MAP BY THOMAS B. SEAR. FILED IN LIBER 156 OF MAPS, PAGE 85.
6. ABSTRACT BY MONROE TITLE INSURANCE CORPORATION, ABSTRACT No. 102426, LAST DATED JAN. 16, 1998.
7. ABSTRACT BY ROCHESTER ABSTRACT CORPORATION, SEARCH No. 4250/PT. 32/8, LAST DATED AUG. 7, 1979.
8. ABSTRACT BY TICIR TITLE GUARANTEE, SEARCH No. 5196-00682, PART OF, LAST DATED JAN. 21, 1993.
9. LIBER 6364 OF DEEDS, PAGE 64.
10. LIBER 3128 OF DEEDS, PAGE 176.
11. LIBER 8040 OF DEEDS, PAGE 430.
12. LIBER 2944 OF DEEDS, PAGE 327.
13. MAP BY PASSERO ASSOC. FILED IN LIBER 231 OF MAPS, PAGE 29.
14. MAP BY PASSERO ASSOCIATES, P.C. ENTITLED "BUELL AUTOMATICS RESUBDIVISION" FILED IN THE M.C.C.O. AT LIBER 297 OF MAPS, PG. 55.
15. ABSTRACT OF TITLE PREPARED BY MONROE TITLE INSURANCE CORPORATION, ABSTR. NO. 127342 LAST DATED OCTOBER 04, 1999.
16. LIBER 297 OF MAPS, PAGE 55

BUELL AUTOMATICS, INC.
BROWNFIELD CLEANUP PROGRAM
SITE #C828114
METES AND BOUNDS DESCRIPTION
LOT 1 OF LIBER 297 OF MAPS, PAGE 55

ALL THAT TRACT OR PARCEL OF LAND, SITUATED IN GREAT LOT 32, TOWNSHIP 1, 4000 ACRE TRACT, TOWN OF GATES, COUNTY OF MONROE, AND STATE OF NEW YORK, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING ON THE WESTERLY RIGHT OF WAY OF BUELL ROAD, (66' ROW) AT THE NORTHEASTERLY PROPERTY CORNER OF LOT 1 OF THE BUELL AUTOMATICS RESUBDIVISION, AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 297 OF MAPS, PAGE 55; THENCE,

1. SOUTH 01°08'07" EAST, ALONG SAID WESTERLY RIGHT OF WAY, A DISTANCE OF 300.00 FEET TO A POINT; THENCE,
2. SOUTH 88°39'53" WEST, ALONG THE NORTHERLY PROPERTY LINE OF LANDS OF NOW OR FORMERLY MICHAEL T. WEBB AND JAMES W. WEBB, A DISTANCE OF 280.00 FEET TO A POINT; THENCE,
3. NORTH 01°08'07" WEST, ALONG THE EASTERLY PROPERTY LINE OF LANDS OF NOW OR FORMERLY GERSTEV AND COMPANY, A DISTANCE OF 300.00 FEET TO A POINT; THENCE,
4. NORTH 88°39'53" EAST, ALONG THE SOUTHERLY PROPERTY LINE OF LANDS OF NOW OR FORMERLY 333 BUELL ROAD, A DISTANCE OF 280.00 FEET TO THE POINT OF BEGINNING, ENCOMPASSING 1.928 ACRES OF LAND, MORE OR LESS.

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NOTE: THE FIRST 7 COURSES RUN ALONG THE FACE OF THE BUILDING.

1. SOUTH 01°18'20" EAST, A DISTANCE OF 16.80 FEET TO A POINT; THENCE,
2. NORTH 88°41'40" EAST, A DISTANCE OF 7.70 FEET TO A POINT; THENCE,
3. SOUTH 01°18'20" EAST, A DISTANCE OF 7.70 FEET TO A POINT; THENCE;
4. SOUTH 88°41'40" WEST, A DISTANCE OF 7.70 FEET TO A POINT; THENCE,
5. SOUTH 01°18'20" EAST, A DISTANCE OF 33.75 FEET TO A POINT; THENCE,
6. NORTH 88°37'36" EAST, A DISTANCE OF 18.60 FEET TO A POINT; THENCE,
7. SOUTH 01°22'24" EAST, A DISTANCE OF 57.91 FEET TO A POINT; THENCE,
8. SOUTH 88°49'32" WEST, A DISTANCE OF 104.09 FEET TO A POINT; THENCE,

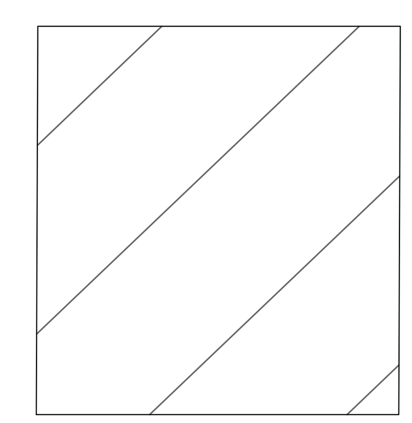
NOTE THE FOLLOWING 2 COURSES RUN ALONG THE FACE OF THE BUILDING.

9. NORTH 01°21'37" WEST, A DISTANCE OF 115.76 FEET TO A POINT; THENCE,
10. NORTH 88°36'47" EAST, A DISTANCE OF 85.54 FEET TO THE POINT OF BEGINNING, ENCOMPASSING 0.254 ARES OF LAND, MORE OR LESS.

THE TOTAL REMAINING AREA OF THE ORIGINAL PARCEL MINUS THE ADDITION IS 1.674 ACRES OF LAND, MORE OR LESS.

ALL AS SHOWN ON A MAP PREPARED BY PASSERO ASSOCIATES, ENTITLED" BROWNFIELD CLEANUP PROGRAM, SITE 3C828114, METES AND BOUNDS DESCRIPTION", DRAWING NO. DEC-1, AND DATED APRIL 12, 2007.

ENVIRONMENTAL EASEMENT KEY



CERTIFICATION:

WE, PASSERO ASSOCIATES, CERTIFY THAT THIS MAP WAS PREPARED USING PORTIONS OF THE REFERENCE MATERIAL AS LISTED HEREON AND FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED FEBRUARY 4, 1998, AND **RE-INSPECTED ON JAN. 26, 2000, WITH CHANGES AND/OR ADDITIONS SHOWN HEREON. THIS PARCEL IS SUBJECT TO ANY EASEMENTS OR ENCUMBRANCES OF RECORD. NO CERTIFICATION IS EXTENDED TO INFORMATION NOT REFERENCED. THIS CERTIFICATION IS MADE TO:

1. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
2. CREARY LAW GROUP, P.C.
3. LAWTON FAMILY, LLC.

ROBERT A. VENTO , N.Y.S.P.L.S. #049701

** = FIELD SURVEY NOTE: WELL LOCATIONS DONE MAY 8, 2014 & APRIL 22, 2015

No.	DATE	BY	REVISION
5	5-5-15	RDC	WELL LABEL CHANGES
4	4-27-15	RDC	WELL LOCATIONS FIELD MEASURED APRIL 22, 2015
3	5-30-14	RDC	EXCEPTION PARCEL
2	5-23-14	RDC	CERTIFICATIONS
1	5-15-14	RDC	WELL LOCATIONS FIELD MEASURED MAY 8, 2014

PASSERO ASSOCIATES
ARCHITECTS-ENGINEERS-SURVEYORS
242 WEST MAIN STREET, SUITE 100
ROCHESTER, NEW YORK 14614
PHONE: 585-325-1000 FAX: 585-760-8580
WWW.PASSERO.COM

PROJECT: BUELL AUTOMATICS, INC.
GREAT LOT 32, TOWNSHIP 1, 4000 ACRE TRACT
TOWN OF GATES, MONROE COUNTY, STATE OF NEW YORK

DRAWING: BROWNFIELD CLEANUP PROGRAM, SITE # C828114
METES AND BOUNDS DESCRIPTION

CLIENT: WILLIAM J. CREARY, JR.
CREARY LAW GROUP, P.C.
18 NORTH MAIN STREET
PITTSFORD NY 14534
PHONE: 585-586-8480 FAX: 585-586-8097

Partner in Charge J.F.C.
Project Manager E.J.F.
Drawn by D.S.C./D.P.S.

PROJECT NO. 20070687.0003
DRAWING NO. DEC-1
SCALE 1"=30'
DATE APRIL 12, 2007

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 27th day of October, 2015 between Owner(s) Lawton Family, LLC, having an office at 381 Buell Road, Rochester, NY 14624, County of Monroe, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL"), which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 385 Buell Road in the Town of Gates, County of Monroe and State of New York, known and designated on the tax map of the County Clerk of Monroe as tax map parcel numbers: Section 135.05 Block 1 Lot 40, being the same as that property conveyed to Grantor by deed dated March 17, 2008 and recorded in the Monroe County Clerk's Office in Liber and Page 10600/297. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.632 +/- acres, and is hereinafter more fully described in the Land Title Survey dated May 4, 2015 prepared by Robert A. Vento, NYSPLS on behalf of Passero Associates, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: B8-0576-00-04A, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential, Restricted Residential or Commercial purposes as defined in 6NYCRR 375-1.8(g)(i), (ii) and (iii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:	Site Number: C828114 Office of General Counsel NYSDEC 625 Broadway Albany New York 12233-5500
With a copy to:	Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Lawton Family, LLC:

By: ____________________

Print Name: GARY B. LAWTON

Title: ~~PRESIDENT~~ MEMBER / OWNER Date: 8/6/15

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Monroe)

On the 6th day of August, in the year 2015, before me, the undersigned, personally appeared Gary B. Lawton, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

William J. Creary
Notary Public - State of New York

WILLIAM J. CREARY, JR.
Notary Public, State of New York
Monroe County, Reg# 02CR4840048
Commission Expires February 28, 2018

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: ______________________
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 27th day of October, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

SCHEDULE "A" PROPERTY DESCRIPTION

BUELL AUTOMATICS, INC.
BROWNFIELD CLEANUP PROGRAM
SITE # C828114
METES AND BOUNDS DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, SITUATE IN THE TOWN OF GATES, COUNTY OF MONROE AND STATE OF NEW YORK, BEING A PART OF LOT #32, TOWNSHIP 1, SHORT RANGE, 4000 ACRE TRACT, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE WEST LINE OF BUELL ROAD WHERE IT IS INTERSECTED BY THE NORTH LINE OF THE PREMISES CONVEYED TO REFINERS OIL COMPANY BY DEED RECORDED IN MONROE COUNTY CLERK'S OFFICE DECEMBER 22, 1954 IN LIBER 2939 OF DEEDS, PAGE 258, WHICH POINT IS ALSO 400 FEET NORTH OF THE NORTH LINE OF BROOKS AVENUE, THENCE

(1) WESTERLY ON A LINE MAKING AN ANGLE OF 89 48' 00" IN THE SOUTHWEST QUADRANT A DISTANCE OF 393.15 FEET TO A POINT, THENCE

(2) SOUTHERLY AT RIGHT ANGLES TO THE LAST COURSE A DISTANCE OF 70 FEET TO A POINT; THENCE

(3) EASTERLY AT RIGHT ANGLES TO THE LAST COURSE, A DISTANCE OF 392.90 FEET TO A POINT IN THE WEST LINE OF BUELL ROAD, DISTANCE OF 70 FEET SOUTHERLY FROM THE POINT OF BEGINNNING, THENCE

(4) NORTHERLY ALONG THE WEST LINE OF BUELL ROAD, ON A LINE MAKING AN INTERIOR ANGLE OF 90 12' 00" WITH THE LAST COURSE A DISTANCE OF 70 FEET TO THE POINT OF BEGINNING.

ENCOMPASSING 0.632 ACRES OF LAND, MORE OR LESS.

EXCEPTING AND RESERVING TO THE PARTY OF THE FIRST PART A PERMANENT EASEMENT FOR INGRESS AND EGRESS ACROSS SAID PARCEL, TWENTY (20) FEET BY THREE HUNDRED AND NINETY-TWO AND NINE TENTHS (392.9) FEET, AS MORE PARTICULARLY SHOWN ON THE INSTRUMENT SURVEY BY EDWARD H. BARG, DATED APRIL 21, 1988

MONROE COUNTY CLERK'S OFFICE

ROCHESTER,NY

THIS IS NOT A BILL. THIS IS YOUR RECEIPT

Receipt # 1322516

Index DEEDS

Book 11614 Page 505

No. Pages : 10

Instrument EASEMENT AGREEMENT

Date : 11/04/2015

Time : 12:31:48PM

Control # 201511040400

TT # TT0000005641

Ref 1 #

Employee : RoseM

Return To:
BOX 8

LAWTON FAMILY LLC

PEOPLE OF THE STATE OF NEW YORK
COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COUNTY FEE TP584	$	5.00
COUNTY FEE NUMBER PAGES	$	45.00
RECORDING FEE	$	45.00
STATE FEE TRANSFER TAX	$	0.00
Total	$	95.00

State of New York

MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

TRANSFER AMT

TRANSFER AMT $1.00

CHERYL DINOLFO

MONROE COUNTY CLERK

PI182-201511040400-10

LEGEND	
CB	CATCHBASIN
C/O	CLEANOUT (UNKNOWN TYPE)
DCO	CLEANOUT DRAINAGE SEWER
SCO	CLEANOUT SANITARY SEWER
	END SECTION DRAINAGE PIPE
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHTPOLE
MH	MANHOLE (UNKNOWN TYPE)
E MH	MANHOLE ELECTRIC
MH	MANHOLE DRAINAGE INLET
D MH	MANHOLE DRAINAGE SEWER
S MH	MANHOLE SANITARY SEWER
	MONITORING POINT
	SIGN POST (SINGLE)
SP	TRAFFIC LIGHT SPAN POLE
PP	UTILITY POLE
	UTILITY POLE ANCHOR WIRE
	UTILITY POLE WITH LIGHT
CC	WATER SERVICE
WV	WATER VALVE

ENVIRONMENTAL EASEMENT NOTE:

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DERWEB@DEC.NY.GOV".

SURVEY NOTES

THE HORIZONTAL DATUM IS REFERENCED TO THE N.Y.S. PLANE COORDINATE SYSTEM, WEST ZONE, TRANSVERSE MERCATOR SYSTEM.

BEARINGS SHOWN HEREON ARE REFERENCED TO GRID BEARINGS. DISTANCES SHOWN ARE GROUND DISTANCES.

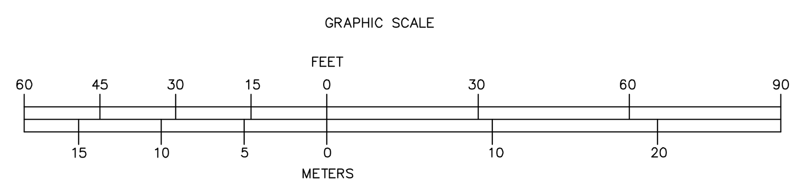
MONUMENTS USED

MCGS 311 1975 ELEV.=565.16' N = 1,142,121.555 E = 745,966.133 N.A.D. 1927

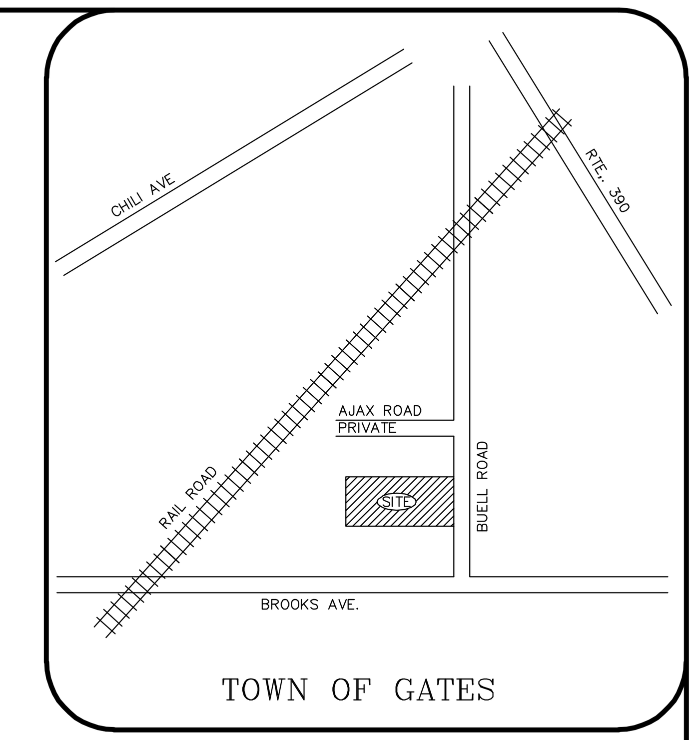
NYSDOT 4-1-303 N = 1,142,790.49 E = 744,796.72 N.A.D. 1927.

GRID FACTOR = 1.0000059 ELEVETION FACTOR = 0.9999730

SURVEY FIELD WORK ON THIS SURVEY WAS DONE TO AN ACCURACY GREATER THAN ONE PART IN 10,000 (1 : 10,000), USING ESTABLISHED CONTROL REFERENCED HEREON.



N
GRID



LOCATION SKETCH

N.T.S.

REFERENCES:
1. MAP BY HERMAN J. KLINGENBERGER ENTITLED " BUELL AUTOMATICS SUBDIVISION", FILED IN LIBER 224 OF MAPS, PAGE 17.
2. MAP BY CARMICHAEL & MUERB ASSOC. ENTITLED "...MAP SHOWING PROPERTY OF A. F. TADDEO CORP." LAST DATED JAN. 29, 1979.
3. MAP BY ROBERT M. DUNN. ENTITLED "...MAP SHOWING INSTRUMENT LOCATION... ... BUELL AUTOMATICS INC." LAST DATED APRIL 20, 1974.
4. MAP BY RONALD W. STAUB. ENTITLED "INSTRUMENT SURVEY MAP 351 BUELL ROAD" LAST DATED NOV. 12, 1990.
5. MAP BY THOMAS B. SEAR. FILED IN LIBER 156 OF MAPS, PAGE 85.
6. ABSTRACT BY MONROE TITLE INSURANCE CORPORATION, ABSTRACT No. 102426, LAST DATED JAN. 16, 1998.
7. ABSTRACT BY ROCHESTER ABSTRACT CORPORATION, SEARCH No. 4250/PT. 32/8, LAST DATED AUG. 7, 1979.
8. ABSTRACT BY TICIR TITLE GUARANTEE, SEARCH No. 5196-00682, PART OF, LAST DATED JAN. 21, 1993.
9. LIBER 6364 OF DEEDS, PAGE 64.
10. LIBER 3128 OF DEEDS, PAGE 176.
11. LIBER 8040 OF DEEDS, PAGE 430.
12. LIBER 2944 OF DEEDS, PAGE 327.
13. MAP BY PASSERO ASSOC. FILED IN LIBER 231 OF MAPS, PAGE 29.
14. MAP BY PASSERO ASSOCIATES, P.C. ENTITLED "BUELL AUTOMATICS RESUBDIVISION" FILED IN THE M.C.C.O. AT LIBER 297 OF MAPS, PG. 55.
15. ABSTRACT OF TITLE PREPARED BY MONROE TITLE INSURANCE CORPORATION, ABSTR. NO. 127342 LAST DATED OCTOBER 04, 1999.
16. LIBER 297 OF MAPS, PAGE 55
17. LIBER 7431 OF DEEDS, PAGE 74
18. MAP PREPARED BY PASSERO ASSOCIATES, 381 BUELL RD., PROJECT NO. 20070687.0003
19. ABSTRACT PREPARED BY FIRST AMERICAN TITLE INSURANC COMPANY, FILE NO. 393680, DATED APRIL 3, 2015

385 BUELL ROAD
BROWNFIELD CLEANUP PROGRAM
SITE #xxxxxxx
METES AND BOUNDS DESCRIPTION
LIBER 7431 OF DEEDS, PAGE 74

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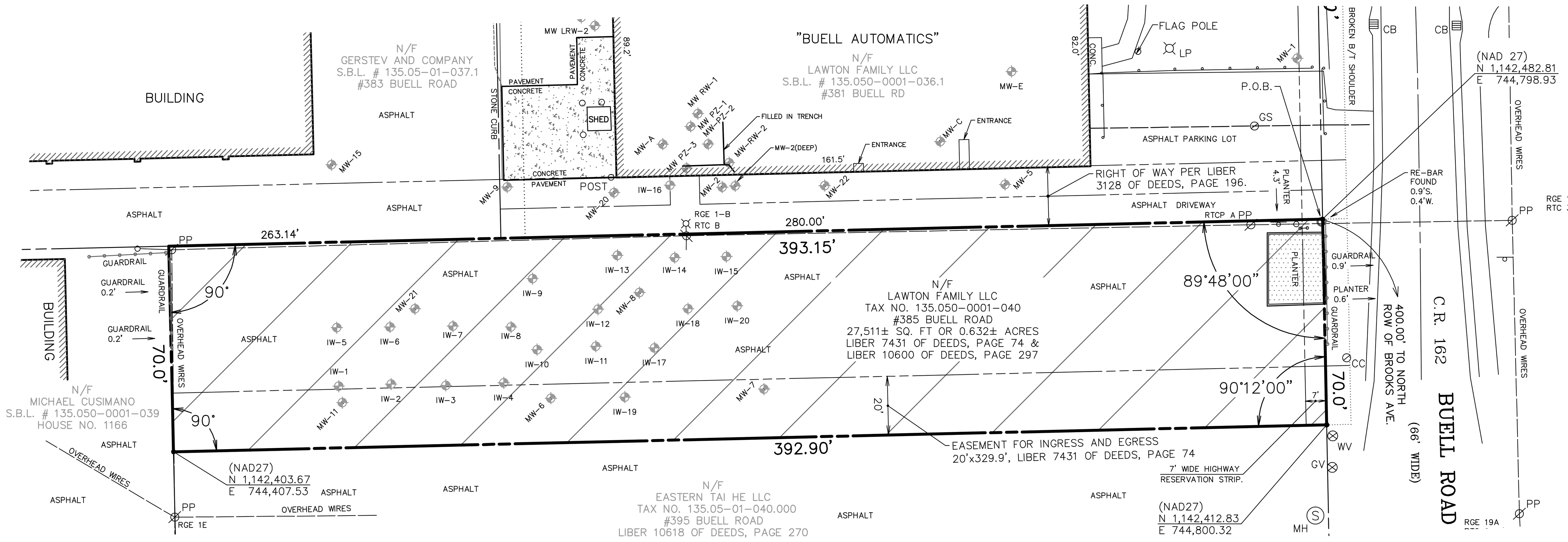
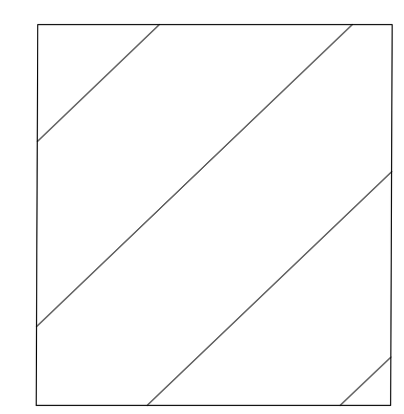
ENCOMPASSING 0.632 ACRES OF LAND, MORE OR LESS.

EXCEPTING AND RESERVING TO THE PARTY OF THE FIRST PART A PERMANENT EASEMENT FOR INGRESS AND EGRESS ACROSS SAID PARCEL, TWENTY (20) FEET BY THREE HUNDRED AND NINETY-TWO AND NINE TENTHS (392.9) FEET, AS MORE PARTICULARLY SHOWN ON THE INSTRUMENT SURVEY BY EDWARD H. BARG, DATED APRIL 21, 1988.



ENVIRONMENTAL EASEMENT KEY



EASEMENT AGREEMENT NOTES:
1. PARCEL MAY BE SUBJECT TO AN EASEMENT AGREEMENT AT LIBER 8823 OF DEES PAGE 562

CERTIFICATION:

WE, PASSERO ASSOCIATES, CERTIFY THAT THIS MAP WAS PREPARED USING PORTIONS OF THE REFERENCE MATERIAL AS LISTED HEREON AND FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED APRIL 22, 2015. THIS PARCEL IS SUBJECT TO ANY EASEMENTS OR ENCUMBRANCES OF RECORD. NO CERTIFICATION IS EXTENDED TO INFORMATION NOT REFERENCED. THIS CERTIFICATION IS MADE TO:

1. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
2. CREARY LAW GROUP, P.C.
3. LAWTON FAMILY, LLC.

ROBERT A. VENTO , N.Y.S.P.L.S. #049701

UNDERGROUND UTILITY NOTE:
1. UNDERGROUND UTILITIES SHOWN ARE PLOTTED FROM RECORD MAPS THAT WERE PROVIDED BY SAID UTILITIES.
2. IT WILL BE THE RESPONSIBILITY OF THOSE USING THIS PLAN FOR INFORMATION TO FIELD VERIFY ALL UNDERGROUND UTILITIES.
3. CONTRACTOR IS TO NOTIFY CENTRAL STAKEOUT PHONE NO. 1-800-962-7962 FOR LOCATION OF ANY UNDERGROUND UTILITIES BEFORE UNDERTAKING ANY CONSTRUCTION IN THIS AREA.

Z:\2007\20070687\20070687.0003\DRAWINGS\SURVEY\20070687.0003 385 BUELL RD ENVIRONMENTAL MAP.DWG 5/6/2015 8:03 AM Richard Celestino

No.	DATE	BY	REVISION
1	5-5-15	RDC	WELL LABEL CHANGES

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS IN VIOLATION OF STATE EDUCATION LAW ARTICLE 145 SECTION 7209 AND ARTICLE 147 SECTION 7307

PASSERO ASSOCIATES
ARCHITECTS-ENGINEERS-SURVEYORS
242 WEST MAIN STREET, SUITE 100
ROCHESTER, NEW YORK 14614
PHONE: 585-325-1000 FAX: 585-760-8580
WWW.PASSERO.COM

PROJECT: 385 BUELL ROAD
GREAT LOT 32, TOWNSHIP 1, 4000 ACRE TRACT
TOWN OF GATES, MONROE COUNTY, STATE OF NEW YORK

DRAWING: BROWNFIELD CLEANUP PROGRAM, SITE # xxxxxxx
METES AND BOUNDS DESCRIPTION

CLIENT: WILLIAM J. CREARY, JR.
CREARY LAW GROUP, P.C.
18 NORTH MAIN STREET
PITTSFORD NY 14534
PHONE: 585-586-8480 FAX: 585-586-8097

Partner in Charge J.F.C.
Project Manager R.A.V.
Drawn by R.D.C.

PROJECT NO. 20070687.0003
DRAWING NO. DEC-385
SCALE 1"=30'
DATE MAY 4, 2015

APPENDIX B – LIST OF SITE CONTACTS

Name	Phone/Email Address
Gary Lawton, Buell Automatics, Inc. Site Owner, Remedial Party	(585) 328-7430 gary@buellautomatics.com
Peter Nielsen, P.E., Stantec Consulting Qualified Environmental Professional	(585) 413-5280 peter.nielsen@stantec.com
Frank Sowers, P.E. NYSDEC DER Project Manager	(585) 226-5357 frank.sowers@dec.ny.gov
Bernette Schilling, P.E. NYSDEC Regional Hazardous Waste Engineer	(585) 226-5315 bernette.schilling@dec.ny.gov
Kelly Lewandowski, P. E. Chief, NYSDEC Site Control Section	(518) 402-9569 kelly.lewandowski@dec.ny.gov
Contact for aScribe Laser, 383 Buell Road:	
Mr. Mark Shaw Owner	(585) 730-7340
Contacts for Best Western, The Inn At Rochester Airport, 395 Buell Road:	
Mr. Jayesh Patel, Bajrangee, Inc. Owner’s Representative	(716) 481-9888 jay@vvkkmgmt.com
Shaunna Diehl On-site General Manager	(585) 436-4400
William J. Creary, Jr. Remedial Party Attorney	(585) 586-8480, Ext. 17 wjcreary@crearylaw.com

APPENDIX C – MONITORING WELL BORING AND CONSTRUCTION LOGS

Stantec
2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 2D

Project:	Voluntary Investigation	Drill Contractor: Nothnagle	Start Date: 8/5/02
Project #:	16059	Driller: N. Short	Completion Date: 8/8/02
Client:	Buell Automatics	Elevation: 562.0 ft. AMSL	Drilling Method: 6-1/4 in ID HSA; wet rotary NX
Location:	381 Buell Road	Weather: sunny; 70; light wind- N	Supervisor: P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		46				34.0	5"	1	0-2'	Gray coarse to fine Sand, some coarse gravel and silt,
			11							dry, (asphalt surface with road base)
				6						**(FILL)**
					6					**2.0 '**
		6				0.0	5"	2	2-4'	Brown silty fine Sand, moist
			6							
				7						**(LACUSTRINE SAND)**
					7					
		3				0.5	16"	3	4-6'	-same, except wet
5			3							
				3						
					3					
		2				0.0	12"	4	6-8'	-same, except gray
			5							
				6						
					10					
		6				0.0	18"	5	8-10'	-same, except brown
			10							
				13						
10					13					
		2				0.0	18"	6	10-12'	-same, except gray brown
			3							
				9						
					10					
		3				0.0	18"	7	12-14'	-same
			6							
				7						
					8					
		4				0.5	18"	8	14-16'	-same
15			4							
				5						
					5					
		2				0.0	12"	9	16-18'	-same
			2							
				3						
					4					
		4				0.0	12"	10	18-20'	-same, except Silt, with trace fine sand and gravel
			4							at 19.5'
				5						**19.5 '**
20					6					**(LACUSTRINE SILT AND CLAY)**

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 2D

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/5/02
Project #:	16059	Driller:	N. Short	Completion Date:	8/8/02
Client:	Buell Automatics	Elevation:	562.0 ft. AMSL	Drilling Method:	6-1/4 in ID HSA; wet rotary NX
Location:	381 Buell Road	Weather:	sunny; 70; light wind- N	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
20	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		2				0.0	14"	11	20-22'	Gray Clay, some silt, trace sand and gravel, moist
			2							
				3						**(LACUSTRINE SILT AND CLAY)**
					4					
		3				0.0	24"	12	22-24'	Gray and red brown clayey Silt, trace fine sand, moist
			3							
				4						
					4					**24.0 '**
		4				0.0	16"	13	24-26'	Gray silty fine Sand, wet
25			4							
				6						**(LACUSTRINE SAND)**
					4					
		4				0.0	18"	14	26-28'	Gray silty fine Sand, wet
			6							
				10						
					50					**28.0 '**
										-spoon bouncing; roller bit from 28.0 to 29.0 w/o sampling
		26				0.0	16"	15	29-31 '	Dense gray coarse to fine Sand and Gravel, some silt,
30			21							trace clay, moist; hard
				23						
					30					
		10				0.0	12"	16	31-33'	-same
			15							
				18						**(GLACIAL TILL)**
					23					
		15				0.0	10"	17	33-35'	-same
			14							
				22						
35					18					
		8				0.0	6"	18	35-37'	-same
			8							
				13						
					15					**37.3'**
						0.0	NR	19	37-37.3 '	No recovery; top of rock at 37.3 ft. bgs. - auger refusal
									RUN 1:	
									37.3 - 42.3 '	Gray, vuggy crystalline Limestone; coral;
									Rec = 100%	8 fractures, 2 with calcite crystals.
									RQD = 64 %	
40										**(BEDROCK)**

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

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2250 Brigton Henrietta Town Line Road
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Test Boring No. MW - 2D

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/5/02
Project #:	16059	Driller:	N. Short	Completion Date:	8/8/02
Client:	Buell Automatics	Elevation:	562.0 ft. AMSL	Drilling Method:	6-1/4 in ID HSA; wet rotary NX
Location:	381 Buell Road	Weather:	sunny; 70; light wind- N	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
40	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
									RUN 1: continued	
									37.3 - 42.3 '	Gray, vuggy crystalline Limestone; coral;
									Rec = 100%	8 fractures, 2 with calcite crystals.
									RQD = 64 %	**(BEDROCK)**
										42.3 '
										Boring terminated at 42.3 ft. bgs
45										Notes:
										1. 4-inch diameter steel casing grouted at 22.0 ft. bgs.
										2. Monitoring well MW-2D installed in completed borehole. See well detail sheet.
50										
55										
60										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

BEDROCK MONITORING WELL

DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-2D
DATE COMPLETED: 8/8/02
DRILLING METHOD: 6-1/4 in ID HSA; wet rotary NX core
SUPERVISOR: P. Smith

FLUSH MOUNT ROAD BOX

SURFACE SEAL TYPE: Concrete

TOP OF SEAL @ 20.8 ft.

BOTTOM OF 4-inch Steel Casing @22.0 ft. bgs

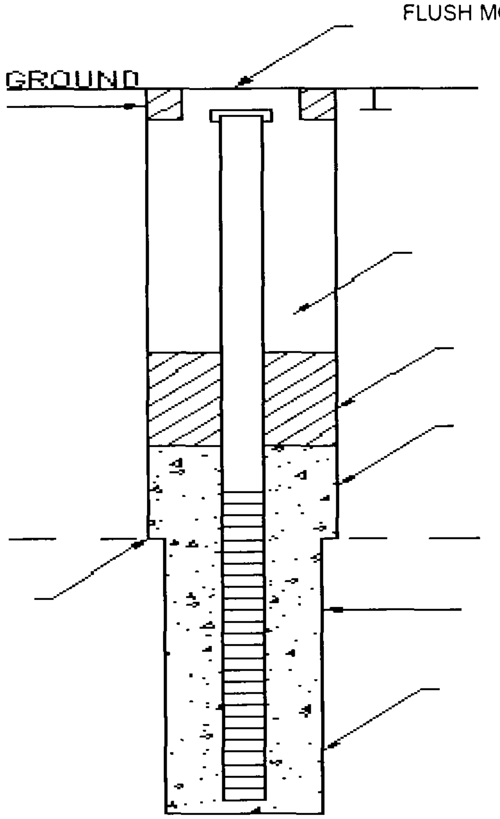
BOTTOM OF SEAL @ 31.3 ft.

TOP OF SCREEN @ 32.3 ft.

TOP OF ROCK @ 37.3 ft.

BOTTOM OF SCREEN @ 42.3 ft.

BOTTOM OF HOLE @ 42.3 ft.



8-inch OVERBURDEN HOLE DIAMETER

WELL CASING ANNULUS BACKFILL TYPE: Cement

SEAL TYPE: Bentonite

SANDPACK TYPE: SAND, SIZE Quartzite Sand, 00N

4-inch BEDROCK HOLE DIAMETER (NX core reamed with 3-7/8 in. roller bit).

NOTE:
ALL DIMENSIONS ARE BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT _____ PERFORATED __x__ LOUVRE _____ OTHER

SCREEN MATERIAL: STAINLESS STEEL _____ PVC __x__ OTHER ____________

SCREEN LENGTH: 10.0 ft. SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 10-inch overburden hole; nominal 4-inch bedrock hole.

Stantec

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Test Boring No. MW - 6

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/8/02
Project #:	16059	Driller:	N. Short	Completion Date:	8/8/02
Client:	Buell Automatics	Elevation:	560.3 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Clear, 70's	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		34				0.5	10"	1	0-2'	Gray Gravel, some sand and silt; asphalt surface, road base
			22							**(FILL)**
				14						
					10					
		5				0.0	16"	2	2-4'	**2.6 '**
			10							Brown silty fine Sand, moist
				10						
					10					
		6				0.0	18"	3	4-6'	-same, except wet
5			9							
				10						**(LACUSTRINE SAND)**
					12					
		9				0.0	20"	4	6-8'	-same
			10							
				11						
					9					
		3				0.0	16"	5	8-10'	-same
			4							
				5						
10					5					
		2				0.0	16"	6	10-12'	-same
			3							**11.2 '**
				6						Red brown Silt, some fine sand, trace clay and gravel, moist
					13					
		3				0.0	16"	7	12-14'	-same, with increasing clay and gravel
			5							
				8						**(LACUSTRINE SILT AND CLAY)**
					9					
		3				0.0	18"	8	14-16'	-same (Till)
15			7							**15.0 '**
				11						Brown silty fine Sand, dry **(LACUSTRINE SAND)**
					11					**15.9 '**
		100/3				0.0	2"	9	16-16.3 '	rock fragments
		9				0.0	16"	10	17-19'	Dense gray, sandy Till, dry; rock frags from 18.5 to 18.8 '
			28							**(GLACIAL TILL)**
				70						
					37					**19.0 '**
										Boring terminated at 19.0 ft. bgs
20										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Monitoring well MW-6 installed in completed borehole. See well detail sheet.

Stantec

OVERBURDEN MONITORING WELL

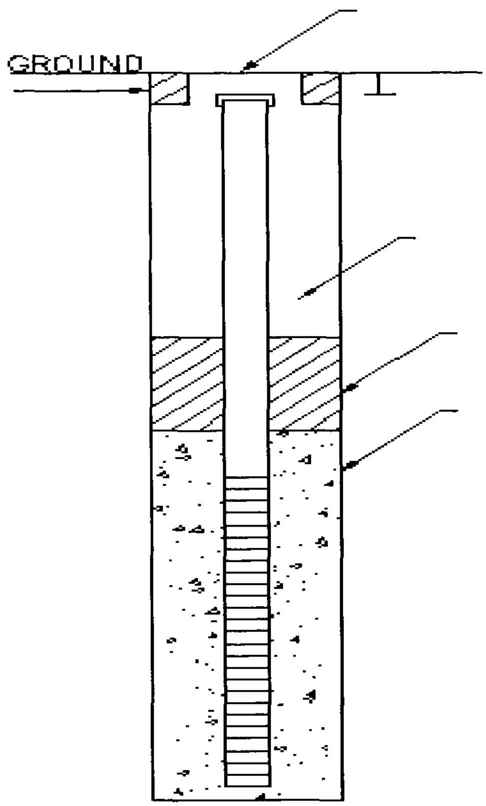
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-6
DATE COMPLETED: 8/8/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

TOP OF SEAL @ 2.0 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 4.0 ft

SANDPACK TYPE:
SAND, SIZE Quartzite Sand, 00N

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 14.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

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Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 7

Project:	Voluntary Investigation	Drill Contractor: Nothnagle	Start Date: 05/21/02
Project #:	16059	Driller: N. Short	Completion Date: 05/21/02
Client:	Buell Automatics	Elevation: 561.4 ft. AMSL	Drilling Method: Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather: Occ. Rain; wind 5-10 west	Supervisor: P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		30				0.0	12"	1	0-2'	Gray Gravel, some sand and silt (asphalt surface, road base)
			10							**(FILL)**
				10						**1.5 '**
					5					Brown silty fine SAND, moist
		6				0.0	10"	2	2-4'	-same
			6							
				7						
					14					
		6				0.0	16"	3	4-6'	-same, except wet
5			7							
				8						**(LACUSTRINE SAND)**
					12					
		13				8.0	24"	4	6-8'	-same, with interbedded silt seams
			14							
				14						
					15					
		4				0.0	16"	5	8-10'	-same
			7							
				8						
10					8					
		3				0.0	18"	6	10-12'	-same
			7							
				7						
					8					
		6				0.0	16"	7	12-14'	-same
			7							
				8						
					10					
		3				0.0	14"	8	14-16'	Gray brown SAND, some silt, trace gravel, moist
15			7							
				14						
					15					
		3				0.0	6"	9	16-18'	-same, with increasing silt, trace gravel
			7							
				8						
					10					
		1				0.0	20"	10	18-20'	**18.3**
			3							Red brown clayey SILT, some fine sand, moist, plastic
				6						**(LACUSTRINE SILT and CLAY)**
20					8					**20.0**

Boring terminated at 20.0 ft. BGS

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Monitoring well MW-7 installed in completed borehole. See well detail sheet.

Stantec

OVERBURDEN MONITORING WELL

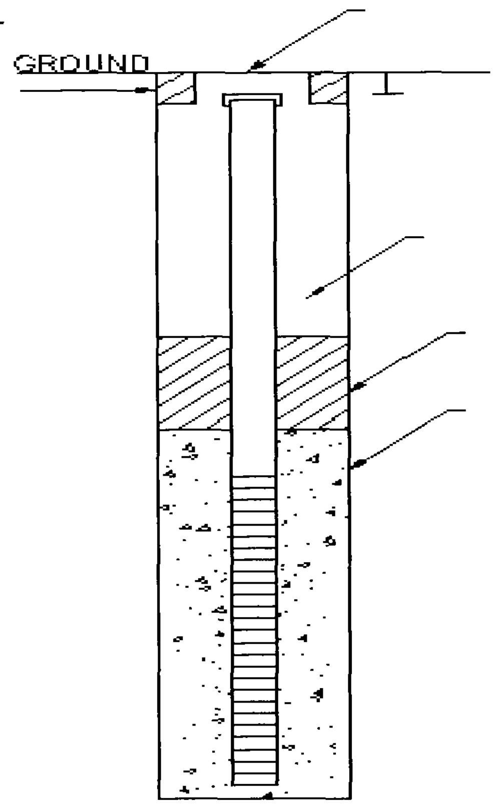
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-7
DATE COMPLETED: 5/20/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



TOP OF SEAL @ 2.0 ft

BOTTOM OF SEAL @ 4.0 ft

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 20.0 ft

BOTTOM OF HOLE @ 20.0 ft

WELL CASING
ANNULUS BACKFILL
TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE:
SAND, SIZE: Quartzite Sand, 00N

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 15.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 8

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	5/21/2002
Project #:	16059	Driller:	N. Short	Completion Date:	5/21/2002
Client:	Buell Automatics	Elevation:	562.0 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Occ. Rain; wind 5-10 west	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		17				0.0	14"	1	0-2'	Asphalt surface - gravel base
			8							**(FILL)** **1.3 '**
				6						Brown silty fine SAND, moist
					5					
		3				0.0	16"	2	2-4'	same, except wet
			5							
				4						
					6					Dark gray seam @ 3.7 ' (no odors, staining)
		8				0.0	15"	3	4-6'	Brown silty fine SAND, wet
5			7							
				6						
					5					
		5				0.0	16"	4	6-8'	-same
			5							
				6						**(LACUSTRINE SAND)**
					9					
		5				0.0	16"	5	8-10'	-same
			7							
				9						
10					10					
		3				0.0	16"	6	10-12'	-same
			5							
				6						
					8					
		5				0.0	16"	7	12-14'	-same, with occasional silt seams
			5							
				6						
					7					
		5				2.8	12"	8	14-16'	-same
15			7							
				12						Gray brown c-f SAND, some silt, trace clay and gravel, moist,
					14					
		6				2.5	12"	9	16-18'	-same
			7							**17.0 '**
				7						Gray and red brown mottled clayey SILT, some sand, moist,
					6					plastic
		5				18.5	18"	10	18-20'	-same **(LACUSTRINE SILT and CLAY)**
			6							
				9						**19.6 '**
20					12					Gray fine SAND, some silt, dry **(LACUSTRINE SAND)**

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Stantec

Test Boring No. MW - 8

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	5/21/2002
Project #:	16059	Driller:	N. Short	Completion Date:	5/21/2002
Client:	Buell Automatics	Elevation:	562.0 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Occ. Rain; wind 5-10 wes	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		6				0.0	16"	11	20-22'	Interbedded gray, fine Sand and moist, gray brown
			7							clayey till, dry
				8						**(LACUSTRINE SAND)**
					18					
		15				0.0	16"	12	22-24'	-same
			16							**22.6 '**
				27						Gray coarse to fine Sand, silt and gravel, dry
					28					**(GLACIAL TILL)** **24.0 '**
										Boring terminated at 24.0 ft. BGS
25										
										Note:
										1. Monitoring well installed in completed borehole.
										See well detail sheet.
30										
35										
40										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

OVERBURDEN MONITORING WELL

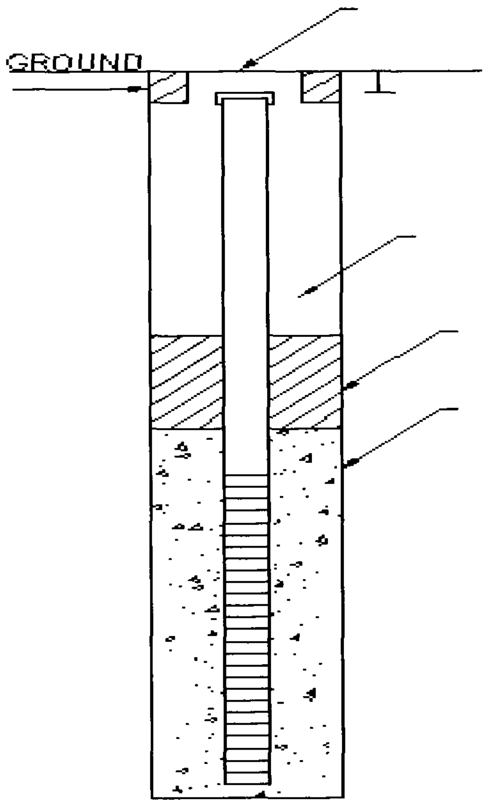
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road. Rochester, NY

HOLE DESIGNATION: MW-8
DATE COMPLETED: 5/21/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE:
SAND, SIZE Quartzite Sand, 00N

TOP OF SEAL @ 2.0 ft

BOTTOM OF SEAL @ 4.0 ft

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 19.0 ft

LOWER SEAL from 19.5 to 24.0 ft.

