

Buell Automatics Site

MONROE COUNTY, NEW YORK

Construction Completion Report

LNAPL Monitoring Well Installation

NYSDEC Site Number: C828114

Prepared for:

Buell Automatics, Inc.
381 Buell Road
Rochester, New York

Prepared by:

Stantec Consulting Services Inc.
61 Commercial Street
Rochester, New York 14614
(585) 475-1440

NOVEMBER 2012

CERTIFICATION

I, Peter Nielsen, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the construction program, and I certify that the Revised LNAPL Monitoring Work Plan (Work Plan) was implemented and that all construction activities were completed in substantial conformance with the DER-approved Work Plan.

061499-1

NYS Professional Engineer #

11/20/12

Date

Peter Nielsen

Signature



TABLE OF CONTENTS

CERTIFICATION.....	II
TABLE OF CONTENTS	III
LIST OF ACRONYMS	IV
CONSTRUCTION COMPLETION REPORT	1
1.0 BACKGROUND AND SITE DESCRIPTION.....	1
2.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED	2
2.1 Contractors and Consultants	2
2.2 Health & Safety Monitoring, Community Air Monitoring, and Quality Assurance/Quality Control.....	2
2.3 LNAPL Monitoring Well Installation	3
2.4 Waste Management.....	4
2.5 LNAPL Monitoring	4
LIST OF TABLES	5
LIST OF FIGURES	5
LIST OF APPENDICES	5

LIST OF ACRONYMS

Acronym	Definition
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	Below ground surface
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
LNAPL	Light non-aqueous phase liquid
MW	Monitoring well
NYSDEC	New York State Department of Environmental Conservation
PID	Photo-ionization detector
RWP	Remedial Work Plan
SMP	Interim Site Management Plan
VOC	Volatile organic compound

CONSTRUCTION COMPLETION REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Stantec Consulting Services Inc. (Stantec) has prepared this Construction Completion Report (CCR) which describes implementation of the Light Non-Aqueous Phase Liquid (LNAPL) monitoring component of the environmental remediation program (remedy) at the Buell Automatics Brownfield Cleanup Program (BCP) Site located at 381 Buell Road in the Town of Gates, Monroe County, New York (the “Site”). The Site is designated as BCP Site No. C828114. The Site location is shown on Figure 1.

The work was performed on behalf of and at the request of Buell Automatics, Inc. (Buell). Buell is implementing the remedy for the Site pursuant to the terms of a Brownfield Cleanup Agreement (BCA) executed by Buell and the New York State Department of Environmental Conservation (the “Department”) and pursuant to applicable regulations and guidance. The remedy is being implemented to address the presence of volatile organic compounds (VOCs) and petroleum impacts in soil and groundwater at levels exceeding applicable standards.

A proposed remedy for the Site was described in the February 2010 Remedial Work Plan (RWP) that was approved by the Department in March 2010. As implementation of the remedy proceeds, design documents are submitted for the Department’s approval presenting specific plans for the various components of the remedy. An LNAPL monitoring program is one of those components.

Subsurface contamination by LNAPL derived from petroleum products is present in the areas surrounding the western half of the southern section of the Buell building, which is designated the Petroleum Impacts Area. The Buell Automatics facility produces machined metal components for a variety of products, and the source of the LNAPL is believed to be past releases of petroleum-based metal-working lubricant (cutting oil) and petroleum-based solvent.

The Revised LNAPL Monitoring Work Plan (Stantec, August 2012) specified the actions that were to be taken to monitor the extent of LNAPL in the subsurface. This CCR documents the activities performed to implement the monitoring-well installation

and initial monitoring phases of the LNAPL monitoring program. Results of subsequent monitoring will be reported in regular project progress reports.

2.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved Revised LNAPL Monitoring Work Plan for the Buell Automatics site (August 2012). All deviations from the Work Plan are noted below.

In accordance with the Work Plan, four new wells were installed to supplement the coverage of the Buell building perimeter and the Petroleum Impacts Area that is provided by existing wells in the groundwater monitoring network for the Site. Well installation and development activities were performed on September 20th and 21st, 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 2.

2.1 Contractors and Consultants

Well drilling, installation and development services were provided by Nothnagle Drilling of Scottsville, New York. Full-time observation by Stantec personnel was performed during drilling, well installation and development activities. Waste characterization analysis was performed by Paradigm Environmental Services of Rochester, New York.

2.2 Health & Safety Monitoring, Community Air Monitoring, and Quality Assurance/Quality Control

Health & Safety and Community Air Monitoring were performed in accordance with the Interim Site Management Plan (SMP) for the project (February 2011). Quality assurance and quality control were performed in accordance with the Quality Assurance Project Plan for Remedy Implementation activities at the Buell Site (February 2011, revised July 2011).

Community air monitoring was performed in accordance with the project Community Air Monitoring Plan (CAMP, included in the February 2011 SMP). Action

levels were not exceeded. A copy of the CAMP field data sheet is provided in Appendix A.

2.3 LNAPL Monitoring Well Installation

Monitoring wells were installed with a rotary drill rig using 4¼-inch hollow stem augers advanced to a depth of 10 to 14 feet below ground surface (bgs). Continuous soil sampling was performed at each location. Soil samples were screened with a calibrated photoionization detector (PID) for the presence of volatile organic vapors. Soil samples were visually observed for indications of staining, oils, fill, etc. PID readings, odors, visual observations and lithologic information were logged for each location. Test boring logs are presented in Appendix B. PID readings are summarized on Table 1. Stratigraphic units encountered in the four borings are summarized in Table 2.

During the well installation, slight deviations from the Work Plan were made at some of the well locations to accommodate apparent water table conditions. The deviations involved minor modifications to final well depths and well-screen and sand-pack lengths to allow for a deeper well than the 10-ft. depth specified in the Work Plan. Each well was constructed using 2-inch diameter, schedule-40 PVC with 8 to 12 feet of 0.010-inch slot well screen. The top of the screen was placed at a depth of 2 ft. bgs. Sand packs consisting of fine sand extending 6 inches above the top of the well screens were installed, and the sand packs were capped with bentonite seals. A protective casing held in place with a Portland cement concrete mix was installed at surface grade. An inner cap was installed on the well riser. Well construction records are presented in Appendix B. A summary of well construction details is presented in Table 3.

Wells were developed by manual surging and bailing with a bailer to establish communication between the sand pack and surrounding formation and, if possible to reduce the turbidity of the development purge water. Up to 15 gallons of purge water were removed from each well during development.

Locations and elevations of the tops of the outer covers and inner risers were surveyed relative to established national vertical and horizontal reference standards. Surveyed elevations are presented in Table 3.

2.4 Waste Management

Soil and debris generated during the installation of the wells were placed directly in 4 covered DOT-approved 55-gallon steel drums. Each drum was labeled as to contents. Soil material was collected from each of the 4 drums and combined in a representative composite sample submitted to the project laboratory for waste characterization analysis. Waste characterization results are presented in Appendix C. Disposal of the 4 soil drums is currently pending. Documentation of disposal will be forwarded to the Department at the time it is received, and a copy of the disposal documentation will be included in the final engineering report for the project.

Groundwater purged during well development was placed directly in 2 of the covered DOT-approved 55-gallon steel drums used to accumulate purge water generated during previous project groundwater sampling and LNAPL recovery events. The four drums containing purge water were removed from the site for off-site treatment and disposal on October 18, 2012. Documentation of disposal of the drums containing well development purge water is presented in Appendix D.

2.5 LNAPL Monitoring

Following installation, the new wells were added to the network of site groundwater and LNAPL monitoring wells. LNAPL and groundwater levels were measured in site wells on October 5 and November 16, 2012, and LNAPL was not encountered in any of the new wells on either date. A summary of initial monitoring results is presented in attached Table 4.

Going forward, the new wells will be monitored in accordance with the Water Level and LNAPL monitoring program specified in Section 3.3.1.1 of the SMP with the following clarification requested by the Department. Groundwater level measurements and a check for LNAPL will be performed at each new well quarterly for the first year following installation and then annually for wells without LNAPL, and quarterly for another year for wells with LNAPL. For those monitoring wells that exhibit the presence of LNAPL, quarterly LNAPL-recovery events will be performed. Results will be documented in the regular progress reports for the remedial project. The results of the LNAPL-monitoring and -recovery events will be evaluated to determine if additional actions are needed to address petroleum-impacted groundwater if it is found to be migrating from beneath the footprint of the Buell building.

