



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Site No. 915128

Site Name Union Road Site

Site Address: Losson Road Zip Code: 14110
City/Town: Cheektowaga
County: Erie
Site Acreage: 23.0

Reporting Period: December 26, 2013 to December 26, 2014

Box 1

RECEIVED

JAN 26 2015

NYS DEC
REGION 9

YES NO

1. Is the information above correct?

If NO, include handwritten above or on a separate sheet.

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development?

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below?
Closed Landfill

7. Are all ICs/ECs in place and functioning as designed?

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 915128

Box 3

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
114.17-1-2	Witben Realty C/O Universal Marion	Landuse Restriction Monitoring Plan O&M Plan Ground Water Use Restriction

Site O&M Plan & Reporting per Order on Consent.

114.17-1-3.1	Universal Marion Corp.	Ground Water Use Restriction Landuse Restriction Monitoring Plan O&M Plan
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Site O&M Plan & Reporting per Order on Consent.

Box 4

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
114.17-1-2	Cover System Groundwater Treatment System Fencing/Access Control
114.17-1-3.1	Groundwater Treatment System Cover System Fencing/Access Control

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) 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 is accurate and compete.

YES NO

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) 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;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

**IC CERTIFICATIONS
SITE NO. 915128**

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 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 Michael Persico at 52 Federal Road Suite 2C, Danbury, CT
print name print business address

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.



Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

1/20/15
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 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 Michael O'Connor at 52 Federal Rd Suite 2C Danbury, CT
print name print business address

am certifying as a Qualified Environmental Professional for the Remedial Party
(Owner or Remedial Party)


Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

1/20/15
Date

52 Federal Road, Suite 2C
Danbury, CT 06810
Tele: (203) 205-9000
Fax: (203) 205-9011
www.unicornmgt.com



Unicorn Management
Consultants, LLC

**ANNUAL GROUNDWATER MONITORING REPORT
CLOSURE YEAR 18 (2014)**

**UNION ROAD SITE
TOWN OF CHEEKTOWAGA
ERIE COUNTY, NEW YORK
(SITE REGISTRY NO. 9-15-128)**

Prepared for:

**AMERICAN PREMIER UNDERWRITERS, INC.
(FORMERLY THE PENN CENTRAL CORPORATION)
ONE EAST FOURTH STREET
CINCINNATI, OHIO 45202**

Prepared by:

**UNICORN MANAGEMENT CONSULTANTS, LLC
52 FEDERAL ROAD, SUITE 2C
DANBURY, CT 06810**

January 23, 2015



Document Authorization Form

Annual Groundwater Monitoring Report Closure Year 18 (2014)

Union Road Site
Town of Cheektowaga
Erie County, New York
(Site Registry No. 9-15-128)

Prepared for:

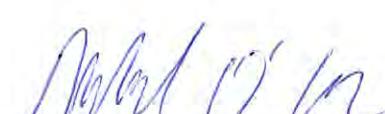
American Premier Underwriters, Inc.
(Formerly The Penn Central Corporation)
One East Fourth Street
Cincinnati, Ohio 45202

Prepared by:

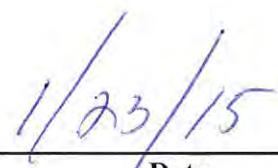
UNICORN MANAGEMENT CONSULTANTS, LLC
52 FEDERAL ROAD, SUITE 2C
DANBURY, CT 06810

January 23, 2015

AUTHORIZATIONS:



Michael J. O'Connor, LEP, PG.
Manager of Environmental Projects



Date

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APPENDIX B LABORATORY REPORT (ON CD)

1. INTRODUCTION

This Groundwater Monitoring Report has been prepared by Unicorn Management Consultants, LLC (UMC) on behalf of American Premier Underwriters, Inc. The purpose of this document is to demonstrate compliance with Section 12.4.1 of the Union Road Site Remedial Design Report (Design Report), approved by the NYSDEC in May, 1995. Section 12.4.1 of the Design Report discusses the Groundwater Monitoring Plan (GMP). The GMP consists of these elements:

- Installation of groundwater monitoring wells inside and outside the slurry wall around the landfill closure;
- Collection and analyses of groundwater samples; and
- Determination of groundwater elevations.

Please note that pursuant to a letter dated October 18, 2001, from Blank Rome Comisky and McCauley, LLP (APU's legal counsel), effective October 19, 2001, APU designated UMC as their environmental consultants.