BOTTOM OF HOLE @ 24.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 14.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 9

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/6/02
Project #:	16059	Driller:	N. Short	Completion Date:	8/6/02
Client:	Buell Automatics	Elevation:	561.1 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Ptly sunny, 60's	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		12				0.0	8"	1	0.5-2'	Gray coarse to fine Sand and Gravel, dry
			13							(asphalt surface w/ road base) **(FILL)**
				11						**1.6 '**
										Brown silty fine Sand @ 1.6'
		5				0.0	12"	2	2-4'	-same, except wet @ 3.5'
			6							
				5						
					6					
		4				0.0	16"	3	4-6'	-same
5			4							
				6						**(LACUSTRINE SAND)**
					6					
		4				14.8	20"	4	6-8'	-same
			5							
				7						
					7					
		4				0.0	18"	5	8-10'	-same
			4							
				7						
10					9					
		1				0.0	16"	6	10-12'	-same
			5							
				17						Gray brown silty coarse to fine Sand, some Silt
					22					little coarse to fine gravel, moist
		3				0.0	16"	7	12-14'	**12.5 '**
			4							Gray clayey Silt, trace gravel, moist
				5						
					7					**(LACUSTRINE SILT and CLAY)**
		2				0.0	20"	8	14-16'	-same
15			3							
				4						
					9					**16.0 '**
										Boring terminated at 16.0 ft. BGS
										Note:
										1. Monitoring well MW-9 installed in completed borehole.
										See well detail sheet.
20										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

OVERBURDEN MONITORING WELL

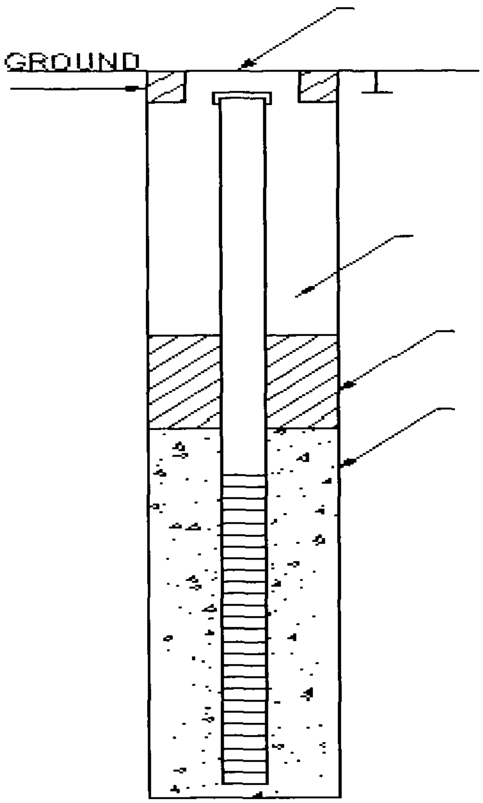
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-9
DATE COMPLETED: 8/6/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

TOP OF SEAL @ 2.0 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 4.0 ft

PACK TYPE:
SAND, SIZE Quartzite Sand, 00N

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 15.0 ft

BOTTOM OF HOLE @ 16.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 10.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

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Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 10

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/5/02
Project #:	16059	Driller:	N. Short	Completion Date:	8/5/02
Client:	Buell Automatics	Elevation:	562.8 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	sunny; 70; light wind- N	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		2				0.0	6"	1	0-2'	0-0.5 concrete surface- **0.5 '**
			3							Dark gray silty fine Sand, moist; strong petroleum odor
				5						
										(FILL)
		5				1.7	10"	2	2-4'	- same
			3							
				3						
					5					**4.0 '**
		3				0.0	12"	3	4-6'	Red brown, moist silty fine Sand, little clay, moist,
5			3							no odor
				4						
					5					**(LACUSTRINE SAND)**
		5				0.0	16"	4	4-8'	-same
			8							
				13						
					17					
		4				0.0	16"	5	8-10'	-same
			7							**9.0 '**
				7						same, except no clay, wet **9.5 '**
10					9					
		2				0.0	18"	6	10-12'	Red brown clayey Silt, some fine sand, moist
			3							
				9						
					11					**(LACUSTRINE SILT and CLAY)**
		3				0.0	22"	7	12-14'	-same
			4							
				6						
					7					
		4				0.0	18"	8	14-16'	-same, with trace gravel
15			5							
				7						
					8					
		5				0.0	18"	9	16-18'	-same
			5							**17.3 '**
				6						Red brown silty fine Sand, wet **(LACUSTRINE SAND)**
					3					**17.7 '**
		2				0.0	12"	10	18-20'	Red brown clayey Silt, little Sand, trace Gravel, moist
			2							
				3						**(GLACIAL TILL)**
20					4					**20.0 '**

Boring terminated at 20.0 ft. BGS

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Monitoring well MW-10 installed in completed borehole. See well detail sheet.

61 Commercial St
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-10R

Project:	Buell Automatics	Drill Contractor:	TREC	Start Date:	10/29/2014
Project #:	190500033	Driller:		Completion Date:	10/29/2014
Client:	Buell Automatics	Elevation:	-	Drilling Method:	HSA
Location:	381 Buell Road	Weather:	overcast, 60s	Supervisor:	WA
	Gates, NY				

	SAMPLE				Soil Information	
	PID (ppm)	Rec. (ft)	No.	Depth (ft)	Remarks	
0				0-5	Asphalt (top 0.5') and stone fill	0-4
					Small stone/crusher run fill	4-5
					-FILL-	
5	1.2					
				5-10		
7	2.1				-NATIVE OVERBURDEN SOILS-	
9	1.5					
10						
				10-15		
12	4.7					
15	1.5					
17	1.5					
20	0.5				bottom of boring at 20'	

Notes:
1. PID Model Mini-Rae 3000 with 10.6eV lamp.
2. Advanced augers without sampling.

Horizontal Coordinates

Method	Survey

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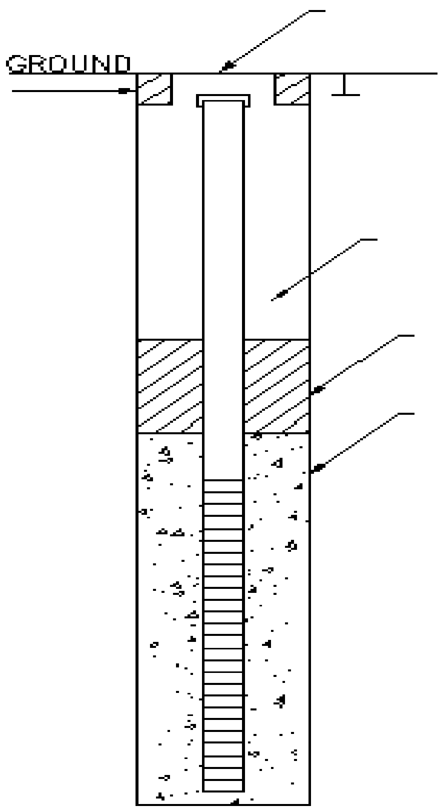
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics	HOLE DESIGNATION	**MW-10R**
PROJECT NUMBER	190500033.000	DATE COMPLETED	10/29/2014
CLIENT	Buell Automatics	DRILLING METHOD	HSA
LOCATION	381 Buell Road	SUPERVISOR	WA
	Gates, NY		

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX



SURFACE SEAL TYPE: concrete

RISER RECESS: - ft

WELL CASING ANNULUS BACKFILL TYPE: cement

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: quartz sand, 00N

TOP OF SEAL @ 2.0 ft

BOTTOM OF SEAL @ 4.0 ft

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 20.0 ft

BOTTOM OF HOLE @ 20.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC x OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020"

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 6 1/4 in

Horizontal Coordinates

Method: Survey

\\Us1275-f02\shared_projects\16059\docs\SMP\Final SMP (2015)\Appendices\Appendix D - MW completion logs\Overburden Well Completion_MW10R&16R.xls

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Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 11

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/7/02
Project #:	16059	Driller:	N. Short	Completion Date:	8/7/02
Client:	Buell Automatics	Elevation:	559.3 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Clear, 70's	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		30				0.0	12"	1	0-2'	Gray Gravel, some sand and silt (asphalt, road base)
			15							**(FILL)**
				7						**1.5 '**
				9						
		9				0.0	12"	2	2-4'	Brown Silt, some fine sand, wet
			8							
				8						
					8					**(LACUSTRINE SAND)**
		3				0.0	12"	3	4-6'	-same
5			3							
				4						
					6					
		3				0.0	12"	4	6-8'	-same
			6							
				7						
					8					
		2				0.0	12"	5	8-10'	-same
			5							
				7						
10					8					
		5				0.0	16"	6	10-12'	-same
			7							**11.2 '**
				9						Gray brown Sand, some Silt, trace fine gravel, moist
					9					
		3				0.0	20"	7	12-14'	**12.3 '**
			4							Gray Silt, some Clay, little fine sand, moist
				5						
					12					
		15				0.0	4"	8	14-14.7'	Gray brown gravelly Silt, moist
15			100/2							
										(GLACIAL TILL)
		15				0.0	16"	9	16-18'	-same
			20							
				18						
					20					
		13				0.0	16"	10	18-19.8	-same
			18							
				24						
20					100/3					**20.0 '**

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Boring terminated at 20.0 ft. BGS
Monitoring well MW-11 installed in completed borehole. See well detail sheet.

Stantec

OVERBURDEN MONITORING WELL

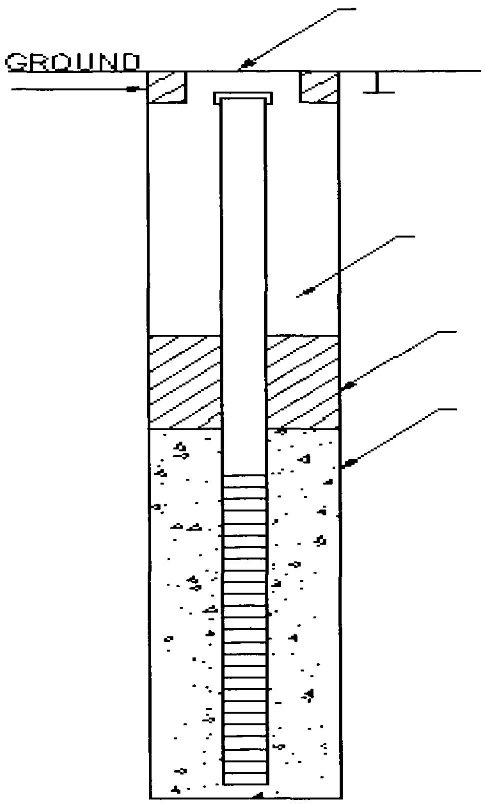
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-11
DATE COMPLETED: 8/7/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

TOP OF SEAL @ 2.0 ft

SEAL TYPE: *Bentonite*

BOTTOM OF SEAL @ 4.0 ft

PACK TYPE:
SAND, SIZE Quartzite Sand, 00N

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 20.0 ft

BOTTOM OF HOLE @ 20.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 15.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

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Rochester, NY 14623
(585) 475-1440

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Test Boring No. MW - 12

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	5/22/02
Project #:	16059	Driller:	N. Short	Completion Date:	5/22/02
Client:	Buell Automatics	Elevation:	562.8 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Clear; wind 10-15 west	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		18				0.0	16"	1	0-2'	Gray Gravel, some sand and silt (asphalt surface, road base)
			10							**(FILL)**
				9						**1.7**
					4					Dark gray Silt, some roots, moist
		4				0.0	20"	2	2-4'	
			4							-same, except gray brown, no roots, little clay @ 3.0
				4						**3.7**
					7					
		3				0.0	14"	3	4-6'	Gray brown fine Sand, some silt, wet
5			4							
				4						**(LACUSTRINE SAND)**
					5					
		7				0.0	14"	4	6-8'	-same, except gray brown
			7							
				11						
					9					
		3				0.0	16"	5	8-10'	**8.6**
			7							Red brown clayey Silt, trace gravel, moist; plastic
				4						
10					12					**(LACUSTRINE SILT and CLAY)**
		1				0.0	18"	6	10-12'	-same
			4							
				9						**11.7**
					15					Brown silty fine Sand, wet
		4				0.0	16"	7	12-14'	
			7							**(LACUSTRINE SAND)**
				7						
					15					**13.8 '**
		3				0.0	16"	8	14-16'	Gray Sand, some silt, little coarse to fine gravel, moist
15			13							
				13						**(GLACIAL TILL)**
					18					
		19				0.0	14"	9	16-18'	-same, except dense, gravelly
			20							
				25						
					42					
		13				0.0	12"	10	18-20'	-same, dry to moist
			17							
				25						
20					35					**20.0 '**

Boring terminated at 20.0 ft. BGS

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Monitoring well MW-12 installed in completed borehole. See well detail sheet.

Stantec

OVERBURDEN MONITORING WELL

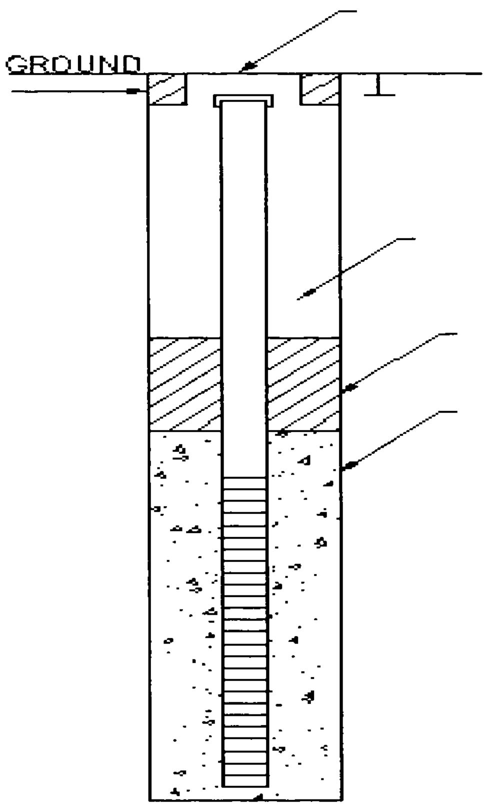
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-12
DATE COMPLETED: 5/21/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE:
SAND, SIZE: Quartzite Sand, 00N

TOP OF SEAL @ 2.0 ft

BOTTOM OF SEAL @ 4.0 ft

TOP OF SCREEN @ 5.0 ft

BOTTOM OF SCREEN @ 20.0 ft

BOTTOM OF HOLE @ 20.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 15.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

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Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 13

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	5/20/02
Project #:	16059	Driller:	N. Short	Completion Date:	5/20/02
Client:	Buell Automatics	Elevation:	563.9 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Ptly cdy; 40's	Supervisor:	P.Smith

	C	Blows on Sampler				SAMPLE				Soil and Rock Information
0		0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		2				0.0	18"	1	0-2'	Coarse to fine Sand and Gravel, moist
			3							(FILL) 0.8
				4						Brown silty fine Sand, moist
					4					
		2				0.0	20"	2	2-4'	-same, except dark brown, moist to wet @ 3.0 '
			2							
				2						
					2					
		1				0.0	14"	3	4-6'	Red brown Silt, little fine sand and clay, trace coarse sand
5			2							and fine gravel, moist
				3						
					8					
		3				0.0	16"	4	6-8'	Brown Sand and Silt, wet
			7							
				9						(LACUSTRINE SAND)
					10					
		10				0.0	12"	5	8-10'	- same
			9							
				8						
10					10					
		10				0.0	16"	6	10-12'	- same
			13							
				18						11.5 '
					20					Dense Silt w/ fine sand, trace gravel, 11.5 - 12.0 '
		12				0.0	12"	7	12-14'	Gray brown silty fine Sand, wet
			16							
				18						
					20					
		8				0.0	18"	8	14-16'	Gray brown silty fine Sand, trace clay, wet; varves
15			12							
				13						(LACUSTRINE SAND)
					16					
		7				0.0	16"	9	16-18'	- same
			11							
				11						
					11					
		2				0.0	12"	10	18-20'	- same
			9							
				9						
20					11					20.0 '

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 13

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	5/20/02
Project #:	16059	Driller:	N. Short	Completion Date:	5/20/02
Client:	Buell Automatics	Elevation:	563.9 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	Ptly cdy; 40's	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
20	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		7				0.0	16"	11	20-22'	Red brown Silt, some fine sand, trace clay, loose, wet
			9							
				11						**(LACUSTRINE SILT and CLAY)**
					15					
		2				0.0	12"	12	22-24'	- same
			3							
				7						
					10					
		9				0.0	12"	13	24-26'	- same
25			11							**25.5'**
				9						Gray Silt, some fine sand, compact; varves **26.0'**
					15					
		2				0.0	16"	14	26-28'	Gray brown silty fine Sand, wet, loose
			3							
				3						**(LACUSTRINE SAND)**
					3					**27.8 '**
		7				0.0	12"	15	28-30'	Gray Silt, some fine sand, trace gravel, moist; compact
			31							
				30						**(GLACIAL TILL)**
30					22					
		8				0.0	18"	16	30-32'	Gray brown Sand, some silt, trace clay, moist
			8							
				10						same, except little clay, trace gravel, moist
					10					Gray brown Silt, some clay, little fine sand, moist; plastic
		2				0.0	18"	17	32-34'	
			3							
				4						
					5					**34.0 '**
										Boring terminated at 34.0 ft. BGS
35										
										Note:
										1. Monitoring well MW-13 installed in completed borehole.
										See well detail sheet.
40										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

OVERBURDEN MONITORING WELL

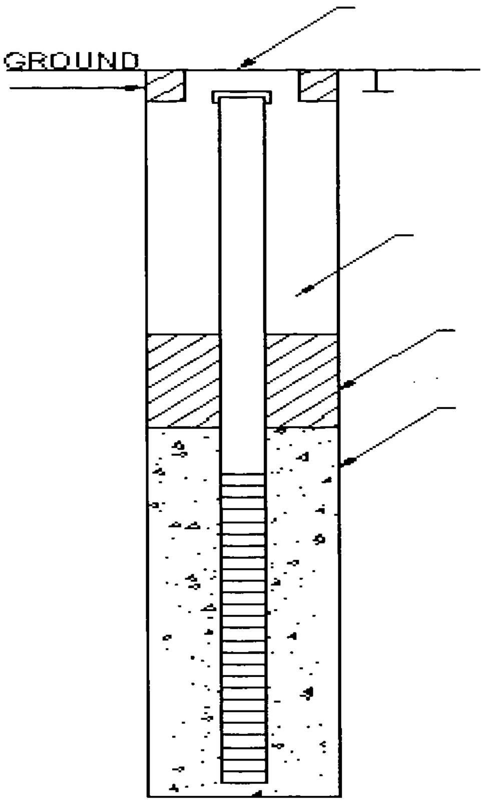
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-13
DATE COMPLETED: 5/22/02
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

TOP OF SEAL @ 2.0 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 4.0 ft

PACK TYPE:
SAND, SIZE: Quartzite Sand, 00N

TOP OF SCREEN @ 5.2 ft

BOTTOM OF SCREEN @ 20.2 ft

LOWER SEAL from 21.0 to 34.0 ft. bgs

BOTTOM OF HOLE @ 34.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 15.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No. MW - 14

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	2/25/03
Project #:	16059	Driller:	S. Loranty	Completion Date:	2/25/03
Client:	Buell Automatics	Elevation:	561.3 ft. AMSL	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:	10^{o}, light snow	Supervisor:	P.Smith

Depth (ft)	C	Blows on Sampler 0-6"	6-12"	12-18"	18-24"	SAMPLE PID	Rec.	No.	Depth	Soil and Rock Information Remarks
0								1	0-2'	Asphalt surface 0.5 '
			14							Gray Sand and Gravel, dry **(FILL)**
				18						1.5 '
					25	0.0				Brown silty fine Sand, some gravel, moist
		4						2	2-4'	- same, without gravel
			7							**(LACUSTRINE SAND)**
				8						
					10	0.0				4.0 '
		3						3	4-6'	Red brown Sand, some silt and clay, trace gravel,
5			6							moist
				10						
					12	0.0				**(LACUSTRINE SILT and CLAY)**
		3						4	6-8'	- same
			7							
				9						
					12	0.0				
		3						5	8-10'	- same
			7							
				8						
10					13	0.0				
		3						6	10-12'	- same
			3							
				4						
					5	0.0				12.0 '
		1						7	12-14'	Gray brown Silt, some clay and fine sand, moist
			3							
				5						**(LACUSTRINE SILT and CLAY)**
					6	0.0				
		2						8	14-16'	- same 15.2 '
15			3							Brown fine Sand, some silt, dry
				5						**(LACUSTRINE SAND)**
					11	0.0				16.0 '
										Boring terminated at 16.0 ft. BGS
										Note:
										1. Monitoring well MW-14 installed in completed
										borehole. See well detail sheet.
20										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

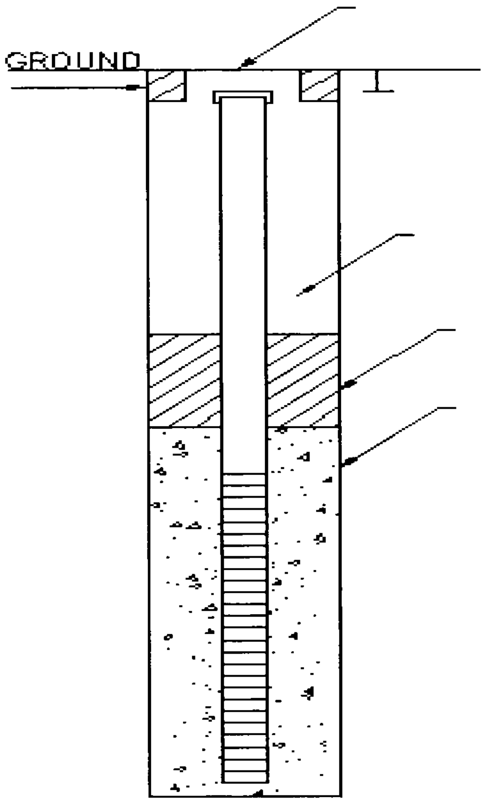
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME:	Remedial Investigation	HOLE DESIGNATION:	MW-14
PROJECT NUMBER:	16059	DATE COMPLETED:	2/25/03
CLIENT:	Buell Automatics	DRILLING METHOD:	4-1/4 in ID HSA
LOCATION:	381 Buell Road, Rochester, NY	SUPERVISOR:	P. Smith

SURFACE SEAL TYPE Concrete

FLUSH MOUNT ROAD BOX



WELL CASING

ANNULUS BACKFILL

TYPE: Cement

TOP OF SEAL @ 1.5 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 3.0 ft

PACK TYPE:

SAND, SIZE Quartzite Sand, 00N

TOP OF SCREEN @ 4.0 ft

BOTTOM OF SCREEN @ 13.0 ft

LOWER SEAL from 13.0 to 16.0 ft. bgs

BOTTOM OF HOLE @ 16.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 9.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(716) 475-1440

Test Boring No. **MW - 15**

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	2/25/03
Project #:	16059	Driller:	S. Loranty	Completion Date:	2/25/03
Client:	Buell Automatics	Elevation:	560.5 ft. AMSL	Drilling Method:	4-1/4 in ID H S A
Location:	381 Buell Road	Weather:	10°, light snow	Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
								1	0-2'	Asphalt surface **0.5 '**
			34							Gray Silt and gravel, dry **(FILL)**
				26						**1.5 '**
					13	0.0				Brown fine silt fine SAND, moist
		3						2	2-4'	- same, except moist to wet
			10							
				11						**(LACUSTRINE SAND)**
					4	0.0				**4.0 '**
		3						3	4-6'	- same, with trace gravel
5			6							
				7						
					9	0.0				
		6						4	6-8'	- same
			12							
				14						
					16	0.0				
		4						5	8-10'	
			6							**9.0 '**
				7						Gray and red brown Clay, some silt, little fine sand,
10					8	0.0				moist
		4						6	10-12'	- same
			7							**(LACUSTRINE SILT and CLAY)**
				9						**11.5 '**
					13	0.0				Brown very fine Sand, some silt, dry **(LACUSTRINE**
										SAND) 12.0 '
										Boring terminated at 12.0 ft. BGS
										Note:
										1. Monitoring well MW-15 installed in completed
15										borehole. See well detail sheet.
20										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

OVERBURDEN MONITORING WELL

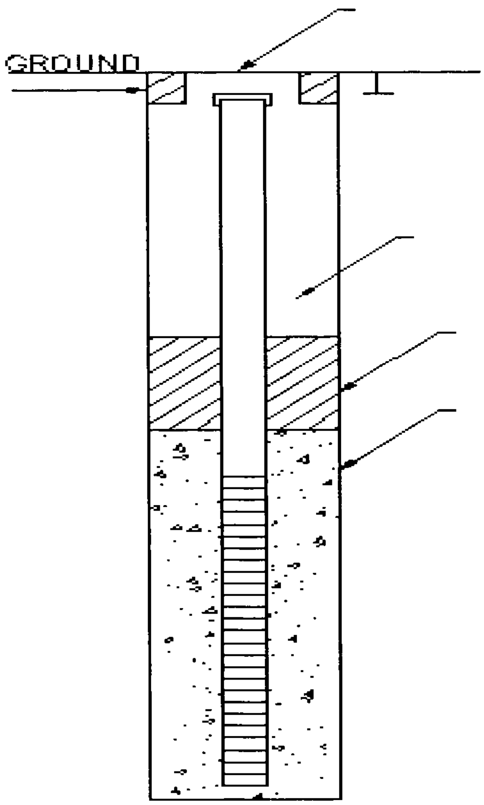
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-15
DATE COMPLETED: 2/25/03
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE:
SAND, SIZE: Quartzite Sand, 00N

TOP OF SEAL @ 1.5 ft

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

BOTTOM OF SCREEN @ 10.0 ft

LOWER SEAL from 10.0 to 12.0 ft. bgs

BOTTOM OF HOLE @ 12.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 6.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(716) 475-1440

Test Boring No. MW - 16

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	11/22/05
Project #:	16059	Driller:	K. Bush	Completion Date:	11/22/05
Client:	Buell Automatics	Elevation:	562.6	Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information Remarks	
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth		
		0				1,600	16"	1	0-2'	Concrete surface	0.5'
			1							Gray SAND, some Silt, moist; strong odor	
				2						(FILL)	
					3						2.0'
		3				39	12"	2	2-4'	Dark gray, fine Sand, some Silt	
			3								
				5						(LACUSTRINE SAND)	
					5						
		3				23	16"	3	4-6'	same, except wet	
5			7								
				9							5.5'
					7					Red brown SILT, some clay, moist	
		3				88	18"	4	6-8'		
			8							(LACUSTRINE SILT and CLAY)	
				10							
					13						8.0'
						20	18"	5	8-10'	Interbedded Clay and Sand, wet	
											9.0'
10										Gray brown SILT, some Sand, moist	
										(LACUSTRINE SILT)	10.0'
										Boring terminated at 10.0 ft. BGS	
15										Note: 1. Monitoring well MW-16 installed in completed borehole. See well detail sheet.	
20											

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

61 Commercial St
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-16R

Project:	Buell Automatics	Drill Contractor:	TREC	Start Date:	10/29/2014
Project #:	190500033	Driller:		Completion Date:	10/29/2014
Client:	Buell Automatics	Elevation:	-	Drilling Method:	HSA
Location:	381 Buell Road	Weather:	overcast, 60s	Supervisor:	WA
	Gates, NY				

	SAMPLE				Soil Information	
0	PID (ppm)	Rec. (ft)	No.	Depth (ft)	Remarks	
	none above background			0-5	Asphalt	0-0.5
					Crusher run fill	0.5-5
					-FILL-	
5						
				5-10		
7	2.7				-NATIVE OVERBURDEN SOILS-	
9	0.5					
10	0.9				bottom of boring at 10'	
15						
20						

Notes:
1. PID Model Mini-Rae 3000 with 10.6eV lamp.
2. Advanced augers without sampling.

Horizontal Coordinates

Method	Survey

Stantec

OVERBURDEN MONITORING WELL

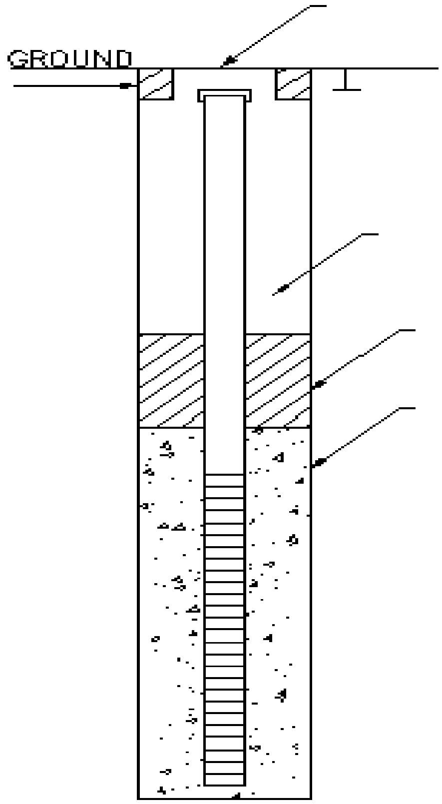
DESIGN DETAILS

PROJECT NAME Buell Automatics
PROJECT NUMBER 190500033.000
CLIENT Buell Automatics
LOCATION 381 Buell Road
Gates, NY

HOLE DESIGNATION **MW-16R**
DATE COMPLETED 10/29/2014
DRILLING METHOD HSA
SUPERVISOR WA

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX



SURFACE SEAL TYPE concrete

RISER RECESS - ft

WELL CASING
ANNULUS BACKFILL
TYPE: cement

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE quartz sand, 00N

TOP OF SEAL @ 1.0 ft

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

BOTTOM OF SCREEN @ 9.0 ft

LOWER SEAL @ 9.0-10.0 ft
BOTTOM OF HOLE @ 10.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ___ LOUVRE ___ OTHER ___

SCREEN MATERIAL: STAINLESS STEEL ___ PVC x OTHER ___

SCREEN LENGTH: 5 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020"

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 6 1/4 in

Horizontal Coordinates

Method Survey

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(716) 475-1440

Test Boring No. MW - 17

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	11/22/05
Project #:	16059	Driller:	K. Bush	Completion Date:	11/22/05
Client:	Buell Automatics	Elevation:		Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		25				0.0	18"	1	0-2'	Asphalt surface **0.5 '**
			24							Gray brown, coarse to fine SAND, some Silt, moist
				8						**(FILL)** **1.5'**
					7					Dark gray SILT, some Sand, moist **2.0'**
		7				0.0	18"	2	2-4'	Red brown fine SAND, some Silt, trace fine Gravel
			6							and Clay, moist
				8						**(LACUSTRINE SAND)**
					10					
		3				0.4	12"	3	4-6'	same
5			8							
				9						
					11					
		2				3.4	12"	4	6-8'	same
			6							
				12						**7.5'**
					20					Brown fine SAND, some silt, wet
		3				0.6	24"	5	8-10'	same
			8							**9.0'**
				7						Red brown SILT, some clay and fine sand, moist
10					8					
		3				0.5	24"	6	10-12'	same **(LACUSTRINE SILT and CLAY)**
			5							
				14						**11.5'**
					18					Brown fine SAND, some silt, wet
		4				1.2	24"	7	12-14'	same
			8							**(LACUSTRINE SAND)**
				7						
					5					**14.0'**
		2				1.3	24"	8	14-16'	Gray SILT, some clay and fine sand, moist
15			WH							
				2						**(LACUSTRINE SILT and CLAY)**
					2					
		WH				1.2	24"	9	16-18'	same
			WH							
				2						
					2					**18.0'**
										Boring terminated at 18.0 ft. BGS
										Note:
										1. Monitoring well MW-17 installed in completed
20										borehole. See well detail sheet.

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

OVERBURDEN MONITORING WELL

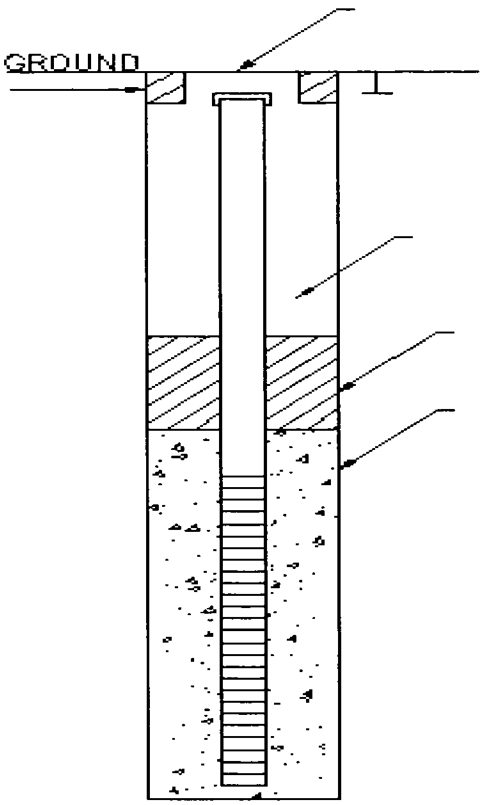
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-17
DATE COMPLETED: 11/22/05
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE:
SAND, SIZE: Quartzite Sand, 00N

TOP OF SEAL @ 3.0 ft

BOTTOM OF SEAL @ 6.0 ft

TOP OF SCREEN @ 7.0 ft

BOTTOM OF SCREEN @ 17.0 ft

BOTTOM OF HOLE @ 18.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 10.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(716) 475-1440

Test Boring No. **MW - 18**

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	11/22/05
Project #:	16059	Driller:	K. Bush	Completion Date:	11/22/05
Client:	Buell Automatics	Elevation:		Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

		Blows on Sampler				SAMPLE				Soil and Rock Information
0	C	0-6"	6-12"	12-18"	18-24"	PID	Rec.	No.	Depth	Remarks
		21				0.0	12"	1	0-2'	Asphalt surface **0.5 '**
			13							Dark gray silty fine SAND, trace Gravel, dry
				9						**(FILL)**
					6					**2.0'**
		6				0.0	18"	2	2-4'	Red brown SILT, some clay, dry; dessication cracks
			6							
				10						
					12					
		5				0.0	18"	3	4-6'	same
5			9							
				13						**(LACUSTRINE and CLAY)**
					16					
		4				0.0	18"	4	6-8'	same
			9							
				12						
					17					
		4				0.0	18"	5	8-10'	same, with trace Sand, moist
			11							
				14						
10					16					
		4				0.0	18"	6	10-12'	same
			6							
				9						
					12					
		2				0.0	18"	7	12-14'	same
			3							**(LACUSTRINE and CLAY)**
				5						
					4					
		2				0.0	24"	8	14-16'	same
15			3							
				6						
					6					
		WH				0.0	24"	9	16-18'	same
			1							**17.0'**
				2						Gray clayey SILT, some fine gravel, wet
					1					
		WH				0.0	24"	10	18-20'	Same, with thin seams of coarse Sand, moist to wet
			2							
				1						
20					11					

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(716) 475-1440

Test Boring No. MW - 18

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	11/22/05
Project #:	16059	Driller:	K. Bush	Completion Date:	11/22/05
Client:	Buell Automatics	Elevation:		Drilling Method:	Hollow stem auger 4-1/4 in ID
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

Depth (ft)	C	Blows on Sampler 0-6"	6-12"	12-18"	18-24"	SAMPLE PID	Rec.	No.	Depth	Soil and Rock Information Remarks
		3				0.0	24"	11	20-22'	Gray clayey SILT, some Sand, wet **(LACUSTRINE and CLAY)**
			9							
				7						**21.0'**
					9					Buff fine SAND, some Silt, dry
										(LACUSTRINE SAND) **22.0'**
										Boring terminated at 22.0 ft. BGS
25										Note: 1. Monitoring well MW-18 installed in completed borehole. See well detail sheet.
30										
35										
40										

N = No. of Blows to Drive 2 " Spoon, 12 ", with 130 lb. Wt., 30 " Ea. Blow.

Stantec

OVERBURDEN MONITORING WELL

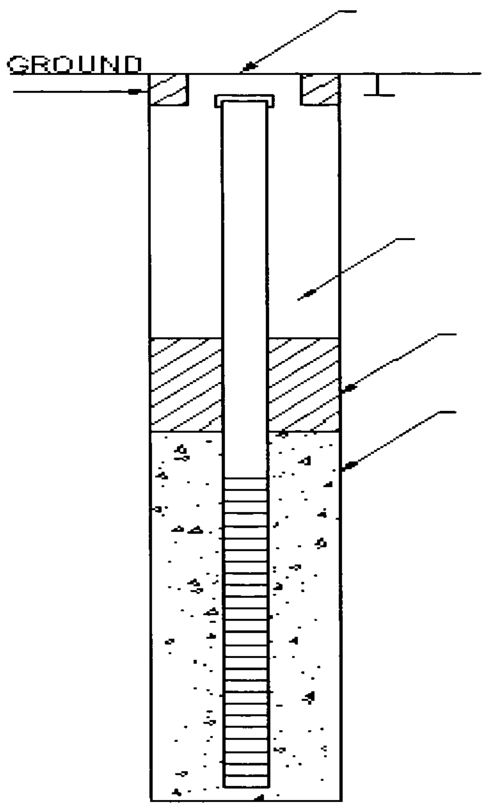
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: MW-18
DATE COMPLETED: 11/22/05
DRILLING METHOD: 4-1/4 in ID HSA
SUPERVISOR: P. Smith

SURFACE SEAL TYPE Concrete

FLUSH MOUNT ROAD BOX



WELL CASING
ANNULUS BACKFILL
TYPE: Cement

TOP OF SEAL @ 10.6 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 13.2 ft

PACK TYPE:
SAND, SIZE Quartzite Sand, 00N

TOP OF SCREEN @ 15.5 ft

BOTTOM OF SCREEN @ 20.5 ft

LOWER SEAL from 20.5 to 21.0 ft. bgs

BOTTOM OF HOLE @ 21.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC __x__ OTHER ____

SCREEN LENGTH: 5.0 ft SCREEN DIAMETER: 2.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in. ID

HOLE DIAMETER: nominal 8 - inch

Stantec

OVERBURDEN MONITORING WELL

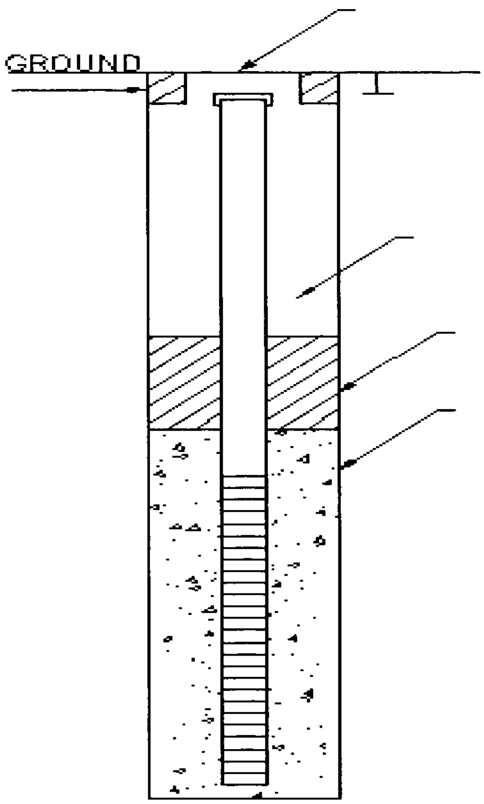
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: RW-1
DATE COMPLETED: 12/30/03
DRILLING METHOD: Backhoe
SUPERVISOR: A. Krause

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



WELL CASING ANNULUS BACKFILL TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE: SAND, SIZE: Quartzite Sand, 00N

TOP OF SEAL @ 0.5 ft

BOTTOM OF SEAL @ 1.5 ft

TOP OF SCREEN @ 2.0 ft

BOTTOM OF SCREEN @ 6.0 ft

BOTTOM OF HOLE @ 12.0 ft

NOTE:
ALL DIMENSIONS ARE BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL __X__ PVC ____ OTHER ____

SCREEN LENGTH: 4.0 ft SCREEN DIAMETER: 6.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: Stainless Steel WELL CASING DIAMETER: 6.0 in.

HOLE DIAMETER: NA

Stantec

OVERBURDEN MONITORING WELL

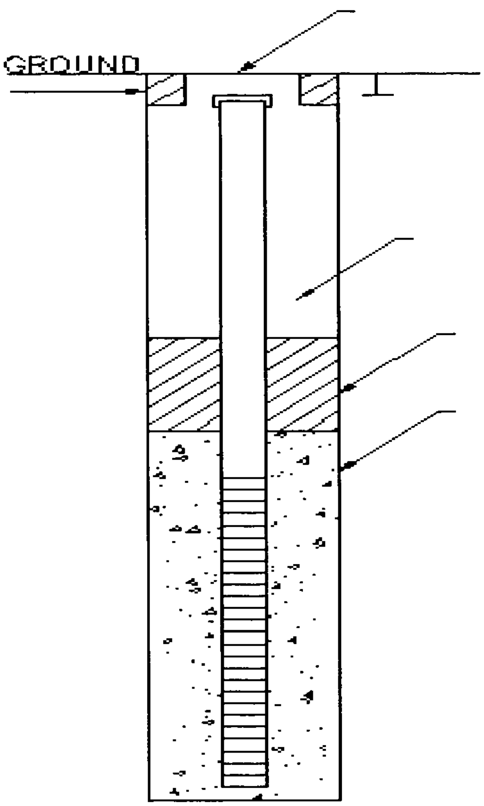
DESIGN DETAILS

PROJECT NAME: Remedial Investigation
PROJECT NUMBER: 16059
CLIENT: Buell Automatics
LOCATION: 381 Buell Road, Rochester, NY

HOLE DESIGNATION: RW-2
DATE COMPLETED: 12/30/03
DRILLING METHOD: Backhoe
SUPERVISOR: A. Krause

SURFACE SEAL TYPE: Concrete

FLUSH MOUNT ROAD BOX



WELL CASING ANNULUS BACKFILL TYPE: Cement

SEAL TYPE: Bentonite

PACK TYPE: SAND, SIZE: Quartzite Sand, 00N

TOP OF SEAL @ 0.5 ft

BOTTOM OF SEAL @ 1.0 ft

TOP OF SCREEN @ 1.5 ft

BOTTOM OF SCREEN @ 6.5 ft

BOTTOM OF HOLE @ 12.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT ____ PERFORATED __x__ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL __X__ PVC ____ OTHER ____

SCREEN LENGTH: 5.0 ft SCREEN DIAMETER: 6.0 in. ID SCREEN SLOT SIZE: 0.010 inch

WELL CASING MATERIAL: Stainless Steel WELL CASING DIAMETER: 6.0 in.

HOLE DIAMETER: NA

2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Stantec

Test Boring No. GP-1

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/24/03
Project #:	16059	Driller:	R. Rose	Completion Date:	12/24/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	A. Krause

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks	
0					Concrete	0.5'
					Concrete and Asphalt	1.7
	7		1	1.7-5.7'	Red, clayey fine SAND.	
	14				Gray, fine SAND, little Clay, wet	
5						
	24		2	5.7-9.7'	s.a.a.	
	15				Gray, very fine SAND, wet	
10	5		3	9.7-13.7'	Brown, fine SAND, irridescent sheen, slight odor, wet	13.7'
					Boring terminated at 13.7'	
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-2

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/24/03
Project #:	16059	Driller:	R. Rose	Completion Date:	12/24/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	A. Krause

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0					Concrete
					1.0'
	17		1	1.0-5.0'	Red CLAY, moist
5	22				Gray fine SAND, wet.
	30		2	5.0-9.0'	Gray, clayey fine SAND, wet
	14				Brown, fine SAND, wet
10					
	10		3	9.0-12.7'	s.a.a.
	3				12.7'
					Equipment Refusal at 12.7'
15					
20					

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-3

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/24/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/24/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	A. Krause

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
					Concrete 1.3'
	250		1	1.3-5.3'	Asphalt
	33				Brown, fine SAND, moist
5	19				Red CLAY, moist
	9		2	5.3-9.3'	Brown and gray fine SAND, wet, with product globules/sheen.
	13				Black staining.
	2		3	9.3-12.0'	
10					Brown, gray fine SAND, wet
					12.0'
					Equipment Refusal at 12.0'
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-4

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/24/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/24/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	A. Krause

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0					Concrete 0.8'
	2		1	0.8-4.8'	Gray, fine SAND, moist, black staining.
5	2		2	4.8-8.5'	Red CLAY to clayey fine SAND, little fine and medium GRAVEL, moist. 8.0'
					Equipment Refusal at 8.0'
10					
15					
20					

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-5

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/03
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith

	SAMPLE				Soil Information
	PID	**Rec.**	**No.**	**Depth**	**Remarks**
0					**0.6'**
		18"	1	.6-2.6'	Gray, brown, fine SAND, moist.
	0.0				
		36"	2	2.6-6.6'	**(FILL)**
					- same
5					
	193				**6.6'**
		36"	3	6.6-10.6'	Brown silty fine SAND, wet.
					(LACUSTRINE SAND)
	8,000				same, with trace brown product, strong odor (9-9.6 ft.) **9.6'**
10					same, with trace gravel
	945				**10.6'**
		24"	4	10.6-12.6'	Brown silty fine SAND, moist.
	4.0				
		24"	5	12.6-14.6'	- same
	3.0				**14.6'**
15					Boring terminated at 14.6 ft. bgs
20					

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-6

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/03
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
					0.5'
		24"	1	0.5-2.5'	Gray, brown, fine SAND, moist.
					(FILL)
		48"	2	2.5-6.5'	- same
5					- irridescent sheen at 5-6 ft.
					- same except wet @ 6 ft.
	755				- irridescent sheen, trace product 6.5-7.5' 6.5'
		48"	3	6.5-10.5'	
	2,480				
					Brown, silty fine SAND, wet.
10	1.7				(LACUSTRINE SAND)
	22				
		24"	4	10.5-12.5'	- same
	6.0				12.5'
					Boring terminated at 12.5 ft. bgs
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-7

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith

Depth (ft)	PID	Rec.	No.	Depth	Soil Information Remarks
0					0.5'
		24"	1	0.5-2.5'	Gray brown fine SAND, some silt, moist
		24"	2	2.5-6.5'	- same
					- same, except wet at 4.5 ft. **(FILL)**
5					
	1.5				
		24"	3	6.5-10.5	7.0 '
					Gray fine SAND, some silt, wet, with trace irridescent sheen.
					(LACUSTRINE SAND)
10	42.2				
	1.7				- same, except brown
					Boring terminated at 10.5' **10.5'**
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-8

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks
0					0.5'
		12"	1	0.5-2.5'	Gray brown fine SAND, some silt, moist.
		24"	2	2.5-6.5'	- same except wet at 5.5 ft. **(FILL)**
5					
					6.0'
		48"	3	6.5-10.5'	Brown sandy SILT, wet, with dark brown product, irridescent sheen.
	77				**(LACUSTRINE SAND)**
10					
	22				10.5'
					Boring terminated at 10.5'
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-9

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith

Depth (ft)	PID	Rec.	No.	Depth	Soil Information Remarks
0					0.5'
					Boring advanced to 8.5 ft. w/o sampling.
5					
					8.5'
			1	8.5-12.5'	Brown fine sandy SILT, wet.
10	0.1				
					(LACUSTRINE SILT AND CLAY)
	0.0				12.5'
					Boring terminated at 12.5'
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-10

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith/A. Krause

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0					0.5'
					Boring advanced to 16 ft. w/o sampling.
5					
10					
15					16.0'
			1	16-20'	Gray fine SAND, some silt, wet. (LACUSTRINE SAND)
					19.8'
20	0			19.8-20	Brown gray clayey fine SAND, some silt and gravel, moist.