LIST OF TABLES

Table 1 – Summary of Field Screening Results - Test Boring Soils

Table 2 – Stratigraphic Summary - Test Boring Soils

Table 3 – Well Completion Summary

Table 4 - Summary of Water and LNAPL Level Measurements

LIST OF FIGURES

Figure 1 – Site Location

Figure 2 – Site Plan Showing Monitoring Well Locations

LIST OF APPENDICES

Appendix A – CAMP Monitoring Records

Appendix B – Test Boring Logs and Monitoring Well Installation Reports

Appendix C – Waste Characterization Analysis Reports

Appendix D – Waste Disposal Documentation

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS - TEST BORING SOILS

Buell Automatics
Gates, NY

Borehole	PID Readings				
	Macrocore™ Sleeve		Headspace		Background
	Depth (ft. bgs)	(ppm)	Depth (ft. bgs)	(ppm)	
LNAPL MW Installations - September 2012					
MW-19	0-2	0.0	1.5-1.7	0.0	0.0
	2-4	0.0	-	-	0.0
	4-4.4	0.4	-	-	0.0
	4.4-5.0	0.8	-	-	0.0
	5-6	2.6	5.5-6.0	0.0	0.0
	6-7	0.1	-	-	0.0
	7-8	0.0	-	-	0.0
	8-10	0.0	8.6	0.0	0.0
MW-20	-	-	-	-	-
	0.5-2	0.0	-	-	0.0
	2-4	0.0	3.0-4.0	0.0	0.0
	4-6	0.0	-	-	0.0
	6-8	0.0	7.0	0.0	0.0
MW-21	8-10	0.0	9.0-10.0	0.2	0.0
	0-2	0.0	-	-	0.0
	2-4	0.0	3.5	0.1	0.0
	4-6	0.0	4.0-5.0	4.1	0.0
	6-8	0.0	-	-	0.0
	8-10	0.0	-	-	0.0
MW-22	10-12	0.0	10.5	1.3	0.0
	0-2	0.0	1.5	0.0	0.0
	2-4	0.0	-	-	0.0
	4-4.7	1.7	-	-	0.0
	4.7-5.5	4.6	5-6	173.4	0.0
	5.5-5.9	99.7	-	-	0.0
	5.9-6.7	68.4	6-7	130.1	0.0
	6.7-7.0	17.4	-	-	0.0
	7-8	0.5	7.8	46.4	0.0
	8-8.5	0.5	-	-	0.0
	8.5-9.0	0.2	9.0	0.1	0.0
	9.0-9.5	0.1	-	-	0.0
	9.5-14	0.0	13.5	2.5	0.0

Notes:

1. ft. bgs = feet below ground surface.
2. ppm = parts per million.
3. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.

TABLE 2
STRATIGRAPHIC SUMMARY
Buell Automatics
Gates, NY

Boring/ Well	Ground Elevation	FILL				LACUSTRINE SAND				SILT and CLAY				LACUSTRINE SAND				GLACIAL TILL				BEDROCK		
		Top (ft. bgs)	Bottom (ft. bgs)	Top Elev. (ft.AMSL)	Bottom Elev. (ft.AMSL)	Top (ft. bgs)	Bottom (ft. bgs)	Top Elev. (ft.AMSL)	Bottom Elev. (ft.AMSL)	Top (ft. bgs)	Bottom (ft. bgs)	Top Elev. (ft.AMSL)	Bottom Elev. (ft.AMSL)	Top (ft. bgs)	Bottom (ft. bgs)	Top Elev. (ft.AMSL)	Bottom Elev. (ft.AMSL)	Top (ft. bgs)	Bottom (ft. bgs)	Top Elev. (ft.AMSL)	Bottom Elev. (ft.AMSL)	Top (ft. bgs)	Top Elev. (ft.AMSL)	
Phase II Field Data																								
MW-1	563.9	0.0	0.0	-	-	0.0	20.0	563.9	543.9	20.0	>22.0	543.9	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	561.9	0.0	3.0	561.9	558.9	3.0	12.5	558.9	549.4	12.5	19.0	549.4	542.9	-	-	-	-	19.0	> 21	542.9	-	-	-	-
MW-3	562.8	0.0	5.0	562.8	557.8	3.0	> 21	559.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	562.8	0.0	3.0	562.8	559.8	3.0	19.0	559.8	543.8	19.0	29.0	543.8	533.8	-	-	-	-	29.0	30.5	533.8	532.3	-	-	-
MW-5	562.1	0.0	4.0	562.1	558.1	4.0	18.0	558.1	544.1	-	-	-	-	-	-	-	-	18.0	>21.5	544.1	-	-	-	-
B-1	562.8	0.0	3.0	562.8	559.8	3.0	> 9	559.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-2	562.8	0.0	1.0	562.8	561.8	1.0	5.0	561.8	557.8	5.0	> 7	557.8	-	-	-	-	-	-	-	-	-	-	-	-
B-3	562.8	0.0	1.0	562.8	561.8	1.0	6.0	561.8	556.8	6.0	> 7	556.8	-	-	-	-	-	-	-	-	-	-	-	-
B-4	562.8	0.0	1.0	562.8	561.8	1.0	6.5	561.8	556.3	6.5	> 7	556.3	-	-	-	-	-	-	-	-	-	-	-	-
B-5	562.8	0.0	1.0	562.8	561.8	1.0	6.5	561.8	556.3	6.5	> 7	556.3	-	-	-	-	-	-	-	-	-	-	-	-
B-6	562.8	0.0	3.0	562.8	559.8	3.0	> 13	559.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-7	562.8	0.0	3.0	562.8	559.8	3.0	> 11	559.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Remedial Investigation Field Data																								
MW-2D	562.0	0.0	2.0	562.0	560.0	2.0	19.5	560.0	542.5	19.5	24.0	542.5	538.0	24.0	28.0	538.0	534.0	28.0	37.3	534.0	524.7	37.3	524.7	
MW-6	560.3	0.0	2.6	560.3	557.7	2.6	11.2	557.7	549.1	11.2	15.0	549.1	545.3	15.0	15.9	545.3	544.4	15.9	> 19	544.4	-	-	-	-
MW-7	561.4	0.0	1.5	561.4	559.9	1.5	13.4	559.9	548.0	13.4	18.3	548.0	543.1	-	-	-	-	18.3	> 20	543.1	-	-	-	-
MW-8	562.0	0.0	1.3	562.0	560.7	1.3	17.0	560.7	545.0	17.0	19.6	545.0	542.4	19.6	22.6	542.4	539.4	22.6	> 24	539.4	-	-	-	-
MW-9	561.1	0.0	1.6	561.1	559.5	1.6	11.0	559.5	550.1	-	-	-	-	-	-	-	-	11.0	> 16	550.1	-	-	-	-
MW-10	562.8	0.0	0.5	562.8	562.3	0.5	17.7	562.3	545.1	-	-	-	-	-	-	-	-	17.7	> 20	545.1	-	-	-	-
MW-11	559.3	0.0	1.5	559.3	557.8	1.5	11.2	557.8	548.1	-	-	-	-	-	-	-	-	11.2	> 20	548.1	-	-	-	-
MW-12	562.8	0.0	1.7	562.8	561.1	1.7	8.6	561.1	554.2	8.6	11.7	554.2	551.1	11.7	13.8	551.1	549.0	13.8	> 20	549.0	-	-	-	-
MW-13	563.9	0.0	0.8	563.9	563.1	0.8	20.0	563.1	543.9	20.0	26.0	543.9	537.9	26.0	27.8	537.9	536.1	27.8	> 34	536.1	-	-	-	-
MW-14	561.3	0.0	1.5	561.3	559.8	1.5	4.0	559.8	557.3	4.0	15.2	557.3	546.1	15.2	> 16	546.1	-	-	-	-	-	-	-	-
MW-15	560.5	0.0	1.5	560.5	559.0	1.5	9.0	559.0	551.5	9.0	11.5	551.5	549.0	11.5	> 12	549.0	-	-	-	-	-	-	-	-
MW-16	562.6	0.0	2.0	562.6	560.6	2.0	5.5	560.6	557.1	5.5	>10	557.1	-	-	-	-	-	-	-	-	-	-	-	-
MW-17	556.6	0.0	2.0	556.6	554.6	2.0	9.0	554.6	547.6	9.0	>18	547.6	-	11.5	14.0	545.1	542.6	-	-	-	-	-	-	-
MW-18	556.6	0.0	2.0	556.6	554.6	-	-	-	-	2.0	21.0	554.6	535.6	21.0	>22	535.6	-	-	-	-	-	-	-	-
B-8	563.7	0.0	3.0	563.7	560.7	3.0	> 6.5	560.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-9	563.7	0.0	2.5	563.7	561.2	2.5	> 6.5	561.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-10	563.7	0.0	2.5	563.7	561.2	2.5	3.8	561.2	559.9	3.8	> 6	559.9	-	-	-	-	-	-	-	-	-	-	-	-
B-11	562.0	0.0	2.0	562.0	560.0	2.0	> 12	560.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-12	562.0	0.0	2.0	562.0	560.0	2.0	5.3	560.0	556.7	5.3	> 11	556.7	-	-	-	-	-	-	-	-	-	-	-	-
B-13	562.0	0.0	2.0	562.0	560.0	2.0	> 10	560.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-14	562.0	0.0	1.7	562.0	560.3	1.7	> 10	560.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-15	563.7	0.0	3.3	563.7	560.4	3.3	> 10	560.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-16	563.7	0.0	3.3	563.7	560.4	3.3	7.0	560.4	556.7	7.0	> 9	556.7	-	-	-	-	-	-	-	-	-	-	-	-
B-17	563.7	0.0	3.5	563.7	560.2	3.5	7.0	560.2	556.7	7.0	> 9	556.7	-	-	-	-	-	-	-	-	-	-	-	-
B-18	562.8	0.0	3.5	562.8	559.3	3.5	9.2	559.3	553.6	9.2	> 10	553.6	-	-	-	-	-	-	-	-	-	-	-	-
B-19	563.7	0.0	2.0	563.7	561.7	2.0	7.2	561.7	556.5	7.2	> 10.2	556.5	-	-	-	-	-	-	-	-	-	-	-	-
B-20	563.7	0.0	2.3	563.7	561.4	2.3	7.5	561.4	556.2	7.5	> 10	556.2	-	-	-	-	-	-	-	-	-	-	-	-
B-21	562.8	0.0	2.0	562.8	560.8	2.0	5.0	560.8	557.8	5.0	> 8	557.8	-	-	-	-	-	-	-	-	-	-	-	-
B-22	562.8	0.0	2.5	562.8	560.3	2.5	6.0	560.3	556.8	6.0	> 8	556.8	-	-	-	-	-	-	-	-	-	-	-	-
B-23	563.7	0.0	1.0	563.7	562.7	1.0	3.5	562.7	560.2	3.5	> 8	560.2	-	-	-	-	-	-	-	-	-	-	-	-
B-24	563.7	0.0	0.5	563.7	563.2	0.5	> 8	563.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-25	563.7	0.0	1.5	563.7	562.2	1.5	> 8	562.2	-	-	-	-	-	-	-	-	-	-	-	-</				