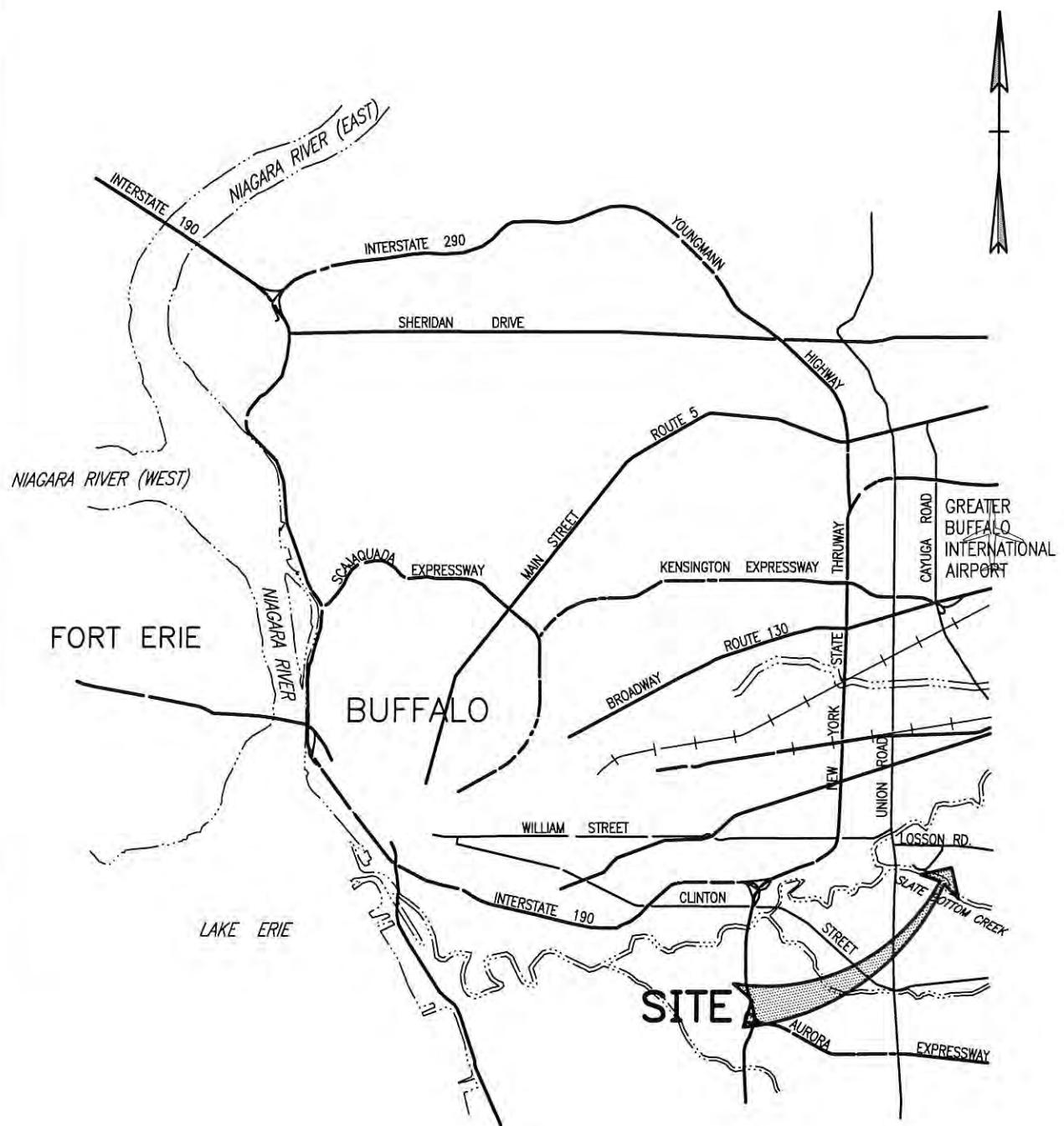
The Union Road site ("the Site") is a Class 4 Site as defined by the New York State Department of Environmental Conservation (NYSDEC). The Site registry number is 915128. The Site is located at 333 Losson Road in Cheektowaga, New York (see Figure 1-1). A Record of Decision (ROD) for the Site was signed on March 9, 1992. Order on Consent Index No. B9-0148-92-03 was signed by The Penn Central Corporation (currently, American Premier Underwriters, Inc.) and the New York State Department of Environmental Conservation (NYSDEC); the effective date of the Order is April 12, 1994. Appendix "B" of the Order is the Final Remedial Action Work Plan (the "Work Plan"), dated June 18, 1993.

As required in Section 4.2 of the Work Plan, the design documents, including the Union Road Site Remedial Design Report, were submitted in May 1995 to the NYSDEC and were subsequently approved. After approval, work commenced and the landfill closure was completed in December 1996. Figure 1-2 illustrates a plan view of the Site closure.