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. GP-10

Project:	Voluntary Investigation - IRM	Drill Contractor:	SLC	Start Date:	12/31/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	12/31/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P. Smith/A. Krause

	SAMPLE				Soil Information
20	PID	Rec.	No.	Depth	Remarks
			2	20-24'	Brown gray clayey fine SAND, trace gravel, moist.
					(GLACIAL TILL)
	0.0				24.0'
					Boring terminated @ 24.0 ft. bgs
25					
30					
35					
40					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-8

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/12/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/12/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Manual Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

Depth (ft)	SAMPLE				Soil Information
	PID	Rec.	No.	Depth	Remarks
0			1	0.5-2.5	Concrete **0.5 '**
					Coarse to fine Sand and Gravel, moist
	3,400				**(FILL)**
					(Black from 1.8 to 2.5 ft.; strong odor)
		18"	2	2.5-4.5	**3.0 '**
					Brown silty fine SAND, moist
					(LACUSTRINE SAND)
	3,000				
5		12"	3	4.5-6.5	- same
	2,200				**6.5 '**
					Boring terminated at 6.5 ft. bgs
10					
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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2250 Brigton Henrietta Town Line Road
Rochester, NY 14623
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Test Boring No. B-9

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/12/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/12/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Manual Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0		12"	1	0.5-2.5'	Concrete 0.5 '
					Brown SILT and Gravel, moist, mild odor (FILL) 2.5 '
	17	18"	2	2.5-4.5 '	Brown silty fine SAND, moist to wet
	83		3	4.5-6.5 '	- same, with strong odor, trace iridescent sheen, wet
5					
					(LACUSTRINE SAND)
	223				6.5 '
					Boring terminated at 6.5 ft. bgs
10					
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-10

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle
Project #:	16059	Driller:	N. Short
Client:	Buell Automatics	Elevation:	
Location:	381 Buell Road	Weather:	Interior

Start Date:	8/12/2002
Completion Date:	8/12/2002
Drilling Method:	Manual Geoprobe
Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0		24"	1	0.5-2.5 '	Concrete 0.5 '
					Brown sandy SILT, moist, moderate odor
					(LACUSTRINE SAND)
	118		2	2.5-4.5 '	- same
	163				3.8 '
					Red brown clayey SILT, moist
	91				(LACUSTRINE SILT AND CLAY)
5			3	4.5-6.0 '	- same
	36				6.0 '
					Boring terminated at 6.0 ft. bgs
10					
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-11

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/8/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/8/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Clear, 70s	Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0		36"	1	0-4.0 '	Gray coarse to fine Sand and Gravel, dry (asphalt surface, gravel base)
					(FILL)
	0.0				2.0 '
					Brown fine sandy Silt, moist
	10				
		48"	2	4.0-8.0 '	- same, except gray
5					
	37				wet @ 6 ft. with very strong odor
					(LACUSTRINE SAND)
	42				
		28"	3	8.0-12 '	- poor recovery, sampler overpacked
10	0.0				
	4.0				12.0 '
					Boring terminated at 12.0 ft. bgs
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-12

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle
Project #:	16059	Driller:	N. Short
Client:	Buell Automatics	Elevation:	
Location:	381 Buell Road	Weather:	Clear, 70s
Start Date:	8/8/2002		
Completion Date:	8/8/2002		
Drilling Method:	Geoprobe		
Supervisor:	P.Smith		

Depth (ft)	PID	Rec.	No.	Depth	Soil Information Remarks
0		36"	1	0-4.0	Gray coarse to fine Sand and Gravel, dry (asphalt surface, gravel base)
					(FILL)
	0				**2.0 '**
					Brown silty fine Sand, moist
	0				- same, except wet @ 3.5 **(LACUSTRINE SAND)**
		48"	2	4.0-8.0	
5	48				**5.3 '**
					Red brown Silt and Clay, moist
	0				
		28"	3	8.0-11	- same
					(LACUSTRINE SILT AND CLAY)
10					
	0				**11.0 '**
					Boring terminated at 11.0 ft. bgs
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-13

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/8/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/8/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Clear, 70s	Supervisor:	P.Smith

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
		36"	1	0-4	Gray coarse to fine Sand and Gravel, dry (asphalt surface, gravel base)
					(FILL)
	0				**2.0 '**
					Brown silty fine Sand, moist
					- same, except black from 3 to 3.8 ft.
	15				
		36"	2	4.0-7.0	Gray brown silty fine SAND, wet
5	0				
					(LACUSTRINE SAND)
	0				
		36"	3	7.0-10.0	- same
10	0				**10.0 '**
					Boring terminated at 10.0 ft. bgs
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-14

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle
Project #:	16059	Driller:	N. Short
Client:	Buell Automatics	Elevation:	
Location:	381 Buell Road	Weather:	Clear, 70s
Start Date:	8/8/2002		
Completion Date:	8/8/2002		
Drilling Method:	Geoprobe		
Supervisor:	P.Smith		

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks
0		24"	1	0-4 '	Gray coarse to fine Sand and Gravel, dry (asphalt surface, gravel base) **(FILL)** **1.7 '**
	0				Brown silty fine Sand, moist
	0				
		4"	2	4-7 '	same, except wet
5					**(LACUSTRINE SAND)**
		36"	3	7-10 '	same, except gray
	0				
10	0				**10.0 '**
					Refusal @ 10'
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-15

Project:	Voluntary Investigation	Drill Contractor: Nothnagle	Start Date: 8/9/2002
Project #:	16059	Driller: N. Short	Completion Date: 8/9/2002
Client:	Buell Automatics	Elevation:	Drilling Method: Geoprobe
Location:	381 Buell Road	Weather: Interior	Supervisor: P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
		16"	1	0-4 '	Concrete	0.5 '
					Gray SAND and Gravel, strong odor	
					(FILL)	
	1					3.3 '
					Gray clayey SILT, moist	
	54				**(LACUSTRINE SILT and CLAY)**	4.0 '
		36"	2	4-7 '	Gray silty fine SAND, wet, strong odor, iridescent sheen	
5	75				**(LACUSTRINE SAND)**	5.0 '
					Red brown CLAY, moist	
					(LACUSTRINE SILT and CLAY)	6.0 '
					Brown silty fine SAND, wet	
	4				**(LACUSTRINE SAND)**	7.0 '
		NR	3	7-10 '	- no recovery; sleeve destroyed	
10						10.0 '
					Boring terminated at 10.0 ft. bgs	
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-16

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/9/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/9/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
		18"	1	0-4 '	Concrete	0.5 '
					Gray coarse to fine SAND and moist Gravel, mild odor	
					(FILL)	
	2.5					3.3 '
	3.1				Red brown clayey SILT, trace roots	
		36"	2	4-7 '	**(Relict Topsoil)**	
5						5.2 '
					Brown to black silty fine SAND, wet, strong odor, iridescent sheen, trace free product	
	3.1				**(LACUSTRINE SAND)**	
						7.0 '
		24"	3	7-9 '		
	2.5				Red brown silty Clay, dry to moist	
					(LACUSTRINE SILT and CLAY)	
	2.5					9.0 '
					Boring terminated at 9.0 ft. bgs	
10						
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-17

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/9/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/9/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
		36"	1	0-4 '	Concrete	0.5 '
					Gray brown fine SAND; silt, sand and gravel layers;	
	10.8				strong odor, trace oily product, moist	
					(FILL)	
						3.5 '
	12.7				Gray brown SILT, some fine Sand, moist	4.0 '
		36"	2	4-7 '	Gray SAND, wet, strong odor	
5	18.4				**(LACUSTRINE SAND)**	5.0 '
					Red brown clayey SILT, with oily product in cracks	
					(LACUSTRINE SILT and CLAY)	
	14.6					
		24"	3	7-9 '	Red brown clayey SILT, moist	
	3.1					9.0 '
					Boring terminated at 9.0 ft. bgs	
10						
15						
20						

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-18

Project:	Voluntary Investigation	Drill Contractor:	Nothnagle	Start Date:	8/8/2002
Project #:	16059	Driller:	N. Short	Completion Date:	8/8/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

Depth (ft)	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
		6"	1	0-4 '	Gray coarse to fine Sand and Gravel, dry (asphalt surface, gravel base)
					(FILL)
					3.5 '
	4.1				Black, silty fine SAND, moist **4.0 '**
		36"	2	4-7 '	Gray SAND, moist, strong odor
5	104				**5.0 '**
					Red Brown CLAY, moist **5.8 '**
					Gray SAND, wet, strong odor and iridescent sheen
					(LACUSTRINE SAND)
	23				
			3	7-10 '	- poor recovery, sleeve destroyed
					9.2 '
					Red brown clayey SILT, moist **(LACUSTRINE SILT and CLAY)**
10	0				**10.0 '**
					Boring terminated at 10.0 ft. bgs
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-19

Project:	Voluntary Investigation	Drill Contractor:	SLC
Project #:	16059	Driller:	R. Rose
Client:	Buell Automatics	Elevation:	
Location:	381 Buell Road	Weather:	
Start Date:	5/5/03	Completion Date:	5/5/03
Drilling Method:	Geoprobe	Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0		30"	1	0-4 '	Concrete	0.5 '
					Brown and gray Sand and Gravel, some silt, moist (FILL)	2.0 '
	20.4				Dark gray Silt, some fine sand, strong odor, moist to wet	
		48"	2	4-8 '	Gray silty fine Sand, wet, iridescent sheen	
5	1.3				(LACUSTRINE SAND)	7.2 '
	3.1				Red Brown clayey Silt, moist	
		26"	3	8-10.2 '	-same	
10	1.3				(LACUSTRINE SILT AND CLAY)	10.2 '
					Boring terminated at 10.2 ft. bgs	
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-20

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/5/03
Project #:	16059	Driller:	R. Rose	Completion Date:	5/5/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0		30"	1	0-4 '	Concrete	0.5 '
					Gray brown Sand and Gravel, moist	
					(FILL)	2.3 '
					Dark gray silty fine Sand, moist; strong odor, free product (oil)	
	7.7					
		48"	2	4-8 '	- same, with iridescent sheen, wet	
5						
	0.4				(LACUSTRINE SAND)	
						7.5 '
	7.2				Red brown silty Clay, trace gravel, occasional sand seam	
		24"	2	8-10 '		
					- same, except smeared with product (LACUSTRINE SILT AND CLAY)	
10	3.6					10.0 '
					Boring terminated at 10.0 ft. bgs	
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-21

Project:	Voluntary Investigation	Drill Contractor: SLC	Start Date: 5/3/2003
Project #:	16059	Driller: R. Rose	Completion Date: 5/3/2003
Client:	Buell Automatics	Elevation:	Drilling Method: Geoprobe
Location:	381 Buell Road	Weather:	Supervisor: P.Smith

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
		36"	1	0-4 '	Concrete	0.5 '
					Gray brown to black Silt, Sand and Gravel **(FILL)**	1.2 '
	0.4				Black, moist tar-like seam, strong odor from 1.2 to 1.5 ft.	1.5 '
					Dark gray silty fine SAND, moist to wet	
	0.9				**(LACUSTRINE SAND)**	
		36"	2	4-8 '	- same with iridescent sheen from 4.5-5 ft.	
5	2.7					5.0 '
					Red brown Silt, some clay, dry to moist	
					(LACUSTRINE SILT and CLAY)	
	0.4					8.0 '
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-22

Project: Voluntary Investigation	Drill Contractor: SLC	Start Date:	5/5/2003
Project #: 16059	Driller: R. Rose	Completion Date:	5/5/2003
Client: Buell Automatics	Elevation:	Drilling Method:	Geoprobe
Location: 381 Buell Road	Weather: Rain/high Wind	Supervisor:	P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
		18"	1	0-4 '	Asphalt surface	0.5 '
					Gray brown silty fine Sand, moist (poor recovery)	
	1.3				(LACUSTRINE SAND)	
		48"	2	4-8 '	- same, except wet	
5						
	1.3				- same with sheen from 5.8 to 6.0 ft.	6.0 '
					Red brown Clay, some silt, moist; stiff	
					(LACUSTRINE SILT and CLAY)	
	0.9					8.0 '
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-23

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/5/03
Project #:	16059	Driller:	R. Rose	Completion Date:	5/5/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Rain/high winds	Supervisor:	P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
			1	0-4 '	Asphalt surface	**0.5 '**
	160				Dark gray silty fine Sand, moist; strong odor	
					(LACUSTRINE SAND)	
	53				- same, except wet with iridescent sheen	**3.5 '**
	109				Red brown clayey Silt, moist, stiff	
			2	4-8 '		
5						
					- same with trace gravel **(LACUSTRINE SILT and CLAY)**	
	28					**8.0 '**
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-24

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/5/03
Project #:	16059	Driller:	R. Rose	Completion Date:	5/5/03
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

Depth (ft)	PID	Rec.	No.	Depth	Soil Information Remarks
0			1	0-2 '	Concrete **0.5 '**
	5.4				Gray brown silty fine Sand, moist **(LACUSTRINE SAND)** **3.0 '**
			2	2-4 '	Red brown silty Clay, moist **4.0 '**
	4.0				
5			3	4-6 '	Red brown Silt, some fine sand, trace clay, wet
	4.0				
			4	6-8 '	- same **(LACUSTRINE SILT and CLAY)** **8.0 '**
	1.8				
					Boring terminated at 8.0 ft. bgs
10					
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-25

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/3/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/3/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	interior	Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0			1	0-2 '	Concrete surface	0.5 '
					Brown silty fine Sand, moist, concrete @ 1.5'	
	85				(LACUSTRINE SAND)	
		NR	2	2-4 '	(No Recovery)	4.0 '
			3	4-6 '	Gray brown Silt and Sand, trace clay, moist	
5						
	1.3					
			4	6-8 '	same, except wet	
					(LACUSTRINE SILT and CLAY)	
	0.9					8.0 '
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-26

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/3/2002
Project #:	16059	Driller:	R. Rose	Completion Date:	5/3/2002
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:		Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks	
0			1	0-2 '	Concrete	**0.5 '**
					Brown SILT, some fine Sand, trace Clay, moist	
					black asphalt(?) 1.8-2'	
	600				**(FILL)**	
			2	2-4 '		**2.5 '**
	101				Gray SILT, some fine Sand, trace Clay, moist, moderate odor,	
						3.0 '
	60					
			3	4-6 '	Gray brown, wet Silty fine SAND, trace Clay	
5						
					(LACUSTRINE SAND)	
	16.8					
			4	6-8 '	same	
	12.2					**8.0 '**
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-27

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/3/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/3/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
		28"	1	0-4 '	Concrete **0.5 '**
					Gray silty fine Sand, trace clay, moist to wet; strong odor
					(LACUSTRINE SAND)
	4.0				
			2	4-8 '	- same
5					
					5.5 '
					iridescent sheen from 5.5 to 7 ft.
	1.3				
					7.0 '
					dark brown Silt from 7 to 8 ft.
	3.1	48"			**8.0 '**
			3	8-12 '	- same, except moist to wet
					(LACUSTRINE SAND)
10	0.9				
					11.2 '
					Red brown Silt, some clay, moist **(LACUSTRINE SILT and CLAY)**
	0.4				**12.0 '**
					Boring terminated at 12.0 ft. bgs
15					
20					

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-28

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/3/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/3/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

Depth (ft)	PID	Rec.	No.	Depth	Soil Information / Remarks	
0		30"	1	0-4'	Concrete	**0.4 '**
					Dark gray Silt, some find sand, trace clay, moist; mild odor	
	0.9					**4.0 '**
5		48"	2	4-8'	Red brown SILT, some clay, moist	
					(LACUSTRINE SILT and CLAY)	
	1.3					**6.5 '**
					Gray silty fine SAND, wet, trace sheen (free product?) @ 6.5 ft., strong odor	
		48"	3	8-12'	- same (possible slough)	
					(LACUSTRINE SAND)	
10	0.9					
						11.5 '
	1.8				Red brown silty CLAY, moist **(LACUSTRINE SILT and CLAY)**	
						12.0 '
					Boring terminated at 12.0 ft. bgs	
15						
20						

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-29

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/3/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/3/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

Depth (ft)	PID	Rec.	No.	Depth	Soil Information / Remarks	
0		36"	1	0-4'	concrete	0.5
					Dark gray SILT, some fine sand, moist, wet (LACUSTRINE SAND)	3.5 '
	8.6				Iridescent sheen @ 3.5-4', strong odor	4.0 '
		48"	2	4-8'	Gray brown silty fine SAND, wet (LACUSTRINE SAND)	5.0 '
5					same, with iridescent sheen from 5.0-6.5'	
	1.8					6.5 '
					same, without sheen	7.5 '
	0.4				Red brown silty CLAY, moist (LACUSTRINE SILT and CLAY)	8.0 '
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-30

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/3/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/3/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
		36"	1	0-4'	Concrete	**0.5 '**
					Gray SAND, some gravel, silt, some black aslphalt looking material, moist	
						3.0 '
					Gray silty fine SAND, moist	
	1.3				**(LACUSTRINE SAND)**	
			2	4-8'	same as above, except dark gray, wet, mild odor	
5	0.9					**4.8 '**
					Red brown CLAY, trace Gravel, moist (trace product - oil)	
	2.2				**(LACUSTRINE SILT and CLAY)**	
			3	8-12'		
					same, except hard	
10						
	0.4					**12.0 '**
					Boring terminated at 12.0 ft. bgs	
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-31

Project:	Voluntary Investigation	Drill Contractor:	SLC
Project #:	16059	Driller:	R. Rose
Client:	Buell Automatics	Elevation:	
Location:	381 Buell Road	Weather:	Interior
Start Date:	5/5/2003	Completion Date:	5/5/2003
Drilling Method:	Geoprobe	Supervisor:	P.Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0			1	0-4'	Concrete	0.5 '
					Black coarse to fine Sand and Gravel, moist	
					(FILL)	
	0.9					3.0 '
					Red brown silty Clay, moist	
			2	4-8'	- same	
5					(LACUSTRINE SILT and CLAY)	
	2.2					
	0.9					8.0 '
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-32

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/5/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/5/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
		30"	1	0-4'	Concrete	0.5 '
					Gray Sand and gravel, moist **(FILL)**	2.5 '
					Dark gray silty fine SAND, moist to wet, strong petroleum odor **(LACUSTRINE SAND)**	
	9.9					
		48"	2	4-8'		4.5 '
5					Red brown silty CLAY, moist **(LACUSTRINE SILT and CLAY)**	
	8.1					6.5 '
					Dark gray silty fine SAND, wet, strong odor	
	4.0					
		24"	3	8-12'	Brown silty fine SAND, no odor **(LACUSTRINE SAND)**	
10						
	0.9					
			4	12-15'	same, except very dense, moist	
15	0.9					15.0 '
					Boring terminated at 15.0 ft. bgs	
20						

Notes:

1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-33

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/5/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/5/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
		24"	1	0-4'	Concrete	0.5 '
					Red brown Silt, some fine sand, little clay, moist	
	1.9					
					(LACUSTRINE SILT and CLAY)	
	1.3				Dark gray @ 3.5'	4.0'
		48"	2	4-8'	Brown silty fine Sand, wet	
5						
					(LACUSTRINE SAND)	
	0.9					
	0.9					
			3	8-11.5'	same, with trace clay	
10	0.9					
					same, except red brown, no clay	
	0.9					11.5'
					Boring terminated at 11.5 ft. bgs	
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No. B-34

Project:	Voluntary Investigation	Drill Contractor:	SLC	Start Date:	5/5/2003
Project #:	16059	Driller:	R. Rose	Completion Date:	5/5/2003
Client:	Buell Automatics	Elevation:		Drilling Method:	Geoprobe
Location:	381 Buell Road	Weather:	Interior	Supervisor:	P.Smith

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
		36"	1	0-4'	Concrete	0.5 '
					Dark gray Silt, moist, strong petroleum odor	
	4.5					
					Gray brown Silt, some fine sand, trace clay, moist	
	2.2				**(LACUSTRINE SILT and CLAY)**	
		48"	2	4-8'		
5						
						6.0'
					Brown silty fine Sand, moist; top/bottom stained dark gray; sheen	
	1.3				**(LACUSTRINE SAND)**	7.0 '
	1.8				Red brown Clay, some silt, moist; stiff	8.0 '
					Boring terminated at 8.0 ft. bgs	
10						
15						
20						

Notes:
1. PID Thermo Env Model 580 B with 11.8 eV lamp.

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Test Boring No.: B-35

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks
0		24"	1	0-4'	Concrete surface
					(FILL)
					2.0
	405				Brown fine Sandy SILT, moist
					(LACUSTRINE SAND)
	115				
		36"	2	4-8'	Same, except wet 5.0
5					Red brown SILT, some fine Sand and Clay, moist
	37				**(LACUSTRINE SILT and CLAY)**
	17.5				8.0
					Boring terminated at 8.0 ft. bgs.
10					
15					
					Note:
					1. Boring backfilled with bentonite chips at completion.
20					

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Test Boring No.: B-36

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0		30"	1	0-4'	Concrete surface
					Gray SAND, some Silt, trace Gravel, moist
					(FILL)
	8.5				3.0'
					Red brown, SILT, some Clay, trace Gravel, wet
	29				
		36"	2	4-8'	same, except stiff, moist
5					
	37				
					(LACUSTRINE SILT and CLAY)
	125				
		24"	3	8-10	same
10	35				10.0'
					Boring terminated at 10.0 ft. bgs.
15					
					Note:
					1. Boring backfilled with bentonite chips at completion.
20					

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Test Boring No.: B-37

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0			1	0-4'	Asphalt surface Gray brown, SILT, Sand and Gravel, moist **(FILL)** 3.2'
	0.0				
	4.5		2	4-8'	Dark gray, SILT, some fine Sand, moist Gray brown, Silty fine SAND, wet **(LACUSTRINE SAND)** 6.0'
5					Red brown, SILT, some fine Sand and Clay, moist **(LACUSTRINE SILT and CLAY)** 8.0'
	4.1				
10					Boring terminated at 8.0 ft. bgs.
15					
20					Note: 1. Boring backfilled with bentonite chips at completion.

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Test Boring No.: B-38

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
		36"	1	0-4	Asphalt surface
					Gray, coarse to fine Sand and Gravel, dry
					(FILL)
					1.9'
					Red brown, SILT, some Sand and Clay, moist
					3.0'
	0.0				sand lense 3-3.5 ft. bgs 3.5
	0.0				
		24"	2	4-6'	Red brown, SILT, some Sand and Clay, moist
5					
					(LACUSTRINE SILT and CLAY)
	0.0				6.0
					Boring terminated at 6.0 ft. bgs.
10					
15					
					Note:
					1. Boring backfilled with bentonite chips at completion.
20					

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-39

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks
0			1	0-4'	Asphalt surface Gray, coarse to fine SAND and Gravel, moist **(FILL)** 2.0'
					Gray, silty fine SAND, wet **(LACUSTRINE SAND)**
	30.5				
	22.8				
			2	4-8'	Same, except gray brown
5					5.0'
					Red brown, SILT, some Clay and fine Sand, moist
	13.8				**(LACUSTRINE SILT and CLAY)**
					8.0'
					Boring terminated at 8.0 ft. bgs.
10					
15					
					Note: 1. Boring backfilled with bentonite chips at completion.
20					

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-40

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
			1	0-4'	Concrete surface Gray brown, coarse to fine SAND and Gravel, some Silt, moist **(FILL)** 2.0'
	9.4				Gray brown silty fine SAND, wet **(NATIVE)**
	7.8				
			2	4-8'	same
5					5.0'
					Red brown clayey SILT, moist
	50.1				**(LACUSTRINE SILT and CLAY)**
	22.3				8.0
					Boring terminated @ 8.0 ft. bgs.
10					
15					
					Note: 1. Boring backfilled with bentonite chips at completion.
20					

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-41

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0		48"	1	0-4'	Asphalt surface	
					Gray brown, coarse to fine SAND and Gravel, some Silt, moist	
					(FILL)	1.9'
	2.3				Brown, silty fine SAND, moist **(LACUSTRINE SAND)**	2.3'
					Red brown, silty CLAY, moist	
					(LACUSTRINE SILT and CLAY)	
	9.3					
		24"	2	4-8'	same	
5						
	5.8					8.0'
					Boring terminated at 8.0 ft. bgs.	
10						
15						
					Note:	
					1. Boring backfilled with bentonite chips at completion.	
20						

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-42

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

	SAMPLE				Soil Information
0	PID	Rec.	No.	Depth	Remarks
		48	1	0-4'	asphalt surface, gray sand and gravel base, dry
					(FILL)
	8.6				2.0'
					Red brown clayey SILT, moist
					(LACUSTRINE SILT and CLAY)
					3.5'
	7.6				sand seam from 3.5 to 4.0 ft. bgs
		36	2	4-8'	Red brown clayey SILT, moist
5					
	24.4				7.0'
					Red brown silty fine SAND, wet
	93.1				**(LACUSTRINE SAND)** 8.0'
					Boring terminated at 8.0 ft. bgs.
10					
15					
20					

Note:
1. Boring backfilled with bentonite chips at completion.

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-43

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks
0			1	0-4'	Gray sand and gravel, dry (FILL) 2.0'
					Gray brown silty fine SAND, wet (LAUCSTRINE SAND)
	2.4				
	8.8				
			2	4-8'	same
5					6.5'
					Red brown clayey SILT, moist (LACUSTRINE SILT and CLAY)
	35.5				8.0'
					Boring terminated at 8.0 ft. bgs.
10					
15					
					Note: 1. Boring backfilled with bentonite chips at completion.
20					

Stantec

2250 Brighton Henrietta Town Line Road
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-44

Project:	Remedial Investigation	Drill Contractor:	Nothnagle	Start Date:	9/20/2005
Project #:	16059	Driller:	N. Short	Completion Date:	9/20/2005
Client:	Buell Automatics	Elevation:		Drilling Method:	Direct-push
Location:	Rochester, NY	Weather:		Supervisor:	P. Smith

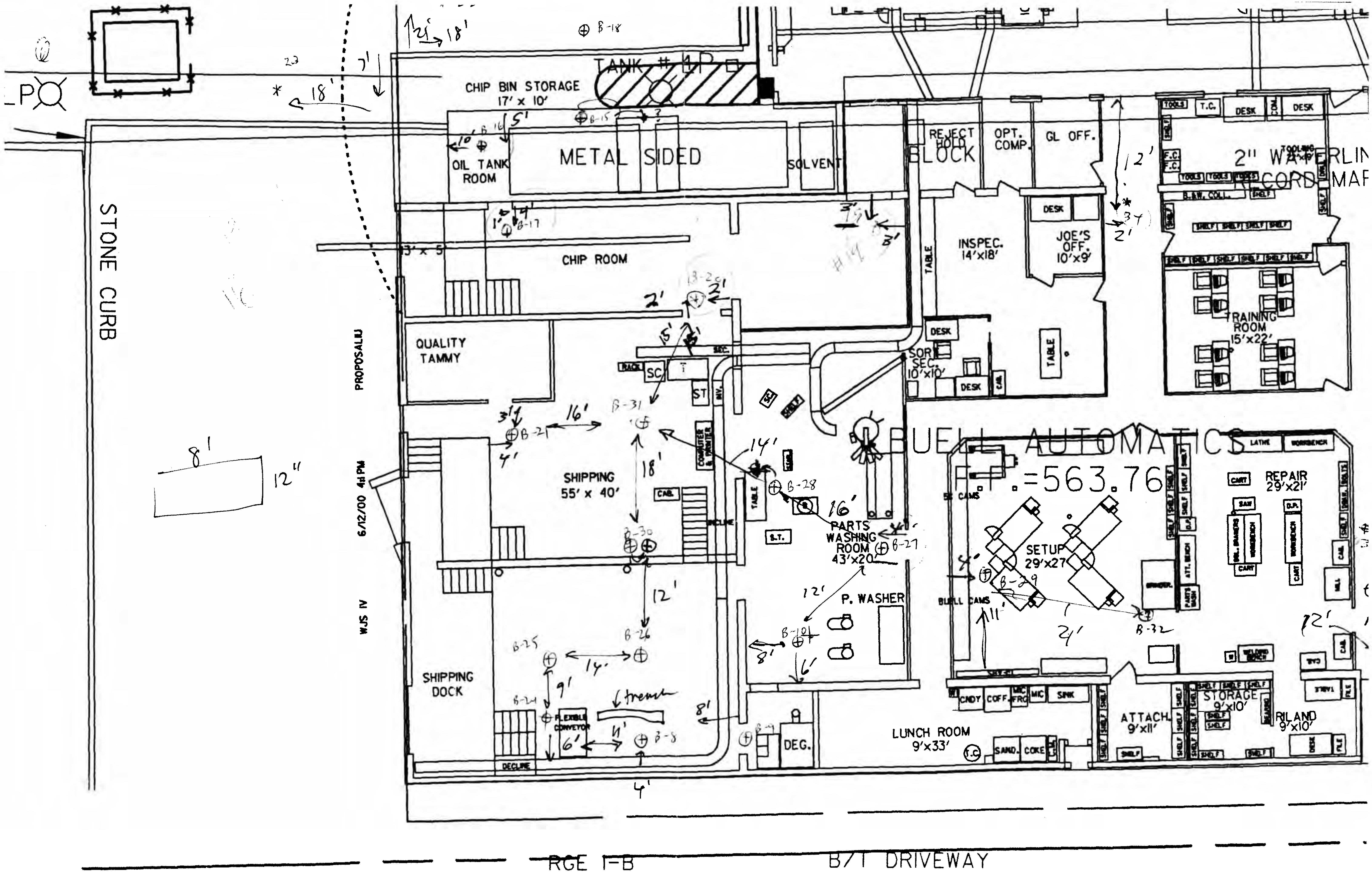
Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks
0		24"	1	0-4'	Gravel surface Gray brown, coarse to fine SAND and Gravel, some Silt, moist **(FILL)** 2.0'
					Gray brown fine SAND, some Silt, wet **(LACUSTRINE SAND)**
	0.0	36"	2	4-8'	same
5					5.0
					Red brown, SILT, some Clay and fine Sand, moist **(LACUSTRINE SILT and CLAY)**
	0.8				8.0'
					Boring terminated at 8.0 ft. bgs.
10					
15					
					Note: 1. Boring backfilled with bentonite chips at completion.
20					

BUELL AUTOMATICS
REMEDIAL INVESTIGATION REPORT

Appendix C

Swing-tie Measurements for Interior Boring Locations

(presented on the following page)



STONE CURB
CHIP BIN STORAGE
17' x 10'
TANK # 1P
OIL TANK
ROOM
METAL SIDED
SOLVENT
BLOCK
REJECT
HOLD
OPT.
COMP.
GL OFF.
2" WATERLIN
RECORD MAP
CHIP ROOM
QUALITY
TAMMY
INSPEC.
14'x18'
JOE'S
OFF.
10'x9'
TRAINING
ROOM
15'x22'
SORT
SEC.
10'x10'
SHIPPING
55' x 40'
BUELL AUTOMATICS
F.F. =563.76
PARTS
WASHING
ROOM
43'x20'
SETUP
29'x27'
REPAIR
29'x21'
P. WASHER
BUELL CAMS
SHIPPING
DOCK
FLEXIBLE
CONVEYOR
DECLINE
DEG.
LUNCH ROOM
9'x33'
ATTACH.
9'x11'
STORAGE
9'x10'
RILAND
9'x10'
PROPOSAL II
6/12/00 4th PM
WJS IV
RGE 1-B
B/T DRIVEWAY
B-8
B-9
B-10
B-15
B-16
B-17
B-18
B-21
B-24
B-25
B-26
B-27
B-28
B-29
B-30
B-31
B-32
8'
12"
trench

61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-19

Project:	Buell Road	Drill Contractor:	Nothnagle	Start Date:	9/20/2012
Project #:	190500033	Driller:	K. Bush	Completion Date:	9/20/2012
Client:	Buell Automatics	Elevation:	N/A	Drilling Method:	HSA, Macrocore
Location:	Buell Road, Gates, NY	Weather:	Sun, 70s F	Supervisor:	S. Burke

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks		Headspace sample PID (ppm)
0	0.0	3.0	1	0-4'	0.0' - 0.6'	Asphalt and subbase	
					0.6' - 1.6'	Red-brown SAND, trace silt, moist	1.5-1.7' = 0.0
					1.6' - 4.0'	Red-brown CLAY, some silt, moist	
	0.2	3.4	2	4-8'	4.0' - 5.8'	Red-brown SILT, some medium-coarse sand, moist	
5	0.8						
	2.6				5.8' - 6.6'	Light brown fine SAND, little silt, wet	5.5-6.0' = 0.0
					6.6' - 8.0'	Light brown fine SAND, little silt, moist	
	0.1						
	0.0	2.0	3	8-10'	8.0' - 8.5'	Red-brown SAND, some silt, moist	
					8.5' - 8.7'	Red-brown SAND, some silt, some gravel, moist	8.6' = 0.0
					8.7' - 10.0'	Red-brown SAND, little silt, moist	
10					Boring terminated at 10.0' below ground surface		
					No indication of odor, staining, or petroleum sheen noted		
15							
20							

Notes:
1. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.
2. PID screening results are in parts per million (ppm).

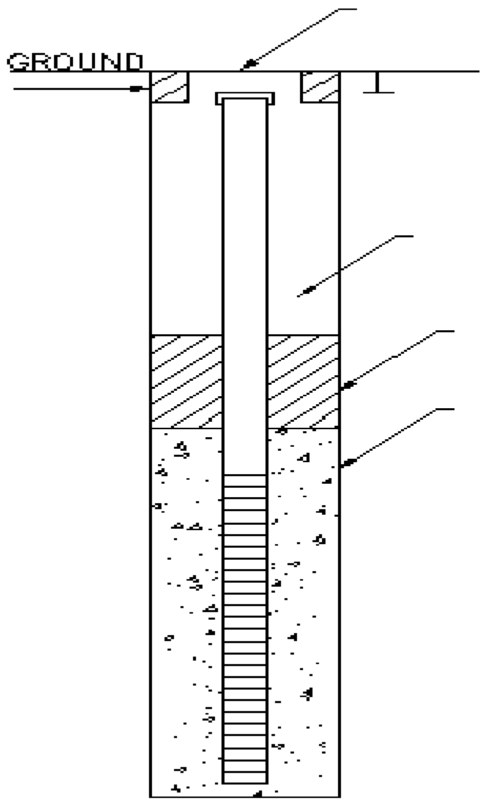
Stantec

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	381 Buell Rd	HOLE DESIGNATION	**MW-19**
PROJECT NUMBER	190500033	DATE COMPLETED	9/20/2012
CLIENT	Buell Automatics	DRILLING METHOD	HSA
LOCATION	381 Buell Rd	SUPERVISOR	S. Burke
	Gates, NY		

FLUSH MOUNT ROAD BOX



SURFACE SEAL TYPE: Concrete

RISER RECESS: 0.2 ft

WELL CASING ANNULUS BACKFILL TYPE: Concrete

TOP OF SEAL @ 0.5 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 1.5 ft

PACK TYPE: Sand

TOP OF SCREEN @ 2.0 ft

BOTTOM OF SCREEN @ 9.9 ft

BOTTOM OF HOLE @ 10.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT _X___ PERFORATED _____ LOUVRE _____ OTHER ________

SCREEN MATERIAL: STAINLESS STEEL _____ PVC __X_ OTHER ________

SCREEN LENGTH: 8.0 ft SCREEN DIAMETER ___2.0_____ in. SCREEN SLOT SIZE: Sch. 40

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in

HOLE DIAMETER: 4.25 in.

61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-20

Project:	Buell Road	Drill Contractor:	Nothnagle	Start Date:	9/20/2012
Project #:	190500033	Driller:	K. Bush	Completion Date:	9/20/2012
Client:	Buell Automatics	Elevation:	N/A	Drilling Method:	HSA, Macrocore
Location:	Buell Road, Gates, NY	Weather:	Sun, 70s F	Supervisor:	S. Burke

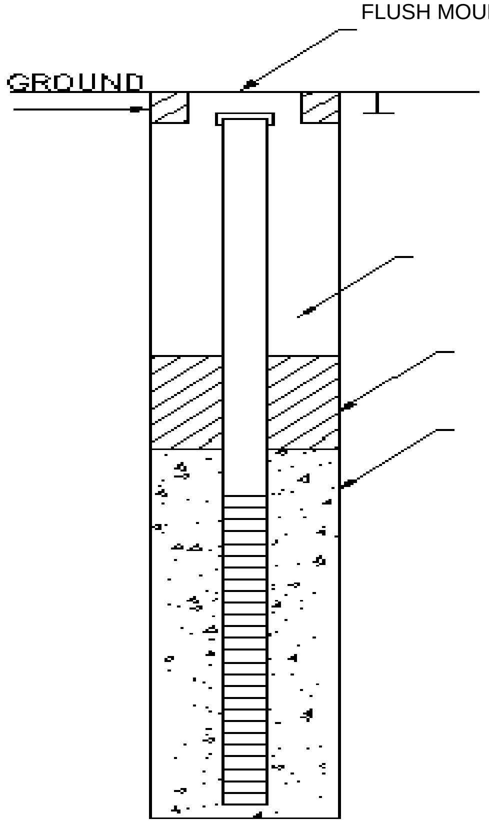
Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks		Headspace sample PID (ppm)
0	0.0	2.2	1	0-4'	0.0' - 1.0'	Asphalt and subbase	
					1.0' - 2.9'	Red-brown SILT, with little sand, little gravel, moist -FILL-	
					2.9' - 4.0'	Red-brown fine SAND, trace silt, wet	3.0-4.0' = 0.0
5	0.0	1.2	2	4-8'	4.0' - 8.0'	Brown fine SAND, trace gravel, wet	7.0' = 0.0
	0.0	1.5	3	8-10'	8.0' - 10.0'	Brown fine SAND, wet -LACUSTRINE SAND-	9.0-10.0' = 0.0
10					Boring terminated at 10.0' below ground surface No indication of odor, staining, or petroleum sheen noted		
15							
20							

Notes:
1. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.
2. PID screening results are in parts per million (ppm).

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	381 Buell Rd	HOLE DESIGNATION	**MW-20**
PROJECT NUMBER	190500033	DATE COMPLETED	9/20/2012
CLIENT	Buell Automatics	DRILLING METHOD	HSA
LOCATION	381 Buell Rd	SUPERVISOR	S. Burke
	Gates, NY		



SURFACE SEAL TYPE: Concrete

RISER RECESS: 0.4 ft

WELL CASING ANNULUS BACKFILL TYPE: Concrete

TOP OF SEAL @ 1.0 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 1.5 ft

PACK TYPE: Sand

TOP OF SCREEN @ 2.0 ft

BOTTOM OF SCREEN @ 10.0 ft

BOTTOM OF HOLE @ 10.7 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT _X___ PERFORATED _____ LOUVRE _____ OTHER _____

SCREEN MATERIAL: STAINLESS STEEL _____ PVC _X_ OTHER _____

SCREEN LENGTH: 7.7 ft SCREEN DIAMETER 2.0 in. SCREEN SLOT SIZE: Sch. 40

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in

HOLE DIAMETER: 4.25 in.

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61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-21

Project:	Buell Road	Drill Contractor:	Nothnagle	Start Date:	9/20/2012
Project #:	190500033	Driller:	K. Bush	Completion Date:	9/20/2012
Client:	Buell Automatics	Elevation:	N/A	Drilling Method:	HSA, Macrocore
Location:	Buell Road, Gates, NY	Weather:	Sun, 70s F	Supervisor:	S. Burke

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks		Headspace sample PID (ppm)
0	0.0	2.7	1	0-4'	0.0' - 0.8'	Asphalt and subbase	
					0.8' - 2.0'	Light-brown coarse to fine SAND, little gravel, dry -FILL-	
					2.0' - 3.9'	Red-brown fine SAND, trace silt, trace medium to coarse sand, moist -LACUSTRINE SAND-	3.5' = 0.1
5	0.0	2.7	2	4-8'	3.9' - 4.0'	-GRAVEL-	4.0-5.0 = 4.1
					4.1' - 8.0'	Red-brown fine SAND, trace silt, trace medium to coarse sand, moist to 4.3', wet below 4.3' -LACUSTRINE SAND-	
10	0.0	2.0	3	8-10'	8.0' - 10.5'	Red-brown fine SAND, trace silt, trace medium to coarse sand, wet	
					10.5' - 12.0'	Red-brown SILT, trace to little sand and fine gravel, moist to wet -GLACIAL TILL-	10.5' = 1.3
15					Boring terminated at 12.0' below ground surface No indication of odor, staining, or petroleum sheen noted		
20							

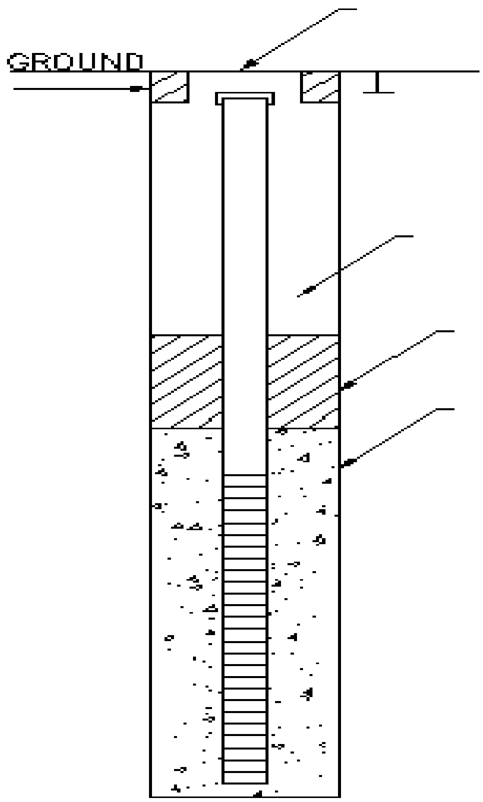
Notes:
1. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.
2. PID screening results are in parts per million (ppm).

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	381 Buell Rd	HOLE DESIGNATION	**MW-21**
PROJECT NUMBER	190500033	DATE COMPLETED	9/20/2012
CLIENT	Buell Automatics	DRILLING METHOD	HSA
LOCATION	381 Buell Rd	SUPERVISOR	S. Burke
	Gates, NY		

FLUSH MOUNT ROAD BOX



SURFACE SEAL TYPE Concrete

RISER RECESS 0.2 ft

WELL CASING ANNULUS BACKFILL TYPE: Concrete

TOP OF SEAL @ 0.5 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 1.5 ft

PACK TYPE: Sand

TOP OF SCREEN @ 2.0 ft

BOTTOM OF SCREEN @ 9.9 ft

BOTTOM OF HOLE @ 10.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 8.0 ft SCREEN DIAMETER 2.0 in. SCREEN SLOT SIZE: Sch. 40

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in

HOLE DIAMETER: 4.25 in.

61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-22

Project:	Buell Road	Drill Contractor:	Nothnagle	Start Date:	9/20/2012		
Project #:	190500033	Driller:	K. Bush	Completion Date:	9/20/2012		
Client:	Buell Automatics	Elevation:	N/A	Drilling Method:	HSA, Macrocore		
Location:	Buell Road, Gates, NY	Weather:	Sun, 70s F	Supervisor:	S. Burke		

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks		Headspace sample PID (ppm)
0	0.0	3.0	1	0-4'	0.0' - 0.7'	Asphalt and subbase	
					0.7' - 1.5'	Brown fine SAND, with some gravel, dry -FILL-	
					1.5' - 3.8'	Red-brown SILT, some sand, dry	1.5' = 0.0
					3.8' - 4.0'	Red-brown fine SAND, trace medium to coarse sand, moist	
		3.5	2	4-8'	4.0' - 6.0'	Red fine SAND, trace medium to coarse sand, moist	
5	1.7						
	4.6						5.0-6.0' = 173.4
	99.7				6.0' - 8.0'	Brown SILT, some fine to medium sand, moist	
							6.0-7.0' = 130.1
	68.4						
	17.4						
							7.8' = 46.4
		2.0	3	8-10'	8.0' - 8.5'	Red-brown SILT, some clay, dry	
	0.5				8.5' - 9.5'	Red-brown SILTY CLAY, some coarse sand, dry	
	0.2						9.0' = 0.1
10	0.1						
	0.0	4.2	4		10.0' - 13.2'	Brown CLAY, some silt, occaisional gravel, moist	
					13.2' - 14.0'	Red-brown SAND, some silt, wet	13.5' = 2.5
					Boring terminated at 10.0' below ground surface		
15					No indication of odor, staining, or petroleum sheen noted		
20							

Notes:
1. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.
2. PID screening results are in parts per million (ppm).

OVERBURDEN MONITORING WELL

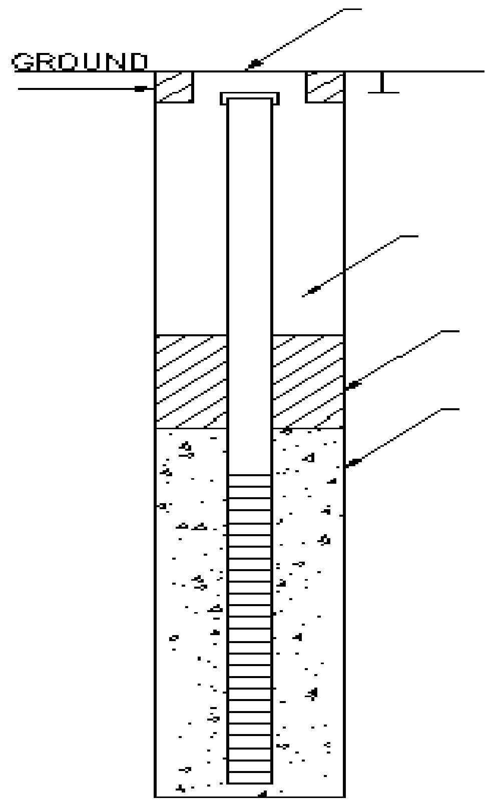
DESIGN DETAILS

PROJECT NAME	381 Buell Rd	HOLE DESIGNATION	**MW-22**
PROJECT NUMBER	190500033	DATE COMPLETED	9/20/2012
CLIENT	Buell Automatics	DRILLING METHOD	HSA
LOCATION	381 Buell Rd	SUPERVISOR	S. Burke
	Gates, NY		

FLUSH MOUNT ROAD BOX

SURFACE SEAL TYPE Concrete

RISER RECESS 0.3 ft



WELL CASING
ANNULUS BACKFILL
TYPE: Concrete

TOP OF SEAL @ 0.5 ft

SEAL TYPE: Bentonite

BOTTOM OF SEAL @ 1.5 ft

PACK TYPE: Sand

TOP OF SCREEN @ 2.0 ft

BOTTOM OF SCREEN @ 13.9 ft

BOTTOM OF HOLE @ 14.0 ft

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 11.9 ft SCREEN DIAMETER 2.0 in. SCREEN SLOT SIZE: Sch. 40

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2.0 in

HOLE DIAMETER: 4.25 in.