TABLE 3
WELL COMPLETION SUMMARY

Buell Automatics
Gates, NY

Well Designation	Completion Date	Elevation (ft. AMSL) (NGVD 29)		Bentonite Seal (ft. bgs)	Sandpack Interval (ft. bgs)	Screened Interval (ft. bgs)	Lower Seal (ft. bgs)	Total Depth (ft. bgs)
		Ground	Reference					
MW-1	5/26/99	562.9	562.7	8.0-10.0	10.0-22.0	12.0-22.0	-----	22.0
MW-2	5/26/99	561.9	561.71	7.0-9.0	9.0-21.0	11.0-21.0	-----	21.0
MW-2D	8/8/02	562.0	561.56	20.8 - 31.3	31.3 - 42.3	32.3 - 42.3	-----	42.3
MW-5	5/26/99	562.1	561.76	7.0-9.0	9.0-21.0	11.5-21.5	-----	21.5
MW-6	8/8/02	560.3	559.78	2.0-4.0	4.0-19.0	5.0-19.0	-----	19.0
MW-7	5/21/02	561.4	560.83	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-8	5/21/02	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	561.1	560.36	2.0-4.0	4.0-16.0	5.0 - 15.0	-----	16.0
MW-10	8/5/02	562.8	562.37	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-11	8/7/02	559.3	559.05	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-12	5/22/02	562.8	562.3	2.0-4.0	4.0-20.0	5.0-20.0	-----	20.0
MW-13	5/20/02	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	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	560.4	560.1	1.5 - 3.0	3.0 - 10.0	4.0 - 10.0	10.0 - 12.0	12.0
MW-16	11/22/05	562.60	561.97	1.0-3.0	3.0-8.0	4.0-8.0	8.0-10.0	10.0
MW-17	11/22/05	556.60	556.16	3.0-6.0	6.0-18.0	7.0-17.0	-----	18.0
MW-18	11/22/05	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	563.51	563.09	0.5-1.5	1.5-10.0	2.0-9.9	-----	14.0
MW-20	9/20/12	561.44	561.15	1.0-1.5	1.5-10.7	2.0-10.0	-----	10.7
MW-21	9/20/12	560.28	559.91	0.5-1.5	1.5-10.0	2.0-9.9	-----	10.0
MW-22	9/20/12	562.16	561.73	0.5-1.5	1.5-14.0	2.0-13.9	-----	14.0
RW-1	12/30/03	563.7	563.27	0.5-1.5	1.5-6.0	2.0-6.0	-----	6.0
RW-2	12/30/03	563.8	563.25	0.5-1.0	1.0-6.5	1.5-6.5	-----	6.5

Notes:

1. NS = Not Surveyed
2. ft. bgs = all depths feet below ground surface.
3. All wells completed with flush-mount protective casings.

TABLE 4
SUMMARY OF WATER AND LNAPL LEVEL MEASUREMENTS
Buell Automatics
Gates, NY

Monitoring Well	Ground Elevation	Reference Elevation	August 1, 2011			August 3, 2011			August 5, 2011			September 9, 2011			September 30, 2011		
			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)**
MW-1	563.9	562.70	NP	5.62	557.08	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	561.9	561.71	NP	5.14	556.57	---	---	---	---	---	---	---	---	---	---	---	---
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	--- [‡]	---	--- [†]	---
MW-5	562.1	561.76	NP	4.84	556.92	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	560.3	559.78	NP	3.95	555.83	---	---	---	---	---	---	---	---	---	---	---	---
MW-7	561.4	560.83	NP	4.95	555.88	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	562.0	561.48	NP	5.44	556.04	---	---	---	---	---	---	---	---	---	---	---	---
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
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
MW-11	559.3	559.05	NP	5.55	553.50	---	---	---	---	---	---	---	---	---	---	---	---
MW-12	562.8	562.30	NP	4.26	558.04	---	---	---	---	---	---	---	---	---	---	---	---
MW-13	563.9	563.42	NP	5.85	557.57	---	---	---	---	---	---	---	---	---	---	---	---
MW-14	561.3	560.90	NP	5.11	555.79	---	---	---	---	---	---	---	---	---	---	---	---
MW-15	560.5	560.10	NP	4.20	555.90	---	---	---	---	---	---	---	---	---	---	---	---
MW-16	562.6	561.97	--- [†]	--- [†]	---	---	---	---	NP	1.56	560.41	---	---	---	---	---	---
MW-17	556.6	556.16	NP	3.70	552.46	---	---	---	---	---	---	---	---	---	---	---	---
MW-18	556.6	556.48	---	dry	---	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
RW-2	563.8	563.25	NP	5.94	557.31	---	---	---	---	---	---	---	---	---	---	---	---

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

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. Explanation of blank spaces:
MW-3 filled with debris beginning in January 2012.
MW-17 destroyed or removed by others prior to July 25, 2012 sampling event.
MW-19 through MW-22 were not installed until September 2012.

TABLE 4
SUMMARY OF WATER AND LNAPL LEVEL MEASUREMENTS
Buell Automatics
Gates, NY

Monitoring Well	Ground Elevation	Reference Elevation	November 4, 2011			December 9, 2011			January 9, 2012			February 9, 2012			March 14, 2012		
			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)**
MW-1	563.9	562.70	NP	3.81	558.89	---	---	---	---	---	---	---	---	---	NP	3.47	559.23
MW-2	561.9	561.71	NP	3.56	558.15	---	---	---	---	---	---	NP	3.16	558.7	NP	2.60	559.11
MW-2 D	562.0	561.56	---	--- [†]	---	---	--- [†]	---	---	---	---	---	---	---	---	--- [†]	---
MW-3	--- [‡]	--- [‡]	---	--- [†]	---	---	--- [†]	---	Debris in well			---	---	---			
MW-4	--- [‡]	--- [‡]	3.41	3.50	--- [‡]	NP	3.14	--- [‡]	---	---	---	---	---	---	2.63	2.70	--- [‡]
MW-5	562.1	561.76	NP	3.92	557.84	---	---	---	---	---	---	---	---	---	NP	2.20	559.56
MW-6	560.3	559.78	NP	3.19	556.59	---	---	---	---	---	---	---	---	---	NP	1.96	557.82
MW-7	561.4	560.83	NP	3.51	557.32	---	---	---	---	---	---	---	---	---	NP	2.69	558.14
MW-8	562.0	561.48	NP	3.85	557.63	---	---	---	---	---	---	---	---	---	NP	2.91	558.57
MW-9	561.1	560.36	NP	2.76	557.60	NP	1.88	558.5	NP	3.10	557.3	NP	2.34	558.0	NP	1.93	558.43
MW-10	562.8	562.37	2.61	2.75	559.75	See note below		560.23	NP	2.33	560.0	NP	2.34	560.0	(see note) NP	1.79	560.58
MW-11	559.3	559.05	NP	5.21	553.84	---	---	---	---	---	---	---	---	---	(see note) NP	4.08	554.97
MW-12	562.8	562.30	NP	2.61	559.69	---	---	---	---	---	---	---	---	---	NP	1.79	560.51
MW-13	563.9	563.42	NP	4.51	558.91	---	---	---	---	---	---	---	---	---	NP	3.40	560.02
MW-14	561.3	560.90	NP	5.34	555.56	---	---	---	---	---	---	---	---	---	NP	1.77	559.13
MW-15	560.5	560.10	NP	3.21	556.89	---	---	---	---	---	---	---	---	---	NP	1.47	558.63
MW-16	562.6	561.97	NP	0.36	561.61	---	---	---	---	---	---	---	---	---	NP	0.90	561.07
MW-17	556.6	556.16	NP	3.36	552.80	---	---	---	---	---	---	---	---	---	NP	1.91	554.25
MW-18	556.6	556.48	NP	2.28	554.20	---	---	---	---	---	---	---	---	---	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	4.01	559.26	---	---	---	---	---	---	---	---	---	NP	3.46	559.81
RW-2	563.8	563.25	NP	5.54	557.71	---	---	---	---	---	---	---	---	---	NP	1.45	561.80