Stantec

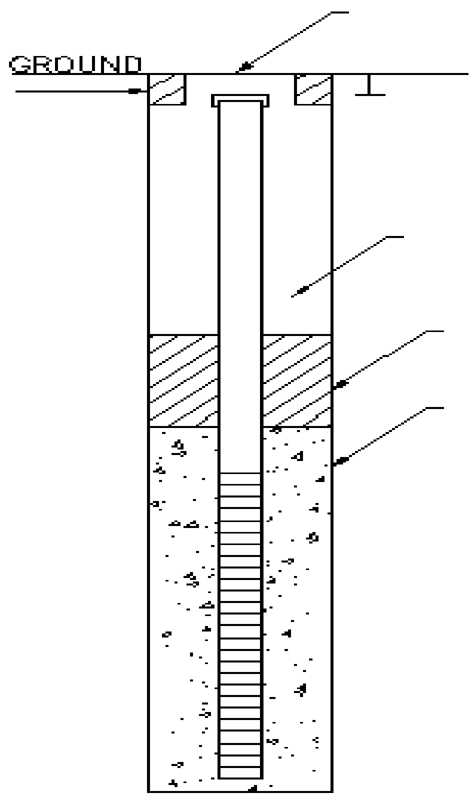
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	IW-1
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/21/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ~3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

OVERBURDEN MONITORING WELL

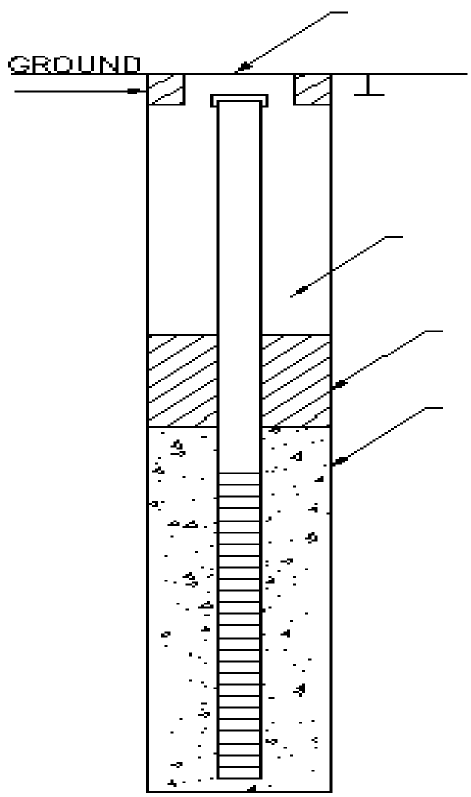
DESIGN DETAILS

PROJECT NAME: Buell Automatics - EISB
PROJECT NUMBER: 190500033.152
CLIENT: Buell Automatics
LOCATION: 381 Buell Road

HOLE DESIGNATION: **IW-2**
DATE COMPLETED: 1/22/2015
DRILLING METHOD: Hollow stem auger
SUPERVISOR: A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ____ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: none
Plug (pointed): none

BOTTOM OF SCREEN @ 18.0 ft

BOTTOM OF HOLE @ 18.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 14 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

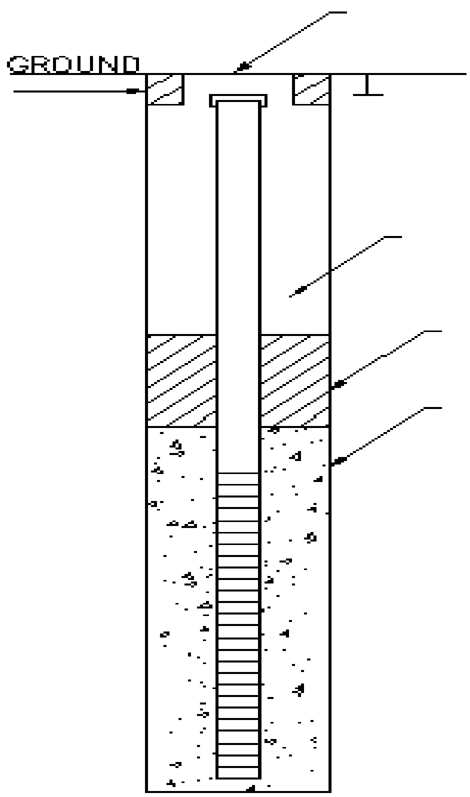
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-3**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/23/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	K. Premo

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS ______ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.3 ft

TOP OF SCREEN @ 3.8 ft

Riser Length: 4'
End piece: none
Plug (pointed): none

BOTTOM OF SCREEN @ 17.8 ft

BOTTOM OF HOLE @ 17.8 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 14 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

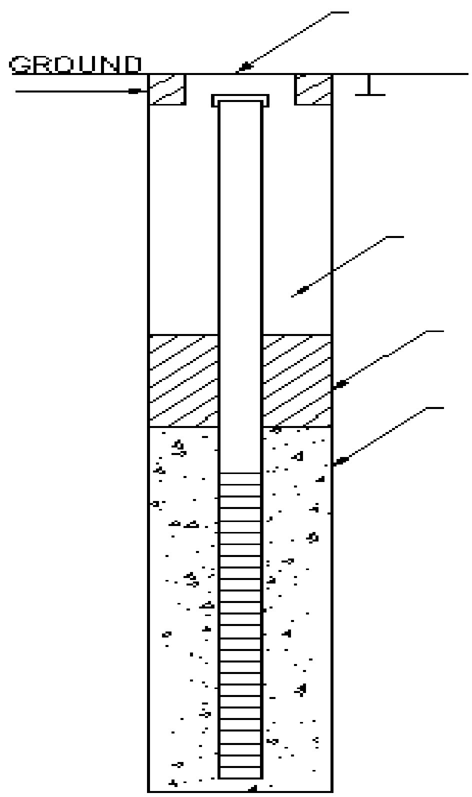
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-4**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/23/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS ______ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: none
Plug (pointed): none

BOTTOM OF SCREEN @ 17.0 ft

BOTTOM OF HOLE @ 17.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 13 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

OVERBURDEN MONITORING WELL

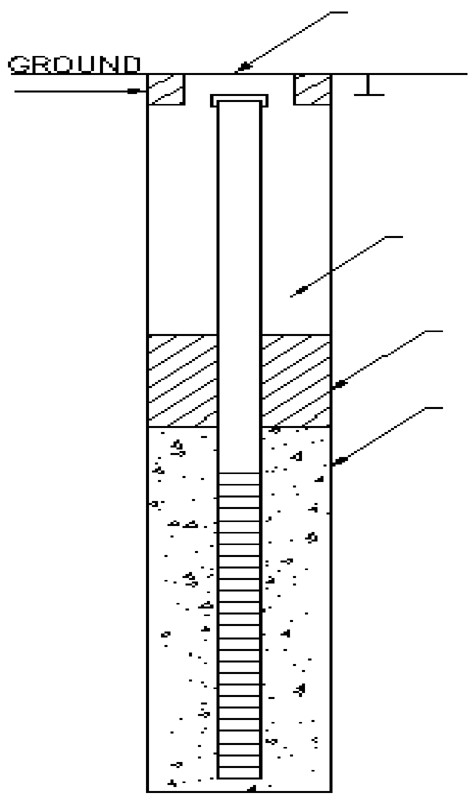
DESIGN DETAILS

PROJECT NAME: Buell Automatics - EISB
PROJECT NUMBER: 190500033.152
CLIENT: Buell Automatics
LOCATION: 381 Buell Road

HOLE DESIGNATION: **IW-5**
DATE COMPLETED: 1/21/2015
DRILLING METHOD: Hollow stem auger
SUPERVISOR: A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ~2 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: none
Plug (pointed): none

BOTTOM OF SCREEN @ 17.0 ft

BOTTOM OF HOLE @ 17.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 13 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

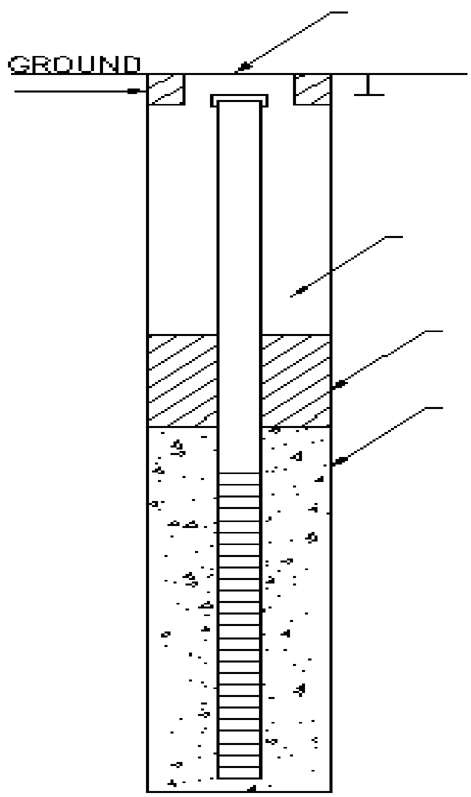
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-6**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/21/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ~4 in

WELL CASING ANNULUS BACKFILL TYPE: grout

SEAL TYPE: bentonite

PACK TYPE: SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 2.9 ft

TOP OF SCREEN @ 3.6 ft

Riser Length: 4'
End piece: none
Plug (pointed): none

BOTTOM OF SCREEN @ 16.6 ft

BOTTOM OF HOLE @ 16.6 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 13 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

OVERBURDEN MONITORING WELL

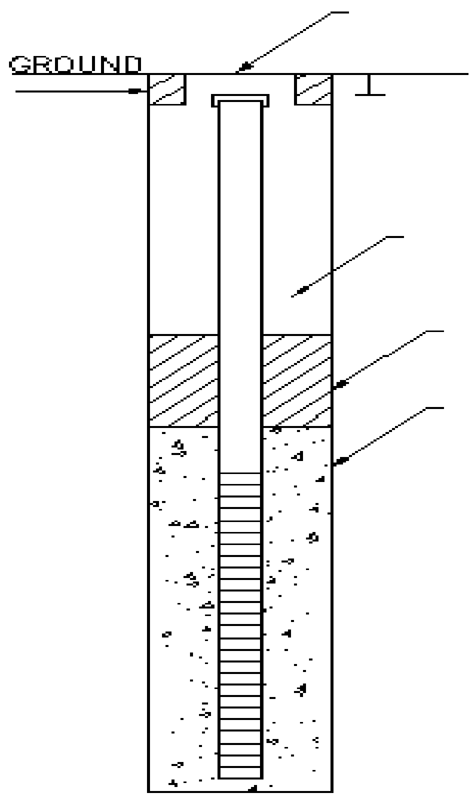
DESIGN DETAILS

PROJECT NAME Buell Automatics - EISB
PROJECT NUMBER 190500033.152
CLIENT Buell Automatics
LOCATION 381 Buell Road

HOLE DESIGNATION **IW-7**
DATE COMPLETED 1/20/2015
DRILLING METHOD Hollow stem auger
SUPERVISOR T. Wells
A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE concrete

RISER RECESS ~3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE 1

TOP OF SEAL @ 1.0 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length 4'
End piece none
Plug (pointed) none

BOTTOM OF SCREEN @ 17.5 ft

BOTTOM OF HOLE @ 17.5 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 13.5 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

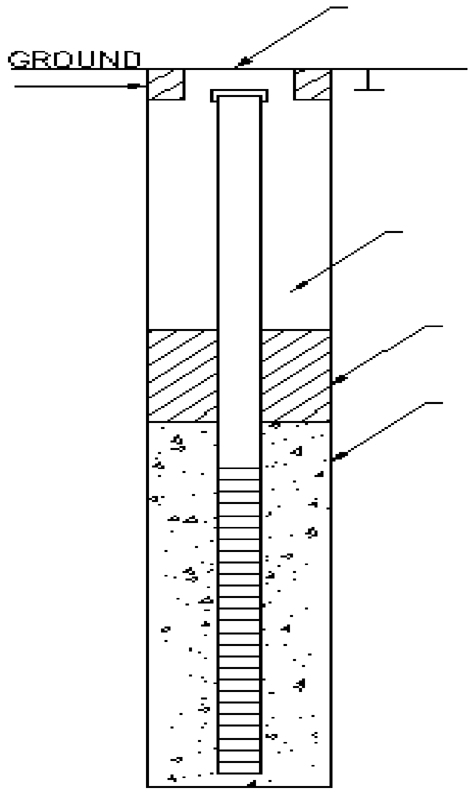
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-8**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/20/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	T. Wells

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ~4 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

TOP OF SEAL @ 1.0 ft

PACK TYPE:
SAND, SIZE: 1

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 5.0 ft

Riser Length	4'
End piece	3"
Plug (pointed)	1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.5 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME Buell Automatics - EISB

PROJECT NUMBER 190500033.152

CLIENT Buell Automatics

LOCATION 381 Buell Road

HOLE DESIGNATION **IW-9**

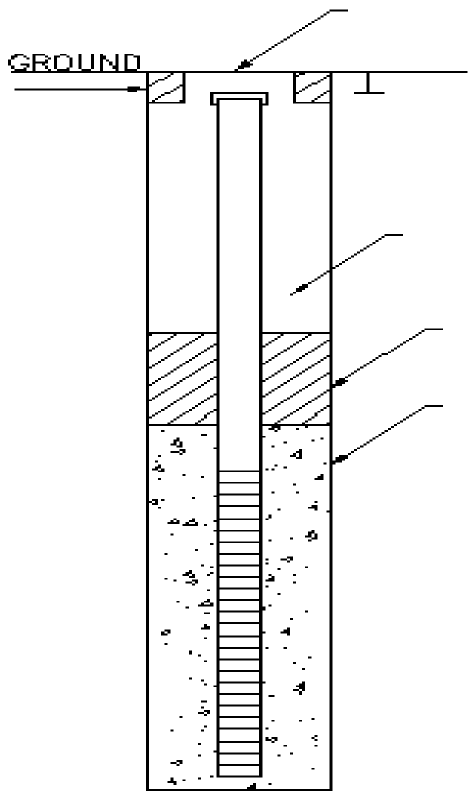
DATE COMPLETED 1/19/2015

DRILLING METHOD Hollow stem auger

SUPERVISOR L. Lyons

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE concrete

RISER RECESS ____ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

TOP OF SEAL @ 1.0 ft

SEAL TYPE: bentonite

BOTTOM OF SEAL @ 3 ft

PACK TYPE:
SAND, SIZE 1

TOP OF SCREEN @ 4.0 ft

Riser Length 4'

End piece 3"

Plug (pointed) 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

OVERBURDEN MONITORING WELL

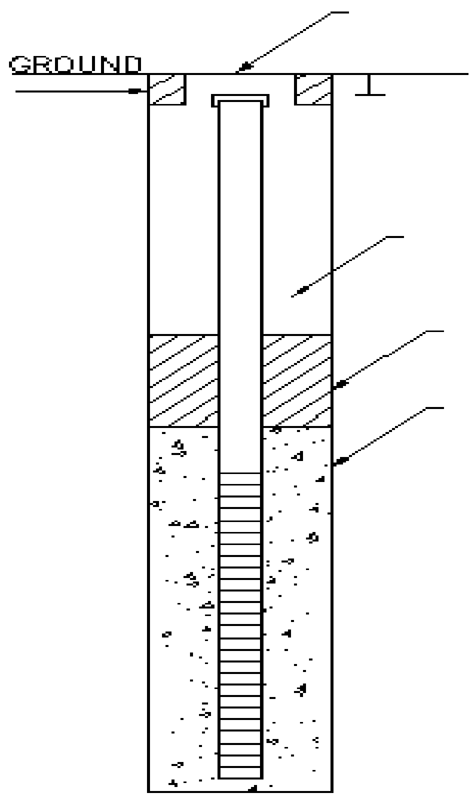
DESIGN DETAILS

PROJECT NAME: Buell Automatics - EISB
PROJECT NUMBER: 190500033.152
CLIENT: Buell Automatics
LOCATION: 381 Buell Road

HOLE DESIGNATION: **IW-10**
DATE COMPLETED: 1/23/2015
DRILLING METHOD: Hollow stem auger
SUPERVISOR: A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ______ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

OVERBURDEN MONITORING WELL

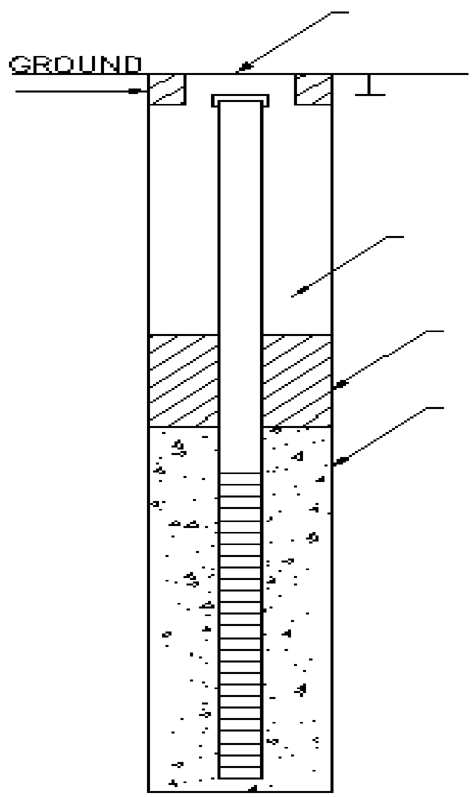
DESIGN DETAILS

PROJECT NAME: Buell Automatics - EISB
PROJECT NUMBER: 190500033.152
CLIENT: Buell Automatics
LOCATION: 381 Buell Road

HOLE DESIGNATION: **IW-11**
DATE COMPLETED: 1/26/2015
DRILLING METHOD: Hollow stem auger
SUPERVISOR: A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ____ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

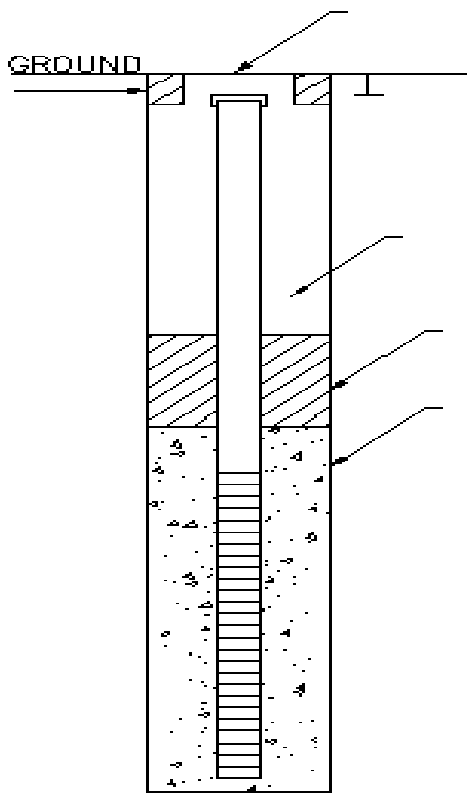
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-12**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/16/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	L. Lyons

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE concrete

RISER RECESS 3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE 1

TOP OF SEAL @ 1.5 ft

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

Riser Length 4'
End piece 3"
Plug (pointed) 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

OVERBURDEN MONITORING WELL

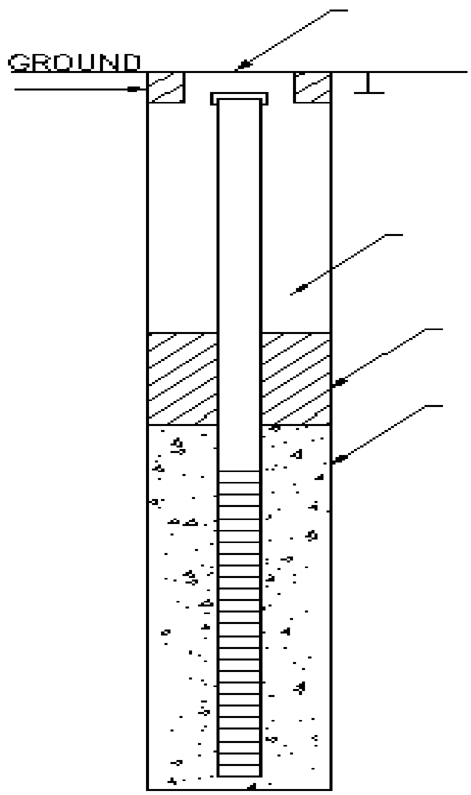
DESIGN DETAILS

PROJECT NAME: Buell Automatics - EISB
PROJECT NUMBER: 190500033.152
CLIENT: Buell Automatics
LOCATION: 381 Buell Road

HOLE DESIGNATION: **IW-13**
DATE COMPLETED: 1/13/2015
DRILLING METHOD: Hollow stem auger
SUPERVISOR: A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ____ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ 1.0 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT: X PERFORATED: ____ LOUVRE: ____ OTHER: ____

SCREEN MATERIAL: STAINLESS STEEL: ____ PVC: X OTHER: ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

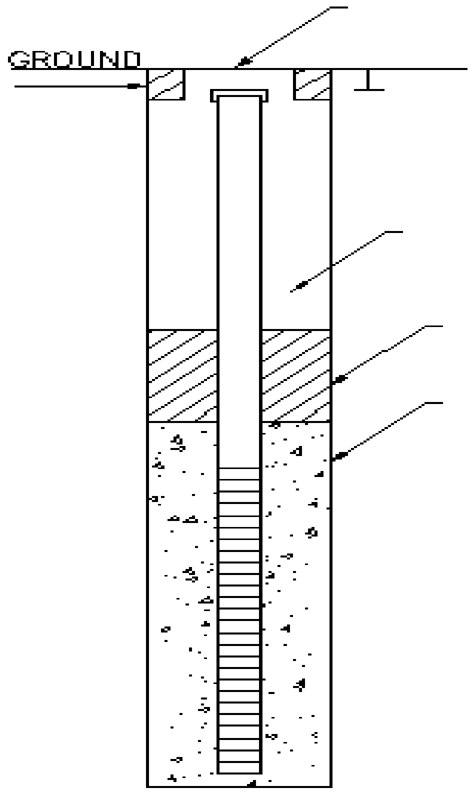
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-14**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/14/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	K. Premo

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS ______ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

TOP OF SEAL @ 1.0 ft

PACK TYPE:
SAND, SIZE 1

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length 4'
End piece 3"
Plug (pointed) 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

OVERBURDEN MONITORING WELL

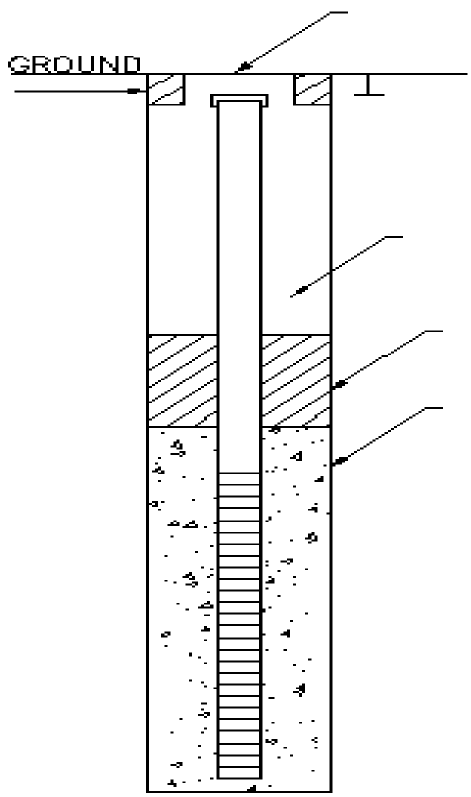
DESIGN DETAILS

PROJECT NAME Buell Automatics - EISB
PROJECT NUMBER 190500033.152
CLIENT Buell Automatics
LOCATION 381 Buell Road

HOLE DESIGNATION **IW-15**
DATE COMPLETED 1/15/2015
DRILLING METHOD Hollow stem auger
SUPERVISOR L. Lyons

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE concrete

RISER RECESS ~3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

TOP OF SEAL @ 1.0 ft

PACK TYPE:
SAND, SIZE 1

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

Riser Length 4'
End piece 3"
Plug (pointed) 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

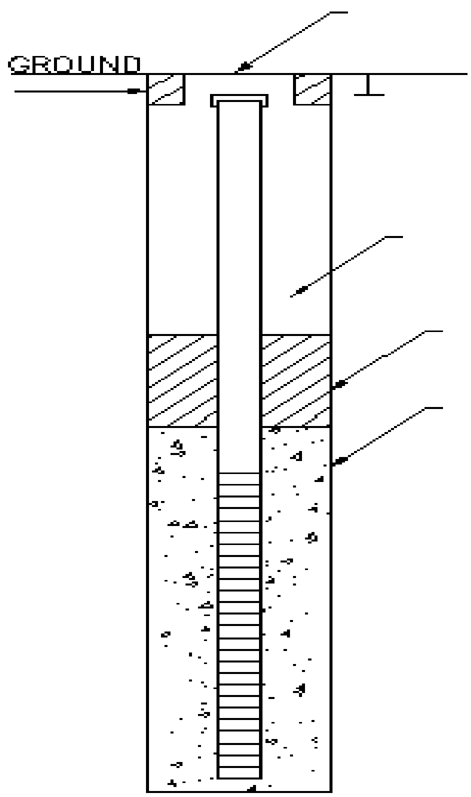
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-16**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/14/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	K. Premo

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: 6 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ 1.0 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ___ LOUVRE ___ OTHER ___

SCREEN MATERIAL: STAINLESS STEEL ___ PVC X OTHER ___

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

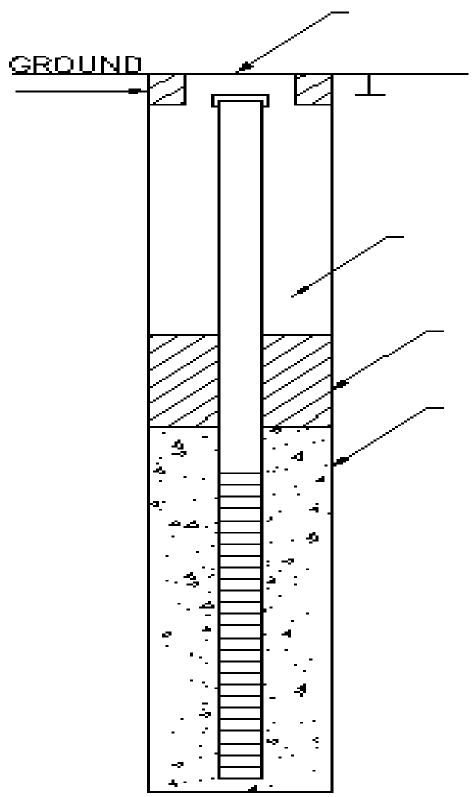
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-17**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/16/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	L. Lyons

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: 3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

TOP OF SEAL @ 1,5 ft

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

OVERBURDEN MONITORING WELL

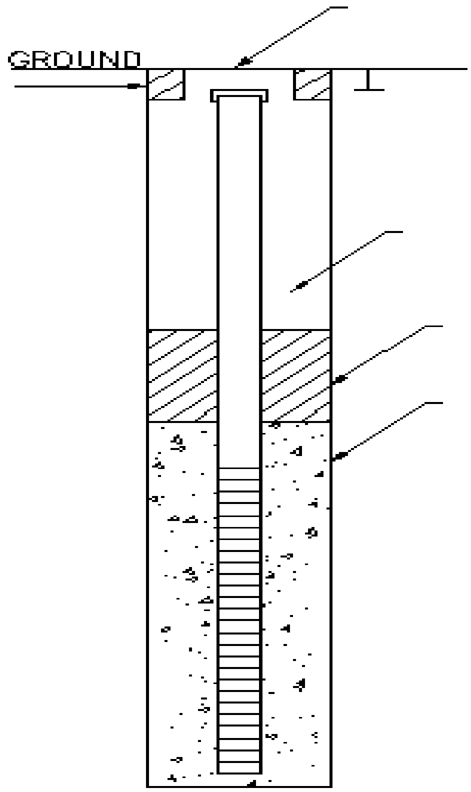
DESIGN DETAILS

PROJECT NAME: Buell Automatics - EISB
PROJECT NUMBER: 190500033.152
CLIENT: Buell Automatics
LOCATION: 381 Buell Road

HOLE DESIGNATION: **IW-18**
DATE COMPLETED: 1/15/2015
DRILLING METHOD: Hollow stem auger
SUPERVISOR: L. Lyons

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: ~3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

TOP OF SEAL @ 1.5 ft

PACK TYPE:
SAND, SIZE: 1

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

Stantec

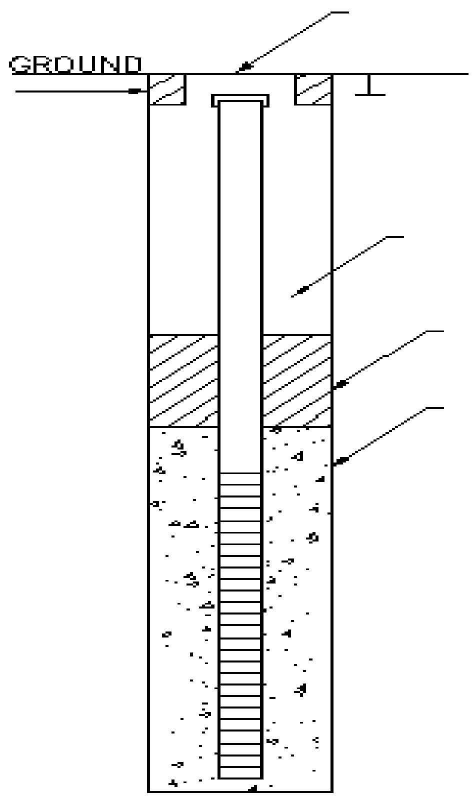
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-19**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/26/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	A. Glose

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS ______ ft

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ ~1 ft

BOTTOM OF SEAL @ 3.5 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ______ LOUVRE ______ OTHER ______

SCREEN MATERIAL: STAINLESS STEEL ______ PVC X OTHER ______

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

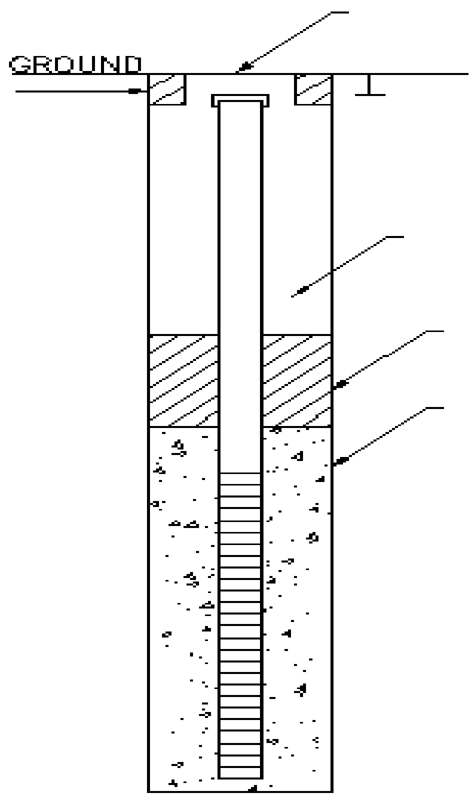
OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME	Buell Automatics - EISB	HOLE DESIGNATION	**IW-20**
PROJECT NUMBER	190500033.152	DATE COMPLETED	1/16/2015
CLIENT	Buell Automatics	DRILLING METHOD	Hollow stem auger
LOCATION	381 Buell Road	SUPERVISOR	L. Lyons

NOTE:
ALL DIMENSIONS ARE
BELOW GROUND SURFACE (BGS)

FLUSH MOUNT ROAD BOX (8", 9/16 inch screws)



SURFACE SEAL TYPE: concrete

RISER RECESS: 3 in

WELL CASING
ANNULUS BACKFILL
TYPE: grout

SEAL TYPE: bentonite

PACK TYPE:
SAND, SIZE: 1

TOP OF SEAL @ 1.0 ft

BOTTOM OF SEAL @ 3.0 ft

TOP OF SCREEN @ 4.0 ft

Riser Length: 4'
End piece: 3"
Plug (pointed): 1.5"

BOTTOM OF SCREEN @ 19.0 ft

BOTTOM OF HOLE @ 19.0 ft

SCREEN TYPE: CONTINUOUS SLOT X PERFORATED ____ LOUVRE ____ OTHER ____

SCREEN MATERIAL: STAINLESS STEEL ____ PVC X OTHER ____

SCREEN LENGTH: 15 ft SCREEN DIAMETER: 2 in SCREEN SLOT SIZE: 0.020 in

WELL CASING MATERIAL: PVC WELL CASING DIAMETER: 2 in

HOLE DIAMETER: ~8 in
(6 1/4 in OD auger)

APPENDIX D – NO FURTHER ACTION LETTER, NYSDEC SPILL NO. 0209109

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 8
Bureau of Technical Support
6274 East Avon-Lima Road, Avon, New York 14414-9519
Phone: (585) 226-2466 • **Fax:** (585) 226-8139
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

April 12, 2010

RECEIVED
APR 14 2010
STANTEC

Mr. Gary Lawton, President
Buell Automatics, Inc.
381 Buell Road
Gates, NY 14624

Dear Mr. Lawton:

Re: NYSDEC Spill # 0209109
Former All Around Travel
385 Buell Road
Gates (T), Monroe County

This office has received the March 30, 2010, Corrective Action Report, prepared by Stantec, for the above referenced spill location. Upon review of the aforementioned report, the known petroleum contamination has been remediated to the Department's satisfaction. No further remedial action is required at this time in regards to the petroleum contamination. This case has been removed from the Department's active petroleum spill files. However, be aware that this ruling does not preclude reactivation of this case should new information become available and/or an impact to a receptor be discovered in the future.

Be advised that chlorinated solvents were detected in several soil samples. A copy of the Correction Action Report will be forwarded to the Department's Hazardous Waste Remediation section for their information.

If there are any questions or comments, feel free to contact me at either the above address or by telephone at 585-226-5438.

Sincerely,

Michael F. Zamiarski, P.E.

Michael F. Zamiarski, P.E.
Environmental Engineer II
Division of Environmental Remediation

cc: Michael Storonsky, Stantec
Frank Sowers, NYSDEC Region 8

APPENDIX E – EXCAVATION WORK PLAN (EWP)

E-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC. Table E-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table E-1: Notifications*

Bernette Schilling, P.E. NYSDEC Regional Hazardous Waste Remediation Engineer	(585) 226-5315 bernette.schilling@dec.ny.gov
Frank Sowers, P.E. NYSDEC Project Manager	(585) 226-5357 frank.sowers@dec.ny.gov
Kelly Lewandowski, P. E. Chief, NYSDEC Site Control Section	(518) 402-9569 kelly.lewandowski@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;

- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work;

- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix F of this SMP;
- Identification of disposal facilities for potential waste streams;
- Identification of sources of any anticipated backfill, along with all required chemical testing results; and
- A detailed truck transport route and map for materials transported off-site.

E-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section E-6 of this Appendix.

E-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC.

E-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

E-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes will be the most appropriate routes and take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

E-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

E-7 MATERIALS REUSE ON-SITE

This section describes the methods to be followed for materials reuse on-site. 'Reuse on-site' means reuse on-site of material that originates at the site and which does not leave the site during the excavation. Material reuse on-site will comply with the requirements of NYSDEC DER-10 Section 5.4(e)4.

Materials that will be re-used on-Site will need to be segregated based upon field screening, previous investigation findings, and/or additional pre-construction and/or construction sampling and analyses. A qualified environmental professional will oversee the proper management of the excavated soils for on-site re-use.

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Any excavated materials in known areas of contamination (based on previous sampling results) or with high PID readings or with signs of staining or petroleum product or nuisance odor will not be considered appropriate for re-use and will be managed for proper off-site disposal.

Other Site soil will not be considered appropriate for re-use without testing. All testing frequencies and parameters will be in accordance with Table 5.4(e)10 of DER-10 and will be selected in consultation with NYSDEC. The analyses will include the following:

- USEPA's Target Compound List (TCL) volatile organic compounds (VOCs), analyzed by USEPA SW846 Method 8260, and

- TCL Semi-volatile organic compounds (TCL SVOCs), analyzed by USEPA SW846 Method 8270;
- TCL PCBs and Pesticides and USEPA's Target Analyte List (TAL) Inorganics by applicable SW846 Methods.

Contaminated on-site material, including contaminated soil, that is acceptable for reuse on-site will be placed below an impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

E-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

E-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that reflects the existing (pre-excavation) conditions of the cover system in the area of the excavation, or as otherwise approved by NYSDEC. The existing cover system is comprised of a minimum of asphalt pavement, concrete covered sidewalks, concrete building floor slab and some limited landscaped areas. A demarcation layer consisting of orange snow fencing material, white geotextile or equivalent material will be placed to provide a visual reference to the top of any remaining contamination. If the type of cover system changes from that which exists prior to the excavation (i.e., floor slab is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

E-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are the lower of the 'Protection of Groundwater' or Protection of Public Health - Commercial' Restricted Use Soil Cleanup Objectives which are listed in Table 6NYCRR 375-6.8(b). Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

E-11 STORMWATER POLLUTION PREVENTION

The following is applicable for large excavations of less than 1 acre in area. A more detailed Stormwater Pollution Prevention Plan will be developed for excavations larger than 1 acre.

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

E-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

E-13 OTHER NUISANCES

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX F

HEALTH AND SAFETY PLAN (HASP)

and

COMMUNITY AIR MONITORING PLAN (CAMP)

Appendix F

Health and Safety Plan
Buell Automatics Site
Index #B8-0576-00-04A
381 Buell Road
Gates, Monroe County, New York

Prepared for:
New York State Department of
Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414

Prepared on Behalf of:
Buell Automatics, Inc.
381 Buell Road
Gates, New York

Prepared by:
Stantec Consulting Services Inc.
61 Commercial Street Suite 100
Rochester, New York 14614-1009

Stantec

August 2015

TABLE OF CONTENTS

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Health and Safety Plan
Buell Automatics Site
BCP Site No. C828114
381 Buell Road
Gates, Monroe County, New York

1.0 INTRODUCTION

The following Health and Safety Plan (HASP) describes personal safety protection standards and procedures to be followed by Stantec staff during remedial or site management activities at 381 Buell Road, Gates, New York (Figure 1).

This HASP establishes mandatory safety procedures and personal protection standards pursuant to the Occupational Safety and Health Administration (OSHA) regulations 29 Code of Federal Regulations (CFR) 1910.120. The HASP applies to all Stantec personnel conducting any Site work, as defined in 29 CFR 1910.120(a). All personnel involved in the mentioned activities must familiarize themselves with this HASP, comply with its requirements and have completed the required health and safety training and medical surveillance program participation pursuant to 29 CFR 1910.120 prior to beginning any work onsite.

THIS HASP IS FOR THE EXPRESS USE OF STANTEC EMPLOYEES. ALL OTHER CONTRACTORS TO BE WORKING IN THE EXCLUSION AREAS ARE REQUIRED BY LAW TO DEVELOP THEIR OWN HASP, AS WELL TO MEET ALL PERTINENT ASPECTS OF OSHA REGULATIONS. STANTEC RESERVES THE RIGHT TO STOP ANY SITE WORK WHICH IS DEEMED TO POSE A HEALTH AND SAFETY THREAT TO ITS STAFF.

1.1 SITE BACKGROUND

This site is subject to a Brownfield Cleanup Agreement (BCA). The objectives of the HASP involve protection of human health during remedial and site management activities at the Buell Automatics site.

The Site property comprises approximately 1.67 acres and is improved by a manufacturing building with a footprint of approximately 13,000 square feet.

The original manufacturing building at the Site was constructed on the southern portion of the Site in 1957. Additions to the original structure were completed in 1981 and 1983. A second parcel was acquired by Buell in 2000, and a 11,000 square foot building addition for manufacturing was completed on the northern portion. The 2000 building addition and its 11,000 square foot footprint are excluded from the area encompassed by the BCA.

Buildings occupy roughly 29% of the real property which encompasses the Site, while the majority of the remaining surface area is covered by asphalt parking lots, and access roads.

Buell operates a manufacturing facility at the Site. The Buell operation uses automatic screw machines to produce machined parts for automotive components and other applications.

The Site has been used for light industrial manufacturing since the 1950's. Prior to the 1950s, the Site was reportedly used for agriculture.

An RI was performed in 2007 which indicates that there are three source areas of subsurface contamination at the Site: the Former Trench Drain Area, the Former Loading Dock Area and the Petroleum Impacts Area. The three areas are located in the southwest quadrant of the Site.

In two of the source areas, impacts are predominantly from trichloroethene (TCE) and related chlorinated volatile organic compounds (collectively VOCs). The two areas where TCE contamination is present are the Former Trench Drain Area, which includes an area inside the southwest portion of Buell's manufacturing building and the adjacent area located outside the south wall of the building, and the Former Loading Dock Area, which is located outside the west end of the facility.

The Petroleum Impacts Area, where impacts are from petroleum solvent compounds and cutting oil, is largely confined to the area beneath the footprint of the facility building to the north of the Former Trench Drain Area and east of the Former Loading Dock Area.

In both the Former Trench Drain Area (FTDA) and the Former Loading Dock Area (FLDA), TCE and other chlorinated VOCs are present in soil at concentrations above the NYSDEC's soil cleanup objectives (SCOs) for protection of groundwater (POGW). In one soil sample interval in the Former Loading Dock area (test boring B-23, sample depth of 1 to 2 ft. bgs), TCE was detected at a concentration that exceeded the Department's SCOs for protection of public health at sites restricted to industrial uses, but otherwise VOCs detected were below SCOs for industrial use sites. Groundwater in the FTDA and FLDA and downgradient groundwater in adjacent areas to the southwest have been impacted by chlorinated VOCs. Chlorinated VOCs were also detected off-Site in soil vapor beneath the former Five Star Tool Building (currently aScribe Laser). The eastern end of the aScribe Laser Building is located at the western edge of an area where groundwater contamination has been detected west of the Former Loading Dock Area.

While odors and other indications of petroleum impacts were observed in soil samples, in fact the concentrations of petroleum compounds in the soils do not exceed the Department's SCOs. Related groundwater impacts by petroleum compounds were not observed downgradient of the Petroleum Impacts Area.

Excavation of the FLDA and application of electron donor in the completed excavation prior to backfilling was completed in 2014. An Enhanced In-Situ Bioremediation program is in progress to address groundwater contamination at the site. This program involved the installation of injection wells, a subsequent injection of electron donor solution in the FTDA and its downgradient plume, and post-treatment groundwater monitoring.

1.2 SITE-SPECIFIC CHEMICALS OF CONCERN

The primary compounds of concern that are present, or are potentially present, in the soil and groundwater at the Buell Automatics Site are listed in Table 1. Material Safety Data Sheets (MSDSs) for these compounds are presented in Appendix A. The air monitoring action levels will be based on one-half of the current Threshold Limit Valve (TLV) or Permissible Exposure Limit (PEL) for vinyl chloride with a margin of safety built into the action levels to account for the non-specificity of the field monitoring instruments. Exposure limits for less hazardous compounds will be satisfied by meeting the more stringent exposure limits for vinyl chloride. Table 1 summarizes health and safety data for the compounds of primary concern.

Table 1
Health and Safety Data for Contaminants of Concern

Compound	PEL/ TWA	Physical Description	Odor Threshold in Air	Route of Exposure	Symptoms	Target Organs
1,1-Dichloroethane (1,1-DCA)	100 ppm	Colorless, oily liquid with a chloroform-like odor.	255 ppm	inhalation, ingestion, skin and/or eye contact	irritation skin; central nervous system depression; liver, kidney, lung damage	Skin, liver, kidneys, lungs, central nervous system
cis- and trans-1,2-Dichloroethene (cis-1,2-DCE and trans-1,2-DCE)	200 ppm	Colorless liquid (usually a mixture of the cis & trans isomers) with a slightly acrid, chloroform-like odor.	19.1 ppm	inhalation, ingestion, skin and/or eye contact	Irritation eyes, respiratory system; central nervous system depression	Eyes, respiratory system, central nervous system
Stoddard Solvent	500 ppm	Colorless liquid with a kerosene-like odor.	1-30 ppm	inhalation, ingestion, skin and/or eye contact	irritation eyes, nose, throat; dizziness; dermatitis; chemical pneumonitis (aspiration liquid); in animals: kidney damage	Eyes, skin, respiratory system, central nervous system, kidneys
Tetrachloroethene (PCE)	100 ppm	Colorless liquid with a mild, chloroform-like odor.	6.17 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]	Eyes, skin, respiratory system, liver, kidneys, central nervous system

Compound	PEL/ TWA	Physical Description	Odor Threshold in Air	Route of Exposure	Symptoms	Target Organs
1,1,1-trichloroethane (1,1,1-TCA)	350 ppm	Colorless liquid with a mild, chloroform-like odor.	22.4 ppm	inhalation, ingestion, skin and/or eye contact	irritation eyes, skin; headache, lassitude (weakness, exhaustion), central nervous system depression, poor equilibrium; dermatitis; cardiac arrhythmias; liver damage	Eyes, skin, central nervous system, cardiovascular system, liver
Trichloroethylene (TCE)	100 ppm	Colorless liquid with a chloroform-like odor.	1.36 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]	Eyes, skin, respiratory system, heart, liver, kidneys, central nervous system
Vinyl chloride	1 ppm	Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations.	0.253 ppm	inhalation, skin, and/or eye contact (liquid)	Lassitude (weakness, exhaustion); abdominal pain, gastrointestinal bleeding; enlarged liver; pallor or cyanosis of extremities; liquid: frostbite; [potential occupational carcinogen]	Liver, central nervous system, blood, respiratory system, lymphatic system
Miscellaneous petroleum based solvents, lubricating oils, and rust preventatives	See Appendix A - MSDSs					

Notes:
NA - not available
PEL - permissible exposure limits
TWA - time weighted average, 8-hour workday
mg/m^3 - milligrams per cubic meter
ppm - parts per million

2.0 STANTEC PERSONNEL ORGANIZATION

The following Stantec personnel will be involved in health and safety operations at the Buell Automatics Site:

2.1 PROJECT MANAGER

Mr. Michael Storonsky, Principal, is the Project Manager. Mr. Storonsky is responsible for ensuring that all Stantec procedures and methods are carried out, and that all Stantec personnel abide by the provisions of this Health and Safety Plan.

2.2 SITE SAFETY OFFICER/FIELD TEAM LEAD

Ben Haravitch and AnneMarie Glose will serve as the field team leader and Site Safety Officer during this project. Mr. Haravitch and Ms. Glose will report directly to the Project Manager and will be responsible for the implementation of this HASP as well as daily calibration of Stantec's safety monitoring instruments. Mr. Haravitch and Ms. Glose will keep a log book of all calibration data and instrument readings for the Site.

2.3 HEALTH AND SAFETY COORDINATOR

Tom Wells will be the Health and Safety Coordinator. Mr. Wells will be responsible for overall coordination of Health and Safety issues on the project.

2.4 DAILY MEETINGS

All Stantec personnel and contractors working within the exclusion zone will be required to read this document and sign off on the daily safety meeting form presented in Appendix B.

3.0 MEDICAL SURVEILLANCE REQUIREMENTS

3.1 INTRODUCTION

Hazardous waste site workers can often experience high levels of physical and chemical stress. Their daily tasks may expose them to toxic chemicals, physical hazards, biologic hazards, or radiation. They may develop heat stress while wearing protective equipment or working under temperature extremes, or face life-threatening emergencies such as explosions and fires. Therefore, a medical program is essential to: assess and monitor worker's health and fitness both prior to employment and during the course of the work; provide emergency and other treatment as needed; and keep accurate records for future reference. In addition, OSHA requires a medical evaluation for employees that may be required to work on hazardous waste sites and/or wear a respirator (29 CFR Part 1910.120 and 1910.134), and certain OSHA standards include specific medical surveillance requirements (e.g., 29 CFR Part 1926.62, Part 1910.95 and Parts 1910.1001 through 1910.1045).

3.2 MEDICAL EXAMINATIONS

A. All Stantec personnel working in areas of the Site where Site-related contaminants may be present shall have been examined by a licensed physician as prescribed in 29 CFR Part 1910.120, and determined to be medically fit to perform their duties for work conditions which require respirators. Employees will be provided with medical examinations as outlined below:

- Pre-job physical examination
- Annually thereafter if contract duration exceeds 1 year;
- Termination of employment;
- Upon reassignment in accordance with CFR 29 Part 1910.120(e)(3)(i)(C);
- If the employee develops signs or symptoms of illness related to workplace exposures;
- If the physician determines examinations need to be conducted more often than once a year; and
- When an employee develops a lost time injury or illness during the contract period.

B. Examinations will be performed by, or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and will be provided without cost to the employee, without loss of pay and at a reasonable time and place. Medical surveillance protocols and examination and test results shall be reviewed by the Occupational Physician.

4.0 ONSITE HAZARDS

4.1 CHEMICAL HAZARDS

The primary potential chemical hazards on-site are expected to be exposure to the VOCs detailed in Table 1. Material safety data sheets for the anticipated chemicals are presented in Appendix A.

The soil and groundwater contaminants are volatile; therefore, any activity at the site which causes physical disturbance of the soil or groundwater can potentially allow the release of contaminants into the air. For volatiles, this can include release of organic vapors into the air. Such an occurrence may be recognized by noticeable chemical odors. Field personnel should be aware of the odor threshold for these chemicals and their relation to the action levels and Permissible Exposure Limits.

Symptoms of overexposure to primary compounds of concern are detailed in Table 1. To prevent exposure to these chemicals, dermal contact will be minimized by using disposable surgical gloves (such as nitrile gloves) with work gloves (as appropriate) when handling soil, groundwater equipment or samples. Real time, breathing zone levels of total VOCs will be monitored using a portable photoionization detector (PID). If ambient levels exceed action levels, all site activities will be performed using level C personal protection until ambient concentrations dissipate. Where levels exceed 50 ppm, work will cease and the project manager will be notified immediately. Intrusive work may also be halted where required by action levels detailed in the Community Air Monitoring Plan (CAMP), included as Appendix C.

In addition, depending on seasonal conditions, disturbance of the site soils may cause the particulate contaminants to become airborne as dust. Therefore, particulates will be monitored as discussed in Section 6.1 and dust-suppression methods used where appropriate as discussed in Section 6.2, or in the CAMP.

Finally, aeration of the groundwater may cause volatilization of chemicals into the air, particularly VOCs. Table 2 summarizes first aid instructions for exposure pathways for the compounds of concern.

Table 2
Exposure Pathways and First Aid Response for Contaminants of Concern

Substance	Exposure Pathways	First-Aid Instructions
VOCs and petroleum products listed in Table 1	Eye	irrigate immediately
	Dermal	soap wash promptly
	Inhalation	respiratory support
	Ingestion	medical attention immediately

4.2 PHYSICAL HAZARDS

Hazards typically encountered at construction sites with drilling or excavation activities will be a concern at this site. These hazards include slippery ground surfaces, holes, and operation of heavy machinery and equipment. Field team members will wear the basic safety apparel such as steel-toed shoes, hard hat and safety glasses during all appropriate activities.

Under no circumstances will Stantec personnel approach the borehole during active drilling operation. All field personnel working around the rig will be shown the location and operation of kill switches, which are to be tested daily. Under no circumstance will Stantec personnel enter excavations or other confined spaces to collect soil samples or for any other reason.

Multi-purpose fire extinguishers, functional and within annual inspection period, will be staged and readily accessible for use.

The use of electrical equipment in any established exclusion zones will be limited to areas verified as containing non-explosive atmospheres (<10% LEL) prior to operation, unless the equipment has been previously demonstrated or designed to be FM or UL rated as intrinsically safe. Care will be taken to avoid an ignition source while working in the presence of vapors.

The contractor shall make all necessary contacts with utilities and/or underground utility locator hotlines prior to drilling, and shall meet OSHA requirements for distances between the drilling rig and overhead utilities. No drilling work will be carried out where the drill rig chassis has not been stabilized and the rig is not to be moved between locations with its boom in a vertical position.

4.2.1 Noise

The use of heavy machinery/equipment and operation may result in noise exposures, which require hearing protection. Exposure to noise can result in temporary hearing losses, interference with speech communication, interference with complicated tasks or permanent hearing loss due to repeated exposure to noise.

During the investigative activities, all Stantec field team members will use hearing protection when sound levels are in excess of 90 dB TWA.

4.2.2 Heat Stress Exposure

Heat is a potential threat to the health and safety of site personnel. The Site Safety Officer under the direction of the Project Manager will determine the schedule of work and rest. These schedules will be employed as necessary so that personnel do not suffer adverse effects from heat. Table 3 summarizes exposure symptoms and first aid instructions for heat stress. Non-caffeinated, thirst replenishment liquids will be available on-site.

Cold stress is also a potential threat to the health and safety of site personnel. Symptoms of cold stress include shivering, blanching of the extremities, numbness or burning sensations, blue, purple or gray discoloration of hands and feet, frostbite, hypothermia, and loss of consciousness. Cold stress can be prevented by acclimatizing one's self to the cold, increasing fluid intake, avoiding caffeine and alcohol, maintaining proper salt and electrolyte intake, eating a well-balanced diet, wearing proper clothing, building heated enclosures to work in, and taking regular breaks to warm up. If any of the above symptoms are encountered, the person should be removed from the cold area. Depending on the severity of the cold stress, 911 should be contacted and first aid administered. No fluids should be given to an unconscious person.

Table 3
Exposure Symptoms and First Aid for Heat Exposure

Hazard	Exposure Symptoms	First-Aid Instructions
Heat Stress	Fatigue, sweating, irritability	rest; take fluids
	Dizziness, disorientation, perspiration ceases, loss of consciousness	remove from hot area, activate 911, administer first aid, no fluids to be administered to unconscious victim.

4.2.3 Roadway Hazards

Field activities are planned to take place near active roadways and driveways. Where such work zones are established, personnel shall assure that protective measures including signage, cones, and shielding through use of vehicles parked at workmen perimeter, are in place. All contractors shall be responsible for meeting signage requirements of DOT. Fluorescent safety vests shall be worn by all personnel during activities in or adjacent to roadways and driveways.

4.2.4 Electrical Work

Site work involving electrical installation or energized equipment must be performed by a qualified electrician. All electrical work will be performed in accordance with the OSHA electrical safety requirements found in 29 CFR 1926.400 through 1926.449. Workers are not permitted to work near electrical power circuits unless the worker is protected against electric shock by de-energizing and grounding the circuit or by guarding or barricading the circuit and providing proper personal protective equipment. All electrical installations must comply with NEC regulations. All electrical wiring and equipment used must be listed by a nationally recognized testing laboratory.

All electrical circuits and equipment must be grounded in accordance with the NEC regulations. The path to ground from circuits, equipment, and enclosures will be permanent and continuous. Ground fault circuit interrupters (GFCIs) are required on all 120-volt, single phase, 15- and 20-amp outlets in work areas that are not part of the permanent wiring of the building or structure. A GFCI is required when using an extension cord. GFCIs must be tested regularly with a GFCI tester.

Heavy-duty extension cords will be used; flat-type extension cords are not allowed. All extension cords must be the three-wire type, and designed for hard/extra hard usage. Electrical wire or cords passing through work areas must be protected from water and damage. Worn, frayed, or damaged cords and cables will not be used. Walkways and work spaces will be kept clear of cords and cables to prevent a tripping hazard. Extension cords and cables may not be secured with staples, hung from nails, or otherwise temporarily secured. Cords or cables passing through holes in covers, outlet boxes, etc., will be protected by bushings or fittings.

All lamps used in temporary lighting will be protected from accidental contact and breakage. Metal shell and paper-lined lamp holders are not permitted. Fixtures, lamp holders, lamps, receptacles, etc. are not permitted to have live parts. Workers must not have wet hands while plugging/unplugging energized equipment. Plugs and receptacles will be kept out of water (unless they are approved for submersion).

4.2.5 Lock-Out/Tag-Out

Before a worker sets up, services, or repairs a system where unexpected energizing (or release of stored energy) could occur and cause injury or electrocution, the circuits energizing the parts must be locked-out and tagged. Only authorized personnel will perform lock-out/tag-out procedures. All workers affected by the lock-out/tag-out will be notified prior to, and upon completion of, the lock-out/tag-out procedure.

Lock-out/tag-out devices must be capable of withstanding the environment to which they are exposed. Locks will be attached in such a way as to prevent other personnel from operating the equipment, circuit, or control, or from removing the lock unless they resort to excessive force. Tags will identify the worker who attached the device, and contain information, which warns against the hazardous condition that will result from the system's unauthorized start-up. Tags must be legible and understood by all affected workers and incidental personnel. The procedures for attaching and removing lock-out/tag-out devices include the steps outlined in the following table.

If maintenance work is required, the electrical supply to the equipment must be disconnected. Turning off the MAIN breaker using the disconnect switch will disconnect all power to the system. Once the disconnect switch has been turned off, the switch will be locked-out using the steps outlined below.

STEP	LOCK-OUT/TAG-OUT PROCEDURES
1	Disconnect the circuits and/or equipment to be worked on from all electrical energy sources.
2	Ensure that the system is completely isolated so that it cannot be operated at that shut-off point or at any other location.
3	Release stored electrical energy.
4	Block or relieve stored non-electrical energy.
5	Place a lock on each shut-off or disconnect point necessary to isolate all potential energy sources. Place the lock in such a manner that it will maintain the shut-off/disconnect in the off position.
6	Place a tag on each shut-off or disconnect point. The tag must contain a statement prohibiting the unauthorized re-start or re-connect of the energy source and the removal of the tag, and the identity of the individual performing the tag and lock-out.
7	Workers who will be working on the system must place their own lock and tag on <u>each</u> lock-out point.
8	A qualified person must verify the system cannot be re-started or re-connected, and de-energization of the system has been accomplished.

Once the service or repairs have been made on the system:	
1	A qualified person will conduct an inspection of the work area, to verify that all tools, jumpers, shorts, grounds, etc., have been removed so that the system can then be safely re-energized.
2	All workers stand clear of the system.
3	Each lock and tag will be removed by the worker who attached it. If the worker has left the site, then the lock and tag may be removed by a qualified person under the following circumstances:
	a. The qualified person ensures the worker who placed the lock and tag has left the site; and
	b. The qualified person ensures the worker is aware the lock and tag has been removed before the worker resumes work on-site.

4.2.6 Ladders

One-third of worker deaths in construction result from falls. Many falls occur because ladders are not placed or used safely. Ladder use will comply with OSHA 1926.1053 through 1926.1060, including the following safety requirements.

STEP	PROPER LADDER USE PROCEDURE
1	Choose the right ladder for the task--the proper type and size, with a sufficient rating for the task.
2	Check the condition of the ladder before climbing. Do not use a ladder with broken, loose, or cracked rails or rungs. Do not use a ladder with oil, grease, or dirt on its rungs. The ladder should have safety feet.
3	Place the ladder on firm footing, with a four-to-one pitch.
4	Support the ladder by: Tying it off; Using ladder outrigger stabilizers; or Have another worker hold the ladder at the bottom. If another worker holds the ladder, they must: Wear a hard hat; Hold the ladder with both hands; Brace the ladder with their feet; and Not look up.
5	Keep the areas around the top and bottom of the ladder clear.
6	Extend the top of the ladder at least 36 inches (3 feet) above the landing.
7	Climb the ladder carefully - facing it - and use both hands. Use a tool belt and hand-line to carry material to the top or bottom of the ladder. Wear shoes in good repair with clean soles.
8	Inspect the ladder every day, prior to use, for the following problems: Rail or rung damage Broken feet Rope or pulley damage Rung lock defects or damage Excessive dirt, oil, or grease If the ladder fails inspection, it must be removed from service and tagged with a "Do Not Use" sign.

Ladders with non-conductive side rails must be used when working near electrical conductors, equipment, or other sources. Ladders will not be used horizontally for platforms, runways, or scaffolds.

4.2.7 Hand and Power Tools

All hand and power tools will be maintained in a safe condition and in good repair. Hand and power tools will be used in accordance with 29 CFR 1926, Subpart I (1926.300 through 1926.307). Neither Stantec nor its subcontractors will issue unsafe tools, and workers are not permitted to bring unsafe tools on-site. All tools will be used, inspected, and maintained in accordance with the manufacturer's instructions. Throwing tools or dropping tools to lower levels is prohibited. Hand and power tools will be inspected, tested, and determined to be in safe operating condition prior to each use. Periodic safety inspections of all tools will be conducted to assure that the tools are in good condition, all guards are in place, and the tools are being properly maintained. Any tool that fails an inspection will be immediately removed from service and tagged with a "Do Not Use" sign.

Workers using hand and power tools, who are exposed to falling, flying, abrasive, or splashing hazards, will be required to wear personal protective equipment (PPE). Eye protection must always be worn when working on-site. Additional eye and face protection, such as safety goggles or face shields, may also be required when working with specific hand and power tools. Workers, when on-site, will wear hard hats. Additional hearing protection may be required when working with certain power tools. Workers using tools, which may subject their hands to an injury, such as cuts, abrasions, punctures, or burns, will wear protective gloves. Loose or frayed clothing, dangling jewelry, or loose long hair will not be worn when working with power tools.

Electric power-operated tools will be double insulated or grounded, and equipped with an on/off switch. Guards must be provided to protect the operator and other nearby workers from hazards such as in-going nip points, rotating parts, flying chips, and sparks. All reciprocating, rotating and moving parts of tools will be guarded if contact is possible. Removing machine guards is prohibited.

Abrasive wheels will only be used on equipment provided with safety guards. Safety guards must be strong enough to withstand the effect of a bursting wheel. Abrasive wheels will not be operated in excess of their rated speed. Work or tool rests will not be adjusted while the wheel is in motion. All abrasive wheels will be closely inspected and ring tested before each use, and any cracked or damaged wheels will be removed immediately and destroyed.

Circular saws must be equipped with guards that completely enclose the cutting edges and have anti-kickback devices. All planer and joiner blades must be fully guarded. The use of cracked, bent, or otherwise defective parts is prohibited. Chain saws must have an automatic chain brake or kickback device. The worker operating the chain saw will hold it with both hands during cutting operations. A chain saw must never be used to cut above the operator's shoulder height. Chain saws will not be re-fueled while running or hot. Power saws will not be left unattended.

Only qualified workers will operate pneumatic tools, powder-actuated tools, and abrasive blasting tools.

4.2.8 Manual Lifting

Back injuries are among the leading occupational injuries reported by industrial workers. Back injuries such as pulls and disc impairments can be reduced by using proper manual lifting techniques. Leg muscles are stronger than back muscles, so workers should lift with their legs and not with their back. Proper manual lifting techniques include the following steps:

STEP	PROPER MANUAL LIFTING PROCEDURE
1	Plan the lift before lifting the load. Take into consideration the weight, size, and shape of the load.
2	Preview the intended path of travel and the destination to ensure there are no tripping hazards along the path.
3	*Wear heavy-duty work gloves to protect hands and fingers from rough edges, sharp corners, and metal straps. Also, keep hands away from potential pinch points between the load and other objects.*
4	*Get the load close to your ankles, and spread your feet apart. Keep your back straight and do not bend your back too far; instead bend at your knees.*
5	Feel the weight; test it.
6	Lift the load smoothly, and let your legs do the lifting. If you must pivot, do not swing just the load; instead, move your feet and body with the load.

If the load is too heavy, then do not lift it alone. Lifting is always easier when performed with another person. Assistance should always be used when it is available.

4.2.9 Weather-Related Hazards

Weather-related hazards include the potential for heat or cold stress, electrical storms, treacherous weather-related working conditions, or limited visibility. These hazards correlate with the season in which site activities occur. Outside work will be suspended during electrical storms. In the event of other adverse weather conditions, the Site Safety Officer will determine if work can continue without endangering the health and safety of site personnel.

5.0 SITE WORK ZONES

The following work zones will be physically delineated by Stantec during the investigation activities.

5.1 CONTROL ZONES

Control boundaries will be established within the areas of site activities. Examples of boundary zones include the exclusion and decontamination zone. All boundaries will be dynamic, and will be determined by the planned activities for the day. The Field Team Leader will record the names of any visitors to the site.

5.2 EXCLUSION ZONE

The controlled portion of the site will be delineated to identify the exclusion zone, wherein a higher level of personal protective equipment may be required for entry during intrusive activities. The limits of the exclusion zone will be designated at each work location appropriately. A decontamination zone will be located immediately outside the entrance to the exclusion zone. All personnel leaving the exclusion zone will be required to adhere to proper decontamination procedures.

A "super exclusion" zone will be established around the borehole which will not be entered by Stantec personnel at any time during any active drilling, slambar, cathead, silica sand dumping, or other related activities. The drilling contractor will be directed to stop such activity when Stantec site team members have a need to enter this zone.

5.3 DECONTAMINATION ZONE

The decontamination zone will be located immediately outside the entrance to the exclusion zone on its apparent upwind side, if feasible, and will be delineated with caution tape and traffic cones. This zone will contain the necessary decontamination materials for personnel decontamination. Decontamination procedures are outlined in Section 8.0 of this plan.

6.0 SITE MONITORING/ACTION LEVELS

6.1 SITE MONITORING

Field activities associated with the drilling and sampling may create potentially hazardous conditions due to the migration of contaminants into the breathing zone. These substances may be in the form of mists, vapors, dusts, or fumes that can enter the body through ingestion, inhalation, absorption, and direct dermal contact. Monitoring for VOCs will be performed to ensure appropriate personal protective measures are employed during site activities.

A separate CAMP has also been developed to protect the surrounding neighborhood. The CAMP is presented in Appendix C of this HASP.

Although the concentrations of anticipated contaminants in soil/groundwater should not present an explosive hazard, explosive environments or conditions may be encountered unexpectedly during the course of this project. Monitoring for explosivity in the atmosphere will be routinely conducted during site activities as a precautionary measure to ensure site personnel are not subjected to any dangerous conditions.

The following describes the conditions that will be monitored for during the investigation activities. All calibrations, etc., done on instruments, as well as background and site readings will be logged.

Organic Vapor Concentrations - Organic vapors will be monitored continuously in the breathing zone in the work area with a portable photoionization detector (PID), such as a miniRAE Model 2000 with a 10.2 eV lamp. The instrument will be calibrated daily or as per the manufacturer's recommendations. PID readings will be used as the criteria for upgrading or downgrading protective equipment and for implementing additional precautions or procedures.

Split spoons or other soil sampling devices will be monitored using the PID at the time they are opened, with appropriate PPE to be used where soils exhibit measurable volatile organic compound levels.

Explosivity - Explosivity will be monitored continuously during active drilling and excavation operations. Measurements obtained from this monitoring instrument will also be used as criteria for implementation of work stoppage or site evacuation. A combination combustible gas/oxygen (CGO_2) instrument, calibrated per manufacturer's recommendations, will be used.

Particulates - Should subsurface conditions be observed to be dry, Stantec will perform particulate monitoring with a MIE PDM-3 Miniram aerosol monitor, within the work area to monitor personal exposures to particulates and to compare work area readings with downwind and upwind readings. The first readings of the day will be obtained prior to the commencement of work to obtain a daily background reading, and the instrument will be zeroed daily and calibrated to manufacturer's specifications. Readings will be recorded every 30 minutes thereafter. If the work area particulate levels exceed the background levels by more than 0.15 mg/m^3, the Contractor will be instructed to implement dust suppression measures.

6.2 ACTION LEVELS

During the course of any activity, as long as PID readings in the breathing zone are less than 5 ppm above background, Level D protection will be considered adequate. Level C protection will be required when VOC concentrations in ambient air in the work zone exceed 5 ppm total VOCs above background but remain below 50 ppm total VOCs.

If concentrations in the work zone exceed 50 ppm for a period of 5 minutes or longer, work will immediately be terminated by the Site Safety Officer. Options to allow continued work would then be discussed amongst all parties. Supplied-air respiratory protection is generally required for work to resume under these conditions. If Level B protection is not used, work may resume in Level C once monitoring concentrations have decreased below 50 ppm and conditions outlined in the CAMP are met.

If the monitoring of fugitive particulate levels within the work area exceeds 0.15 mg/m^3 above background, then the Contractor will be directed to implement fugitive dust control measures which may include use of engineering controls, such as water spray at the borehole during drilling.

7.0 PERSONAL PROTECTIVE EQUIPMENT

Based on an evaluation of the hazards at the site, personal protective equipment (PPE) will be required for all personnel and visitors entering the drilling or excavation exclusion zone(s). It is anticipated that all Stantec oversight work will be performed in Level D. All contractors will be responsible for selection and implementation of PPE for their personnel.

7.1 PROTECTIVE CLOTHING/RESPIRATORY PROTECTION:

Protective equipment for each level of protection is as follows:

If PID readings are above 50 ppm, requiring an upgrade to Level B, site work will be halted pending review of conditions and options by Stantec and other parties.

When PID readings range between 5 and 50 ppm, upgrade to Level C:

Level C

- Full face, air purifying respirator with organic/HEPA cartridge;
- Disposable chemical resistant one-piece suit (Tyvek or Saranex, as appropriate);
- Inner and outer chemical resistant gloves;
- Hard hat;
- Steel-toed boots; and
- Disposable booties.

When PID readings range between background and 5 ppm use Level D:

Level D

- Safety glasses;
- Steel-toed boots;
- Protective cotton, latex or leather gloves depending on site duties;
- Hard hat; and

- Tyvek coverall (optional).

8.0 DECONTAMINATION

8.1 PERSONNEL DECONTAMINATION

For complete decontamination, all personnel will observe the following procedures upon leaving the exclusion zone:

1. Remove outer boots and outer gloves and place in disposal drum.
2. If using a respirator, remove respirator, dispose of cartridges if necessary, and set aside for later cleaning.
3. Remove disposable chemical resistant suits and dispose of in drum.
4. Remove and dispose of inner gloves.

Decontamination solutions shall be supplied at the decontamination zone. The wash solution will consist of water and detergent such as Alconox or trisodium phosphate (TSP), and the rinse solution will consist of clean water.

Contaminated wash solutions shall be collected in drums for disposal. All other disposable health and safety equipment will be decontaminated and disposed of as non-hazardous waste.

8.2 EQUIPMENT DECONTAMINATION

If equipment is used during field activities, it will be properly washed or steam-cleaned prior to exiting the decontamination zone. Pre- or post-use rinsing using solvents will be done wearing appropriate PPE.

Monitoring instruments will be either wrapped in polysheeting or carried by personnel not involved in handling contaminated materials, to reduce the need for decontamination. All instruments will be wet-wiped prior to removal from the work zone.

9.0 EMERGENCY PROCEDURES

The Site Safety Officer will coordinate emergency procedures and will be responsible for initiating emergency response activities. Emergency communications at the site will be conducted verbally or by means of an air or vehicle horn. All personnel will be informed of the location of the cellular telephone and horn. Three blasts on the air or vehicle horn will be used to signal distress.

9.1 LIST OF EMERGENCY CONTACTS

Ambulance: 911
Hospital: Strong Memorial Hospital: (585) 275-2100
Fire Department: 911
Police: 911
Poison Control Center: (585) 222-1222
RG&E Utility Emergency: 911 or (800) 743-1702

9.2 DIRECTIONS TO HOSPITAL

A map and directions to the hospital is included in the back of the document (Figure 2). The route shall be reviewed at the initial site safety meeting on site.

9.3 ACCIDENT INVESTIGATION AND REPORTING

A. All accidents requiring first aid, which occur incidental to activities onsite, will be investigated. The investigation format will be as follows:

- interviews with witnesses,
- pictures, if applicable, and
- necessary actions to alleviate the problem.

B. In the event that an accident or some other incident such as an explosion or exposure to toxic chemicals occurs during the course of the project, the Project Health and Safety Officer will be telephoned as soon as possible and receive a written notification within 24 hours. The report will include the following items:

- Name of injured;
- Name and title of person(s) reporting;

- Date and time of accident/incident;
- Location of accident/incident, building number, facility name;
- Brief summary of accident/incident giving pertinent details including type of operation ongoing at the time of the accident/incident;
- Cause of accident/incident;
- Casualties (fatalities, disabling injuries), hospitalizations;
- Details of any existing chemical hazard or contamination;
- Estimated property damage, if applicable;
- Nature of damage; effect on contract schedule;
- Action taken to insure safety and security; and
- Other damage or injuries sustained (public or private).

Where reportable injuries, hospitalizations or fatalities occur amongst Stantec personnel, the necessary document required by OSHA will be submitted within timeframes allowed by law.

The accident report form is illustrated in Table 4.

TABLE 4
ACCIDENT REPORT

Project Buell Automatics Site__________ Date of Occurrence______________

Location __381 Buell Road, Gates, NY____________________________________
____

Type of Occurrence: (check all that Apply)

- ☐ Disabling Injury
- ☐ Property Damage
- ☐ Chemical Exposure
- ☐ Explosion
- ☐ Other Injury
- ☐ Equip. Failure
- ☐ Fire
- ☐ Vehicle Accident
- ☐ Other (explain)____

____

Witnesses to Accident/Injury:

______________________ ________________
______________________ ________________
______________________ ________________

Injuries:
Name of Injured ____

What was being done at the time of the accident/injury?

____
____

What corrective actions will be taken to prevent recurrence? _________________________
____
____

SIGNATURES

Health and Safety Officer __________________ Date ________________________

Project Manager _______________________ Date ________________________

Reviewer _____________________________ Date ________________________

Comments by reviewer ____
____
____

FIGURES

HEALTH & SAFETY PLAN

APPENDIX A

MATERIAL SAFETY DATA SHEETS

Centers for Disease Control and Prevention
Your Online Source for Credible Health Information

September 2005

NIOSH Publication Number 2005-149

Search the Pocket Guide

SEARCH

Enter search terms separated by spaces.

1,1-Dichloroethane

Synonyms & Trade Names Asymmetrical dichloroethane; Ethylidene chloride; 1,1-Ethylidene dichloride

CAS No. 75-34-3	**RTECS No.** KI0175000	**DOT ID & Guide** 2362 130
Formula $CHCl_2CH_3$	**Conversion** 1 ppm = 4.05 mg/m^3	**IDLH** 3000 ppm See: 75343

Exposure Limits

NIOSH REL : TWA 100 ppm (400 mg/m^3) See Appendix C (Chloroethanes)

OSHA PEL : TWA 100 ppm (400 mg/m^3)

Measurement Methods
NIOSH 1003 ;
OSHA 7
See: NMAM or OSHA Methods

Physical Description Colorless, oily liquid with a chloroform-like odor.

MW: 99.0	**BP:** 135°F	**FRZ:** -143°F	**Sol:** 0.6%	**VP:** 182 mmHg	**IP:** 11.06 eV
Sp.Gr: 1.18	**Fl.P:** 2°F	**UEL:** 11.4%	**LEL:** 5.4%		

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

Incompatibilities & Reactivities Strong oxidizers, strong caustics

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms irritation skin; central nervous system depression; liver, kidney, lung damage

Target Organs Skin, liver, kidneys, lungs, central nervous system

Personal Protection/Sanitation (See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact

First Aid (See procedures)
Eye: Irrigate immediately
Skin: Soap flush promptly

Wash skin: When contaminated **Remove:** When wet (flammable) **Change:** No recommendation	**Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH/OSHA

Up to 1000 ppm:
(APF = 10) Any supplied-air respirator

Up to 2500 ppm:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode

Up to 3000 ppm:
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0249

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NIOSH Publication No. 2005-149: September 2005

NIOSH Pocket Guide to Chemical Hazards

1,2-Dichloroethylene

CAS

540-59-0

RTECS

KV9360000

DOT ID & Guide

1150 130P

ClCH=CHCl

Synonyms & Trade Names

Acetylene dichloride, cis-Acetylene dichloride, trans-Acetylene dichloride, sym-Dichloroethylene

Exposure Limits

NIOSH REL: TWA 200 ppm (790 mg/m^3)

OSHA PEL: TWA 200 ppm (790 mg/m^3)

IDLH

1000 ppm See: 540590

Conversion

1 ppm = 3.97 mg/m^3

Physical Description

Colorless liquid (usually a mixture of the cis & trans isomers) with a slightly acrid, chloroform-like odor.

MW: 97.0	BP: 118-140°F	FRZ: -57 to -115°F	Sol: 0.4%
VP: 180-265 mmHg	IP: 9.65 eV		Sp.Gr(77°F): 1.27
Fl.P: 36-39°F	UEL: 12.8%	LEL: 5.6%	

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

Incompatibilities & Reactivities

Strong oxidizers, strong alkalis, potassium hydroxide, copper [Note: Usually contains inhibitors to prevent polymerization.]

Measurement Methods

NIOSH 1003; OSHA 7
See: NMAM or OSHA Methods

Personal Protection & Sanitation

(See protection)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet (flammable)
Change: No recommendation

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH/OSHA
Up to 2000 ppm:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode£
(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)£
(APF = 50) Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece
Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus
Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus
Important additional information about respirator selection

Exposure Routes

inhalation, ingestion, skin and/or eye contact

Symptoms

Irritation eyes, respiratory system; central nervous system depression

Target Organs

Eyes, respiratory system, central nervous system

See also: INTRODUCTION See ICSC CARD: 0436

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Stoddard solvent

Synonyms & Trade Names Dry cleaning safety solvent, Mineral spirits, Petroleum solvent, Spotting naphtha [Note: A refined petroleum solvent with a flash point of 102-110°F, boiling point of 309-396°F, and containing >65% C_{10} or higher hydrocarbons.]

CAS No. 8052-41-3	**RTECS No.** WJ8925000	**DOT ID & Guide** 1268 128 (petroleum distillate, n.o.s.)
	Conversion	**IDLH** 20,000 mg/m3 See: 8052413

Exposure Limits
NIOSH REL : TWA 350 mg/m3 C 1800 mg/m3 [15-minute]
OSHA PEL †: TWA 500 ppm (2900 mg/m3)

Measurement Methods
NIOSH 1550
See: NMAM or OSHA Methods

Physical Description Colorless liquid with a kerosene-like odor.

MW: varies	**BP:** 309-396°F	**FRZ:** ?	**Sol:** Insoluble	**VP:** ?	**IP:** ?
Sp.Gr: 0.78	**Fl.P:** 102-110°F	**UEL:** ?	**LEL:** ?		

Class II Combustible Liquid: Fl.P. at or above 100°F and below 140°F.

Incompatibilities & Reactivities Strong oxidizers

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms irritation eyes, nose, throat; dizziness; dermatitis; chemical pneumonitis (aspiration liquid); in animals: kidney damage

Target Organs Eyes, skin, respiratory system, central nervous system, kidneys

Personal Protection/Sanitation (See protection codes)

First Aid (See

Skin: Prevent skin contact **Eyes:** Prevent eye contact **Wash skin:** When contaminated **Remove:** When wet or contaminated **Change:** No recommendation	procedures) **Eye:** Irrigate immediately **Skin:** Soap wash promptly **Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH

Up to 3500 mg/m3:
(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)*
(APF = 10) Any supplied-air respirator*

Up to 8750 mg/m3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode*
(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)*

Up to 17500 mg/m3:
(APF = 50) Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and organic vapor cartridge(s)*
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 20000 mg/m3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0361 See MEDICAL TESTS: 0212

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Tetrachloroethylene

Synonyms & Trade Names Perchlorethylene, Perchloroethylene, Perk, Tetrachlorethylene

CAS No. 127-18-4	**RTECS No.** KX3850000	**DOT ID & Guide** 1897 160
Formula $Cl_2C{=}CCl_2$	**Conversion** 1 ppm = 6.78 mg/m^3	**IDLH** Ca [150 ppm] See: 127184

Exposure Limits

NIOSH REL : Ca Minimize workplace exposure concentrations. See Appendix A

OSHA PEL †: TWA 100 ppm
C 200 ppm (for 5 minutes in any 3-hour period), with a maximum peak of 300 ppm

Measurement Methods
NIOSH 1003 ;
OSHA 1001
See: NMAM or OSHA Methods

Physical Description Colorless liquid with a mild, chloroform-like odor.

MW: 165.8	**BP:** 250°F	**FRZ:** -2°F	**Sol:** 0.02%	**VP:** 14 mmHg	**IP:** 9.32 eV
Sp.Gr: 1.62	**Fl.P:** NA	**UEL:** NA	**LEL:** NA		

Noncombustible Liquid, but decomposes in a fire to hydrogen chloride and phosgene.

Incompatibilities & Reactivities Strong oxidizers; chemically-active metals such as lithium, beryllium & barium; caustic soda; sodium hydroxide; potash

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]

Target Organs Eyes, skin, respiratory system, liver, kidneys, central nervous system

Cancer Site [in animals: liver tumors]

Personal Protection/Sanitation (See protection codes)	First Aid (See procedures)
Skin: Prevent skin contact **Eyes:** Prevent eye contact **Wash skin:** When contaminated **Remove:** When wet or contaminated **Change:** No recommendation **Provide:** Eyewash, Quick drench	**Eye:** Irrigate immediately **Skin:** Soap wash promptly **Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0076 See MEDICAL TESTS: 0179

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Methyl chloroform

Synonyms & Trade Names Chlorothene; 1,1,1-Trichloroethane; 1,1,1-Trichloroethane (stabilized)

CAS No. 71-55-6	**RTECS No.** KJ2975000	**DOT ID & Guide** 2831 160
Formula CH_3CCl_3	**Conversion** 1 ppm = 5.46 mg/m^3	**IDLH** 700 ppm See: 71556

Exposure Limits
NIOSH REL : C 350 ppm (1900 mg/m^3) [15-minute] See Appendix C (Chloroethanes)
OSHA PEL †: TWA 350 ppm (1900 mg/m^3)

Measurement Methods
NIOSH 1003
See: NMAM or OSHA Methods

Physical Description Colorless liquid with a mild, chloroform-like odor.

MW: 133.4	**BP:** 165°F	**FRZ:** -23°F	**Sol:** 0.4%	**VP:** 100 mmHg	**IP:** 11.00 eV
Sp.Gr: 1.34	**Fl.P:** ?	**UEL:** 12.5%	**LEL:** 7.5%		

Combustible Liquid, but burns with difficulty.

Incompatibilities & Reactivities Strong caustics; strong oxidizers; chemically-active metals such as zinc, aluminum, magnesium powders, sodium & potassium; water [Note: Reacts slowly with water to form hydrochloric acid.]

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms irritation eyes, skin; headache, lassitude (weakness, exhaustion), central nervous system depression, poor equilibrium; dermatitis; cardiac arrhythmias; liver damage

Target Organs Eyes, skin, central nervous system, cardiovascular system, liver

Personal Protection/Sanitation (See protection codes)
Skin: Prevent skin contact

First Aid (See procedures)
Eye: Irrigate immediately

Eyes: Prevent eye contact **Wash skin:** When contaminated **Remove:** When wet or contaminated **Change:** No recommendation	**Skin:** Soap wash promptly **Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH/OSHA

Up to 700 ppm:
(APF = 10) Any supplied-air respirator*
(APF = 50) Any self-contained breathing apparatus with a full facepiece

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0079 See MEDICAL TESTS: 0141

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NPG Home | Introduction | Synonyms & Trade Names | Chemical Names | CAS Numbers | RTECS Numbers | Appendices | Search

Trichloroethylene

$ClCH=CCl_2$

CAS

79-01-6

RTECS

KX4550000

Synonyms & Trade Names

Ethylene trichloride, TCE, Trichloroethene, Trilene

DOT ID & Guide

1710 160

Exposure Limits

NIOSH REL: Ca See Appendix A See Appendix C

OSHA PEL†: TWA 100 ppm C 200 ppm 300 ppm (5-minute maximum peak in any 2 hours)

IDLH

Ca [1000 ppm] See: 79016

Conversion

1 ppm = 5.37 mg/m^3

Physical Description

Colorless liquid (unless dyed blue) with a chloroform-like odor.

MW: 131.4	BP: 189°F	FRZ: -99°F	Sol(77°F): 0.1%
VP: 58 mmHg	IP: 9.45 eV		Sp.Gr: 1.46
Fl.P: ?	UEL(77°F): 10.5%	LEL(77°F): 8%	

Combustible Liquid, but burns with difficulty.

Incompatibilities & Reactivities

Strong caustics & alkalis; chemically-active metals (such as barium, lithium, sodium, magnesium, titanium & beryllium)

Measurement Methods

NIOSH 1022, 3800; OSHA 1001

See: NMAM or OSHA Methods

Personal Protection & Sanitation

(See protection)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: No recommendation
Provide: Eyewash, Quick drench

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH
At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus
Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus
Important additional information about respirator selection

Exposure Routes

inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms

Irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]

Target Organs

Eyes, skin, respiratory system, heart, liver, kidneys, central nervous system

Cancer Site

[in animals: liver & kidney cancer]

See also: INTRODUCTION See ICSC CARD: 0081 See MEDICAL TESTS: 0236

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NIOSH Pocket Guide to Chemical Hazards

Vinyl chloride

CAS

75-01-4

RTECS

KU9625000

DOT ID & Guide

1086 116P (inhibited)

CH_2=CHCl

Synonyms & Trade Names

Chloroethene, Chloroethylene, Ethylene monochloride, Monochloroethene, Monochloroethylene, VC, Vinyl chloride monomer (VCM)

Exposure Limits

NIOSH REL: Ca See Appendix A

OSHA PEL: [1910.1017] TWA 1 ppm C 5 ppm [15-minute]

IDLH

Ca [N.D.] See: IDLH INDEX

Conversion

1 ppm = 2.56 mg/m^3

Physical Description

Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations. [Note: Shipped as a liquefied compressed gas.]

MW: 62.5	BP: 7°F	FRZ: -256°F	Sol(77°F): 0.1%
VP: 3.3 atm	IP: 9.99 eV	RGasD: 2.21	
Fl.P: NA (Gas)	UEL: 33.0%	LEL: 3.6%	
Flammable Gas			

Incompatibilities & Reactivities

Copper, oxidizers, aluminum, peroxides, iron, steel [Note: Polymerizes in air, sunlight, or heat unless stabilized by inhibitors such as phenol. Attacks iron & steel in presence of moisture.]

Measurement Methods

NIOSH 1007; OSHA 4, 75
See: NMAM or OSHA Methods

Personal Protection & Sanitation

(See protection)
Skin: Frostbite
Eyes: Frostbite
Wash skin: No recommendation
Remove: When wet (flammable)
Change: No recommendation
Provide: Frostbite wash

First Aid

(See procedures)
Eye: Frostbite
Skin: Frostbite
Breathing: Respiratory support

Respirator Recommendations

(See Appendix E) NIOSH
At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus
Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern/Any appropriate escape-type, self-contained breathing apparatus
Important additional information about respirator selection

Exposure Routes

inhalation, skin, and/or eye contact (liquid)

Symptoms

Lassitude (weakness, exhaustion); abdominal pain, gastrointestinal bleeding; enlarged liver; pallor or cyanosis of extremities; liquid: frostbite; [potential occupational carcinogen]

Target Organs

Liver, central nervous system, blood, respiratory system, lymphatic system

Cancer Site

[liver cancer]

See also: INTRODUCTION See ICSC CARD: 0082 See MEDICAL TESTS: 0241

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TEXO DATA

TEXO CORPORATION
2828 Highland Avenue
Cincinnati, OH 45212

Call:(513) 731-3400
Fax: (513) 731-8113
Toll Free: (800) 998-8396

80gAL – 8gALS

10%

TEXO KLEEN 1704

CLEANER

Liquid multi-metal cleaner/degreaser/rust preventative designed for industry.

 Original: 12/21/90 Revision: 2/18/99

FEATURES:

- *Multi-metal safe*
- *Rust inhibitive*
- *Near neutral pH*
- *Low foaming*
- *Spray or immersion application*
- *Oil splitting*
- *No rinse required*
- *Pleasant citrus odor*
- NON SILICATED

FOR REFERENCE ONLY

TYPICAL PROPERTIES

Appearance:	Clear liquid
Odor:	Mild surfactant
Color:	Straw
Specific Gravity:	1.063 gr/ml
Weight per Gallon:	8.87 lbs./gal.
pH (conc.):	10.0
pH (4%):	9.4
Flash Point:	>200°F (93.3°C) by Setaflash
Cloud Point (4%):	32°C
Nonvolatile Material:	18.5%
Heat Stability:	Separates but recombines with mixing *
Freeze/Thaw Stability:	Separates but recombines with mixing *
Foam:	Low foam; controlled
Total Alkalinity as Na_2O:	1.67%
Phosphates as P:	0.45%
Silicates:	None
Phenols:	None
Cresols:	None
Chromates:	None
Nitrites:	None

* Please see Special Handling Procedures for further explanation.

DIRECTIONS FOR USE

TEXO KLEEN 1704 can be used at a concentration of 1-10% by volume in spray washers, agitated tanks, power washers and immersion tanks. Parts will be cleaned and rust inhibited in one step. No rinse is required. TEXO KLEEN 1704 imparts indoor rust protection only. TEXO KLEEN 1704 is low foaming at temperatures above 100°F (37.8°C). Ambient temperature applications should be restricted to low agitation equipment, such as dip tanks. Actual cleaning temperature will depend upon cleaning time available and degree of soil. TEXO KLEEN 1704 can also be used as a hand wipe for metal surfaces prior to painting. Use 10-20% by volume, and wipe or blow dry after cleaning. The residue left by TEXO KLEEN 1704 is light to imperceptible and can be painted over by most coatings.

CAUTION

CAUTION. May irritate eyes and skin of anyone sensitive to mild detergents. Harmful if swallowed. Do not get in eyes. Do not take internally.

Open drums slowly to vent. In case of skin or eye contact, flush with plenty of water. If irritation occurs, get medical aid. If swallowed, give large amounts of water. Do not induce vomiting. Get medical aid. Never give anything by mouth to an unconscious person. Remove contaminated shoes and clothing and wash before reuse. Personnel handling this product should be acquainted with its characteristics. Keep out of the reach of children. 83-07A

Consult MSDS for complete safety information.

ATTENTION: When empty, the container may still be hazardous. Because containers, even after they have been emptied, still retain product residues (vapor, liquid or solid), all labelled hazard precautions <u>must be observed</u>. If "emptied" product containers of 110 gallons (416 liters) or greater volume are to be shipped, DOT requires the containers be triple rinsed (or equivalent) to remove any residue and DOT placards be removed or covered with plain placards before they can be shipped as empty containers.

TEXO CORPORATION

MATERIAL SAFETY DATA SHEET

The information on this form is furnished solely for the purpose of compliance with OSHA Hazard Communication Standard 29CFR 1910.1200. Information pertains to product as received in container. The information provided should be evaluated by the user in terms of local operating conditions.

PRODUCT: TEXO KLEEN 1704

Date of This Revision: 2/17/99

HMIS Rating:	Health 1	Fire 0	Reactivity 0	PPE X
0=Least	1=Slight	2=Moderate	3=High	4=Extreme

SECTION I

Manufacturer's Name/Address		Telephone No.
TEXO CORPORATION	General Information	(513) 731-3400
2801 Highland Ave.	Health Emergency	(513) 244-1216
Cinti., OH 45212	Transportation Emergency-Chemtrec	(800) 424-9300

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	TLV (ACGIH)
Dipropylene Glycol Methyl Ether	34590-94-8	100 ppm
Borax	1303-96-4	5 mg/m^3
Triethanolamine	102-71-6	5 mg/m^3

SECTION III - PHYSICAL DATA

Boiling Point (°F)	~212	Specific Gravity (H_2O=1)	1.06
Vapor Pressure (mm Hg.)	N/AV	Percent Volatile	70-80
Vapor Density (Air=1)	N/AV	Evaporation Rate(______=1)	N/AV
Solubility in Water:	Complete	pH @ 100 %	10.0
Appearance & Odor:	Off white liquid, mild odor		

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (Method used) (>200°F)

Flammable Limits
N/AP :Lel N/AP:Uel

EXTINGUISHING MEDIA: Water, foam, CO_2, dry chemical, for fires in area. Use water spray to cool container exposed to fire; do not get water inside containers.

SPECIAL FIREFIGHTING PROCEDURE: Wear self-contained breathing apparatus and impervious gear.

UNUSUAL FIRE & EXPLOSION HAZARDS:N/AP

SECTION V - HEALTH HAZARD DATA

ROUTE OF EXPOSURE: X Skin Contact X Inhalation __Ingestion
THRESHOLD LIMIT VALUE: See Section II

EFFECTS OF OVEREXPOSURE: May irritate eyes and skin. Inhalation may irritate respiratory tract. For Dipropylene glycol methyl ether: SKIN ABSORPTION - The LD50 for skin absorption in rabbits is >20 ml/kg. Prolonged skin contact with very large amounts may cause drowsiness. INGESTION - Single does oral toxicity is low. The oral LD50 for rats is 5.4 ml/kg. Amounts ingested incidental to industrial handling are not likely to cause injury; however ingestion of larger amounts may cause injury. INHALATION - Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. SYSTEMIC & OTHER EFFECTS - Repeated excessive exposures may cause liver or possibly kidney effects. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Results of in vitro ("test tube") mutagenicity tests have been negative.

CARCINOGENICITY: ( )NTP ( )IARC ( )OSHA ( ) ACGIH (X)NONE

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Exposure to borax may aggravate kidney and liver diseases and nerve disorders.

N/AP = not applicable N/AV = not available

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

DO NOT ADD NITRITES DUE TO THE POSSIBLE FORMATION OF NITROSAMINES (POTENTIAL CARCINOGENS).

Do not store at temperatures above 90°F, because the product may separate. TEXO KLEEN 1704 can be reconstituted by cooling to 75°F and agitating for a minimum of 15 minutes. Do not store at temperatures below 40°F, because the product may separate. TEXO KLEEN 1704 can be reconstituted by warming to 75°F and agitating for a minimum of 15 minutes. The shelf life of this material is 12 months. Stock rotation is recommended.

Optimum storage temperature range 50-80°F. If in doubt of storage conditions, mix product before use. Indoor storage only.

STORE IN A COOL DRY AREA AWAY FROM EXCESS HEAT, OPEN FLAME, OR SPARKS. DO NOT CUT OR WELD ON OR AROUND DRUMS FULL OR EMPTY.

CAUTION. May irritate eyes and skin of anyone sensitive to mild detergents. Harmful if swallowed. Do not get in eyes. Do not take internally.

Open drums slowly to vent. In case of skin or eye contact, flush with plenty of water. If irritation occurs, get medical aid. If swallowed, give large amounts of water. Do not induce vomiting. Get medical aid. Never give anything by mouth to an unconscious person. Remove contaminated shoes and clothing and wash before reuse. Personnel handling this product should be acquainted with its characteristics. Keep out of the reach of children.

83-07A

ATTENTION: When empty, the container may still be hazardous. Because containers, even after they have been emptied, still retain product residues (vapor, liquid or solid), all labelled hazard precautions must be observed. If "emptied" product containers of 110 gallons or greater volume are to be shipped, DOT requires the containers be triple rinsed (or equivalent) to remove any residue and DOT placards be removed or covered with plain placards before they can be shipped as empty containers.

TEXO DATA

TEXO CORPORATION
2828 Highland Avenue
Cincinnati, Ohio 45212

Call: (513) 731-3400
Fax: (513) 731-8113
Toll Free: (800) 998-8396

409 GALS
AT STRIGHT
100%

PROTEXO 1125

(RUST BAN)
STEEL RUST PROTECT

Water Based - High Performance - Rust Preventative
Unique in Market

 Original: 2/25/98 Revision: 3/18/99

GENERAL DESCRIPTION

- Long-Term Indoor Rust Protection (1-2 years)
- For High Humidity Environments
- 500 + hours in Humidity Cabinet
- Replace Solvent-Cut-Back Rust Preventatives
- Only 0.06 pounds per gallon VOC
- New Technology, a significant improvement over other water-based systems

PROTEXO 1125 is a complex polymer-based rust inhibitor. PROTEXO 1125 develops a water resistant coating on steel. PROTEXO 1125 dries to a non-tacky coating within one hour after application. PROTEXO 1125 is water based, has no flash point and produces no irritating or dangerous solvent fumes as is common with many other rust inhibiting compounds.

PROTEXO 1125 provides effective, long-term indoor rust protection under highly humid conditions. In addition to the ease of spray or immersion application, PROTEXO 1125 offers a neutral pH and very low VOC content.

TYPICAL PROPERTIES

FOR REFERENCE ONLY

Appearance:	Emulsion
Odor:	Mild
pH:	8.0
Density:	8.21 lbs./gal.
Humidity Resistance:	Excellent
Freezability:	Protect from freezing
Flammability:	None

TEXO CORPORATION

MATERIAL SAFETY DATA SHEET

The information on this form is furnished solely for the purpose of compliance with OSHA Hazard Communication Standard 29CFR 1910.1200. Information pertains to product as received in container. The information provided should be evaluated by the user in terms of local operating conditions.

PRODUCT: PROTEXO 1125

Date of This Revision: 4/5/99

HMIS Rating: Health 0 Fire 0 Reactivity 0 PPE X

0=Least 1=Slight 2=Moderate 3=High 4=Extreme

SECTION I

Manufacturer's Name/Address		Telephone No.
TEXO CORPORATION 2801 Highland Ave. Cinti., OH 45212	General Information Health Emergency Transportation Emergency-Chemtrec	(513) 731-3400 (513) 244-1216 (800) 424-9300

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	TLV (ACGIH)
Mineral Oil	Mixture	5 mg/m³ as oil mist

SECTION III - PHYSICAL DATA

Boiling Point (°F)	212	Specific Gravity (H_2O=1)	0.986 g/ml
Vapor Pressure (mm Hg.)	N/AV	Percent Volatile	85%
Vapor Density (Air=1)	N/AV	Evaporation Rate(______=1).	As water
Solubility in Water:	Nil	pH @ 100 %	8.0
Appearance & Odor:	Emulsion, mild odor		

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (Method used) None

Flammable Limits N/AV :Lel N/AV :Uel

EXTINGUISHING MEDIA: Foam, sand or earth, CO_2, dry chemical, for fires in area. Use water spray to cool container exposed to fire; do not get water inside containers.