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 4
SUMMARY OF WATER AND LNAPL LEVEL MEASUREMENTS
Buell Automatics
Gates, NY

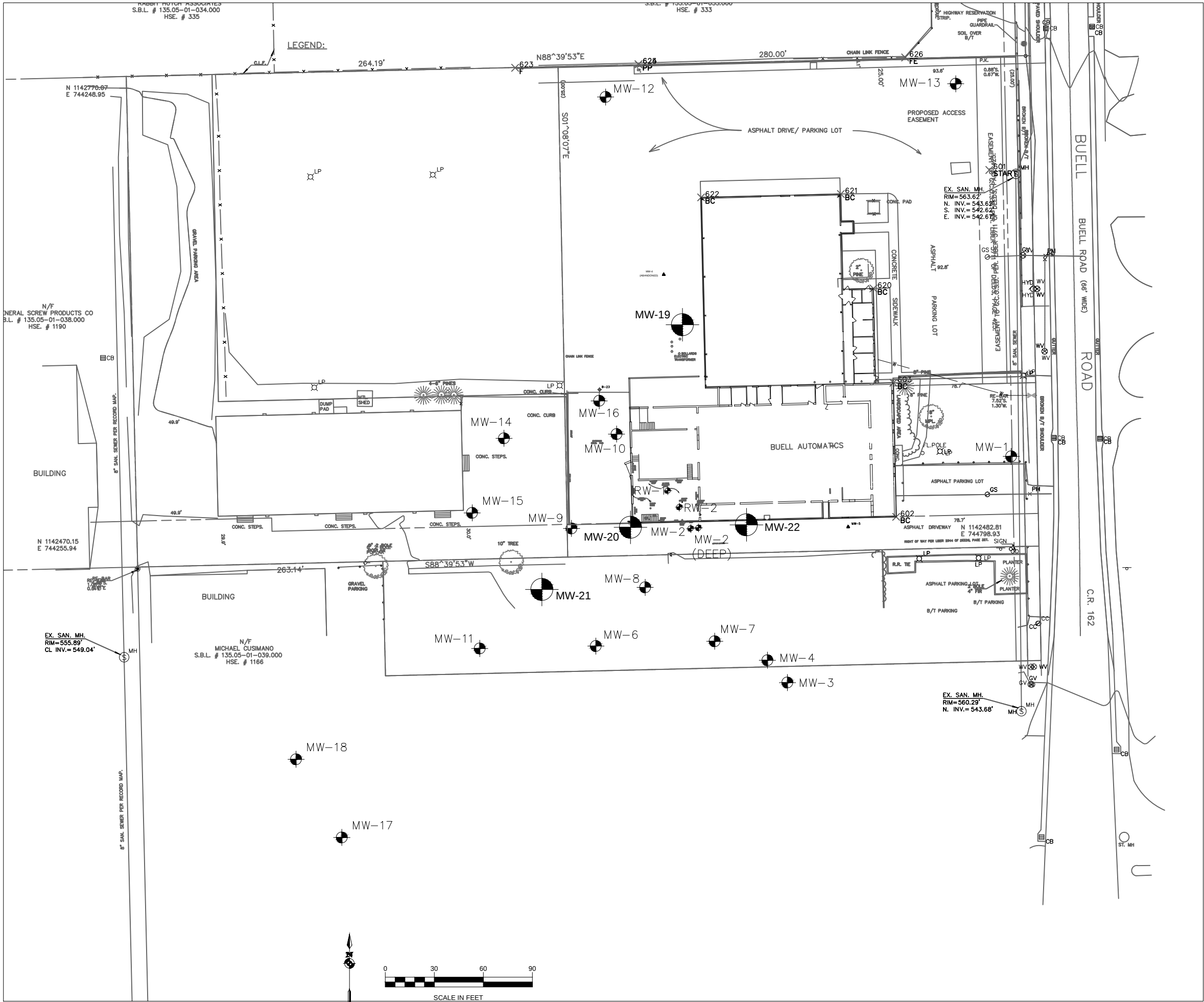
Monitoring Well	Ground Elevation	Reference Elevation	April 5, 2012			May 2, 2012			June 8, 2012			July 3, 2012			July 25, 2012		
			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level			Oil/Water Level		
			oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**	oil (ft. btoc)	water (ft. btoc)	(elevation)**
MW-1	563.9	562.70	---	---	---	NP	3.62	559.08	---	---	---	---	---	---	NP	6.19	556.51
MW-2	561.9	561.71	---	---	---	NP	2.64	559.07	---	---	---	---	---	---	NP	6.04	555.67
MW-2 D	562.0	561.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	---	---															
MW-4	---	---	NP	3.34	---	NP	2.56	---	NP	3.17	---	NP	3.05	---	4.73	4.75	---
MW-5	562.1	561.76	---	---	---	NP	2.32	559.44	---	---	---	---	---	---	NP	5.44	556.32
MW-6	560.3	559.78	---	---	---	NP	1.99	557.79	---	---	---	---	---	---	NP	5.19	554.59
MW-7	561.4	560.83	---	---	---	NP	2.68	558.15	---	---	---	---	---	---	NP	5.75	555.08
MW-8	562.0	561.48	---	---	---	NP	2.89	558.59	---	---	---	---	---	---	NP	6.14	555.34
MW-9	561.1	560.36	NP	2.66	557.7	NP	1.45	558.91	NP	2.68	557.7	NP	2.37	558.0	5.15	5.15	555.21
MW-10	562.8	562.37	NP	2.45	559.9	NP	1.87	560.50	NP	2.46	559.9	NP	2.18	560.2	4.14	6.25	558.02
MW-11	559.3	559.05	---	---	---	NP	4.44	554.61	---	---	---	---	---	---	NP	6.34	552.71
MW-12	562.8	562.30	---	---	---	NP	1.93	560.37	---	---	---	---	---	---	NP	4.87	557.43
MW-13	563.9	563.42	---	---	---	NP	3.52	559.90	---	---	---	---	---	---	NP	6.36	557.06
MW-14	561.3	560.90	---	---	---	NP	2.38	558.52	---	---	---	---	---	---	NP	3.95	556.95
MW-15	560.5	560.10	---	---	---	NP	1.62	558.48	---	---	---	---	---	---	NP	5.47	554.63
MW-16	562.6	561.97	---	---	---	NP	0.80	561.17	---	---	---	---	---	---	NP	3.75	558.22
MW-17	556.6	556.16	---	---	---	NP	1.89	554.27	---	---	---	---	---	---	Well destroyed/covered		
MW-18	556.6	556.48	---	---	---	NP	20.00	536.48	---	---	---	---	---	---	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	3.50	559.77	---	---	---	---	---	---	NP	5.20	558.07
RW-2	563.8	563.25	---	---	---	NP	4.21	559.04	---	---	---	---	---	---	NP	dry	---

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 4
SUMMARY OF WATER AND LNAPL LEVEL MEASUREMENTS
Buell Automatics
Gates, NY