SPECIAL FIREFIGHTING PROCEDURE: Wear self-contained breathing apparatus and impervious gear.

UNUSUAL FIRE & EXPLOSION HAZARDS: N/AP

SECTION V - HEALTH HAZARD DATA

ROUTE OF EXPOSURE: X Skin Contact __Inhalation __Ingestion

THRESHOLD LIMIT VALUE: See Section II

EFFECTS OF OVEREXPOSURE: May irritate skin. Irritates eyes and upper respiratory tract.

EMERGENCY & FIRST AID PROCEDURES: Flush skin with water for 15 minutes. If irritation persists, get medical aid. Flush eyes with water for 15 minutes. Get medical aid. For inhalation, remove to fresh air. If swallowed, give large amounts of water. Get medical aid.

CARCINOGENICITY: ( )NTP ( )IARC ( )OSHA ( ) ACGIH (X)NONE

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Unknown

N/AP = not applicable N/AV = not available

SECTION VI - REACTIVITY DATA

STABILITY - Unstable:
Stable: X

Conditions to Avoid
N/AP

INCOMPATIBILITY (Materials to Avoid): Strong oxidizing agents, strong mineral acids. Contact with nitrites could form suspected cancer-causing nitrosamines.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce CO, CO_2 and reactive volatile hydrocarbons.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove sources of ignition. Ventilate. Dike to prevent spread. Return to container. Cover spill area with inert, non-combustible absorbent material and remove to disposal container.

WASTE DISPOSAL METHOD: Incineration is suggested. Obey all regulations. Do not allow material to enter waterways.

SECTION VIII - EMPLOYEE PROTECTION INFORMATION

RESPIRATORY PROTECTION:NIOSH organic vapor respirator if TLV exceeded.

VENTILATION - Local Exhaust: Suggested
Mechanical: N/AP
Other: N/AP

Ventilation, natural or mechanical, is suggested to dilute any material in the air and help keep the potential exposure levels below the maximum exposure limits.

PROTECTIVE GLOVES: Rubber
EYE PROTECTION: Chemical goggles
OTHER PROTECTION: Rubber apron and boots

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

DO NOT ADD NITRITES DUE TO THE POSIBLE FORMATION OF NITROSAMINES (POTENTIAL CARCINOGENS).

CAUTION. May irritate eyes and skin of anyone sensitive to mild detergents. Harmful if swallowed. Do not get in eyes. Do not take internally.

Open drums slowly to vent. In case of skin or eye contact, flush with plenty of water. If irritation occurs, get medical aid. If swallowed, give large amounts of water. Do not induce vomiting. Get medical aid. Never give anything by mouth to an unconscious person. Remove contaminated shoes and clothing and wash before reuse. Personnel handling this product should be acquainted with its characteristics. Keep out of the reach of children.

83-07A

ATTENTION: When empty, the container may still be hazardous. Because containers, even after they have been emptied, still retain product residues (vapor, liquid or solid), all labelled hazard precautions must be observed. If "emptied" product containers of 110 gallons or greater volume are to be shipped, DOT requires the containers be triple rinsed (or equivalent) to remove any residue and DOT placards be removed or covered with plain placards before they can be shipped as empty containers.

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations.

FEDERAL EPA

Statute	Components Present	RQ	% Present
CERCLA - 40 CFR 302.4 Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Reportable Quantities (RQs)	None	N/AP	N/AP
SARA Title III 40 CFR 372 (for SARA 313) Superfund Amendments and Reauthorization Act of 1986	None		N/AP

Statute	Component Present	RQ	TPQ
SARA Title III, 40 CFR 355 (SARA 302, 304) Superfund Amendments and Reauthorization Act of 1986 Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs)	None	N/AP	N/AP
Section 311, 40 CFR Part 116.4 Clean Water Act	None		

STATE RIGHT-TO-KNOW

State	Rule	Presence of:
CALIFORNIA	PROPOSITION 65	None
MASSACHUSETTS	MSL - Right-To-Know	None
PENNSYLVANIA	Right-to-Know, Hazard Substance List	None
	"Contains Pennsylvania Right-to-Know Trade Secret Ingredients"	
NEW JERSEY	Right-to-Know, Hazard Substance List	None

We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of the use of the product are not within the control of TEXO CORPORATION, it is the user's obligation to determine the conditions of safe use of the product.

Signed David L. Kaplan

RUST-BAN 392

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION

DATE ISSUED 7/10/86

MATERIAL SAFETY DATA SHEET

EXXON COMPANY, U.S.A. P.O. BOX 2180 HOUSTON, TX 77252-2180

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME
RUST-BAN 392

PRODUCT CODE
280392 - 04114

CHEMICAL NAME
Petroleum Rust Preventive

CAS NUMBER
Complex Mixture
CAS Number not applicable

PRODUCT APPEARANCE AND ODOR
Clear liquid, amber color
Mild mineral spirits odor

EMERGENCY TELEPHONE NUMBER
(713) 656-3424

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS	CAS NO. OF COMPONENTS	APPROXIMATE CONCENTRATION
Hydrotreated heavy naphtha, petroleum	64742-48-9	Greater than 92%
Proprietary additives	Mixture	Approximately 7%

See Section E for Health and Hazard Information

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	Flammability	Reactivity	BASIS
1	2	0	Recommended by Exxon

EXPOSURE LIMIT FOR TOTAL PRODUCT
100 ppm (570 mg/m3) for an 8-hour workday

BASIS
Recommended by the American Conference of Governmental Industrial Hygienists (ACGIH)

C. PRIMARY ROUTES OF ENTRY AND EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT
In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

INHALATION
If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION
If ingested, DO NOT induce vomiting; call a physician immediately.

Material Safety Data Sheet

Noco Clean All 140 Solvent

Material Identification and Use

MANUFACTURER'S NAME.............. Noco Energy Corp.
MANUFACTURER'S ADDRESS.......... 700 Grand Island Blvd., Tonawanda, N. Y. 1415

EMERGENCY PHONE NUMBER.......... 1-716-874-6200
SUPPLIER IDENTIFIER............. Noco Clean All 140 Solvent
SUPPLIER'S ADDRESS.............. P.O. Box 86, Tonawanda, New York 14151
SUPPLIER EMERGENCY PHONE NUMBER. 1-716-874-6200
PRODUCT IDENTIFIER.............. Noco Clean All 140 Solvent
PRODUCT USE..................... Low odor cleaning solvent.

Hazardous Ingredients of Materials

Chemical Identity	Concentration	CAS#/NA#/UN#	LD(50)	LC(50)

Physical Data For Product

PHYSICAL STATE.................. Liquid.
ODOR AND APPEARANCE............. Clear water white, mild petroleum odor.
ODOR THRESHOLD.................. Not determined.
SPECIFIC GRAVITY................ 0.799
VAPOR PRESSURE.................. Less than 1 mm Hg @ 25°C
VAPOR DENSITY (air=1)........... Greater than 5.
EVAPORATION RATE................ (Butyll Acetate = 1) Less than 0.1
BOILING POINT................... 360-465°F (182-241°C)
FREEZING POINT.................. N/A
pH.............................. Neutral.
COEFFICIENT OF WATER/OIL DISTRIBUTION.................. Negligible.

Fire and Explosion Hazard of Product

CONDITIONS OF FLAMMABILITY...... Addition of water may cause frothing. Do not cut, drill or weld empty containers.
MEANS OF EXTINCTION............. Foam, water spray, dry chemical, carbon dioxid and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product.
FLASHPOINT AND METHOD OF DETERMINATION.................. 160°F (71°C) ASTM D 56 Tag Closed cup.
UPPER EXPLOSION LIMIT(% BY VOL). 7%
LOWER EXPLOSION LIMIT(% BY VOL). 0.6%
AUTO-IGNITION TEMPERATURE....... 420°F (216°C)
FLAMMABILITY CLASSIFICATION..... 2

Material Safety Data Sheet

Noco Clean All 140 Solvent

HAZARDOUS COMBUSTION PRODUCTS...	Open flames, sparks.
EXPLOSION DATA..................	Not determined.
SENSITIVITY TO STATIC DISCHARGE.	N/A

Reactivity Data

CHEMICAL STABILITY..............	Stable.
INCOMPATIBLE MATERIALS..........	Strong oxidants such as liquid chlorine, concentrated oxygen.
CONDITIONS OF REACTIVITY........	Excessive heat.
HAZARDOUS DECOMPOSITION PRODUCTS	Fumes, smoke , carbon monoxide and other decomposition products.

Toxicological Properties of Product

ROUTES OF ENTRY	
SKIN CONTACT...................	Repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis.
EYE............................	Slightly irritating to eyes.
INHALATION.....................	May cause headaches and dizziness, are anesthetic, and may have other central nervou system effects including death.
INGESTION......................	Amounts which are aspirated into the lungs during ingestion or or vomiting may cause mild to severe pulmonary injury and possibly death.
CARCINOGENICITY, REPRODUCTIVE EFFECTS.........................	Not carcinogenic.

Preventive Measures

PERSONAL PROTECTIVE EQUIPMENT...	VENTILATION: Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Respiratory Protection: Use supplied air respiratory protection in confined or enclosed spaces. Protective Gloves: Use chemcial resistant gloves. Eye Protection: Use splash proof goggles or face shield when eye contact can occur.
SPECIFIC ENGINEERING CONTROLS...	N/A
LEAK AND SPILL PROCEDURES.......	Shut off and eliminate all sources of ignitic
WASTE DISPOSAL..................	Recover free product. Assure conformity witl applicable governmental regulations.

Material Safety Data Sheet

Noco Clean All 140 Solvent

HANDLING PROCEDURES AND EQUIPMENT........................ Wash thoroughly after handling.
STORAGE REQUIREMENTS............ Cool, dry.
SPECIAL SHIPPING INFORMATION.... No special instructions.

First Aid Measures

SPECIFIC FIRST AID PROCEDURES... EYE: flush with clear water for at least 15 minutes or until irritation subsides. SKIN: Remove any contaminated clothing and wash ski thoroughly with soap and water. INHALATION: remove from exposure and call a physician immediately. INGESTION: Do not induce vomiting.

Special Percautions

HAZARD CLASS............. N/A
DOT SHIPPING NAME........ Petroleum Solvent
REPORTABLE QUANTITY (RQ). Check with local authority.
UN NUMBER................ 1255
NA #..................... 1255
PACKAGING SIZE........... N/A

Preparation Date of Material Safety Data Sheet

PREPARED BY...................... NOCO - SK
PHONE NUMBER OF PREPARER........ 1-800-544-1846
DATE PREPARED.................... 9/6/91

FOR REFERENCE ONLY

Material Safety Data Sheet

NOCO CLEAN ALL 142 SOLVENT

Material Identification and Use

MANUFACTURER'S NAME	NOCO ENERGY CORP.
MANUFACTURERS ADDRESS	PO BOX 86, TONAWANDA, NY 14151
EMERGENCY NUMBER	1-800-424-9300 (CHEMTREC)
SUPPLIER'S ADDRESS	700 GRAND ISLAND BLVD., TONAWANDA, NY 14151
SUPPLIER EMERGENCY PHONE NUMBER	1-800-600-628
PRODUCT NAME	CLEAN ALL 142 SOLVENT
PRODUCT CODE	NOC5410
CHEMICAL NAME AND SYNONYM	SOLVENT NAPPA
PRODUCT USE	Used for industrial and automotive cleaning applications.

Ingredients

Components	%	CAS Number	Hazard Data
Medium Aliphatic Solvent	100	64742-88-7	OSHA PEL/TWA 100 PPM ACGIH/TWA 100PPM

WHMIS CLASSIFICATION.................................... B3

Physical Data

PHYSICAL STATE	Liquid
ODOUR AND APPEARANCE	Hydrocarbon odor, clear color
SPECIFIC GRAVITY	(Water = 1) 0.79@ 60°F
VAPOUR PRESSURE (MM HG @ 20 C)	Less than 5 mm/hg @ 100°F
VAPOUR DENSITY (air=1)	6.2
EVAPORATION RATE	N Butyl Acetate = 1: 0.03
BOILING POINT	350°F – 415° F
FREEZING POINT	N/A
pH	N/A
SOLUBILITY IN H2O (water)	Negligible

Fire and Explosion Hazards

CONDITIONS OF FLAMMABILITY	Can be made to burn.
EXTINGUISHING MEDIA	Foam, water fog, dry chemical, carbon dioxide
FLASHPOINT & METHOD OF DETERMINATION	145°F Minimum TTC (61°C Minimum)
FLAMMABLE LIMITS IN AIR % B.V.-UPPER	7%
FLAMMABLE LIMITS IN AIR % B.V.-LOWER	1%
NFPA - HAZARD CLASS	Health: 2 Flammability: 3 Reactivity: 0
HAZARDOUS COMBUSTION PRODUCT	Open flames, sparks, intense heat
UNUSUAL FIRE AND EXPLOSION HAZARD	Container exposed to intense heat from fires should be cooled with water To prevent vapor pressure build up which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.
SPECIAL FIRE FIGHTING PROCEDURES	Wear self contained breathing apparatus when fire fighting in a confined space. Cool fire exposed containers with water spray.

/3/98

Material Safety Data Sheet

NOCO CLEAN ALL 142 SOLVENT

Reactivity Data

CHEMICAL STABILITY.. Stable

INCOMPATIBLE MATERIALS.. Avoid contact with strong oxidizers, heat and open flames

HAZARDOUS DECOMPOSITION.. Carbon monoxide and unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION.. Material is not known to polymerize.

Health Hazard Information

ROUTES OF ENTRY

Skin Contact.. Slightly irritating to skin. Prolonged or repeated contact can result in de-fatting and drying of skin.

Eye.. Practically non-irritating to the eyes.

Inhalation.. Vapors may cause irritation to nose, throat and respiratory tract. High concentrations may result in CNS depression.

Ingestion.. May result in vomiting. Breathing of vomitus into lungs must be avoided, small quantities may result in aspiration pneumontis.

CARCINOGENICITY.. Not carcinogenic.
ACGIH - No

Emergency And First Aid Procedures

.... In case of contact, flush eyes with large amounts of water for at least 15 minutes. Get medical attention.

SKIN.. Wash skin thoroughly with soap and water or waterless hand cleaner. If irritation occurs, get medical attention.

INHALATION.. If breathing is difficult, remove victim to fresh air, Give artificial respiration if not breathing.

INGESTION.. Do not ingest. If ingested, DO NOT INDUCE VOMITING! Get medical attention.

Preventive Measures

VENTILATION REQUIREMENTS.. Use explosion proof ventilation as required to control vapor concentration

RESPIRATORY PROTECTION.. Not required under normal OSHA TLV. Use NIOSH approved respirators to prevent over exposure.

EYE PROTECTION.. Safety glasses with side shields or goggles

PROTECTIVE GLOVES.. Nitrile gloves provide best protection to hands and arms.

PERSONAL HYGIENE.. Wear effective plant clothing. Contaminated clothing should be removed and washed in soap and water. Cleanse skin thoroughly before meals with soap and water. Shower and eyewash facilities should be accessible.

NOTE.. No data

2/3/98

Material Safety Data Sheet

NOCO CLEAN ALL 142 SOLVENT

Environmental Procedures

SPILLS OR RELEASES.......... If material is spilled or released to the atmosphere, steps should be taken to prevent discharges to streams or sewer systems. Spills or releases should be reported, if required to the appropriate Local, State and Federal regulatory agencies.

DISPOSAL.......... Clean up action should be carefully planned and executed. Shipment, storage and/or disposal of waste materials are regulated and action to handle or dispose spilled or released materials must meet all State, Local and Federal rules.

STORAGE.......... Protect against physical damage. Separate from oxidizing materials. Store in cool well ventilated area of non-combustible construction, away from possible sources of ignition.

Regulatory Information

DEPARTMENT OF TRANSPORATION.......... DOT Shipping Name: None
Hazard Class: Flammable Liquid - 3
ID Number: UN 1268

TSCA.......... This product is listed on the TSCA inventory.

CERCLA.......... This product is classified as an oil under Section 311. Spills into or leading to surface water that cause sheen must be reported to The National Response Center at 1-800-424-8802.

RCRA.......... If this product becomes a waste it could not be a hazardous waste by RCRA-40 CFR 261. Place in an appropriate disposal facility in compliance with local authorities.

SARA TITLE III - SECTION 302.......... Not applicable

SECTION 311/312.......... H-1, H-2, P-3

SECTION 313.......... Not applicable

Preparation Date of Material Safety Data Sheet

PREPARED BY.......... NOCO - SK

PHONE NUMBER OF PREPARER.......... 1-315-393-4530

DATE PREPARED.......... 12/03/98

REVISED DATE.......... New

DISCLAIMER.......... Information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or the use of any product in violation of any patent or in violation of any law or regulation. It is the users' responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained by using any material and since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of material supplied by us.

NOCO

Product Data Sheet

NOCO CLEAN-ALL 142 SOLVENT

NOCO Clean-All 142 Solvent is a high flash point, mild odor solvent. It is especially suited for industrial and automotive cleaning applications.

FEATURES	BENEFITS
High Flash Point	Safer to Use
Mild Odor	Pleasant to Use
Not Harsh On Normal Skin	Operator Friendly
Produces Cleaner, Brighter Parts	Less Rejected Parts
Less Evaporation, Lasts Longer	Saves Money
Low Viscosity and Specific Gravity	Better Separation from Water

Typical Properties Characteristics

Appearance	Clear
Specific Gravity @ 60°F	0.768 – 0.820
Flash Point, TCC°F	142° min.
Aniline Point °F	165° max.
Kauri-Butanol Value	29 MIN.
Distillation Degree F:	
Initial Boiling Point	350° min
Ending Point	419° max

Refer to Material Safety Data Sheet for additional information.

Note: This product information sheet lists only target properties. Specific requirements should be discussed with your sales representative.

Rev:090498

NOCO

Product Data Sheet

NOCO CLEAN-ALL 142 SOLVENT

NOCO Clean-All 142 Solvent is a high flash point, mild odor solvent. It is especially suited for industrial and automotive cleaning applications.

FEATURES

High Flash Point
Mild Odor
Not Harsh On Normal Skin
Produces Cleaner, Brighter Parts
Less Evaporation, Lasts Longer
Low Viscosity and Specific Gravity

BENEFITS

Safer to Use
Pleasant to Use
Operator Friendly
Less Rejected Parts
Saves Money
Better Separation from Water

Typical Properties Characteristics

Appearance	Clear
Specific Gravity @ 60°F	0.768 – 0.820
Flash Point, TCC°F	142° min.
Aniline Point °F	165° max.
Kauri-Butanol Value	29 MIN.
Distillation Degree F:	
Initial Boiling Point	350° min
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Refer to Material Safety Data Sheet for additional information.

Note: This product information sheet lists only target properties. Specific requirements should be discussed with your sales representative.

Rev:090498

Material Safety Data Sheet

NOCO CLEAN ALL 142 SOLVENT

Material Identification and Use

MANUFACTURER'S NAME	NOCO ENERGY CORP.
MANUFACTURERS ADDRESS	PO BOX 86, TONAWANDA, NY 14151
EMERGENCY NUMBER	1-800-424-9300 (CHEMTREC)
SUPPLIER'S ADDRESS	700 GRAND ISLAND BLVD., TONAWANDA, NY 14151
SUPPLIER EMERGENCY PHONE NUMBER	1-800-500-626
PRODUCT NAME	CLEAN ALL 142 SOLVENT
PRODUCT CODE	NOC5410
CHEMICAL NAME AND SYNONYM	SOLVENT NAPPA
PRODUCT USE	Used for industrial and automotive cleaning applications.

Ingredients

Components	%	CAS Number	Hazard Data
Medium Aliphatic Solvent	100	64742-88-7	OSHA PEL/TWA 100 PPM ACGIH/TWA 100PPM

WHMIS CLASSIFICATION.. B3

Physical Data

PHYSICAL STATE	Liquid
ODOUR AND APPEARANCE	Hydrocarbon odor, clear color
SPECIFIC GRAVITY	(Water = 1) 0.79@ 60°F
VAPOUR PRESSURE (MM HG @ 20 C)	Less than 5 mm/hg @ 100°F
VAPOUR DENSITY (air=1)	5.2
EVAPORATION RATE	N Butyl Acetate = 1: 0.03
BOILING POINT	350°F – 415° F
FREEZING POINT	N/A
pH	N/A
SOLUBILITY IN H2O (water)	Negligible

Fire and Explosion Hazards

CONDITIONS OF FLAMMABILITY	Can be made to burn.
EXTINGUISHING MEDIA	Foam, water fog, dry chemical, carbon dioxide
FLASHPOINT & METHOD OF DETERMINATION	145°F Minimum TTC (61°C Minimum)
FLAMMABLE LIMITS IN AIR % B.V.-UPPER	7%
FLAMMABLE LIMITS IN AIR % B.V.-LOWER	1%
NFPA - HAZARD CLASS	Health: 2 Flammability: 3 Reactivity: 0
HAZARDOUS COMBUSTION PRODUCT	Open flames, sparks, intense heat
UNUSUAL FIRE AND EXPLOSION HAZARD	Container exposed to intense heat from fires should be cooled with water To prevent vapor pressure build up which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.
SPECIAL FIRE FIGHTING PROCEDURES	Wear self contained breathing apparatus when fire fighting in a confined space. Cool fire exposed containers with water spray.

12/3/98

Material Safety Data Sheet

NOCO CLEAN ALL 142 SOLVENT

Reactivity Data

CHEMICAL STABILITY	Stable
INCOMPATIBLE MATERIALS	Avoid contact with strong oxidizers, heat and open flames
HAZARDOUS DECOMPOSITION	Carbon monoxide and unidentified organic compounds may be formed during combustion.
HAZARDOUS POLYMERIZATION	Material is not known to polymerize.

Health Hazard Information

ROUTES OF ENTRY	
Skin Contact	Slightly irritating to skin. Prolonged or repeated contact can result in de-fatting and drying of skin.
Eye	Practically non-irritating to the eyes.
Inhalation	Vapors may cause irritation to nose, throat and respiratory tract. High concentrations may result in CNS depression.
Ingestion	May result in vomiting. Breathing of vomitus into lungs must be avoided, small quantities may result in aspiration pneumontis.
CARCINOGENICITY	Not carcinogenic. ACGIH - No

Emergency And First Aid Procedures

	In case of contact, flush eyes with large amounts of water for at least 15 minutes. Get medical attention.
SKIN	Wash skin thoroughly with soap and water or waterless hand cleaner. If irritation occurs, get medical attention.
INHALATION	If breathing is difficult, remove victim to fresh air, Give artificial respiration if not breathing.
INGESTION	Do not ingest. If ingested, DO NOT INDUCE VOMITING! Get medical attention.

Preventive Measures

VENTILATION REQUIREMENTS	Use explosion proof ventilation as required to control vapor concentration
RESPIRATORY PROTECTION	Not required under normal OSHA TLV. Use NIOSH approved respirators to prevent over exposure.
EYE PROTECTION	Safety glasses with side shields or goggles
PROTECTIVE GLOVES	Nitrile gloves provide best protection to hands and arms.
PERSONAL HYGIENE	Wear effective plant clothing. Contaminated clothing should be removed and washed in soap and water. Cleanse skin thoroughly before meals with soap and water. Shower and eyewash facilities should be accessible.
NOTE	No data

Material Safety Data Sheet

NOCO CLEAN ALL 142 SOLVENT

Environmental Procedures

SPILLS OR RELEASES.. If material is spilled or released to the atmosphere, steps should be taken to prevent discharges to streams or sewer systems. Spills or releases should be reported, if required to the appropriate Local, State and Federal regulatory agencies.

DISPOSAL.. Clean up action should be carefully planned and executed. Shipment, storage and/or disposal of waste materials are regulated and action to handle or dispose spilled or released materials must meet all State, Local and Federal rules.

STORAGE.. Protect against physical damage. Separate from oxidizing materials. Store in cool well ventilated area of non-combustible construction, away from possible sources of ignition.

Regulatory Information

DEPARTMENT OF TRANSPORATION........................ DOT Shipping Name: None

Hazard Class: Flammable Liquid - 3

ID Number: UN 1268

TSCA.. This product is listed on the TSCA inventory.

CERCLA.. This product is classified as an oil under Section 311. Spills into or leading to surface water that cause sheen must be reported to The National Response Center at 1-800-424-8802.

RCRA.. If this product becomes a waste it could not be a hazardous waste by RCRA-40 CFR 261. Place in an appropriate disposal facility in compliance with local authorities.

SARA TITLE III - SECTION 302.................................. Not applicable

SECTION 311/312.. H-1, H-2, P-3

SECTION 313.. Not applicable

Preparation Date of Material Safety Data Sheet

PREPARED BY.. NOCO - SK

PHONE NUMBER OF PREPARER............................. 1-315-393-4530

DATE PREPARED.. 12/03/98

REVISED DATE.. New

DISCLAIMER.............. Information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or the use of any product in violation of any patent or in violation of any law or regulation. It is the users' responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained by using any material and since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of material supplied by us.

MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet

Noco Clean All 140 Solvent

Material Identification and Use

MANUFACTURER'S NAME.............. Noco Energy Corp.
MANUFACTURER'S ADDRESS.......... 700 Grand Island Blvd., Tonawanda, N. Y. 141

EMERGENCY PHONE NUMBER.......... 1-716-874-6200
SUPPLIER IDENTIFIER............. Noco Clean All 140 Solvent
SUPPLIER'S ADDRESS.............. P.O. Box 86, Tonawanda, New York 14151
SUPPLIER EMERGENCY PHONE NUMBER. 1-716-874-6200
PRODUCT IDENTIFIER.............. Noco Clean All 140 Solvent
PRODUCT USE..................... Low odor cleaning solvent.

Hazardous Ingredients of Materials

Chemical Identity	Concentration	CAS#/NA#/UN#	LD(50)	LC(50)

Physical Data For Product

PHYSICAL STATE.................. Liquid.
ODOR AND APPEARANCE............. Clear water white, mild petroleum odor.
ODOR THRESHOLD.................. Not determined.
SPECIFIC GRAVITY................ 0.799
VAPOR PRESSURE.................. Less than 1 mm Hg @ 25°C
VAPOR DENSITY (air=1)........... Greater than 5.
EVAPORATION RATE................ (Butyll Acetate = 1) Less than 0.1
BOILING POINT................... 360-465°F (182-241°C)
FREEZING POINT.................. N/A
pH.............................. Neutral.
COEFFICIENT OF WATER/OIL DISTRIBUTION................. Negligible.

Fire and Explosion Hazard of Product

CONDITIONS OF FLA... ... Addition of water may cause frothing. Do not cut, drill or weld empty containers.
MEANS OF EXTINCTION............. Foam, water spray, dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product.
FLASHPOINT AND METHOD OF DETERMINATION.................. 160°F (71°C) ASTM D 56 Tag Closed cup.
UPPER EXPLOSION LIMIT(% BY VOL). 7%
LOWER EXPLOSION LIMIT(% BY VOL). 0.6%

MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet

Noco Clean All 140 Solvent

HAZARDOUS COMBUSTION PRODUCTS... Open flames, sparks.
EXPLOSION DATA.................. Not determined.
SENSITIVITY TO STATIC DISCHARGE. N/A

Reactivity Data

CHEMICAL STABILITY.............. Stable.
INCOMPATIBLE MATERIALS.......... Strong oxidants such as liquid chlorine, concentrated oxygen.
CONDITIONS OF REACTIVITY........ Excessive heat.
HAZARDOUS DECOMPOSITION PRODUCTS Fumes, smoke , carbon monoxide and other decomposition products.

Toxicological Properties of Product

ROUTES OF ENTRY
SKIN CONTACT.................... Repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis.
EYE............................. Slightly irritating to eyes.
INHALATION...................... May cause headaches and dizziness, are anesthetic, and may have other central nervou system effects including death.
INGESTION....................... Amounts which are aspirated into the lungs during ingestion or or vomiting may cause mild to severe pulmonary injury and possibly death.
CARCINOGENICITY, REPRODUCTIVE EFFECTS......................... Not carcinogenic.

Preventive Measures

PERSONAL PROTECTIVE EQUIPMENT... VENTILATION: Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Respiratory Protection: Use supplied air respiratory protection in confined or enclosed spaces. Protective Gloves: Use chemcial resistant gloves. Eye Protection: Use splash proof goggles or face shield when eye contact can occur.
SPECIFIC ENGINEERING CONTROLS... N/A
LEAK AND SPILL PROCEDURES....... Shut off and eliminate all sources of
WASTE DISPOSAL.................. Recover free product

MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet

Noco Clean All 140 Solvent

HANDLING PROCEDURES AND EQUIPMENT.......................... Wash thoroughly after handling.
STORAGE REQUIREMENTS................ Cool, dry.
SPECIAL SHIPPING INFORMATION... No special instructions.

First Aid Measure

SPECIFIC FIRST AID PROCEDURES ... EYE: flush with clear water for at least minutes or until irritation subsides. SKIN: Remove any contaminated clothing and wash skin thoroughly with soap and water. INHALATION: remove from exposure and call a physician immediately. INGESTION: Do not induce vomiting.

Special Percautions

HAZARD CLASS.............. N/A
DOT SHIPPING NAME......... Petroleum Solvent
REPORTABLE QUANTITY (RQ). Check with local authority.
UN NUMBER............. 1255
NA #...................... 1255
PACKAGING SIZE........... N/A

End of Material Safety Data Sheet

PREPARER
PHONE NUMBER OF ... 1-... ...-184
DATE PREPARED.................. 9/8/..

CHEMICAL SALES CORPORATION
1382 Niagara Street
Buffalo, New York 14213
(716) 885-5100

02/12/88

BUELL AUTOMATICS
PO BOX 24969
ROCHESTER, NY 14624

Attention: PURCHASING DEPT
Your Ref: ---
Subject: Material Safety Data Sheet (MSDS):

NEU TRI
DOW
851005

Dear Sir/Madam:

As part of our on-going safety committment, enclosed is a Material Safety Data Sheet (MSDS) covering this transaction.

MSDSs contain product property, hazard, first aid, handling and personal protection recommendations. It is the law, and our objective that users of the material have access to, and an understanding of the MSDS information.

For further safety information or MSDSs, call the undersigned. Previous MSDS mailings should be compared with this current one. Please sign and return the postpaid reply card. This helps us determine how effective our MSDS mailing program is.

Very truly yours;

CHEMICAL SALES CORPORATION

Reply to: Stuart Thompson

Our invoice: 23838

MATERIAL SAFETY DATA SHEET

Stirling Industries Division 1100 University Ave. Rochester, N.Y. 14607

I. IDENTIFICATION AND EMERGENCY INFORMATION

****

PRODUCT NAME: NOCOR 0, 1, 1A, 2, 2B, 3, 4, 11
INFORMATION FURNISHED BY: Stirling Industries Division REV 08/7/92
EMERGENCY TELEPHONE NUMBER: (800) 424-9300 Chemtrec (Inquiries 716-461-8310)
CHEMICAL NAME: Petroleum Lubricating Oil
CAS NUMBER : complex mixture CAS not applicable
D.O.T. HAZARD CLASS: NA
D.O.T. I.D. NUMBER: NA
LABELING: NA
MISCELLANEOUS: HMIS Code - Health -1; Fire - 1; Reactivity - 0

II. PHYSICAL DATA

****

BOILING POINT: IBP> 200 C
APPEARANCE: Clear liquid slight amber or yellow color ODOR: Bland petroleum type
SPECIFIC GRAVITY:(68 deg F) 0.8494-0.9506
VAPOR DENSITY (AIR=1): <5
EVAPORATION RATE: nil
VAPOR PRESSURE: less than 0.01 mmHg @ 20 C
SOLUBILITY IN WATER: Nil
VISCOSITY: 45-180 SUS @ 100F
POUR,CONGEALING OR MELTING POINT: -20 F
pH: essentially neutral
PERCENT VOLATILE BY VOL.:Nil from open container after 4 hrs @ 100 F

III. INGREDIENTS

****

Lubricating oil base stocks.		80-95%
Sulfurized animal fat	CAS# 68991-70-8	5-20%

IV. FIRE AND EXPLOSION HAZARD DATA

****

FLASH POINT (MINIMUM):>265 F (COC)
EXPLOSIVE LIMITS: (APPROX. % BY VOLUME IN AIR) Unkown
EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES: Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable , depending on size or potential size of fire and circumstances related to the situation.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS: Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING: "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION: THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in a environmentally safe manner in compliance with applicable government regulations.

V. HEALTH HAZARD DATA

****

VARIABILITY AMONG INDIVIDUALS: Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mist or fumes should be minimized.
EFFECTS OF OVEREXPOSURE (Signs and Symptoms of exposure):Prolonged or repeated skin contact may cause skin irritation.
NATURE OF HAZARD:Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis. Product contacting the eyes may cause irritation.
TOXICITY INFORMATION:Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lumgs druing ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.
PRE-EXISTING MEDICAL CONDITION WHICH MAY BE AGGRAVATED BY EXPOSURE: None recognized

REACTIVITY DATA

****

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite. Oxides of carbon, sulfur, phosphorous, calcium and zinc will occur on thermal decomposition.

VII. SPILL OR LEAK PROCEDURES

****

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize skin contact. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas. Assure conformity with applicable governmental regulations.

VIII. SPECIAL PROTECTION INFORMATION

****

VENTILATION:Use local exhaust to capture vapor, mist, or fumes, if necessary. Provide greater than 60 feet per minute hood face velocity for confined spaces. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Use explosion-proof equipment. No smoking or open lights.
RESPIRATORY PROTECTION: Normally not needed at ambient temperatures. Use supplied-air respiratory protection in confined or enclosed spaces, if needed.
PROTECTIVE GLOVES: Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.
EYE PROTECTION: Use splash goggles or face shield when eye contact may occur.
OTHER PROTECTIVE EQUIPMENT: Use chemical-resistant gloves, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

IX. SPECIAL PRECAUTIONS

****

WORK PRACTICES/ENGINEERING CONTROLS: Keep containers closed when not in use. Do not handle or store near heat, sparks, flame or strong oxidants.
PERSONAL HYGIENE: Minimize breathing vapors, mist or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing. Cleanse skin thoroughly after contact, before breaks and meals and at end of work period . Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

X. EMERGENCY AND FIRST AID PROCEDURES

****

EYE CONTACT: If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.
SKIN CONTACT: In case of skin contact, remove any contaminated clothing and wash skin with soap and water.
INHALATION: Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from product. Immediately remove from exposure and call a physician. If breathing is irregular or has stopped, start resuscitation; administer oxygen,if available. If overexposed to oil mist, remove from further exposure until excessive oil mist condition subsides.
INGESTION: If ingested, call a physician immediately.

XI. TRANSPORTATION INFORMATION

****

Transportation Incident Information : For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation regulations.

The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of seller's knowledge. However, since the conditions of handling and use are beyond our control, seller makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy or completeness of such data or the results to be obtained from use thereof. Further, seller assumes no responsibiltiy for injury to buyer or to third persons or for damage to any property. Buyer assumes all such risks, including but not limited to compliance of user with all applicable Federal, State and local laws and regulations. Further, nothing contained herein is to be construed as a recommendation for use in violaton of any patent or applicable laws and regulatins.

J. T. BAKER MSDS
MSDS for TRICHLOROETHYLENE

716-885-5100

Chemical Sales Corp. 1382 Niagara St. Buffalo, NY

Site Specific Information

No SITE SPECIFIC INFORMATION has been entered for this chemical

1 - PRODUCT IDENTIFICATION

PRODUCT NAME: TRICHLOROETHYLENE
COMMON SYNONYMS: TRICHLOROETHENE; ETHINYL TRICHLORIDE; ACETYLENE TRICHLORIDE; TCE
CHEMICAL FAMILY: CHLORINATED HYDROCARBONS
FORMULA: C2HCL3
FORMULA WT.: 131.40
CAS NO.: 79-01-6
NIOSH/RTECS NO.: KX4550000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 9464, 9474, 9454, 9473, 9455, 9458, 5376

CHEMTREC # (800) 424-9300
NATIONAL RESPONSE CENTER # (800) 424-8802
J. T. BAKER INC.
222 RED SCHOOL LANE
PHILLIPSBURG, NJ 08865
24-HOUR EMERGENCY TELEPHONE -- (201) 859-2151

EFFECTIVE: 05/01/89 ISSUED: 01/06/90
REVISION #05

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* SYSTEM

HEALTH	-	3	SEVERE (CANCER CAUSING)
FLAMMABILITY	-	1	SLIGHT
REACTIVITY	-	2	MODERATE
CONTACT	-	2	MODERATE

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

WARNING

CAUSES IRRITATION. HARMFUL IF SWALLOWED OR INHALED. HEAT MAY CAUSE

MATERIAL SAFETY DATA SHEET

Stirling Industries Division 1100 University Ave. Rochester, N.Y. 14607

I. IDENTIFICATION AND EMERGENCY INFORMATION

****

PRODUCT NAME: NOCOR 60 REV 08/7/92
INFORMATION FURNISHED BY: Stirling Industries Division
EMERGENCY TELEPHONE NUMBER: (800) 424-9300 Chemtrec (Inquiries 716-461-8310)
CHEMICAL NAME: Petroleum Lubricating Oil
CAS NUMBER : complex mixture CAS not applicable
D.O.T. HAZARD CLASS: NA
D.O.T. I.D. NUMBER: NA
LABELING: NA
MISCELLANEOUS: HMIS Code - Health -1; Fire - 1; Reactivity - 0

II. PHYSICAL DATA

****

BOILING POINT: IBP> 200 C
APPEARANCE: Clear liquid slight amber or yellow color ODOR: Bland petroleum type
SPECIFIC GRAVITY:(68 deg F) 0.950
VAPOR DENSITY (AIR=1): <5
EVAPORATION RATE: nil
VAPOR PRESSURE: less than 0.01 mmHg @ 20 C
SOLUBILITY IN WATER: Nil
VISCOSITY: 190 SUS @ 100F
pH: essentially neutral
PERCENT VOLATILE BY VOL.:Nil from open container after 4 hrs @ 100 F

III. INGREDIENTS

****

Lubricating oil base stocks.		>60%
Sulfurized animal fat	CAS# 68991-70-8	<40%

IV. FIRE AND EXPLOSION HAZARD DATA

****

FLASH POINT (MINIMUM):>265 F (COC)
EXPLOSIVE LIMITS: (APPROX. % BY VOLUME IN AIR) Unkown
EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES: Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable , depending on size or potential size of fire and circumstances related to the situation.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS: Fumes, smoke, carbon monoxide, sulfur oxides aldehydes and other decomposition products, in the case of incomplete combustion.

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VARIABILITY AMONG INDIVIDUALS: Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mist or fumes should be minimized.
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****

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite. Oxides of carbon, sulfur, phosphorous, calcium and zinc will occur on thermal decomposition.

VII. SPILL OR LEAK PROCEDURES

****

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Provide greater than 60 feet per minute hood face velocity for confined spaces. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Use explosion-proof equipment. No smoking or open lights.
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IX. SPECIAL PRECAUTIONS

****

WORK PRACTICES/ENGINEERING CONTROLS: Keep containers closed when not in use. Do not handle or store near heat, sparks, flame or strong oxidants.
PERSONAL HYGIENE: Minimize breathing vapors, mist or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing. Cleanse skin thoroughly after contact, before breaks and meals and at end of work period . Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

X. EMERGENCY AND FIRST AID PROCEDURES

****

EYE CONTACT: If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.
SKIN CONTACT: In case of skin contact, remove any contaminated clothing and wash skin with soap and water.
INHALATION: Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from product. Immediately remove from exposure and call a physician. If breathing is irregular or has stopped, start resuscitation; administer oxygen,if available. If overexposed to oil mist, remove from further exposure until excessive oil mist condition subsides.
INGESTION: If ingested, call a physician immediately.

XI. TRANSPORTATION INFORMATION

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Transportation Incident Information : For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation regulations.

The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of seller's knowledge. However, since the conditions of handling and use are beyond our control, seller makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy or completeness of such data or the results to be obtained from use thereof. Further, seller assumes no responsibiltiy for injury to buyer or to third persons or for damage to any property. Buyer assumes all such risks, including but not limited to compliance of user with all applicable Federal, State and local laws and regulations. Further, nothing contained herein is to be construed as a recommendation for use in violaton of any patent or applicable laws and regulatins.

HEALTH & SAFETY PLAN

APPENDIX B

ONSITE SAFETY MEETING FORMS

Stantec

FIELD LEVEL RISK ASSESSMENT (FIT FOR DUTY), 1 DAY – RMS 2

Project:	Buell Automatics	Project No:	190500033
Client:	Buell Automatics		
Location:	385 Buell Road, Gates, New York		
Start Date:			

Work Description **Provide a general description of the work to be conducted.**

Documentation and Procedure Review

1.	Risk Management Strategy (RMS1) form and/or Site Specific Health and Safety Plan signed and reviewed?	☐ Yes ☐ **No***
2.	Emergency Response Plan reviewed?	☐ Yes ☐ **No*** ☐ N/A
3.	Tested two-way communications (cell phone, satellite phone) and security measures?	☐ Yes ☐ **No***
4.	Attended Client Site Health and Safety meeting?	☐ Yes ☐ **No*** ☐ N/A
5.	Conducted Stantec site safety meeting with all workforces?	☐ Yes ☐ **No*** ☐ N/A
6.	Are there any new or unexpected hazards not identified in the RMS1/HASP? *If yes, include in the Job Safety Analysis (JSA).*	☐ Yes ☐ No
7.	Working alone or remote work? *If yes, complete call in/out process – Safe Work form must be completed.*	☐ Yes ☐ No

Notifications and Permits

8.	Are work permits required for this site? *If yes, have they been completed and submitted as required?*	☐ Yes ☐ No ☐ Yes ☐ **No***
9.	Are utility locates required for this site? *If yes, have they been completed and reviewed?*	☐ Yes ☐ No ☐ Yes ☐ **No***
10.	Does the Client require any notification prior to starting the work? *If yes, has the notification been provided?*	☐ Yes ☐ No ☐ Yes ☐ **No***

***Contact your Project Manager immediately.**

Personal Protective Equipment **List specific PPE as needed. Verify type and inspect condition.**

☐ Head Protection Type: ____	☐ Hearing Protection: ____	☐ Gloves Type: ____
☐ Foot Protection Type: ____	☐ Respiratory Protection: ____	☐ Water Safety Gear: ____
☐ Eye Protection Type: ____	☐ Fire Retardant Coveralls: ____	☐ ____
☐ High Visibility Vest: ____	☐ Fall Protection: ____	☐ ____

Tools and Equipment **List specific equipment to be used. Verify type and inspect condition.**

☐	☐	☐
☐	☐	☐

FIELD LEVEL RISK ASSESSMENT (FIT FOR DUTY), 1 DAY – RMS 2

Daily Tailgate Discussions/Subcontractor Input

Start	Time:	Weather:
Mid-Day	Time:	Weather:
Post-Day	Time:	Weather:

I know the hazards:

By signing here, you are stating the following:

1. I have been involved in the Job Safety Analysis and understand the hazards and risk control actions associated with each task I am about to perform.
2. I understand the permit to work requirements applicable to the work I am about to perform (if it includes permitted activities).
3. I am aware that no jobs or work (that is not risk-assessed) is to be performed.
4. I am aware of my obligation to "**Stop Work**" (*See Stop Work Section).*

I arrived and departed fit for duty:

5. I am physically and mentally fit for duty.
6. I am not under the influence of any type of medication, drugs or alcohol that could affect my ability to work safely.
7. I am aware of my responsibility to bring any illness, injury (regardless of where or when it occurred) or fatigue issue I may have to the attention of the Crew Lead.
8. I signed out uninjured unless I have otherwise informed the Crew Lead.

Insert fitness level under corresponding time column: Fit for Duty = F Alternate Plan = AP **Team Lead to contact Project Manager for any personnel identified as AP**			
Individual Name/Company Name/Signature	**Time:**	**Time:**	**Time:**

I will STOP the job any time anyone is concerned or uncertain about safety.

I will STOP the job if anyone identifies a hazard or additional mitigation not recorded.

I will be alert to any changes in personnel or their fitness level (AP), conditions at the work site or hazards.

If it is necessary to **STOP THE JOB**, I will reassess the task, hazards and mitigations; and then proceed only when safe to do so.

Conclusion of day: I certify that the planned work activities are completed for the day and all injuries and first aids have been reported via RMS3.

Signature of Crew Lead: ____________________ **Date:** ____________

Stantec

FIELD LEVEL RISK ASSESSMENT (FIT FOR DUTY), 1 DAY – RMS 2

Job Safety Analysis (JSA) **Must be completed for all field activities.**

Basic Job Steps	Potential Hazards	Controls to Reduce or Eliminate Hazard	Person Responsible

Review the hazard categories below and check the mitigation measures applicable to the identified scope of work.

Environmental Hazards

1. Work area clean ☐
2. Material storage identified ☐
3. Dust/Mist/Fume ☐
4. Noise in area ☐
5. Extreme temperatures ☐
6. Spill potential ☐
7. Waste containers needed ☐
8. Waste properly disposed ☐
9. Waste plan identified ☐
10. Excavation permit required ☐
11. Other workers in area ☐
12. Weather conditions ☐
13. MSDS reviewed ☐

Ergonomic Hazards

14. Awkward body position ☐
15. Over extension ☐
16. Prolonged twisting/bending motion ☐
17. Working in a tight area ☐
18. Lift too heavy/awkward to lift ☐
19. Parts of body in line of fire ☐
20. Repetitive motion ☐
21. Hands not in line of sight ☐
22. Working above your head ☐

Access/Egress Hazards

23. Aerial life/Man basket (inspected & tagged) ☐
24. Scaffold (inspected & tagged) ☐
25. Ladders (tied off) ☐
26. Slips & trips ☐
27. Hoisting (tools, equipment) ☐
28. Evacuation (alarms, routes, ph. #) ☐
29. Confined space entry permit required ☐

Overhead Hazards

30. Barricades & signs in place ☐
31. Hole coverings identified ☐
32. Harness/lanyard inspected ☐
33. 100% Tie-off with harness ☐
34. Tie off points identified ☐
35. Falling items ☐
36. Foreign bodies in eyes ☐
37. Hoisting or moving loads overhead ☐

Rigging & Hoisting Hazards

38. Lift study required ☐
39. Proper tools used ☐
40. Tools inspected ☐
41. Equipment inspected ☐
42. Slings inspected ☐
43. Others working overhead/below ☐
44. Critical lift permit ☐

Electrical Hazards

45. GFI test ☐
46. Lighting levels too low ☐
47. Working on/near energized equipment ☐
48. Electrical cords condition ☐
49. Electrical tools condition ☐
50. Fire extinguisher ☐
51. Hot work or electrical permit required ☐

Personal Limitations/Hazards

52. Procedure not available for task ☐
53. Confusing instructions ☐
54. No training for task or tools to be used ☐
55. First time performing the task ☐
56. Micro break (stretching/flexing) ☐
57. Report **all injuries** to your supervisor ☐

It is important that all relevant hazards have plans in place to reduce risk.
Be sure that all associated permits are closed off at the end of the job.

Remember: Stop and Think

Reviewed by Name and Signature: ____

Fit for Duty

Safety is influenced by many factors, but the most important is the health and well-being of Stantec's employees and partners. Physical and mental health are just as important as good tools, good practices, and good job planning.

This card is designed to help you do a quick self-assessment of your physical and mental health. Any concerns resulting from your assessment regarding your ability to carry out your job responsibilities safely and in good health need to be discussed with your supervisor before starting work.

- Am I feeling good today and ready to work at my typical level of physical activity and responsibility?
- Do I have any sprains/strains, areas of weakness or soreness?
- Am I managing multiple sources of stress?
- Am I well hydrated?
- Any physically-demanding activities recently (chores, sports, hobbies)?
- Am I well-rested with a good energy level? When did I eat last?
- Am I taking any medications that can make me drowsy or adversely affect my safe performance?
- Any cuts/scrapes are clean and bandaged?
- Did I remember to bring with me my health maintenance medications (blood pressure, diabetes, cholesterol, heart, etc.)?

If your answers to any of the questions above indicate that you may not be ready to work, contact your supervisor immediately to discuss a plan of action.

LAST-MINUTE RISK ASSESSMENT (LMRA)

1. STOP and Think

2. Look around

Is the work area safe?
Will my work endanger others?
Will other people pose risk?

3. Assess risk

Do I clearly understand the task?
Will lifting or manual handling be required?
Potential for slips, trips, or falls?
Are there driving or vehicle concerns?
Have I considered all underground services?
Moving or pressurized equipment?
What could go wrong?

4. Control risk

What can I do to control hazards?
Do I have the right tools?
Is the SWP (**Safe Work Practice**) appropriate?
Do I have the appropriate PPE?
Are emergency plans in place?

5. Begin/Resume work

If you're unsure, talk to your supervisor.

Are you ready to work safely?

HEALTH & SAFETY PLAN

APPENDIX C

COMMUNITY AIR MONITORING PLAN

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

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

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

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

Community Air Monitoring Plan

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

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

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

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

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

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

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

Particulate Monitoring, Response Levels, and Actions

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

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

HEALTH & SAFETY PLAN

APPENDIX D

JOB SAFETY ANALYSIS (JSA) FORMS

Job Safety Analysis

PROJECT: Buell Automatics – 381 Buell Road, Rochester, NY

TASK: Groundwater Monitoring Activities

***Created by:* A. Glose**	***Date:* July 30, 2015**	***Revision Date:***
Task Element	**Hazard(s)**	**Controls**
1. Mobilization/Preparation – Assemble all necessary tools, equipment, and PPE required to complete the task.	a. Driving Hazards b. Lifting Hazards c. Slip/Trip/Fall	• Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.* • Minimize the weight of any single lift; use two people where necessary; lift with legs and not with back. • Assess ground conditions in and around the wells for slip/trip/fall hazards, biological and chemical hazards, unsafe conditions, traffic hazards, etc. Remove ice on pavement, if applicable, or use salt/sand for traction.
2. Set up necessary traffic control	a. Vehicle Hazards	• Implement traffic control plan such as setting out delineators, construction fence and/or caution tape defining safety area. • Use caution when moving around site, especially around loading dock areas; look both ways before crossing parking lots and/or streets.
3. Open/close monitoring wells	a. Pinch/crush points b. Insects/vegetation c. Inhalation hazard	• Use caution when opening wells and wear proper hand protection. • Watch for insects inside, around and under the well casing, lock and well cap. • Keep face away from wells when opening to avoid vapors; screen the well area with a PID while opening.
4. Gauge water levels and product thickness (where applicable) in wells	a. Back strain b. Inhalation or dermal exposure to chemical hazards c. Repetitive motion	• Use proper lifting techniques and body positioning to avoid injury when lowering the probe into the well. Stantec • Wear proper PPE throughout groundwater gauging, sampling and disposal to avoid exposure to contaminated groundwater. Stantec

5. Purge well	a. Back strain b. Exposure to contaminants c. Electric shock d. Spill or release	• Use proper lifting techniques and body positioning to avoid injury during purging. • Take care to prevent spills or splashing. • Wear proper PPE to avoid exposure to contaminated groundwater. • Thoroughly decontaminate and rinse pump between sampling events by cleaning with an Alconox solution and rinsing thoroughly with de-ionized water. • Inspect all extension cords and pump cords prior to use. • Keep work area clear of tripping and slipping hazards.
6. Transfer of purge water	a. Lifting hazards b. Spill or release	• Wear proper PPE (nitrile gloves) and take care when transferring or disposing of purge water to prevent spills. • Use proper lifting techniques and body positioning when transferring or disposing of purge water.
7. Collect samples in accordance with sampling plan	a. Back strain b. Exposure to contaminants c. Burns or injury from sample preservatives d. Broken bottles e. Slips/trips/falls	• Use proper lifting and bending techniques. Use knee pads or a kneeling pad. • Decontaminate all equipment that might have come in contact with groundwater between each sampling location unless disposable by cleaning with an Alconox solution and rising with de-ionized water. • Wear proper PPE and avoid spills when filling sample bottles. Handle with care to avoid breakage. • Keep work area clear of tripping or slipping hazards. Stantec • Fill sample containers from pump discharge slowly and over a bucket (when appropriate e.g. VOA's) to eliminate potential spills and avoid breathing vapors. • Keep samples stored in proper containers at correct temperature and away from work area. • Be careful when handling bottles, especially glass bottles and those with preservatives. Wear cut resistant gloves (Kevlar) and chemical resistant gloves (Nitrile) when handling glass containers or broken glass.

8. Clean up groundwater sampling area/demobilize	a. Traffic hazards b. Lifting hazard c. Equipment hazards	• Use proper lifting techniques to load coolers and equipment onto vehicle. • Ensure all equipment has been decontaminated. • Ensure no equipment or trash is left behind • Visually inspect each monitoring well to ensure it is closed properly • Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.*

Training Requirements: **HAZWOPER 40-hr and 8-hr Refresher**	**Personal Protective Equipment (PPE) Requirements:** Wear minimum PPE level appropriate for task. Steel-toed boots, hard hat, gloves, and Safety Glasses required for ALL tasks.

Remarks: Weather conditions (heat, cold, rain, and lightning) must also be considered prior to and during groundwater monitoring activities.

Job Safety Analysis

PROJECT: Buell Automatics – 381 Buell Road, Rochester, NY

TASK: Indoor, Outdoor, and Sub-Slab Vapor Sampling

***Created by:* A. Glose**	***Date:* July 30, 2015**	***Revision Date*:**
Task Element	**Hazard(s)**	**Controls**
1. Mobilization/Preparation – Assemble all necessary tools, equipment, and PPE required to complete the task.	a. Driving Hazards b. Lifting Hazards c. Slip/Trip/Fall	• Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.* • Minimize the weight of any single lift; use two people where necessary; lift with legs and not with back. • Assess ground conditions in and around the sampling locations. Interior floors of building are known to be slick with cutting oil. Wear boots with proper treads; Remove ice on pavement, if applicable, or use salt/sand for traction.
2. Set up necessary traffic control	a. Vehicle Hazards	• Implement traffic control plan such as setting out delineators, construction fence and/or caution tape defining safety area. • Use caution when moving around site, especially around loading dock areas; look both ways before crossing parking lots and/or streets.
3. Set up and connect vapor sampling equipment (Summa canisters, connectors, tubing, valves, and fittings)	a. Slip/Trip/Fall b. Pinch points c. Back strain and repetitive motion d. Chemical hazards e. Vapor inhalation f. Heat/Cold stress	• Interior floors of building are known to be slick with cutting oil; wear boots with proper treads • Stand upwind to avoid exposure whenever possible • Use proper lifting techniques and tools • Avoid twisting back during the operation • Adhere to applicable work plan • Wear proper PPE for inside and outside work
4. Collect vapor samples	a. Slip/Trip/Fall b. Exposure to contaminants (inhalation,	• Follow equipment-specific operation instructions

	dermal contact) c. Noise f. Heat/Cold stress	• Keep work area tidy and free of loose equipment. • Wear PPE in accordance with HASP (including ear protection as necessary) • Wear proper PPE for inside and outside work
5. Clean up sampling area/demobilize	a. Traffic hazards b. Lifting hazard c. Equipment hazards	• Use proper lifting techniques to load samples and equipment onto vehicle. • Ensure no equipment or trash is left behind • Visually inspect sub-slab points to ensure they are closed properly, if applicable • Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.*
Training Requirements: **HAZWOPER 40-hr and 8-hr Refresher**	**Personal Protective Equipment (PPE) Requirements:** Wear minimum PPE level appropriate for task. Steel-toed boots, hard hat, gloves, and Safety Glasses required for ALL tasks.	
Remarks: Assess risks of working in various environments – inside Buell building, outside, neighboring businesses		

Job Safety Analysis

PROJECT: Buell Automatics – 381 Buell Road, Rochester, NY

TASK: Soil Excavation Activities

***Created by:* A. Glose**	***Date:* July 30, 2015**	***Revision Date*:**
Task Element	**Hazard(s)**	**Controls**
1. Mobilization/Preparation – Assemble all necessary tools, equipment, and PPE required to complete the task. Schedule subcontractor services and utility mark outs.	a. Driving Hazards b. Lifting Hazards c. Slip/Trip/Fall d. Electrical Shock	• Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.* • Minimize the weight of any single lift; use two people where necessary; lift with legs and not with back. • Assess ground conditions in and around the excavation area. Interior floors of building are known to be slick with cutting oil. Wear boots with proper treads; Remove ice on pavement, if applicable, or use salt/sand for traction. • Verify that utility mark outs have been completed
2. Obtain sub-contractor equipment maintenance records prior to commencing work.	a. Improper equipment maintenance, which can cause equipment failure and possible personal injury.	• Verify records in possession are for equipment on site. • Verify maintenance is current.
3. Set up necessary traffic control	a. Vehicle Hazards	• Implement traffic control plan such as setting out delineators, construction fence and/or caution tape defining safety area. • Use caution when moving around site, especially around loading dock areas; look both ways before crossing parking lots and/or streets.
4. Set up exclusion zone(s), stockpile area and establish work areas/heavy equipment pathways.	a. Injury or exposure to public or other onsite personnel b. Slip/Trip/Fall c. Onsite vehicular accident with heavy equipment	• Set up exclusion zones. • Set up clear walking paths between workstations. • Use safety tape, snow fence and delineators.

5. Commence excavation.	a. Heat or cold exposure b. Exposure to chemical hazards c. Hitting an underground or overhead utility d. Flammable or oxygen-deficient atmosphere from accumulated vapors e. Slip/trip/fall f. Side wall cave-in g. Equipment failure h. Noise	• Monitor weather conditions and take breaks as needed for cold or hot weather. Stay hydrated. • Conduct air monitoring as outlined in Section 6.1 of this HASP. Include Lower Explosive Limit (LEL) and oxygen monitoring. If >10% LEL or O2 < 19.5%, discontinue work or ventilate area with explosion-proof equipment. • Have appropriate respirator with combination organic vapor/P-100 cartridges readily available. • Maintain required trench/excavation setbacks for workers and equipment and monitor stability of sidewalls and surrounding ground conditions. • Keep work area clear of tripping or slipping hazards. • Perform periodic visual inspections of heavy equipment and keep it at least 5 feet from trench/excavation edge, or one foot away from the edge for every foot of depth if greater than 5 feet deep. • Perform necessary soil classification. • Instruct subcontractor to slope/bench walls or shore excavation to prevent cave-in. • Instruct subcontractor to keep all spoils > 2 ft from excavation edge. • Keep excavation entry controlled and equipped with required ladders and crosswalks. • Suppress odors and vapors as necessary as discussed in Section 6.2 of this HASP.
6. Collect samples in accordance with sampling plan, as required.	a. Injury from heavy equipment b. Exposure to site contaminants	• Stay out of excavation, (collect samples from excavator bucket). • Use agreed-upon hand signals with heavy equipment operators. • Monitor air around excavation in accordance with Section 6.1 of this HASP. • Have appropriate respirator with combination organic vapor/P-100 cartridges readily available.

7. Store excavated materials properly in accordance with site-specific requirements.	a. Exposure to public b. Traffic hazard c. Improper storage or disposal d. Ground stability / Overturn e. Cave-ins, slides; swinging into co-workers or other equipment f. Personal injury g. Equipment damage	• Monitor air around excavation in accordance with Section 6.1 of this HASP. • Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of working location, readily available. • Have proper storage containment and labeling available onsite. • Place materials in isolated location away from traffic and other site functions. • Stockpile excavated materials on suitable plastic or in appropriately designed container. Cover with plastic and barricade access to waste in accordance with local regulations. • Suppress odors and vapors as discussed in Section 6.2 of this HASP. • Coordinate proper disposal offsite (where applicable). • Use agreed-upon hand signals and maintain eye contact with equipment operators. Stay out of the swing radius. • At the end of the day, flatten top of the stockpile, remove ruts and ensure pile is sloped for easy access of ground crew when covering and uncovering the pile.
8. Backfill trench/excavation.	a. Heavy equipment hazards b. Sidewall collapse c. Future damage or accidents resulting from subsidence.	• Use agreed-upon hand signals with heavy equipment operators. • Compact soils to meet specifications. • Maintain eye contact with equipment operators, check blind spots. • Monitor air around trench/excavation in accordance with Section 6.1 of this HASP. • Have appropriate respirator with combination organic vapor/P-100 cartridges readily available.
9. Clean up excavation area and sampling area/demobilize	a. Traffic hazards b. Lifting hazard	• Use proper lifting techniques to load coolers and equipment onto vehicle. • Ensure all equipment has been decontaminated.

	c. Equipment hazards	Ensure no equipment or trash is left behind • Visually inspect each and every trench/excavation. • If trench/excavation is left open overnight, cover completely with trench-plate or completely surround the trench/excavation with delineators and snow fence. • Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.*

Training Requirements: **HAZWOPER 40-hr and 8-hr Refresher**	**Personal Protective Equipment (PPE) Requirements:** Wear minimum PPE level appropriate for task. Steel-toed boots, hard hat, gloves, and Safety Glasses required for ALL tasks.

Remarks: Excavation activities (operating excavator, etc.) are expected to be completed by subcontractor. Stantec staff members are <u>not</u> to enter an excavation. Soil sampling will be taken from the excavator bucket.

Job Safety Analysis

PROJECT: Buell Automatics – 381 Buell Road, Rochester, NY

TASK: Soil Sampling

***Created by:* A. Glose**	***Date:* July 30, 2015**	***Revision Date:***
Task Element	**Hazard(s)**	**Controls**
1. Mobilization/Preparation – Assemble all necessary tools, equipment, and PPE required to complete the task.	a. Driving Hazards b. Lifting Hazards c. Slip/Trip/Fall	• Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.* • Minimize the weight of any single lift; use two people where necessary; lift with legs and not with back. • Assess ground conditions in and around the sampling area for slip/trip/fall hazards, biological and chemical hazards, unsafe conditions, traffic hazards, etc. Remove ice on pavement, if applicable, or use salt/sand for traction.
2. Set up necessary traffic control	a. Vehicle Hazards	• Implement traffic control plan such as setting out delineators, construction fence and/or caution tape defining safety area. • Use caution when moving around site, especially around loading dock areas; look both ways before crossing parking lots and/or streets.
3. Collect samples in accordance with sampling plan.	a. Back strain b. Inhalation or dermal exposure to chemical hazards c. Slip/Trip/Fall d. Injury from broken sample bottle (cuts or acid burn)	• Perform air monitoring in accordance with Section 6.1 of this HASP as applicable • Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available. • Use proper lifting techniques. • Inspect sample containers prior to opening/using them. Keep samples stored in proper containers, at correct temperature, and away from work area. Handle bottles carefully.
4. Clean up sampling	a. Traffic hazards	• Use proper lifting techniques to load samples and

area/demobilize	b. Lifting hazard c. Equipment hazards	equipment onto vehicle. • Ensure no equipment or trash is left behind • Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.*
<u>Training Requirements:</u> **HAZWOPER 40-hr and 8-hr Refresher**	**<u>Personal Protective Equipment (PPE) Requirements:</u>** Wear minimum PPE level appropriate for task. Steel-toed boots, Hard hat, gloves, and Safety Glasses required for ALL tasks.	
Remarks: Weather conditions (heat, cold, rain, and lightning) must also be considered prior to and during soil sampling activities.		

Job Safety Analysis

PROJECT: Buell Automatics – 381 Buell Road, Rochester, NY

TASK: Fermenting of injection fluid used for Enhanced In-Situ Bioremediation (EISB)

***Created by:* B. Haravitch**	***Date:* Feb. 03, 2015**	***Revision Date:***
Task Element	**Hazard(s)**	**Controls**
1. Mobilization/Preparation – Assemble all necessary tools, equipment, and PPE required to complete the task. Schedule subcontractor services.	a. Driving Hazards b. Lifting Hazards c. Slip/Trip/Fall	a. Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.* b. Minimize the weight of any single lift; use two people where necessary; lift with legs and not with back. c. Assess ground conditions in and around the fermentation area in the building. Interior floors of building are known to be slick with cutting oil. Wear boots with proper treads; Remove ice on pavement, if applicable, or use salt/sand for traction.
2. Fermenting – Add contents to fermentation totes and mix.	a. Lifting Hazards b. Electrical Shock c. Power Tool Hazards	a. When adding Guar gum to the totes use caution when lifting. Use a scooping device if necessary. b. Inspect all extension cords and pump cords prior to use. Confirm the presence of GFIs prior to connecting to a circuit. c. Use power tools with caution and inspect prior to use.

Training Requirements:

HAZWOPER 40-hr and 8-hr Refresher

Personal Protective Equipment (PPE) Requirements:

Wear minimum PPE level appropriate for task. Steel-toed boots, Hard hat, gloves, and Safety Glasses required for ALL tasks.

Remarks: All tote modification (i.e., the cutting of holes, etc) is expected to be performed by subcontractor.

Job Safety Analysis

PROJECT: Buell Automatics – 381 Buell Road, Rochester, NY

TASK: Injection of fluid used for Enhanced In-Situ Bioremediation (EISB)

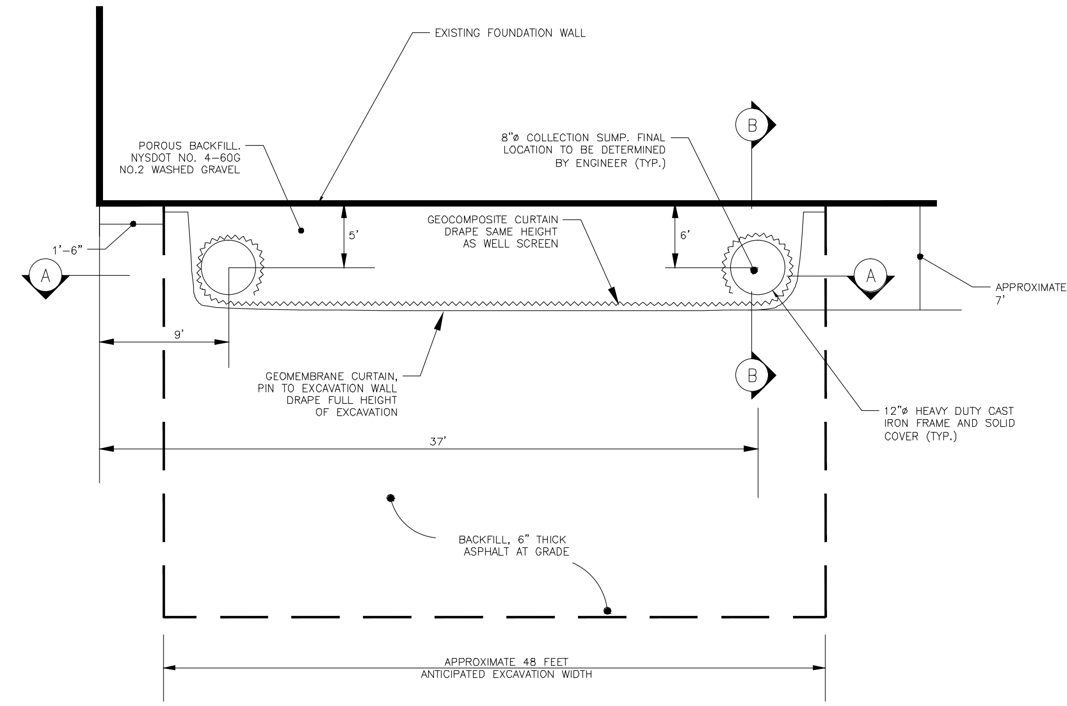
***Created by:* B. Haravitch**	***Date:* Feb. 03, 2015**	***Revision Date:***
Task Element	**Hazard(s)**	**Controls**
1. Mobilization – Assemble all necessary tools, equipment, and PPE required to complete the task. Schedule subcontractor services.	a. Driving Hazards b. Lifting Hazards c. Slip/Trip/Fall	a. Follow precautions outlined in section 4.2.3 of this HASP – *Driving and Roadway Hazards.* b. Minimize the weight of any single lift; use two people where necessary; lift with legs and not with back. c. Assess ground conditions at the site. Interior floors of building are known to be slick with cutting oil. Wear boots with proper treads; Remove ice on pavement, if applicable, or use salt/sand for traction.
2. Preparation – Fill reservoir tank with organic acids and water.	a. Traffic Hazards b. Cold Weather Hazards c. Electrical Shock d. Lifting Hazards	a. When running water hose from hydrant to tank, use extreme caution of traffic. Wear proper reflective vest. b. Wear warm gloves covered with water repellent nitrile gloves when connecting hoses together and to the hydrant, and when filling the tank. High winds and cold water can make for dangerous conditions. Avoid getting wet. c. Inspect heat tape at hydrant, inspect all extension cords and pump cords prior to use. Confirm the presence of GFIs prior to connecting to a circuit. d. When lifting buckets of organic acids into the reservoir tank use caution. Lift with legs and not with back.
3. Injection	a. Traffic Hazards b. High Water Pressure Hazards c. Slip/Trip/Fall	a. Use caution when running injection hoses across driving paths. Use cones or diversion tactics when necessary. b. Be mindful of injection pressures and all fitting connections to prevent back pressure. c. Assess ground conditions. Wear boots with proper treads, remove ice on pavement or use salt/sand for traction.
4. Over-night heating – use of circulating and heat pumps	a. Electrical Hazards	a. Inspect heat tape at hydrant, inspect all extension cords and pump cords prior to use. Confirm the presence of GFIs prior to connecting to a circuit.

to prevent reservoir tank from freezing overnight.		
5. Demobilization – packing up materials at day's end.	a. Traffic Hazards b. Cold Weather Hazards c. Electrical Shock	a. When coiling water hose from hydrant to tank, use extreme caution of traffic. Wear proper reflective vest. b. Wear warm gloves covered with water repellent nitrile gloves when disconnecting hoses. High winds and cold water can make for dangerous conditions. Avoid getting wet. c. Inspect heat tape at hydrant, inspect all extension cords and pump cords that will remain connected overnight. Confirm the presence of GFIs prior to connecting to a circuit.

Training Requirements: **HAZWOPER 40-hr and 8-hr Refresher**	**Personal Protective Equipment (PPE) Requirements:** Wear minimum PPE level appropriate for task. Steel-toed boots, Hard hat, gloves, and Safety Glasses required for ALL tasks.

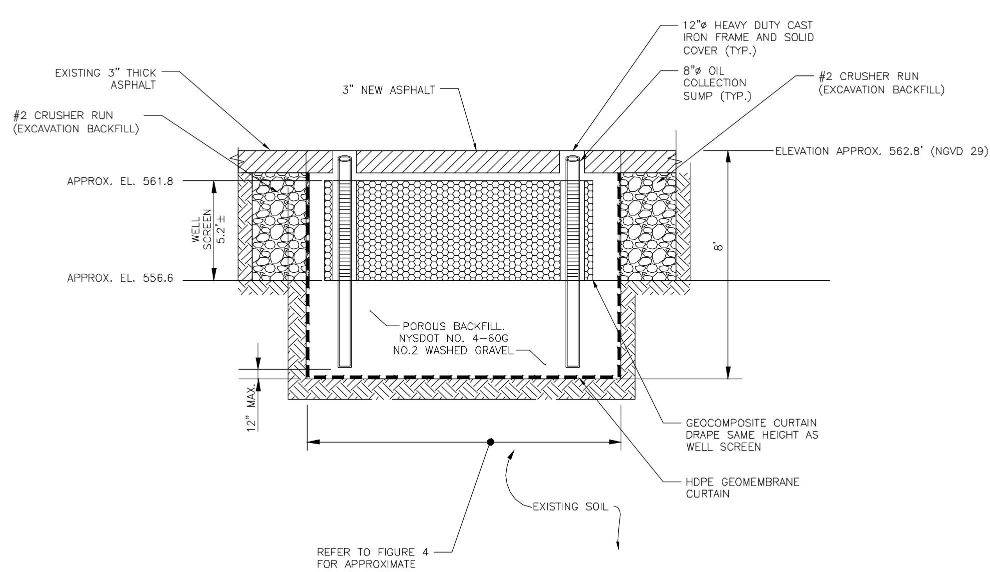
Remarks: It is a good idea to exercise valves during injection to prevent freezing.

APPENDIX G – OIL-COLLECTION SYSTEM PLAN AND DETAILS



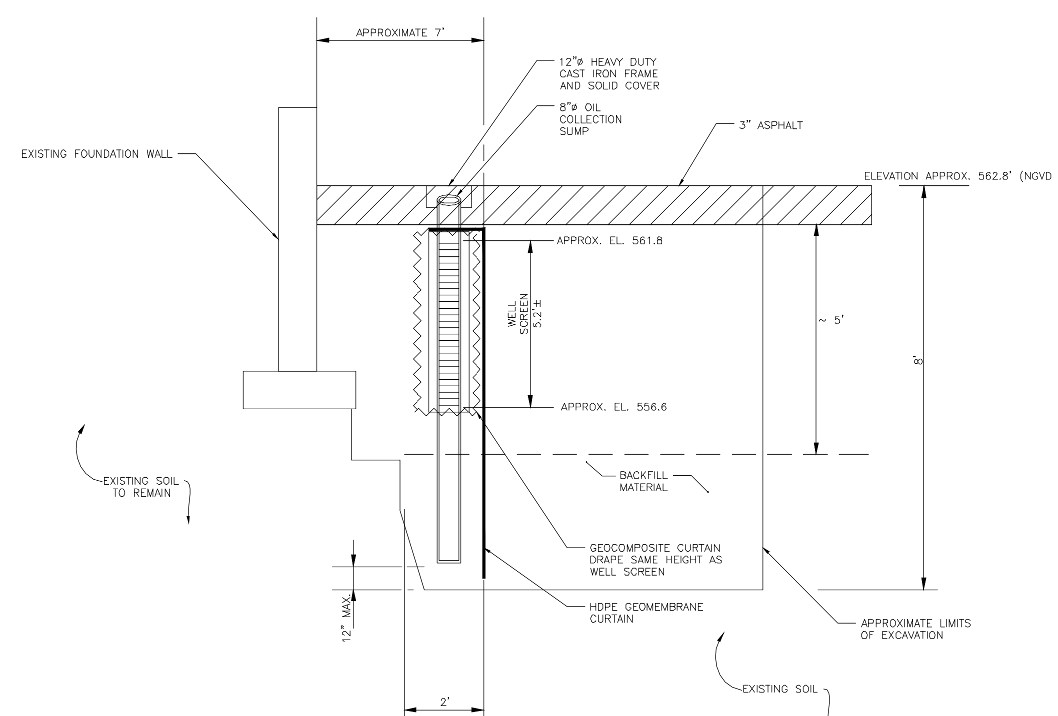
OIL COLLECTION SYSTEM PLAN

SCALE: N.T.S.



SECTION A–A

SCALE: N.T.S.



SECTION B–B

SCALE: N.T.S.

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These documents contain potentially sensitive information and shall only be used for their intended purpose. Once the intended purpose has ceased, the documents shall be destroyed in a secure manner.

Consultants

Legend

Notes

Issued	By	Appd.	YY.MM.DD
RECORD DRAWING	TW	PN/MPS	15.05.07

File Name:	Dwn.	Chkd.	Dsgn.	YY.MM.DD
	APL	TW	TW/BH	15.05.07

Permit-Seal

Client/Project

CONSTRUCTION COMPLETION REPORT
FLDA REMEDIAL EXCAVATION

BUELL AUTOMATICS SITE - BCP SITE NO. C828114
381 BUELL ROAD
GATES, NEW YORK

Title

OIL-COLLECTION SYSTEM
PLAN AND DETAILS
RECORD DRAWING

Project No.	Scale
190500033	AS NOTED

Drawing No.

Figure 9

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2015/05/11 11:28 AM By: Less, Andy

ORIGINAL SHEET - ANSI D

APPENDIX H – QUALITY ASSURANCE PROJECT PLAN

Quality Assurance Project Plan
Site Management Plan
Buell Automatics Site
BCP Site # C828114
381 Buell Road
Gates, New York

October 2015

Prepared for:
New York State Department of
Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414

Prepared on behalf of:
Buell Automatics, Inc.
381 Buell Road
Rochester, NY

Prepared by:
Stantec Consulting Services Inc.
61 Commercial Street
Rochester, New York 14623

October 22, 2015

QUALITY ASSURANCE PROJECT PLAN
SITE MANAGEMENT PLAN
BUELL AUTOMATICS SITE
BCP SITE # C828114
381 BUELL ROAD
GATES, NEW YORK

CERTIFICATION

I, Peter Nielsen, certify that I am currently a NYS registered professional engineer and that this Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

______________________________ ______________________________

Signature Date
Peter Nielsen

Stantec

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1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) is to be used for environmental remediation and related site management activities conducted at the Buell Automatics site located at 381 Buell Road in the Town of Gates, Monroe County, New York (Figure 1). This QAPP presents the policies, organization, objectives, functional activities, and specific quality assurance and quality control activities to ensure the validity of data generated in the completion of environmental remediation and related site management activities. The purpose of this QAPP program is to ensure that all technical data generated are accurate and representative.

Quality assurance (QA) is a management system for ensuring that all information, data, and decisions resulting from environmental remediation and related site management programs are technically sound and properly documented. Quality control (QC) is the functional mechanism through which quality assurance achieves its goals. Quality control programs, for example, define the frequency and methods of checks, audits, and reviews necessary to identify problems and dictate corrective actions to resolve these problems, thus ensuring high quality data. As such, a quality assurance and quality control program pertains to all data collection, evaluation, and review activities which are part of a broader program such as an environmental remediation program.

All QA/QC procedures will be in accordance with applicable professional technical standards, government regulations and guidelines, and specific project goals and requirements. This QAPP has been prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (EPA) Region II guidance documents.

The QAPP incorporates the following activities:

- Sample collection, control, chain-of-custody, and analysis;
- Document control;
- Laboratory instrumentation, analysis, and control; and
- Review of project reports.

Project samples will be collected in the field using standard operating procedures. Field audits may be conducted to verify that proper sampling techniques and chain-of-custody procedures are followed. Field data compilation, tabulation, and analysis will be checked for accuracy. Equipment used to take field measurements will be maintained and calibrated in accordance with established procedures. Records of calibration and maintenance will be kept by assigned personnel. Field testing and data acquisition will be performed following strict guidelines as described herein. Calculations and other post-field tasks will be reviewed by senior project personnel.

Laboratory analysis of all project samples will be performed by an independent laboratory with the experience and certifications appropriate to the analyses to be performed. All standard environmental chemical analyses will be performed by laboratories accredited pursuant to the NYSDOH Environmental Laboratory Accreditation Program (ELAP) for the category of parameters to be analyzed by the laboratory. The specific environmental laboratory or laboratories to be used will be determined at the time the monitoring activities are scheduled.

All standard environmental chemical analyses will be performed with minimum detection and reporting limits that are sufficiently low to allow for comparison of analytical results for each analyte tested to the applicable New York State standard, comparison criterion, or guidance value for that analyte in the medium sampled.

For sampling events and monitoring activities used to collect "documentation samples" as defined in NYSDEC's DER-10 "Technical Guidance for Site Investigation and Remediation" (DER-10), duplicates, replicates, and spiked samples will be used as needed to identify the quality of the analytical data. Results of the laboratory analyses for these samples will be reported using NYSDEC ASP Category B deliverables, and a Data Usability Summary Report (DUSR) will be prepared for analytical results from these monitoring activities. The DUSR will be prepared by an independent consultant with the required experience, in accordance with NYSDEC's "Guidance for the Development of Data Usability Summary Reports," revised 1997, and DER-10. For all other monitoring activities, analyses will be reported using Category A deliverables, and the level of QA/QC will be that level appropriate to support a Category A deliverable. DUSRs will not be prepared for Category A deliverables.

Document control procedures will be used to coordinate the distribution, coding, storage, retrieval, and review of all data collected during all sampling tasks.

1.1 MODIFICATION TO THE QAPP

As the QAPP is intended to be used during the remedial program and site management activities, modifications or updates to it may be needed from time to time. The QAPP may be modified or updated as necessary, and requests for modifications may be initiated by either Buell Automatics, Inc., or NYSDEC.

2.0 PROJECT DESCRIPTION

The Site setting and previous investigation and remedial activities performed at the Site are described in Section 2.0 of the Site Management Plan (SMP).

3.0 PROJECT ORGANIZATION AND RESPONSIBILITY

This QAPP provides for designated qualified personnel to review products and provide guidance on QA matters. This QAPP also outlines the approach to be followed to ensure that products of sufficient quality are obtained. Figure 2 illustrates the QA program organization. This structure will provide for direct and constant operational responsibility, clear lines of authority, and the integration of QA activities. The various QA functions of the project positions are explained in the following subsections.

Project Manager

The project manager will have overall responsibility for ensuring that the project meets the objectives and quality standards as presented in the Remedial Work Plan, the SMP, and this QAPP. He will be responsible for implementing the project and will have the authority to commit the resources necessary to meet project objectives and requirements. The project manager's primary function is to ensure that technical, financial, and scheduling objectives are achieved successfully. The project manager will provide the major point of contact and control for matters concerning the project. In addition, he will be responsible for technical quality control and project oversight.

Team Leaders

The project manager will be supported by a team leader or leaders who will be responsible for leading and coordinating the day-to-day activities of the various resource specialists under their supervision. The team leader is a highly experienced environmental professional who will report directly to the project manager.

Technical Staff

The technical staff (team members) for this project will be drawn from corporate resources and appropriately qualified subcontractors. The technical team staff will be used to gather and analyze data, and to prepare various task reports and support materials. All of the designated technical team members will be experienced professionals who possess the degree of specialization and technical competence required to effectively and efficiently perform the required work.

Project QA Director

The Project QA Director will be responsible for maintaining QA for the project.

Laboratory Director

The laboratory director will be responsible for all analytical work and works in conjunction with the QA unit. He maintains liaison with the QA officer regarding QA and custody requirements.

Laboratory Manager

The laboratory manager will maintain liaison with the laboratory director regarding QA elements of specific sample analyses tasks. He will report to the laboratory director and work in conjunction with the laboratory QA unit.

Laboratory QA Coordinator

The Laboratory QA officer will be responsible for overseeing the QA program within the laboratory and for maintaining all QC documentation. He reports directly to the laboratory director.

Laboratory Staff

Each member of the laboratory staff will perform an assigned QA or analytical function that is pertinent to and within the scope of his or her knowledge, experience, training, and aptitude. An individual will be assigned the responsibility for checking, reviewing, or otherwise verifying that a sample analysis activity has been correctly performed.

Laboratory Facilities

All laboratory work for standard environmental chemical analyses of project samples will be performed in accordance with guidelines established by NYSDEC, NYSDOH, United States Environmental Protection Agency (USEPA), the Water Pollution Control Federation, and/or the American Society for Testing and Materials (ASTM). In case of conflict, these guidelines and protocols will be considered in the order shown (i.e., NYSDEC/ NYSDOH criteria are of primary precedence). In addition, QA and QC programs will be maintained for the instruments and the analytical procedures used.

All standard environmental chemical analyses will be performed by laboratories accredited pursuant to ELAP for the category of parameters to be analyzed by the laboratory. The specific environmental laboratory or laboratories to be used will be determined at the time the monitoring activities are scheduled.

SiREM and The University of Oklahoma will provide specialty genetic and isotopic analytical services for an Enhanced In-Situ Bioremediation (EISB) program in accordance with generally accepted industry standards and guidelines applicable to the methods used.

Laboratory Data Validator

Where a DUSR is to be prepared, the DUSR will be prepared by an independent, third-party data validation consultant with the required experience. Data validation will be performed in accordance with NYSDEC's "Guidance for the Development of Data Usability Summary Reports," revised 1997 and NYSDEC's DER-10 "Technical Guidance for Site Investigation and Remediation."

4.0 QA OBJECTIVES FOR DATA MEASUREMENT

All measurements will be made to ensure that analytical results are representative of the media and conditions measured. Unless otherwise specified, all data will be calculated and reported in units consistent with other organizations who report similar data to allow comparability of databases among organizations.

The key considerations for the QA assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. These characteristics are defined below:

Accuracy: Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

Precision: Precision is the degree of mutual agreement among individual measurements of a given parameter.

Completeness: Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

Representativeness: Representativeness expresses the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Comparability: Comparability expresses the confidence with which one data set can be compared to another.

4.1 GOALS

The QA/QC goal will focus on controlling measurement error within the limits established and will ultimately provide a database for estimating the actual uncertainty in the measurement data.

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and RPD of duplicates/replicates are provided in the referenced analytical procedures. It should be noted that target values are not always attainable. Instances may arise where high sample concentrations, non-homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the laboratory will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

5.0 SAMPLING PROCEDURES

The sampling of various environmental media will be completed as part of the remedial and site management activities.

5.1 SAMPLING PROTOCOL

The following sections outline the sampling procedures for the collection of environmental media samples groundwater, soil, and air.

5.1.1 Groundwater Samples

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. Groundwater sampling events will include quarterly sampling events or a specified time period and then semi-annual events, until an alternate sampling schedule is approved by NYSDEC. If an additional carbon substrate injection associated with the EISB portion of the remedy is required, an additional sampling event or events will be scheduled as needed.

Water and LNAPL levels will be measured at all monitoring wells on the first day of each sampling event. Water and LNAPL levels will be measured from previously surveyed PVC well risers using a pre-cleaned oil/water interface probe with an audible indicator.

Monitoring wells will be purged and sampled in accordance with USEPA Region 2 guidance titled “Ground Water Sampling Procedure Low Stress (Low Flow) Purging And Sampling” dated March 16, 1998 (or as updated by USEPA) using a submersible bladder-pump equipment. A copy of the guidance document is presented in Appendix A.

General water quality field parameters (pH, temperature, specific conductance, oxidation reduction potential, and dissolved oxygen) will be monitored during purging using a flow-through cell, and purging will continue until stabilization is achieved, if possible. During sampling rounds where metals are to be sampled for, the field parameter of turbidity will also be monitored for to ensure turbidities are less than 50 nephelometric turbidity units (NTUs). Should this prove unobtainable, Stantec will discuss methods of reducing sample turbidity with the NYSDEC (e.g., field filtering).

Table 1 summarizes the field and laboratory analytical parameters to be evaluated and the analytical methods to be used for groundwater sampling events.

Analyses will be conducted as per the most recent NYSDEC Analytical Services Protocol (ASP). For sampling events and monitoring activities used to collect documentation samples (as defined in NYSDEC DER-10), duplicates, replicates, and spiked samples will be used as needed to identify the quality of the analytical data. It is currently anticipated that the only documentation samples will be those collected during the last semi-annual event. Results of the laboratory analyses for these samples will be reported using NYSDEC ASP Category B deliverables, and a Data Usability Summary Report (DUSR) will be prepared for analytical results from these monitoring activities. The DUSR will be prepared by an independent consultant with the required experience, in accordance with NYSDEC's "Guidance for the Development of Data Usability Summary Reports," revised 1997 and NYSDEC's DER-10 "Technical Guidance for Site Investigation and Remediation." For all other monitoring activities, analyses will be reported using Category A deliverables, and the level of QA/QC will be that level appropriate to support a Category A deliverable. DUSRs will not be prepared for Category A deliverables. Analysis for tentatively identified compounds (TICs) will not be performed on samples that are not documentation samples.

Specialty microbial genetic testing to be performed in connection with the groundwater monitoring program during two quarterly events in Fall 2015 and Spring 2016 to assess the performance of the EISB component of the remedy will be performed by SiREM of Guelph, Ontario, Canada. Specialty carbon isotope analyses to be performed in connection with the EISB program will be performed by The University of Oklahoma. Microbial genetic analyses and compound-specific carbon isotope analyses will be reported using the standard reporting formats for each lab.

Analytical summary tables will be prepared which summarize the data and compare them to NYSDEC Class GA Water Quality Standards and Guidance Values for groundwater.

Groundwater samples will be containerized for the type of analysis planned for the well using the container requirements as shown on Table 2. The sample containers will be labeled in accordance with Section 6.2. Sample handling, packaging and shipping procedures are presented in Section 6.3.

5.1.2 Air Monitoring Programs

Indoor air monitoring (IAM) and soil vapor intrusion (SVI) assessment sampling programs will be conducted in accordance with applicable technical requirements specified in "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH, October 2006, and updates) for the purposes of monitoring the potential for intrusion of chlorinated VOC contaminants into the Buell Automatics building and the buildings at the adjacent 383 and 395 Buell Road properties.

Air monitoring samples will be collected early in the heating season (typically mid-November to mid-December). If necessary based on the results, a NYSDEC approved Corrective Measures Plan may be developed and implemented in time to allow for additional air sampling by the end of the same heating season.

Sub-slab vapor, indoor air and outdoor air sampling will follow the protocols outlined in Sections 2.7.1, 2.7.3 and 2.7.4, respectively, of the NYSDOH Guidance document. Prior to sampling, leak testing procedures using a tracer gas will be completed at all sub-slab vapor sampling locations to verify the integrity of the soil vapor probe seal. In addition, to ensure that a proper seal is maintained throughout the entire sampling period, tracer gas readings will also be taken at the end of the sampling period. Indoor air samples will be collected at a height of three to five ft. above ground surface to represent the breathing zone. Samples will be collected over an 8-hour period using 6-liter SUMMA® canisters. The canisters will be equipped with flow controllers and vacuum gauges. Airflow into the canisters will be controlled and monitored in accordance with NYSDOH's guidance criteria of 0.2 liters/minute for maximum flow rate. Vacuum levels will be recorded at regular intervals during the sampling event. Individual certification will be used by the project laboratory providing the sampling equipment to confirm that sample canisters and flow controllers are clean before sampling.

Samples will be submitted for analysis to an ELAP laboratory certified by the State of New York for the analyses to be performed. Samples will be analyzed by EPA method TO-15 for the standard list of TO-15 VOC analytes for which it routinely maintains calibration. The analyte list will include at a minimum the following chlorinated VOCs: carbon tetrachloride, perchloroethene (PERC), trichloroethene (TCE), 1,1,1-trichloroethane (TCA), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-DCE, 1,1-DCE, 1,1-dichloroethane (1,1-DCA), 1,2-DCA, vinyl chloride, and chloroethane. The laboratory will seek to attain detection limits of 1.0 micrograms per cubic meter (µg/m3), which are comparable to those typically achieved for indoor air samples. However, depending upon contaminant levels, detection limits may be higher in sub-slab vapor samples. For indoor air samples, detection limits for all compounds except for TCE, vinyl chloride, and carbon tetrachloride will be 1.0 µg/m3; the detection limits for TCE, vinyl chloride, and carbon tetrachloride will be 0.25 µg/m3.

The specific air monitoring programs are discussed further below:

5.1.2.1 Indoor Air Monitoring at Adjacent Properties

An indoor air monitoring program will be conducted for the aScribe Laser and Best Western Inn buildings located at 383 and 395 Buell Road. Each event will entail collection of one outdoor ambient air sample and one indoor air sample. The indoor sampling point will be changed periodically. Should the Best Western Inn and the aScribe Laser Buildings be sampled on the same day, a single outdoor air sample will be collected.

Prior to collecting the air monitoring samples, documentation of the condition of the slab will be performed as appropriate, and cracks that may represent a potential migration pathway for sub-slab vapors will be noted. As practicable, NYSDOH building questionnaire and product inventory forms will be completed. Given that Buell may not own the buildings in question, it is not feasible to include provisions for sealing of cracks or removal of products in the SMP. Therefore, should results of the pre-sampling activities indicate that the utility or validity of the air sampling planned may be in question as a consequence of the presence of cracks or products containing VOCs, the NYSDEC project manager will be contacted for a discussion of the appropriate steps prior to proceeding with the sampling.

With the exception of the last sampling event, the laboratory deliverable will be a NYSDEC ASP Category A deliverable. It is assumed that duplicate samples and DUSRs will not be needed.

For the last sampling round, the laboratory deliverable will be a NYSDEC ASP Category B deliverable. A duplicate sample will be collected and a DUSR will be provided.

5.1.2.2 SVI Assessment Program in the Buell Automatics Building

A pre-sampling building inspection and product inventory will be performed as part of the evaluation of the effectiveness of the SVE system to document the current use and storage of petroleum products and other solvents, cleaners and chemical products that contain VOCs. The pre-sampling inspection will include the identification and documentation of floor penetrations associated with sump and utility features and floor joints, cracks or seams, if any. Photo-ionization detector (PID) readings of VOCs in indoor air will be collected at locations where chemical or petroleum products are stored or used in the building. The NYSDOH "Indoor Air Quality Questionnaire and Building Inventory" form will be used to document the pre-sampling inspection and inventory.

The SVI Assessment sampling events will involve collection of samples of sub-slab vapor and indoor air at existing sample points located in the Buell Building. Outdoor air sampling will be performed at one location on the upwind side of the building at the time of the sampling event to establish background conditions for ambient air. A duplicate indoor air and sub-slab air sample will be collected at one location within the building to be determined at the time of sampling.

Upon completion of the events discussed above, analytical summary tables will be prepared which summarize the data and compare them to the NYSDOH guidance values (October 2006).

The sample containers that will be used are identified in Table 2. The sample containers will be labeled in accordance with Section 6.2. Sample handling, packaging and shipping procedures are presented in Section 6.3.

5.1.3 Other Sampling

Other sampling may be required for excavation monitoring, waste profiling or other activities not specifically foreseen in this QAPP. At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC. Sampling and analytical procedures for those activities will be performed in accordance with NYSDEC's DER-10 Technical Guidance for Site Investigation and Remediation, and this QAPP will be revised or expanded as necessary to include the QA/QC requirements for those activities at the time the notification is submitted to NYSDEC.

5.2 FIELD QUALITY CONTROL SAMPLES

Field quality control samples will consist of trip blanks, field blanks, field duplicates, matrix spikes and matrix spike duplicates, as shown on Table 3. As summarized above, these field quality control samples will be collected only during the last round of sampling for both groundwater monitoring and indoor air sampling.

5.2.1 Field Duplicates

Field quality control samples will be collected to verify reproducibility of the sampling and analytical methods. Field duplicates will be obtained as outlined in Table 3.

5.2.2 Trip Blanks

Trip blanks will be used to assess whether groundwater and sampling containers have been exposed to volatile constituents during sample storage and transport. The trip blanks for water samples will consist of a container filled by the laboratory with analyte-free water. The trip blanks will remain unopened throughout the sampling event and will only be analyzed for volatile organics. The trip blanks will be collected as outlined in Table 3.

5.2.3 Matrix Spike/Matrix Spike Duplicates

Matrix Spike/Matrix Spike Duplicates (MS/MSD) will be obtained to determine if the matrix is interfering with the sample analysis. MS/MSDs will be collected as outlined on Table 3.