Monitoring Well	Ground Elevation	Reference Elevation	July 26, 2012			August 3, 2012			September 7, 2012			October 5, 2012			November 16, 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)**
MW-1	563.9	562.70	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.60	558.10
MW-2	561.9	561.71	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.63	557.08
MW-2 D	562.0	561.56	---	---	---	---	---	---	---	---	---	---	---	---	--- [†]	--- [†]	--- [†]
MW-3	--- [‡]	--- [‡]															
MW-4	--- [‡]	--- [‡]	---	---	---	NP	3.68	--- [‡]	NP	2.72	--- [‡]	NP	5.41	--- [‡]	NP	3.36	--- [‡]
MW-5	562.1	561.76	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.84	557.92
MW-6	560.3	559.78	NP	5.54	554.24	---	---	---	---	---	---	---	---	---	NP	3.57	556.21
MW-7	561.4	560.83	NP	5.59	555.24	---	---	---	---	---	---	---	---	---	NP	4.42	556.41
MW-8	562.0	561.48	NP	5.86	555.62	---	---	---	---	---	---	---	---	---	NP	4.52	556.96
MW-9	561.1	560.36	NP	4.75	555.61	3.96	3.98	556.38	2.85	2.87	557.49	NP	4.68	555.68	NP	3.72	556.64
MW-10	562.8	562.37	3.65	3.80	558.71	2.88	3.11	559.47	1.99	2.11	560.37	3.15	4.68	559.07	NP	4.62	557.75
MW-11	559.3	559.05	NP	6.65	552.40	---	---	---	---	---	---	---	---	---	NP	3.40	555.65
MW-12	562.8	562.30	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.45	558.85
MW-13	563.9	563.42	---	---	---	---	---	---	---	---	---	---	---	---	NP	4.96	558.46
MW-14	561.3	560.90	---	---	---	---	---	---	---	---	---	---	---	---	NP	2.84	558.06
MW-15	560.5	560.10	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.15	556.95
MW-16	562.6	561.97	---	---	---	---	---	---	---	---	---	---	---	---	NP	1.88	560.09
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
MW-20	561.44	561.15										NP	5.05	556.10	NP	4.02	557.13
MW-21	560.28	559.91										NP	4.22	555.69	NP	3.41	556.50
MW-22	562.16	561.73										NP	5.44	556.29	NP	4.49	557.24
RW-1	563.7	563.27	---	---	---	---	---	---	---	---	---	---	---	---	NP	3.66	559.61
RW-2	563.8	563.25	---	---	---	---	---	---	---	---	---	---	---	---	NP	Dry	---





Stantec Consulting S
61 Commercial Street
Rochester NY U.S.A.
14614-1009
Tel. 585.475.1440
Fax. 585.272.1814
www.stantec.com

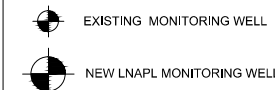
Stantec

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions and scale the drawing - any errors or omissions shall be the responsibility of the Contractor without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Consultants

Legend



Notes

Issued

By

App

Permit-Seal

Project/ Client

BUELL AUTOMATICS

Rochester, New York

Title

SITE PLAN SHOWING
LOCATIONS OF NEW LNAPL
MONITORING WELLS

Project No.

190500033

Drawing No.

FIG. 2

Scale

SEE SCALE BAR

Sheet

Re

of

Appendix A
CAMP Monitoring Records



V:\1905\administration\Environ\FORMS\field forms\STANTEC forms\CAMP\CAMP FORM.DOC

Appendix B

Test Boring Logs and Monitoring Well Installation Reports



61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-19

Page 1 of 1

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

0	SAMPLE				Soil Information		Headspace sample PID (ppm)
	PID	Rec.	No.	Depth	Remarks		
	0.0	3.0	1	0-4'	0.0' - 0.6'	Asphalt and subbase	1.5-1.7' = 0.0
					0.6' - 1.6'	Red-brown SAND, trace silt, moist	
					1.6' - 4.0'	Red-brown CLAY, some silt, moist	
5	0.2	3.4	2	4-8'	4.0' - 5.8'	Red-brown SILT, some medium-coarse sand, moist	5.5-6.0' = 0.0
	0.8						
	2.6				5.8' - 6.6'	Light brown fine SAND, little silt, wet	
					6.6' - 8.0'	Light brown fine SAND, little silt, moist	
	0.1						
10	0.0	2.0	3	8-10'	8.0' - 8.5'	Red-brown SAND, some silt, moist	8.6' = 0.0
					8.5' - 8.7'	Red-brown SAND, some silt, some gravel, moist	
					8.7' - 10.0'	Red-brown SAND, little silt, moist	
					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).

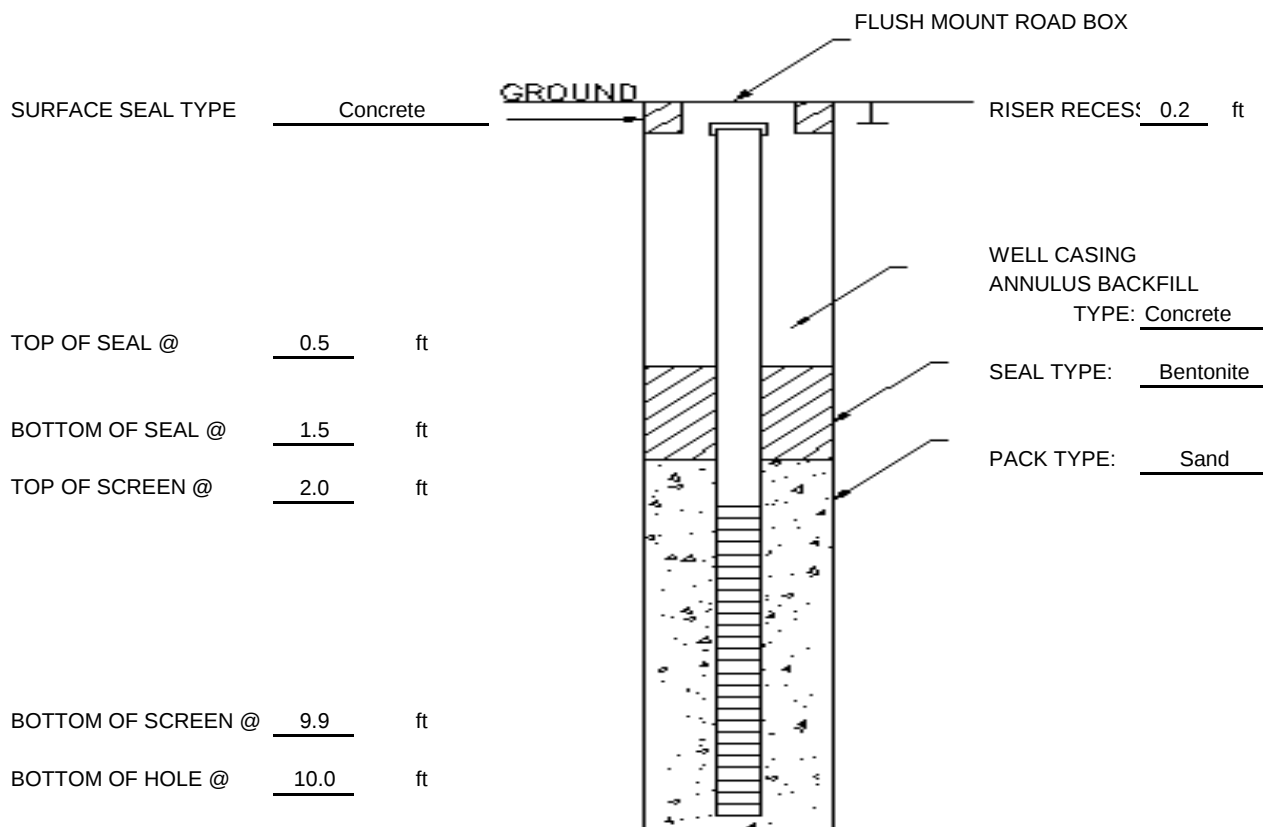


OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 381 Buell Rd
PROJECT NUMBER 190500033
CLIENT Buell Automatics
LOCATION 381 Buell Rd
Gates, NY

HOLE DESIGNATION MW-19
DATE COMPLETED 9/20/2012
DRILLING METHOD HSA
SUPERVISOR S. Burke



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

Page 1 of 1

Project:	<u>Buell Road</u>	Drill Contractor:	<u>Nothnagle</u>	Start Date:	<u>9/20/2012</u>
Project #:	<u>190500033</u>	Driller:	<u>K. Bush</u>	Completion Date:	<u>9/20/2012</u>
Client:	<u>Buell Automatics</u>	Elevation:	<u>N/A</u>	Drilling Method:	<u>HSA, Macrocore</u>
Location:	<u>Buell Road, Gates, NY</u>	Weather:	<u>Sun, 70s F</u>	Supervisor:	<u>S. Burke</u>

	SAMPLE				Soil Information		Headspace sample PID (ppm)
	PID	Rec.	No.	Depth	Remarks		
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
10	0.0	1.5	3	8-10'	8.0' - 10.0'	Brown fine SAND, wet -LACUSTRINE SAND-	9.0-10.0' = 0.0
					Boring terminated at 10.0' below ground surface No indication of odor, staining, or petroleum sheen noted		
15							
20							

Notes:

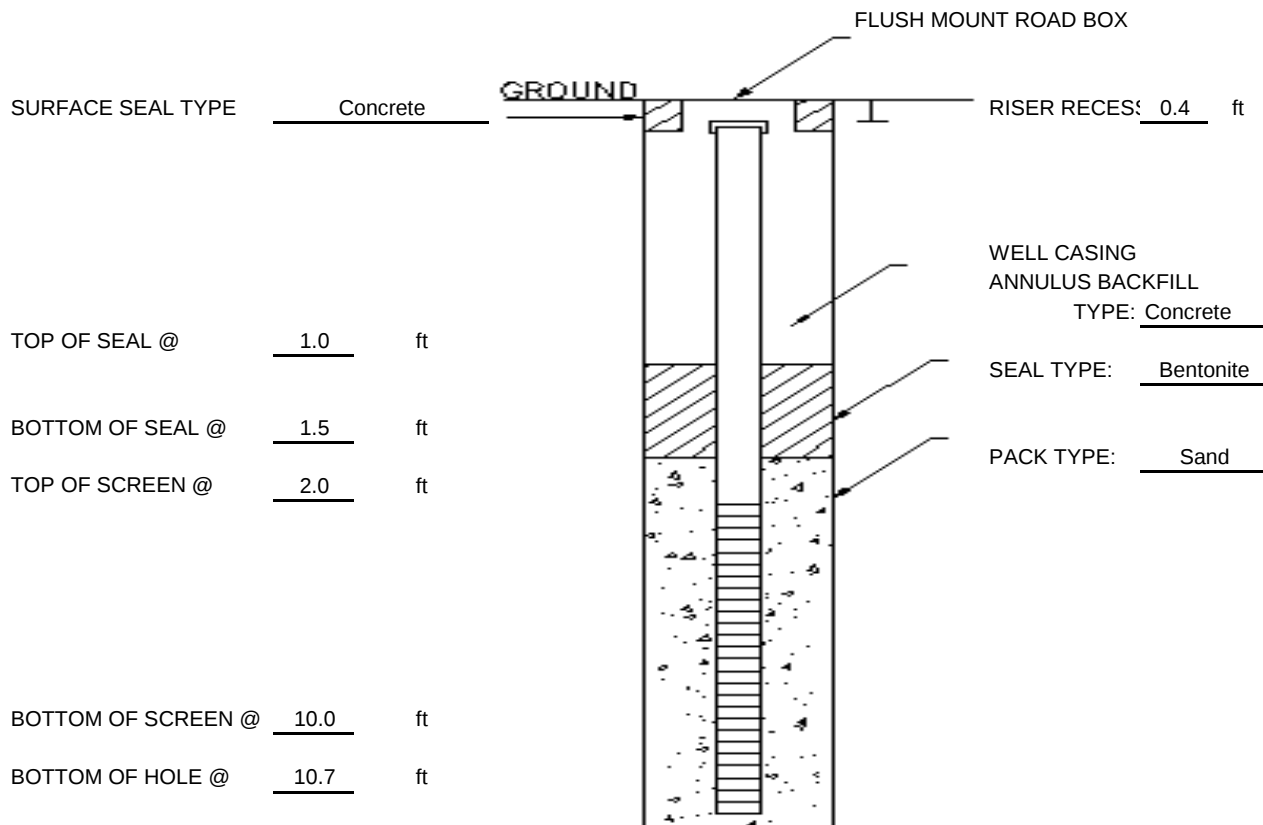
1. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.
2. PID screening results are in parts per million (ppm).



OVERBURDEN MONITORING WELL DESIGN DETAILS

PROJECT NAME 381 Buell Rd
PROJECT NUMBER 190500033
CLIENT Buell Automatics
LOCATION 381 Buell Rd
Gates, NY

HOLE DESIGNATION MW-20
DATE COMPLETED 9/20/2012
DRILLING METHOD HSA
SUPERVISOR S. Burke



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.



61 Commercial Street
Rochester, NY 14614
(585) 475-1440

Test Boring No.: MW-21

Page 1 of 1

Project:	<u>Buell Road</u>	Drill Contractor:	<u>Nothnagle</u>	Start Date:	<u>9/20/2012</u>
Project #:	<u>190500033</u>	Driller:	<u>K. Bush</u>	Completion Date:	<u>9/20/2012</u>
Client:	<u>Buell Automatics</u>	Elevation:	<u>N/A</u>	Drilling Method:	<u>HSA, Macrocore</u>
Location:	<u>Buell Road, Gates, NY</u>	Weather:	<u>Sun, 70s F</u>	Supervisor:	<u>S. Burke</u>

0	SAMPLE				Soil Information		Headspace sample PID (ppm)	
	PID	Rec.	No.	Depth	Remarks			
	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-		
5	0.0	2.7	2	4-8'	3.9' - 4.0'	-GRAVEL-	3.5' = 0.1	
					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-	4.0-5.0 = 4.1	
10	0.0	2.0	3	8-10'	8.0' - 10.5'	Red-brown fine SAND, trace silt, trace medium to coarse sand, wet		
15					10.5' - 12.0'	Red-brown SILT, trace to little sand and fine gravel, moist to wet -GLACIAL TILL-	10.5' = 1.3	
20					Boring terminated at 12.0' below ground surface No indication of odor, staining, or petroleum sheen noted			

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).

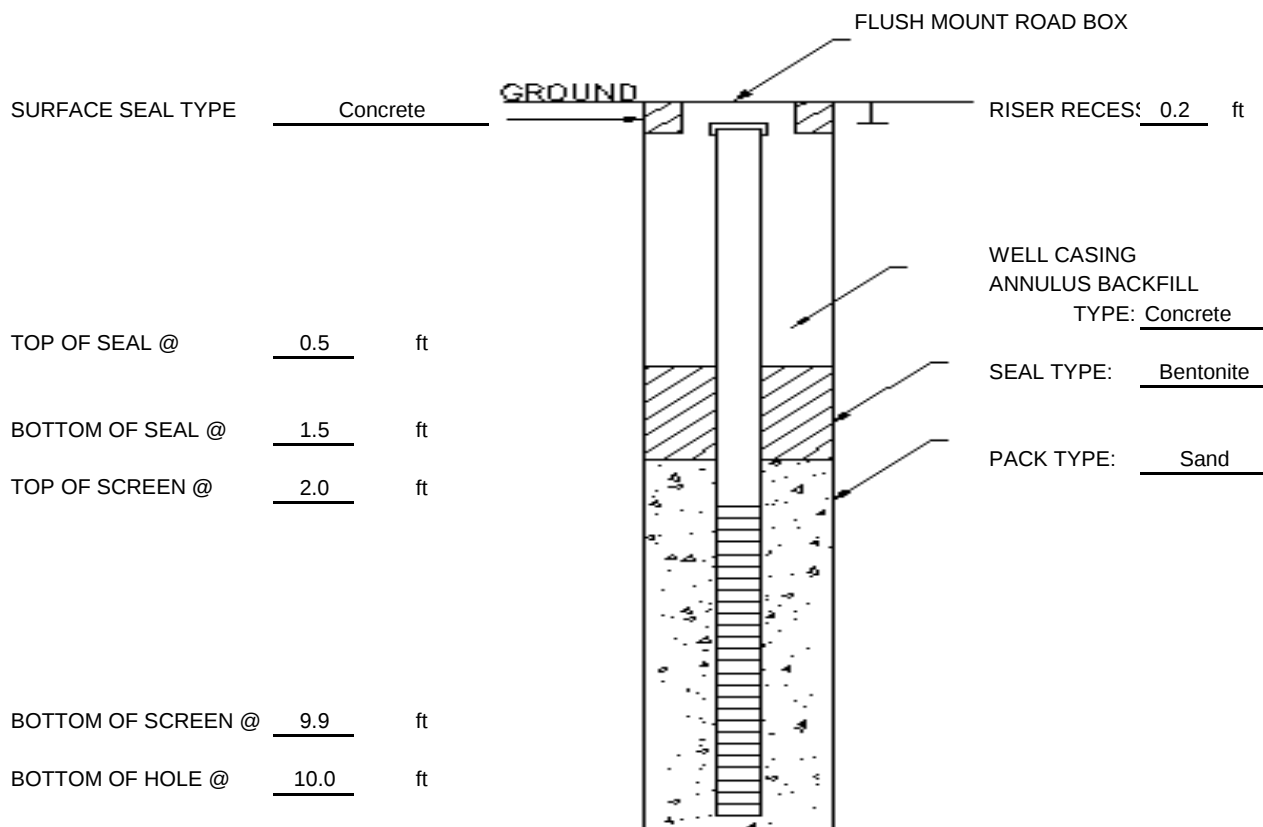


OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 381 Buell Rd
PROJECT NUMBER 190500033
CLIENT Buell Automatics
LOCATION 381 Buell Rd
Gates, NY

HOLE DESIGNATION MW-21
DATE COMPLETED 9/20/2012
DRILLING METHOD HSA
SUPERVISOR S. Burke



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

Page 1 of 1

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

0	SAMPLE				Soil Information Remarks		Headspace sample PID (ppm)
	PID	Rec.	No.	Depth			
	0.0	3.0	1	0-4'	0.0' - 0.7'	Asphalt and subbase	1.5' = 0.0
					0.7' - 1.5'	Brown fine SAND, with some gravel, dry	
						-FILL-	
					1.5' - 3.8'	Red-brown SILT, some sand, dry	
5		3.5	2	4-8'	3.8' - 4.0'	Red-brown fine SAND, trace medium to coarse sand, moist	5.0-6.0' = 173.4 6.0-7.0' = 130.1 7.8' = 46.4
	1.7				4.0' - 6.0'	Red fine SAND, trace medium to coarse sand, moist	
	4.6				6.0' - 8.0'	Brown SILT, some fine to medium sand, moist	
	99.7						
	68.4						
10	17.4			8-10'	8.0' - 8.5'	Red-brown SILT, some clay, dry	9.0' = 0.1
		2.0	3		8.5' - 9.5'	Red-brown SILTY CLAY, some coarse sand, dry	
	0.5						
	0.2						
	0.1						
	0.0	4.2	4		10.0' - 13.2'	Brown CLAY, some silt, occaisional gravel, moist	13.5' = 2.5
					13.2' - 14.0'	Red-brown SAND, some silt, wet	
15					Boring terminated at 10.0' below ground surface No indication of odor, staining, or petroleum sheen noted		
20							

Notes:

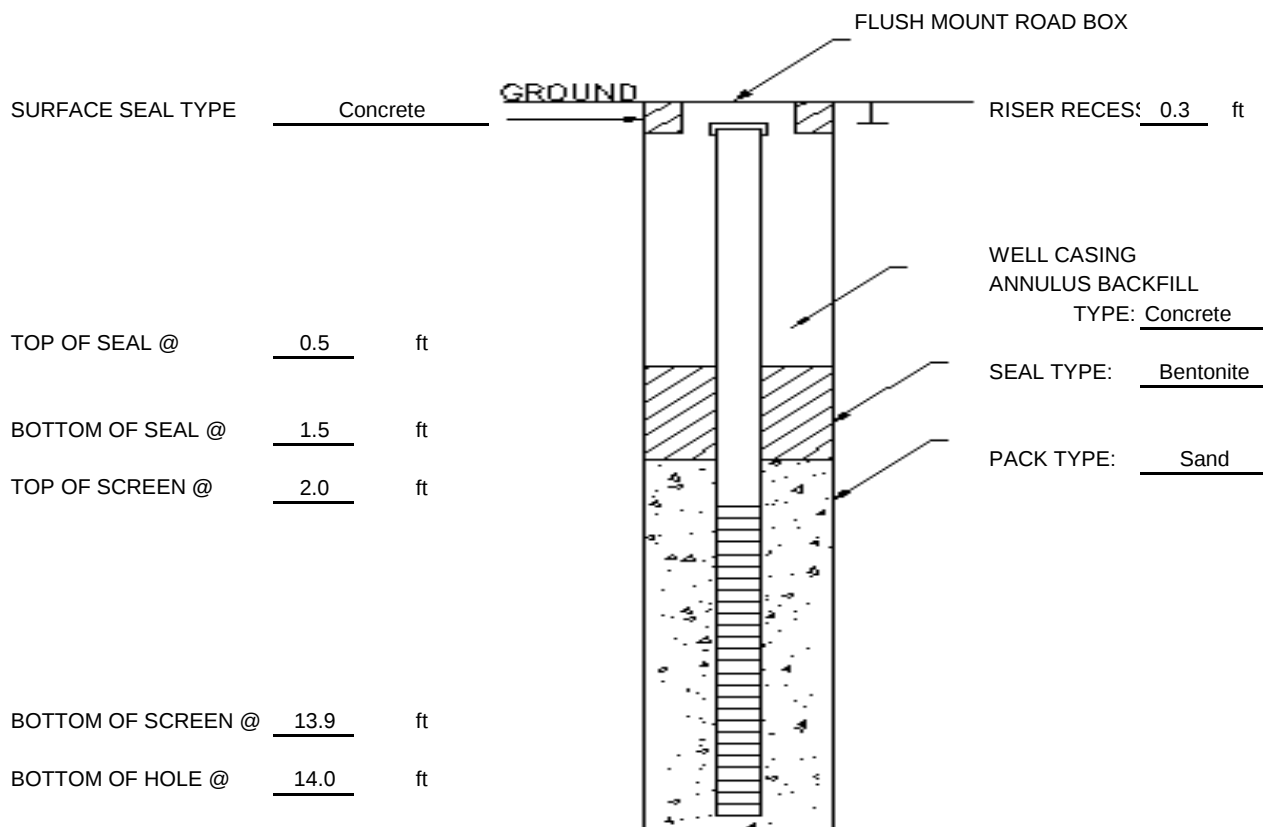
1. Field screening data collected with a Mini-RAE 3000 PID equipped with a 10.6 eV lamp.
2. PID screening results are in parts per million (ppm).



OVERBURDEN MONITORING WELL DESIGN DETAILS

PROJECT NAME 381 Buell Rd
PROJECT NUMBER 190500033
CLIENT Buell Automatics
LOCATION 381 Buell Rd
Gates, NY

HOLE DESIGNATION MW-22
DATE COMPLETED 9/20/2012
DRILLING METHOD HSA
SUPERVISOR S. Burke



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.

Appendix C
Waste Characterization Analysis Report



Analytical Report Cover Page

Stantec

For Lab Project # 12:4271

Issued October 22, 2012

This report contains a total of 8 pages

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

Any noncompliant QC parameters having impact on the data are flagged or documented on the final report or are noted below:

Reduced sample size used for TCLP (1311) extraction due to a visually homogeneous matrix.

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

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified.

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

"<" = analyzed for but not detected at or above the reporting limit.

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

"Z" = See case narrative.

"D" = Duplicate results outside QC limits. May indicate a non-homogenous matrix.

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

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

ENVIRONMENTAL SERVICES, INC.

LAB REPORT FOR SOIL/SOLID/SLUDGE pH MEASURED IN WATER

Date Sampled: 10/05/2012
Date Received: 10/15/2012
Date Analyzed: 10/16/2012

[illegible]

Approved By:

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

124271R1.XLS



PARADIGM
ENVIRONMENTAL SERVICES, INC.

.79 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax : (585) 647-3311

LAB REPORT FOR TCLP RCRA METALS ANALYSIS

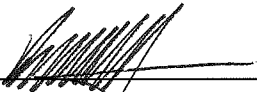
Client: Stantec
Client Job Site: Buell Automatics
Client Job No.: 190500033
Field Location: Soil Drums Composite
Field ID No.: N/A

Lab Project No.: 12:4271
Lab Sample No.: 12:4271-01A
Sample Type: TCLP Extract
Date Sampled: 10/05/2012
Date Received: 10/15/2012

Parameter	Date Analyzed	Analytical Method	Result (mg/L)	Regulatory Limit (mg/L)
Arsenic	10/18/2012	SW846 1311/3005/6010	<0.100	5.0
Barium	10/18/2012	SW846 1311/3005/6010	2.01	100
Cadmium	10/18/2012	SW846 1311/3005/6010	<0.025	1.0
Chromium	10/18/2012	SW846 1311/3005/6010	<0.050	5.0
Lead	10/18/2012	SW846 1311/3005/6010	<0.100	5.0
Mercury	10/18/2012	SW846 1311/7470	<0.0020	0.2
Selenium	10/18/2012	SW846 1311/3005/6010	<0.100	1.0
Silver	10/18/2012	SW846 1311/3005/6010	<0.050	5.0

ELAP ID No.:10958

Comments:

Approved By: 
Bruce Hoogesteger, Technical Director

**Semi-Volatile Analysis Report for TCLP Extract**Client: **Stantec**

Client Job Site: Buell Automatics
Client Job Number: 190500033
Field Location: Soil Drums Composite
Field ID Number: N/A
Sample Type: TCLP Extract

Lab Project Number: 12:4271
Lab Sample Number: 12:4271-01A
Date Sampled: 10/05/2012
Date Received: 10/15/2012
Date Analyzed: 10/18/2012

Base / Neutrals	Results in ug / L	Regulatory Limits in ug / L
1,4-Dichlorobenzene	< 40.0	7,500
2,4-Dinitrotoluene	< 40.0	130
Hexachlorobenzene	< 40.0	130
Hexachlorobutadiene	< 40.0	500
Hexachloroethane	< 40.0	3000
Nitrobenzene	< 40.0	2000
Pyridine	< 40.0	5000

Acids	Results in ug / L	Regulatory Limits in ug / L
Cresols (as m,p,o-Cresol)	< 40.0	200,000
Pentachlorophenol	< 100	100,000
2,4,5-Trichlorophenol	< 100	400,000
2,4,6-Trichlorophenol	< 40.0	2000

ELAP Number 10958

Analytical Method: EPA 8270C
Prep Method: EPA 1311 & 3510C

Data File: S65817.D

Comments: ug / L = microgram per Liter

Signature: _____

Bruce Hoogesteger, Technical Director

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

124271S1.XLS

**Volatile Analysis Report for TCLP Extract****Client:** Stantec**Client Job Site:** Buell Automatics**Lab Project Number:** 12:4271**Lab Sample Number:** 12:4271-01A**Client Job Number:** 190500033**Field Location:** Soil Drums Composite**Date Sampled:** 10/05/2012**Field ID Number:** N/A**Date Received:** 10/15/2012**Sample Type:** TCLP Extract**Date Analyzed:** 10/19/2012