5.2.4 Rinsate Blanks

Rinsate blanks will be used to ensure proper decontamination procedures of non-dedicated equipment. Rinse blanks will be collected as outlined in Table 3.

5.2.5 Laboratory Quality Control Checks

Internal laboratory quality control checks will be used to monitor data integrity. These checks include method (equipment) blanks, spike blanks, internal standards, surrogate samples, calibration standards, and reference standards.

5.3 SAMPLE CONTAINERS

The volumes and containers required for the sampling activities are included in Table 2. Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) by the analytical laboratory prior to their use. All bottles are to be prepared in accordance with EPA bottle washing procedures. Containers with preservative will be tagged as such.

5.4 DECONTAMINATION

Dedicated and/or disposable sampling equipment will be used to the extent possible to minimize decontamination requirements and the possibility of cross-contamination.

Split spoon samplers, water level indicators, down hole pumps, and hand augers are examples of small scale sampling equipment that could be used at more than one location. These types of equipment will be decontaminated between locations by using the following decontamination procedures:

- Initial cleaning of any foreign matter with paper towels, if needed;
- Low phosphate detergent wash;
- De-ionized water rinse; and
- Air dry.

Backhoe buckets, drill rigs, augers, and rods are examples of large-scale equipment that could be used at more than one location. These will be decontaminated using high pressure steam prior to initiating the soil boring program. Steam cleaning will be performed in a designated on-site decontamination area. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will not be permitted. Decontamination waste water will be collected in 55-gallon drums.

5.5 LEVELS OF PROTECTION/SITE SAFETY

All sampling will be conducted under a documented Health and Safety Plan. On the basis of air monitoring, the level of protection may be downgraded or upgraded at the discretion of the site safety officer. Crew members will stand upwind of open boreholes or wellheads during the collection of samples, when possible.

All work will initially be conducted in Level D (refer to Site Specific Health and Safety Plan). Air purifying respirators (APRs) will be available if monitoring indicates an upgrade to Level C is appropriate.

6.0 SAMPLE CUSTODY

This section describes standard operating procedures for sample identification and chain-of-custody to be used for all field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during collection, transportation, storage, and analysis. All chain-of-custody requirements comply with standard operating procedures indicated in USEPA and NYSDEC sample-handling protocol.

Sample identification documents must be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field records,
- Sample label,
- Custody seals, and
- Chain-of-custody records.

6.1 CHAIN-OF-CUSTODY

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses.

6.1.1 Sample Labels

Sample labels attached to, or affixed around, the sample container must be used to properly identify all samples collected in the field. The sample labels are to be placed on the bottles so as not to obscure any QA/QC lot numbers on the bottles. Sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the field sampling records or sample logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

6.1.2 Custody Seals

Custody seals are preprinted adhesive-backed seals often with security slots which are designed to break if the seals are disturbed. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before use. On receipt at the laboratory, the custodian must check (and certify, by completing logbook entries) that seals on shipping containers are intact. Strapping tape should be placed over the seals to ensure that seals on shipping containers are not accidentally broken during shipment.

6.1.3 Chain-Of-Custody Record

The chain-of-custody record must be fully completed at least in duplicate by the field technician who has been designated by the project manager as being responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints in the "Remarks" section of the custody record.

6.1.4 Field Custody Procedures

- As few persons as possible should handle samples.
- Sample bottles will be obtained pre-cleaned by the laboratory and shipped to the sampling personnel in charge of the field activities. Coolers or boxes containing cleaned bottles should be sealed with a custody tape seal during transport to the field or while in storage prior to use.
- The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules.
- The sample collector will record sample data in a controlled field notebook and/or on appropriate field sampling records.
- The site team leader will determine whether proper custody procedures were followed during the fieldwork and decide if additional samples are required.

6.2 DOCUMENTATION

6.2.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag fixed to the sample container:

- BU-XX-YY-ZZ-R#
  - BU - This set of initials indicates the Buell Automatics Site project.
  - XX - These initials identify the sample type and location. Actual sample locations will be recorded on the sampling record. Sampling locations may include:
    - MW - Monitoring wells
    - IA – Indoor Air
    - SS – Sub-Slab Air
    - OA – Outdoor ambient air
    - ES – Excavation
  - YY - These initials identify the sample matrix in accordance with the following abbreviations:
    - W – Water Sample
    - S – Soil or Sediment Sample
    - A – Air
  - ZZ – Sub-Sample Type - Field duplicates, rinsate blanks and trip blanks will be assigned unique sample numbers (if applicable):
    - D - Duplicate Sample
    - RB - Rinsate Blank
    - TB - Trip Blank
    - MS/MSD - Matrix Spike/Matrix Spike Duplicate

- R# – Round Number – Samples that will be collected for numerous rounds will be assigned a round number

Each sample will be labeled, chemically preserved, if required, and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection to the extent possible. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers. The sample label will give the following information:

- Name or initials of sampler;
- Date (and time, if possible) of collection;
- Sample number;
- Intended analysis; and
- Preservation performed.

6.2.2 Daily Logs

Daily logs and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project. All daily logs will be kept in a notebook and consecutively numbered. All entries will be made in waterproof ink, dated, and signed. Sampling data will be recorded in the sampling records. All information will be completed in waterproof ink. Corrections will be made according to the procedures given at the end of this section.

6.3 SAMPLE HANDLING, PACKAGING, AND SHIPPING

The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States Department of Transportation (DOT) in the Code of Federal Regulations, 49 CFR 171 through 177.

All chain-of-custody requirements must comply with standard operating procedures in the NYSDEC and USEPA sample handling protocol. Field personnel will make arrangements for transportation of samples to the laboratory. When custody is relinquished to a shipper, field personnel will ensure that the laboratory custodian or project manager is aware of the expected time of arrival of the sample shipment and of any time constraints on sample analysis(es). All samples will be delivered to the laboratory in a timely manner to help ensure that holding times in accordance with NYSDEC ASP are followed.

7.0 CALIBRATION PROCEDURES AND FREQUENCY

All instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references.

7.1 FIELD INSTRUMENTS

A calibration program will be implemented to ensure that routine calibration is performed on all field instruments. Field team members familiar with the field calibration and operations of the equipment will maintain proficiency and perform the prescribed calibration procedures outlined in the Operation and Field Manuals accompanying the respective instruments. Calibration records for each field instrument used on the project will be maintained on-site during the respective field activities and a copy will be kept in the project files.

7.1.1 Portable Total Organic Vapor Monitor

Any vapor monitor used will undergo routine maintenance and calibration prior to shipment to the project site. Daily calibration and instrument checks will be performed by a trained team member at the start of each day. Daily calibrations will be performed according to the manufacturer's specifications and are to include the following:

- Battery check: If the equipment fails the battery check, recharge the battery.
- Gas standard: The gauge should display an accurate reading when a standard gas is used.
- Cleaning: If proper calibration cannot be achieved, then the instrument ports must be cleaned.

7.1.2 pH and Specific Conductance

The following steps should be observed by personnel engaged in groundwater sampling for pH and specific conductance:

- The operation of the instrument should be checked with fresh standard buffer solution (pH 4 and pH 10) prior to each day's sampling.
- The specific conductance meter should be calibrated prior to each sampling event using a standard solution of known specific conductance.

More frequent calibrations may be performed as necessary to maintain analytical integrity. Calibration records for each field instrument used on the project should be maintained and a copy kept in the project files.

7.2 LABORATORY INSTRUMENTS

Laboratory calibration procedures will be consistent with the method used for analysis. The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.

8.0 ANALYTICAL PROCEDURES

8.1 FIELD

On-site procedures for analysis of total organic vapor and other field parameters are addressed in the applicable Work Plan.

8.2 LABORATORY

Specific analytical methods for constituents of interest in soil and groundwater are listed in Tables 2. The laboratory will maintain and have available for the appropriate operators standard operating procedures relating to sample preparation and analysis according to the methods stipulated in Table 2. Where the noted method does not contain a detection limit for the listed compound, the laboratory will complete method detection limit studies according to SW-846 protocols. The studies will be completed prior to the analysis of samples, and the documentation submitted to the designated representative for approval.

9.0 DATA REDUCTION AND REPORTING

QA/QC requirements will be strictly adhered to during sampling and analytical work. All data generated will be reviewed by comparing and interpreting results from chromatograms (responses, stability of retention times), accuracy (mean percent recovery of spiked samples), and precision (reproducibility of results). Refer to Section 10 for a discussion of QA/QC protocol.

Data storage and documentation will be maintained using logbooks and data sheets that will be kept on file. Analytical QC will be documented and included in the analytical testing report. A central file will be maintained for the sampling and analytical effort after the final laboratory report is issued.

All calculations and data manipulations are included in the appropriate methodology references. Control charts and calibration curves will be used to review the data and identify outlying results. Prior to the submission of the report to the client, all data will be evaluated for precision, accuracy, and completeness. Sections 4.0, 8.0, and 13.0 of this document include some of the QC criteria to be used in the data evaluation process.

Laboratory reports will be reviewed by the laboratory supervisor, the QA officer, laboratory manager and/or director, and the project manager. Analytical reports will contain a data tabulation including results and supporting QC information will be provided. Raw data will be available for later inspection, if required, and maintained in the control job file.

An electronic database of project environmental data will be submitted to NYSDEC in a format compatible with the NYSDEC Environmental Information Management System (EIMS). The environmental data submission will include the core submission of the NYSDEC Electronic Data Deliverable (EDD) prepared using the database software application EQuISTM from EarthSoft® Inc.

10.0 INTERNAL QUALITY CONTROL CHECKS

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of glassware and reagents. The procedures to be followed for internal quality control checks are consistent with DEC ASP protocols.

11.0 PERFORMANCE AND SYSTEM AUDITS

11.1 FIELD AUDITS

The Project QA Director may conduct episodic audits of the operations at the site to ensure that work is being performed in accordance with the work plan and associated standard operating practice. The audit will cover, but not necessarily be limited to, such areas as:

- Conformance to standard operating procedures
- Completeness and accuracy of documentation
- Chain of custody procedures
- Construction specifications

11.2 LABORATORY AUDITS

In addition to any audits required by the DEC, the Project QA Director may choose to audit the laboratory. These additional audits may take the form of performance evaluation samples or on-site inspections of the laboratory. Performance evaluation samples may be either blind samples or samples of known origin to the laboratory. Reasonable notice will be provided if the audit is to include an on-site inspection of the laboratory.

12.0 PREVENTIVE MAINTENANCE

12.1 FIELD

Field personnel assigned to complete the work will be responsible for preventative maintenance of all field instruments. The field sampling personnel will protect the portable total organic vapor monitors and water quality instruments by placing them in portable boxes and/or protective cases.

All field equipment will be subject to a routine maintenance program, prior to and after each use. The routine maintenance program for each piece of equipment will be in accordance with the manufacturer's operations and maintenance manual. All equipment will be cleaned and checked for integrity after each use. Necessary repairs will be performed immediately after any defects are observed, and before the item of equipment is used again. Equipment parts with a limited life (such as batteries, membranes and some electronic components) will be periodically checked and replaced or recharged as necessary according to the manufacturer's specifications.

12.2 LABORATORY

ELAP certified laboratories will provide standard laboratory services for this project. The laboratories' preventative maintenance procedures are outlined in their internal quality plans.

13.0 DATA ASSESSMENT PROCEDURES

Performance of the following calculations will be completed to evaluate the accuracy, precision and completeness of collected measurement data.

13.1 PRECISION

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is sometimes not known to the laboratory and usually not known to bench analysts, so their usefulness for monitoring analytical precision at bench level is limited. For most purposes, precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantification of precision is impossible. Replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Precision is calculated in terms of Relative Percent Difference (RPD), which is expressed as follows:

$$RPD = \frac{X_1 - X_2}{\frac{X_1 + X_2}{2}} \times 100$$

where X_1 and X_2 represent the individual values found for the target analyte in the two replicate analyses or in the matrix spike/matrix spike duplicate analyses.

RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non-homogeneity, analysis of check samples, etc. Follow-up action may include sample re-analysis or flagging of the data as suspect if problems cannot be resolved.

13.2 ACCURACY

Accuracy of a particular analysis is measured by assessing its performance with "known" samples. These "knowns" can take the form of EPA or NBS traceable standards (usually spiked into a pure water matrix), or laboratory prepared solutions of target analytes into a pure water or sample matrix; or (in the case of GC or GC/MS analyses) solutions of surrogate compounds which can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination. In each case the recovery of the analyte is measured as a percentage, corrected for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA or NBS supplied known solutions, this recovery is compared to the published data that accompany the solution. For prepared solutions, the recovery is compared to EPA-developed data or historical data as available. For surrogate compounds, recoveries are compared to USEPA CLP acceptable recovery tables. If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate.

For highly contaminated samples, recovery of matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

13.3 COMPLETENESS

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the total amount expected to be obtained under normal conditions. Completeness for each parameter is calculated as:

$$Completeness = \frac{number\ of\ successful\ analyses\ \times\ 100}{number\ of\ requested\ analyses}$$

Target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the client project officer.

13.4 REPRESENTATIVENESS

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area.

14.0 CORRECTIVE ACTION

Corrective actions can be initiated as a result of performance and system audits, laboratory and interfield comparison studies, data validation, and/or a QA program audit. They may also be required as a result of a request from project representatives. All corrective action necessary to resolve analytical problems will be taken. Success or failure of corrective actions will be reported with an estimate of effect on data quality, if any.

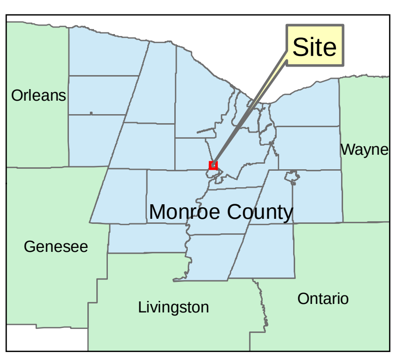
Corrective actions may include altering procedures in the field, conducting subsequent audits, or modifying project protocol. Time and type of corrective action, if needed, will depend on the severity of the problem and relative overall project importance. The project manager is responsible for initiating corrective action and the team leader is responsible for its implementation in the correction of field non-conformance corrective actions.

15.0 QUALITY ASSURANCE REPORTS

As described in Section 5, upon completion of select project sampling efforts, analytical and QC data will be included in a Data Usability Summary Report (DUSR) that summarizes the work and provides a data evaluation. A discussion of the usability of the results in the context of QA/QC procedures will be made, as well as a summation of the QA/QC activity. The DUSR will be performed in accordance with the NYSDEC's DUSR guidance and DER-10.

Serious analytical problems will be reported. Time and type of corrective action, if needed, will depend on the severity of the problem and relative overall project importance. Corrective actions may include altering procedures in the field, conducting an audit, or modifying laboratory protocol. All corrective action will be implemented after notification of the project representatives.

FIGURES



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Site Boundaries

Notes

1. Project Location : UTM Zone 18
Latitude : 43° 7'56.48"N / Longitude: 77°40'1.10"W

0 500 1,000 Feet

Project Location:
381 BUELL ROAD
GATES, NY

Prepared by APL on 7/23/2015
Technical Review by TW/BH on 7/23/2015
Independent Review by PN on 7/23/2015

190500033

Client/Project
Buell Automatics Site
Brownfield Cleanup Program Site No. C828114
Site Management Plan

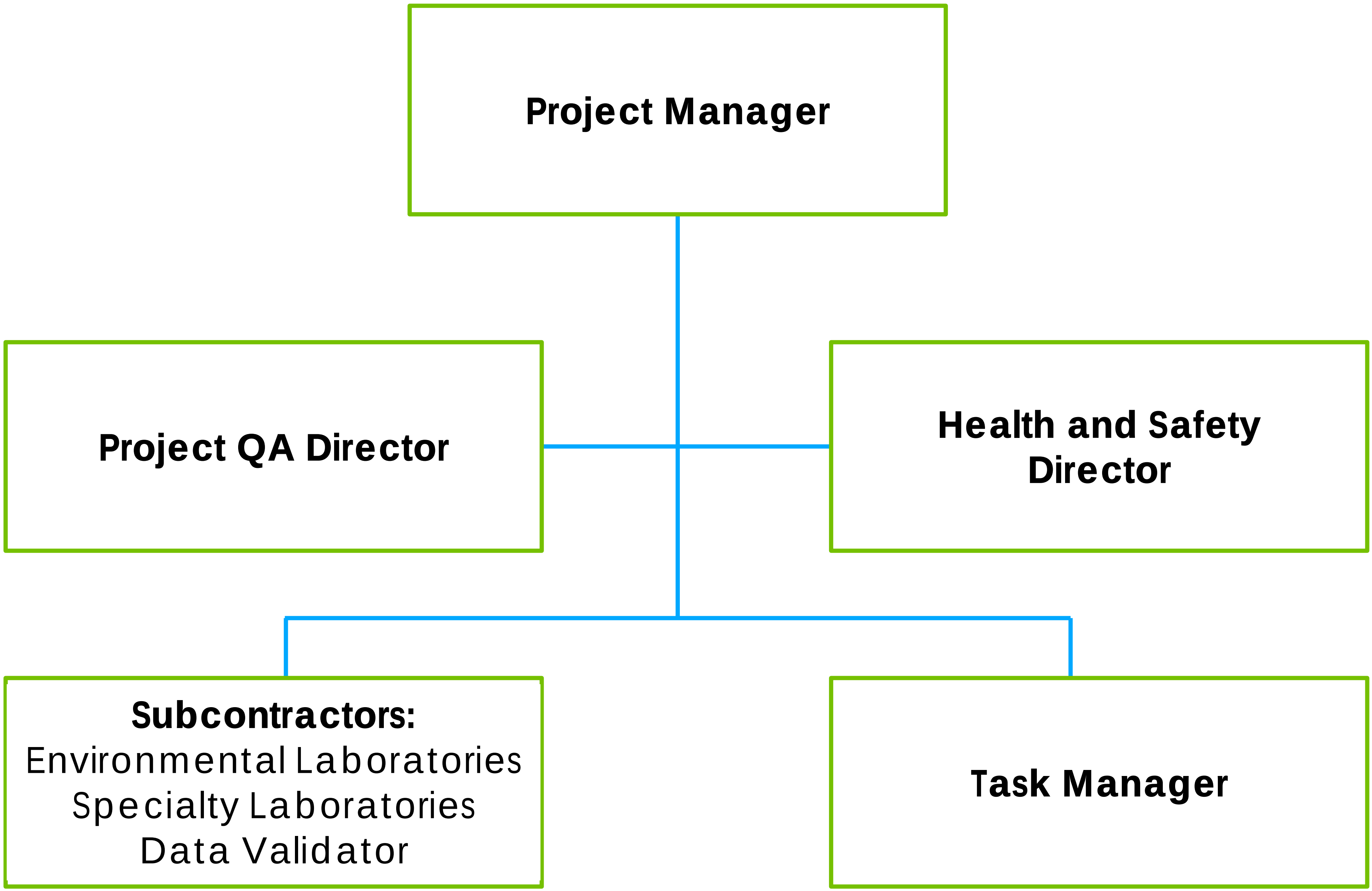
Figure No.
1

Title

Site Location Map

\\US1275-F02\shared_projects\16059\GIS\SMP 2015\Figure 1 - Site Location Map.mxd Revised: 2015-07-29 By: aglose

Figure 2
Project Organizational Chart



TABLES

Table 2
Quality Assurance Project Plan
Buell Automatics Site
Monitoring Wells to be Sampled and Parameters to be Analyzed per Event

		Quarterly	Semi-Annual	Additional EISB-Related Events
Wells				
RW-2[a]		x	x	x
MW-2		x	x	x
MW-6		x	x	x
MW-7		x	x	x
MW-8		x	x	x
MW-10R		x	x	x
MW-11		x	x	x
MW-14		x	x	x
MW-15		x	x	x
MW-16R		x	x	x
Parameters	**Methods**			
TCL VOCs	EPA 8260B	x	x	x
Field parameters	Field Water Quality Meter	x	x	x
Ferrous Iron	Field Colorimeter			x
Chloride	EPA 300.0			x
TOC	EPA 415.1	x	x	x
Nitrate	EPA 300.0			x
Sulfate	EPA 300.0			x
Alkalinity	SM 2320 B			x
Turbidity	Field Water Quality Meter	x	x	x
Mn, Fe, As	EPA 6010/7000	x	x	x
Methane, Ethane, Ethene	EPA 8015B			x
Dhc and VC reductase	PCR	x[1]		x
CSIA	IRMS	x[1]		x

Key:
* = Parameters to include only VOCs and Field parameters
* * (PCR) analysis and CSIA based on results of preceding events.
As = Arsenic
CSIA = Compound Specific Isotope Analysis (C^{12}/C^{13} ratio in trichloroethene)
EISB = Enhanced In-Situ Bioremediation
Fe = Iron
Field parameters = Dissolved oxygen (DO), pH, oxidation reduction potential (ORP), conductivity, and temperature
IRMS = Isotope Ratio Mass Spectrometry
Mn = Manganese
PCR = Quantitative Gene-Trac(tm) polymerase chain reaction (PCR) tests to determine the concentrations of the 16S ribosomal ribonucleic acid (rRNA) gene and vinyl chloride reductase gene of
R = Replacement well to be installed post remediation
TCL VOCs = Target compound list volatile organic compounds
TOC = Total organic carbon
[a] = Depending on the length of the water column, sampling may be conducted at RW-1 inste
[1] = Parameters to be analyzed only during two quarterly events (Fall 2015 and Spring 2016)

Note: Refer to QAPP Section 5.1 for requirements regarding analysis of VOC Tentatively Identified Compounds (TICs)

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Table 2
Quality Assurance Project Plan
Buell Automatics Site
Summary of Laboratories, Analytical Methods, Sample Containers, Preservation, and Holding Times

Parameter	Matrix	Laboratory	Method	Container Requirement	Preservation	Holding Time
TCL VOCs	Groundwater	Paradigm	EPA 8260B	2-40 mL vials	Cool to 4°C, HCl	14 days
Field	Groundwater	Field Analysis	Field Water Quality Meter	N/A	None	Field Analysis
Ferrous Iron	Groundwater	Field Analysis	Field Colorimeter	N/A	None	Field Analysis
Chloride	Groundwater	Paradigm	EPA 300.0	100 mL plastic	Cool to 4°C	28 days
TOC	Groundwater	Paradigm	EPA 415.1	100 mL plastic	Cool to 4°C, H_2SO_4 to pH < 2	28 days
Nitrate	Groundwater	Paradigm	EPA 300.0	100 mL plastic	Cool to 4°C	48 hours
Sulfate	Groundwater	Paradigm	EPA 300.0	100 mL plastic	Cool to 4°C	28 days
Alkalinity	Groundwater	Paradigm	SM 2320 B	100 mL plastic	Cool to 4°C	14 days
Turbidity	Groundwater	Paradigm	Field Water Quality Meter	N/A	None	Field Analysis
Mn, Fe, As	Groundwater	Paradigm	EPA 6010/7000	100 mL plastic	Cool to 4°C, HNO_3 to pH <2	6 months
Methane, Ethane, Ethene	Groundwater	Paradigm	EPA 8015B	2-40 mL vials	None	7 days
Dehalococcoides and VC reductase	Groundwater	SiREM Labs	PCR	1L-HDPE	Cool to 4°C	14 days
CSIA	Groundwater	The University of Oklahoma	IRMS	3-40 mL glass vials	Cool to 4°C, HCl	14 days
VOCs	Air	TestAmerica	TO-15	6-L Summa Canister	N/A	14 Days

Note: All laboratory analyses, with the exception of CSIA, Dehalococcoides and VC reductase, will be analyzed per the most recent NYSDEC ASP protocols. Deliverables will include NYSDEC ASP Category A deliverables for all but the last round of sampling, which will be a NYSDEC ASP Category B deliverable.

Key:
As = Arsenic
CSIA = Compound Specific Isotope Analysis (C^{12}/C^{13} ratio in trichloroethene)
Fe = Iron
Field = Dissolved oxygen, pH, oxidation reduction potential, conductivity, temperature
Mn = Manganese
TCL VOCs = Target compound list
TOC = Total organic carbon
VOCs = Volatile organic compounds

Table 3
Quality Assurance Project Plan
Buell Automatics Site
Summary of Quality Control Checks

Type of QC Check	Frequency	Min. Number Required	Remarks
Laboratory Quality Control Guidelines			
Method Blanks	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
Reagent/Solvent Blanks	1 per lot	1	
Standard Reference Blank	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
Matrix Spike Blanks	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	1 per 20 field samples per media*	1	Batch may include samples from other projects
Field Quality Control Guidelines			
Field Duplicates	1 per 20 field samples per media*	1*	Sample to be selected based on field screening
Trip Blanks	1 per shpiment for each cooler in which aqueous samples for VOC analysis are shipped*	1*	
Rinsate Blanks	1 per non-dedicated equipment set*	1*	
Laboratory Replicates	See Remarks	See Remarks	None planned but may be required to perform additional analyses on a sample

*Note: Certain site specific quality control samples will only be submitted in the selected sampling rounds as specified in the QAPP and in the individual work plans/design documents for each phase of remedy implementation.

APPENDICES

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION II

GROUND WATER SAMPLING PROCEDURE
LOW STRESS (Low Flow) PURGING AND SAMPLING

I. SCOPE & APPLICATION

This Low Stress (or Low-Flow) Purging and Sampling Procedure is the EPA Region II standard method for collecting low stress (low flow) ground water samples from monitoring wells. Low stress Purging and Sampling results in collection of ground water samples from monitoring wells that are representative of ground water conditions in the geological formation. This is accomplished by minimizing stress on the geological formation and minimizing disturbance of sediment that has collected in the well. The procedure applies to monitoring wells that have an inner casing with a diameter of 2.0 inches or greater, and maximum screened intervals of ten feet unless multiple intervals are sampled. The procedure is appropriate for collection of ground water samples that will be analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and microbiological and other contaminants in association with all EPA programs.

This procedure does not address the collection of light or dense non-aqueous phase liquids (LNAPL or DNAPL) samples, and should be used for aqueous samples only. For sampling NAPLs, the reader is referred to the following EPA publications: DNAPL Site Evaluation (Cohen & Mercer, 1993) and the RCRA Ground-Water Monitoring: Draft Technical Guidance (EPA/530-R-93-001), and references therein.

II. METHOD SUMMARY

The purpose of the low stress purging and sampling procedure is to collect ground water samples from monitoring wells that are representative of ground water conditions in the geological formation. This is accomplished by setting the intake velocity of the sampling pump to a flow rate that limits drawdown inside the well casing.

Sampling at the prescribed (low) flow rate has three primary benefits. First, it minimizes disturbance of sediment in the bottom of the well, thereby producing a sample with low turbidity (i.e., low concentration of suspended particles). Typically, this saves time and analytical costs by eliminating the need for collecting and analyzing an additional filtered sample from the same well. Second, this procedure minimizes aeration of the ground water during sample collection, which improves the sample quality for VOC analysis. Third, in most cases the procedure significantly reduces the volume of ground water purged from a well and the costs associated with its proper treatment and disposal.

III. ADDRESSING POTENTIAL PROBLEMS

Problems that may be encountered using this technique include a) difficulty in sampling wells with insufficient yield; b) failure of one or more key indicator parameters to stabilize; c) cascading of water and/or formation of air bubbles in the tubing; and d) cross-contamination between wells.

Insufficient Yield

Wells with insufficient yield (i.e., low recharge rate of the well) may dewater during purging. Care should be taken to avoid loss of pressure in the tubing line due to dewatering of the well below the level of the pump's intake. Purging should be interrupted before the water level in the well drops below the top of the pump, as this may induce cascading of the sand pack. Pumping the well dry should therefore be avoided to the extent possible in all cases. Sampling should commence as soon as the volume in the well has recovered sufficiently to allow collection of samples. Alternatively, ground water samples may be obtained with techniques designed for the unsaturated zone, such as lysimeters.

Failure to Stabilize Key Indicator Parameters

If one or more key indicator parameters fails to stabilize after 4 hours, one of three options should be considered: a) continue purging in an attempt to achieve stabilization; b) discontinue purging, do not collect samples, and document attempts to reach stabilization in the log book; c) discontinue purging, collect samples, and document attempts to reach stabilization in the log book; or d) Secure the well, purge and collect samples the next day (preferred). The key indicator parameter for samples to be analyzed for VOCs is dissolved oxygen. The key indicator parameter for all other samples is turbidity.

Cascading

To prevent cascading and/or air bubble formation in the tubing, care should be taken to ensure that the flow rate is sufficient to maintain pump suction. Minimize the length and diameter of tubing (i.e., 1/4 or 3/8 inch ID) to ensure that the tubing remains filled with ground water during sampling.

Cross-Contamination

To prevent cross-contamination between wells, it is strongly recommended that dedicated, in-place pumps be used. As an alternative, the potential for cross-contamination can be reduced by performing the more thorough "daily" decontamination procedures between sampling of each well in addition to the start of each sampling day (see Section VII, below).

Equipment Failure

Adequate equipment should be on-hand so that equipment failures do not adversely impact sampling activities.

IV. PLANNING DOCUMENTATION AND EQUIPMENT

- Approved site-specific Field Sampling Plan/Quality Assurance Project Plan (QAPP). This plan must specify the type of pump and other equipment to be used. The QAPP must also specify the depth to which the pump intake should be lowered in each well. Generally, the target depth will correspond to the mid-point of the most permeable zone in the screened interval. Borehole geologic and geophysical logs can be used to help select the most permeable zone. However, in some cases, other criteria may be used to select the target depth for the pump intake. In all cases, the target depth must be approved by the EPA hydrogeologist or EPA project scientist.

- Well construction data, location map, field data from last sampling event.

- Polyethylene sheeting.

- Flame Ionization Detector (FID) and Photo Ionization Detector (PID).

- Adjustable rate, positive displacement ground water sampling pump (e.g., centrifugal or bladder pumps constructed of stainless steel or Teflon). A peristaltic pump may only be used for inorganic sample collection.

- Interface probe or equivalent device for determining the presence or absence of NAPL.

- Teflon or Teflon-lined polyethylene tubing to collect samples for organic analysis. Teflon or Teflon-lined polyethylene, PVC, Tygon or polyethylene tubing to collect samples for inorganic analysis. Sufficient tubing of the appropriate material must be available so that each well has dedicated tubing.

- Water level measuring device, minimum 0.01 foot accuracy, (electronic preferred for tracking water level drawdown during all pumping operations).

- Flow measurement supplies (e.g., graduated cylinder and stop watch or in-line flow meter).

- Power source (generator, nitrogen tank, etc.).
- Monitoring instruments for indicator parameters. Eh and dissolved oxygen must be monitored in-line using an instrument with a continuous readout display. Specific conductance, pH, and temperature may be monitored either in-line or using separate probes. A nephalometer is used to measure turbidity.

- Decontamination supplies (see Section VII, below).

- Logbook (see Section VIII, below).

- Sample bottles.

- Sample preservation supplies (as required by the analytical methods).

- Sample tags or labels, chain of custody.

V. SAMPLING PROCEDURES

<u>Pre-Sampling Activities</u>

1. Start at the well known or believed to have the least contaminated ground water and proceed systematically to the well with the most contaminated ground water. Check the well, the lock, and the locking cap for damage or evidence of tampering. Record observations.

2. Lay out sheet of polyethylene for placement of monitoring and sampling equipment.

3. Measure VOCs at the rim of the unopened well with a PID and FID instrument and record the reading in the field log book.

4. Remove well cap.

5. Measure VOCs at the rim of the opened well with a PID and an FID instrument and record the reading in the field log book.

6. If the well casing does not have a reference point (usually a V-cut or indelible mark in the well casing), make one. Note that the reference point should be surveyed for correction of ground water elevations to the mean geodesic datum (MSL).

7. Measure and record the depth to water (to 0.01 ft) in all wells to be sampled prior to purging. Care should be taken to minimize disturbance in the water column and dislodging of any particulate matter attached to the sides or settled at the bottom of the well.

8. If desired, measure and record the depth of any NAPLs using an interface probe. Care should be taken to minimize disturbance of any sediment that has accumulated at the bottom of the well. Record the observations in the log book. If LNAPLs and/or DNAPLs are detected, install the pump at this time, as described in step 9, below. Allow the well to sit for several days between the measurement or sampling of any DNAPLs and the low-stress purging and sampling of the ground water.

Sampling Procedures

9. Install Pump: Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified for that well in the EPA-approved QAPP or a depth otherwise approved by the EPA hydrogeologist or EPA project scientist. The pump intake must be kept at least two (2) feet above the bottom of the well to prevent disturbance and resuspension of any sediment or NAPL present in the bottom of the well. Record the depth to which the pump is lowered.

10. Measure Water Level: Before starting the pump, measure the water level again with the pump in the well. Leave the water level measuring device in the well.

11. Purge Well: Start pumping the well at 200 to 500 milliliters per minute (ml/min). The water level should be monitored approximately every five minutes. Ideally, a steady flow rate should be maintained that results in a stabilized water

level (drawdown of 0.3 ft or less). Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. As noted above, care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment.

12. Monitor Indicator Parameters: During purging of the well, monitor and record the field indicator parameters (turbidity, temperature, specific conductance, pH, Eh, and DO) approximately every five minutes. The well is considered stabilized and ready for sample collection when the indicator parameters have stabilized for three consecutive readings as follows (Puls and Barcelona, 1996):
    - ±0.1 for pH
    - ±3% for specific conductance (conductivity)
    - ±10 mv for redox potential
    - ±10% for DO and turbidity

    Dissolved oxygen and turbidity usually require the longest time to achieve stabilization. The pump must not be removed from the well between purging and sampling.

13. Collect Samples: Collect samples at a flow rate between 100 and 250 ml/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 ft. VOC samples must be collected first and directly into sample containers. All sample containers should be filled with minimal turbulence by allowing the ground water to flow from the tubing gently down the inside of the container.

    Ground water samples to be analyzed for volatile organic compounds (VOCs) require pH adjustment. The appropriate EPA Program Guidance should be consulted to determine whether pH adjustment is necessary. If pH adjustment is necessary for VOC sample preservation, the amount of acid to be added to each sample vial prior to sampling should be determined, drop by drop, on a separate and equal volume of water (e.g., 40 ml). Ground water purged from the well prior to sampling can be used for this purpose.

14. Remove Pump and Tubing: After collection of the samples, the tubing, unless permanently installed, must be properly discarded or dedicated to the well for resampling by hanging the tubing inside the well.

15. Measure and record well depth.

16. Close and lock the well.

VI. FIELD QUALITY CONTROL SAMPLES

Quality control samples must be collected to determine if sample collection and handling procedures have adversely affected the quality of the ground water samples. The appropriate EPA Program Guidance should be consulted in preparing the field QC sample requirements of the site-specific QAPP.

All field quality control samples must be prepared exactly as regular investigation samples with regard to sample volume, containers, and preservation. The following quality control samples should be collected during the sampling event:

- Field duplicates
- Trip blanks for VOCs only
- Equipment blank (not necessary if equipment is dedicated to the well)

As noted above, ground water samples should be collected systematically from wells with the lowest level of contamination through to wells with highest level of contamination. The equipment blank should be collected after sampling from the most contaminated well.

VII. DECONTAMINATION

Non-disposable sampling equipment, including the pump and support cable and electrical wires which contact the sample, must be decontaminated thoroughly each day before use ("daily decon") and after each well is sampled ("between-well decon"). Dedicated, in-place pumps and tubing must be thoroughly decontaminated using "daily decon" procedures (see #17, below) prior to their initial use. For centrifugal pumps, it is strongly recommended that non-disposable sampling equipment, including the pump and support cable and electrical wires in contact with the sample, be decontaminated thoroughly each day before use ("daily decon").

EPA's field experience indicates that the life of centrifugal pumps may be extended by removing entrained grit. This also permits inspection and replacement of the cooling water in centrifugal pumps. All non-dedicated sampling equipment (pumps, tubing, etc.) must be decontaminated after each well is sampled ("between-well decon," see #18 below).

17. **Daily Decon**

A) Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

B) Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5 minutes and flush other equipment with fresh detergent solution for 5 minutes. Use the detergent sparingly.

C) Rinse: Operate pump in a deep basin of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

D) Disassemble pump.

E) Wash pump parts: Place the disassembled parts of the pump into a deep basin containing 8 to 10 gallons of non-phosphate detergent solution. Scrub all pump parts with a test tube brush.

F) Rinse pump parts with potable water.

G) Rinse the following pump parts with distilled/ deionized water: inlet screen, the shaft, the suction interconnector, the motor lead assembly, and the stator housing.

H) Place impeller assembly in a large glass beaker and rinse with 1% nitric acid (HNO_3).

I) Rinse impeller assembly with potable water.

J) Place impeller assembly in a large glass bleaker and rinse with isopropanol.

K) Rinse impeller assembly with distilled/deionized water.

18. **Between-Well Decon**

A) Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.
B) Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5

minutes and flush other equipment with fresh detergent solution for 5 minutes. Use the detergent sparingly.

C) Rinse: Operate pump in a deep basin of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

D) Final Rinse: Operate pump in a deep basin of distilled/deionized water to pump out 1 to 2 gallons of this final rinse water.

VIII. FIELD LOG BOOK

A field log book must be kept each time ground water monitoring activities are conducted in the field. The field log book should document the following:

- Well identification number and physical condition.
- Well depth, and measurement technique.
- Static water level depth, date, time, and measurement technique.
- Presence and thickness of immiscible liquid layers and detection method.
- Collection method for immiscible liquid layers.
- Pumping rate, drawdown, indicator parameters values, and clock time, at three to five minute intervals; calculate or measure total volume pumped.
- Well sampling sequence and time of sample collection.
- Types of sample bottles used and sample identification numbers.
- Preservatives used.
- Parameters requested for analysis.
- Field observations of sampling event.
- Name of sample collector(s).
- Weather conditions.
- QA/QC data for field instruments.

IX. REFERENCES

Cohen, R.M. and J.W. Mercer, 1993, DNAPL Site Evaluation, C.K. Smoley Press, Boca Raton, Florida.

Puls, R.W. and M.J. Barcelona, 1996, Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures, EPA/540/S-95/504.

U.S. EPA, 1993, RCRA Ground-Water Monitoring: Draft Technical Guidance, EPA/530-R-93-001.

U.S. EPA Region II, 1989, CERCLA Quality Assurance Manual.

APPENDIX I - SITE MANAGEMENT FORMS

Site Inspection Form
Buell Automatics Site
NYSDEC Site # C828114, Gates, Monroe County, NY
Site Management Plan

Date ______________________
Name ______________________
Company ______________________
Position ______________________

Done?	Task	Notes
Cover System Inspection		
	Visual inspection of the hard surface cover for evidence of deep cracks, potholes, cuts, depressions, and deterioration of joint seals and penetration seals	
	Identification of any areas where there is evidence of excessive settlement relative to the surrounding areas	
Site-wide Inspection		
	Compliance with the ICs, including site usage:	
	Compliance with the Environmental Easements and the SMP by the Grantor and the Grantor's successors and assigns	
	Confirm that all Engineering Controls are operated, maintained, and inspected as specified in the SMP	
	Confirm that groundwater, soil vapor, and indoor air monitoring is being performed as defined in the SMP	
	Confirm that reporting of data and information pertinent to site management of the real property to which the Environmental Easements apply (Controlled Property) has been completed at the frequency and in a manner defined in the SMP	
	Evaluation of the condition and continued effectiveness of ECs, including: cover system, FLDA oil collection system, LNAPL monitoring and recovery wells, EISB program wells	
	Examination of general site conditions at the time of the inspection	
	Confirm compliance with schedules included in the Operation and Maintenance Plan	
	Confirm that site records are up to date	

Monitoring Well Inspection Form
Buell Automatics Site
NYSDEC Site # C828114, Gates, Monroe County, NY
Site Management Plan

Well ID	Inspection Date	Water Level (ft btoic)	Well Depth (ft btoic)	Well Label (G/F/P)	Condition of Outer Casing (G/F/P)	Condition of J-Plug (G/F/P)	Condition of Inner Casing (G/F/P)	Comments/Repair Actions Required

Key: F=Fair ft btoic=Feet below top of inner casing
G=Good P=Poor

Stantec

Water and LNAPL Level Measurement Form

Buell Automatics Site, NYSDEC Site #C828114

Date:

Names:

Equipment:

Well ID	LNAPL Level (ft BTOIC)	Water Level (ft BTOIC)	Total Depth (ft BTOIC)	Well Diameter (in)	Notes (include detailed notes on oil recovery activities, if any)

ft BTOIC = depth in feet below the top of the inner well casing

Well Volume Calculation: 1 inch = 0.041 gal; 2 inch = 0.163 gal; 4 inch = 0.653 gal

Stantec

61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Well ID: ____________________

Date: ____________________
Page ________ of ________

Monitoring Well Purging and Sampling Record

Site Name: Buell Automatics

Depth to Water: ________ ft TOIC

Depth to Top of Screen ________ ft TOIC

Total Well Depth: ________ ft TOIC

Depth to Pump: ________ ft TOIC

Initial Pump Rate: ________ mL/min

adjusted to: ________ mL/min at ________

adjusted to: ________ mL/min at ________

Purge Start Time: ____________

Purge End Time: ____________

Pump Type: ____________

Well Diameter: ________ inches

Well Volume: ________ gallons

Time	Purge Volume (gallons)	pH (s.u.)	ORP (mV)	Conductivity (mS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)	Water Level (ft)
Final Sample Data:								

Sample ID(s): ____________

Sample Time: ____________

Sampler(s): ____________

Equipment: ____________

Comments: ____________

Analyses:	Dup?	MS/MSD?
☐ VOCs	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

Buell Automatics Air Sampling

Sample ID	Location	Sample Type	Ambient PID (ppm)	Ambient He (ppm)	Pre-Downhole He (ppm)	Post-Downhole He (ppm)	Post-Ambient He (ppm)	Purged (Y/N)	Can ID	Regulator ID	Start Time	Start Pressure (in Hg)	Check #1 Time	Check #1 Pressure	Check #2 Time	Check #2 Pressure	Check #3 Time	Check #3 Pressure	Stop Time	Stop Pressure (in Hg)	Comments
BU-IAA-A	A	IA																			
BU-SSA-A	A	SS																			
BU-IAB-A	B	IA																			
BU-SSB-A	B	SS																			
BU-IAC-A	C	IA																			
BU-SSC-A	C	SS																			
BU-IAD-A	D	IA																			
BU-SSD-A	D	SS																			
BU-IAE-A	E	IA																			
BU-SSE-A	E	SS																			
BU-IAF-A	F	IA																			
BU-SSF-A	F	SS																			
BU-OA-A	upwind	AMB																			
		IA, D																			
		SS, D																			

Sample Type Codes:
IA= Indoor Air
AMB=Ambient Outdoor Air
SS=Sub-slab
D=Duplicate

Annual Indoor Air Sampling
381 and 395 Buell Road

Personnel:

Sample ID	Building	Sample Type	Date	Ambient PID (ppm)	Downhole PID (ppm)	Ambient He (ppm)	Downhole He (ppm)	Purged (Y/N)	Can ID	Regulator ID	Start Time	Start Pressure (in Hg)	Check #1 Time	Check #1 Pressure	Check #2 Time	Check #2 Pressure	Check #3 Time	Check #3 Pressure	Check #4 Time	Check #4 Pressure	Check #5 Time	Check #5 Pressure	Stop Time	Stop Pressure (in Hg)	Comments
BU-OA-A-_____	Outside	OA			NA	NA	NA	NA																	
BU-IA.AL1-A-_____	381 Buell Road	IA			NA	NA	NA	NA																	
BU-IA.BW____-A-_____	395 Buell Road	IA			NA	NA	NA	NA																	

NA = Not Applicable
Sample Type Codes:
IA= Indoor Air
OA=Ambient Outdoor Air

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name ____________________________________ Date/Time Prepared ______________

Preparer's Affiliation ________________________________ Phone No.______________________

Purpose of Investigation____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _________________________ First Name: _________________________

Address: ____

County: _________________

Home Phone: ____________________ Office Phone: ____________________

Number of Occupants/persons at this location _______ Age of Occupants ______________________

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: _________________________ First Name: _________________________

Address: ____

County: _________________

Home Phone: ____________________ Office Phone: ____________________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: _________________

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_______________

If multiple units, how many? ________

If the property is commercial, type?

Business Type(s) _______________________________________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors______ Building age______

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

____
____
____

Airflow near source

____
____
____

Outdoor air infiltration

____
____
____

Infiltration into air ducts

____
____
____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other ________
c. Basement floor:	concrete	dirt	stone	other ________
d. Basement floor:	uncovered	covered	covered with _______________	
e. Concrete floor:	unsealed	sealed	sealed with ________________	
f. Foundation walls:	poured	block	stone	other ________
g. Foundation walls:	unsealed	sealed	sealed with ________________	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: ________(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

____

____

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other ___________

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____________________________

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other___________
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

____

____

____

____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	______________________
1st Floor	______________________
2nd Floor	______________________
3rd Floor	______________________
4th Floor	______________________

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA
Please specify____________________

d. Has the building ever had a fire? Y / N When?__________________

e. Is a kerosene or unvented gas space heater present? Y / N Where? _________________

f. Is there a workshop or hobby/craft area? Y / N Where & Type? _________________

g. Is there smoking in the building? Y / N How frequently? ________________

h. Have cleaning products been used recently? Y / N When & Type? _________________

i. Have cosmetic products been used recently? Y / N When & Type? _________________

j. Has painting/staining been done in the last 6 months? Y / N Where & When? ________________

k. Is there new carpet, drapes or other textiles? Y / N Where & When? ________________

l. Have air fresheners been used recently? Y / N When & Type? _________________

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?_____________

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?_____________

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type?__________________

Are there odors in the building? Y / N
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _______

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Buell Automatics Site

EISB Injection Summary as of ____________ (date)

Injection Location	Start Date	Stop Date	Target Gallons	Injected Gallons	% Complete
RW-1					
RW-2					
MW-2					
MW-6					
MW-8					
MW-11					
IW-1					
IW-2					
IW-3					
IW-4					
IW-5					
IW-6					
IW-7					
IW-8					
IW-9					
IW-10					
IW-11					
IW-12					
IW-13					
IW-14					
IW-15					
IW-16					
IW-17					
IW-18					
IW-19					
IW-20					
			TOTAL		

COMMUNITY AIR MONITORING FORM

Name(s): ____

Date: _______________________________

Site: Buell Automatics

Weather Conditions: ____

Estimated Wind Speed (calm, moderate, strong): ____

Work Location	**Wind Direction***	**TIME**	**UPGRADIENT**			**DOWNGRADIENT**			**WORK AREA**		
			DUST (mg/m^3)	*VOC 10.6 eV (ppm)*	*VOC 11.7 eV (ppm)*	*DUST (mg/m^3)*	*VOC 10.6 eV (ppm)*	*VOC 11.7 eV (ppm)*	*VOC (ppm)*	*LEL (%)*	*O_2 (%)*

*Wind direction is reported by the direction from which it originates

APPENDIX J - REMEDIAL SYSTEM OPTIMIZATION REPORT OUTLINE

REMEDIAL SYSTEM OPTIMIZATION FOR BUELL AUTOMATICS SITE

TABLE OF CONTENTS

4.3 RECOMMENDATIONS TO REDUCE COSTS

4.3.1 Supply Management

4.3.2 Process Improvements or Changes

4.3.3 Optimize Monitoring Program

4.3.4 Maintenance and Repairs

4.4 RECOMMENDATIONS FOR IMPLEMENTATION