Compound	Results in ug / L	Regulatory Limits in ug / L
Benzene	< 20.0	500
2-Butanone	< 100	200,000
Carbon Tetrachloride	< 20.0	500
Chlorobenzene	< 20.0	100,000
Chloroform	< 20.0	6,000
1,2-Dichloroethane	< 20.0	500
1,1-Dichloroethene	< 20.0	700
Tetrachloroethene	< 20.0	700
Trichloroethene	< 20.0	500
Vinyl chloride	< 20.0	200

ELAP Number 10958

Analytical Method: EPA 8260B

Data File: X01149.D

Prep Method: EPA 1311 / 5030

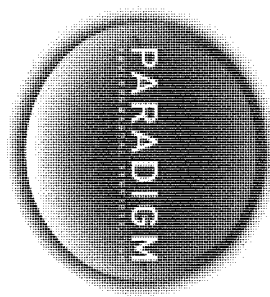
Comments: ug / L = microgram per Liter

Signature: _____

Bruce Hoogesteger, Technical Director

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

124271V1.XLS



CHAIN OF CUSTODY

					
PROJECT REFERENCE Buell Automatics 190500033					
REPORT TO:			INVOICE TO:		
CLIENT:	Stantec		CLIENT:	Same	
ADDRESS:	601 Commercial St		ADDRESS:		
CITY:	Rochester NY	STATE:	NH	CITY:	
PHONE:	(585) 413-5271	ZIP:	04614	STATE:	
ATTN:	Tom Wells	PHONE:		ZIP:	
MATRIX CODES:		ATTN:		LAB PROJECT ID	124271
AQ - Aqueous Liquid				Quotation #:	MS 072811C
NQ - Non-Aqueous Liquid				Email:	tom.wells@stantec.com
WA - Water					
WG - Groundwater					
DW - Drinking Water					
WW - Wastewater					
SO - Soil					
SL - Sludge					
SD - Solid					
PT - Paint					
WP - Wipe					
CK - Caulk					
OL - Oil					
AR - Air					

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRADES	SAMPLE IDENTIFIER	MACTDS	CONCENTRATIONS	TCLP-Haz. waste constituents	TCLPVOA	SVOA	Metal	Flashpoint	PH	REMARKS	PARADIGM LAB SAMPLE NUMBER
1 10/4/2012	16:00	X		Soil drums composite	SO	2	X	X	X	X	X	X	CE Wells 10/15/12 ST TAT TAT VOA SVOA, metals, Flash PH 9.0 to 11.5	01A
2														
3														
4														
5														
6														
7														
8														
9														
10													20 Cited on 10/12	

Turnaround Time	Report Supplements	
Availability contingent upon lab approval; additional fees may apply.		
Standard 5 day	☒	
Rush 3 day	☐	
Rush 2 day	☐	
Rush 1 day	☐	
Other	☐	
Please indicate: _____		
Batch QC	☐	Basic EDD ☐
Category A	☐	INSDEC EDD ☐
Category B	☐	
Other	☐	Other EDD ☐
Please indicate: _____		

Sampled By		Date/Time	Total Cost
Sue Byrne		10/5/12	
Sue Byrne		10/12/12 1500	
Relinquished By Dea. Mulla		Date/Time 10/12/12 1500	
Received By V. B. B.		Date/Time 10/12/12 1515	P.L.F.
Received @ Lab By		Date/Time	
Elizabeth A. Horne 10/15/12 1646			



2082

Chain of Custody Supplement

Client: Stantec

Completed by: mw

Lab Project ID: 12.4271

Date: 10/15/12

Sample Condition Requirements

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

Condition	Yes	No	N/A
Container Type	☒	☐	☐
Comments			
Transferred to method-compliant container	☐	☐	☒
Headspace (<1 mL)	☐	☐	☒
Comments			
Preservation	☐	☐	☒
Comments			
Chlorine Absent (<0.10 ppm per test strip)	☐	☐	☒
Comments			
Holding Time	☒	☐	☐
Comments			
Temperature	☒	☐	☒
Comments	2°Ciced on 10/12		
Sufficient Sample Quantity	☒	☐	☐
Comments			

Appendix D
Waste Disposal Documentation

7048



003585387SKS

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NYD002466290		2. Page 1 of 1		3. Emergency Response Phone 1-800-468-1760		4. Manifest Tracking Number 003585387 SKS			
		5. Generator's Name and Mailing Address BUELL AUTOMATICS 381 Buell Rd Rochester NY 14624-3123 Generator's Phone: 585-328-7430									
6. Transporter 1 Company Name SAFETY-KLEEN SYSTEMS, INC.		U.S. EPA ID Number TXR000081205									
		7. Transporter 2 Company Name		U.S. EPA ID Number							
8. Designated Facility Name and Site Address SAFETY-KLEEN SYSTEMS, INC. 1200 SYLVAN STREET LINDEN, NJ 07036 Facility's Phone: 908-862-2000				U.S. EPA ID Number 7404 NJD002182897							
		9a. HM X		9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NA3082 HAZARDOUS WASTE, LIQUID, N.O.S. (VINYL CHLORIDE, TRICHLOROETHYLENE) 9 PGIII		10. Containers No. 03 Type DM		11. Total Quantity 1200		12. Unit Wt./Vol. P	
14. Special Handling Instructions and Additional Information SK SHIP#208569559 59246343 53319 CSG: 1)ERG#171; 24 HR EMERGENCY #1-800-468-1760 (SAFETY-KLEEN - CONTRACT #94138) SK AUTHORIZED TO RETAIN LICENSED SUBSEQUENT CARRIERS AS NECESSARY											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offor's Printed/Typed Name GREG BEADLE											
Signature 											
Month Day Year 11/01/12											
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____											
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Shelly Pangrazo											
Signature 											
Month Day Year 10/18/12											
Transporter 2 Printed/Typed Name _____											
Signature _____											
Month Day Year _____											
18. Discrepancy 18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number: _____											
18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: _____											
18c. Signature of Alternate Facility (or Generator) Month Day Year _____											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H141 2. _____ 3. _____ 4. _____											
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Shelly Forest											
Signature 											
Month Day Year 10/25/12											

7048


 003585388 SKS
 Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NYD002466290		2. Page 1 of 1		3. Emergency Response Phone 1-800-468-1760		4. Manifest Tracking Number 003585388 SKS		
5. Generator's Name and Mailing Address BUELL AUTOMATICS 381 Buell Rd Rochester NY 14624-3123						Generator's Site Address (if different than mailing address)				
Generator's Phone: 585-328-7430										
6. Transporter 1 Company Name SAFETY-KLEEN SYSTEMS, INC.						U.S. EPA ID Number TXR000081205				
7. Transporter 2 Company Name <i>Herzmit Environmental Group Inc</i>						U.S. EPA ID Number <i>NYD 989769947</i>				
8. Designated Facility Name and Site Address SAFETY-KLEEN SYSTEMS, INC. 3700 LAGRANGE ROAD SMITHFIELD, KY 40068						U.S. EPA ID Number KYD053348108				
Facility's Phone: 502-845-2453										
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes			
			No.	Type						
	X	1. NA3077 HAZARDOUS WASTE, SOLID, N.O.S. (VINYL CHLORIDE, TRICHLOROETHYLENE) 9 PGIII	01	DM	350	P	D040	D043	F001	
							F002	B		
14. Special Handling Instructions and Additional Information SK SHIP#208569565✓59246343 53319 CSG:										
1) ERG#171; 24 HR EMERGENCY #1-800-468-1760 (SAFETY-KLEEN - CONTRACT #94138) SK AUTHORIZED TO RETAIN LICENSED SUBSEQUENT CARRIERS AS NECESSARY										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.										
Generator's/Officer's Printed/Typed Name G. BEADLE, GREG						Signature <i>G. Beadle, GREG</i>		Month Day Year 11 01 12		
TRANSPORTER INTL	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
	Transporter signature (for exports only): _____									
	17. Transporter Acknowledgment of Receipt of Materials									
	Transporter 1 Printed/Typed Name <i>Julie C Pangrazio</i>						Signature <i>Julie C Pangrazio</i>		Month Day Year 11 01 12	
	Transporter 2 Printed/Typed Name <i>William Kadevitz</i>						Signature <i>William Kadevitz</i>		Month Day Year 10 22 12	
DESIGNATED FACILITY	18. Discrepancy									
	18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection									
	Manifest Reference Number: _____									
	19b. Alternate Facility (or Generator) U.S. EPA ID Number _____									
	Facility's Phone: _____									
19c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____										
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1. <i>H061</i> 2. 3. 4.										
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a										
Printed/Typed Name <i>Samantha Calhoun</i>						Signature <i>Samantha Calhoun</i>		Month Day Year 11 01 12		