The GMP, Inspection and Operation and Maintenance activities for the Site went into effect following the landfill closure. This report presents and summarizes the groundwater monitoring data for the Annual Monitoring of Closure Year 18 (2014). This is the 22nd sampling event since the landfill closure (December 1997).

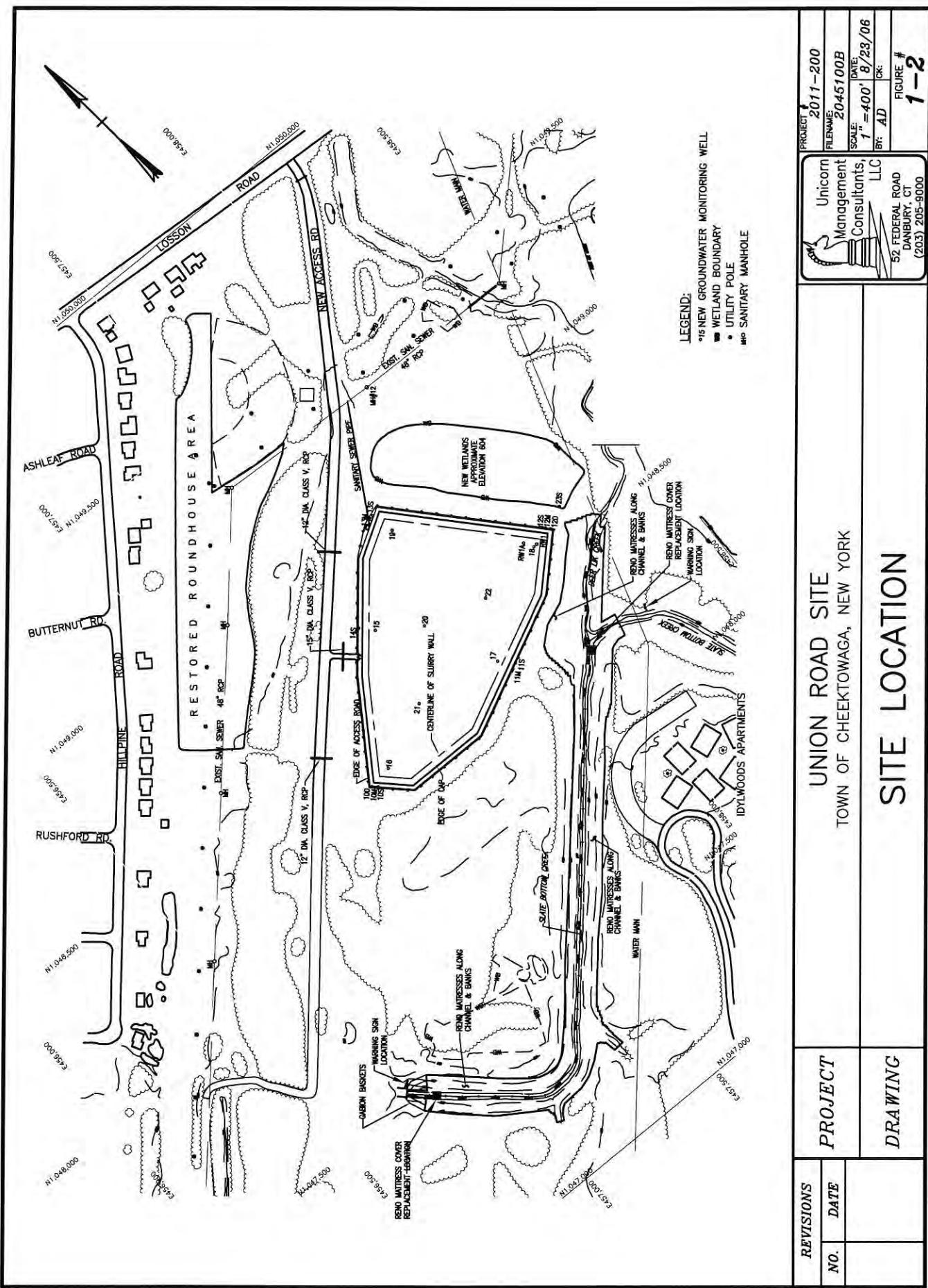
The purpose of GMP is as follows:

- Monitor the groundwater gradient of the three hydrogeologic units in and around the closure area; and
- Evaluate the groundwater quality to assess the effectiveness of the remedial action performed in accordance with 1995 Design Report.



REVISION NO.	PROJECT	UNION ROAD SITE TOWN OF CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE		FILENAME: UNION_RD
		DRAWING	SCALE: 1"~2mi DATE: 1/16/02
		LOCATION MAP	BY: AD CK:
52 FEDERAL ROAD DANBURY, CT (203) 205-9000			FIGURE # 1-1



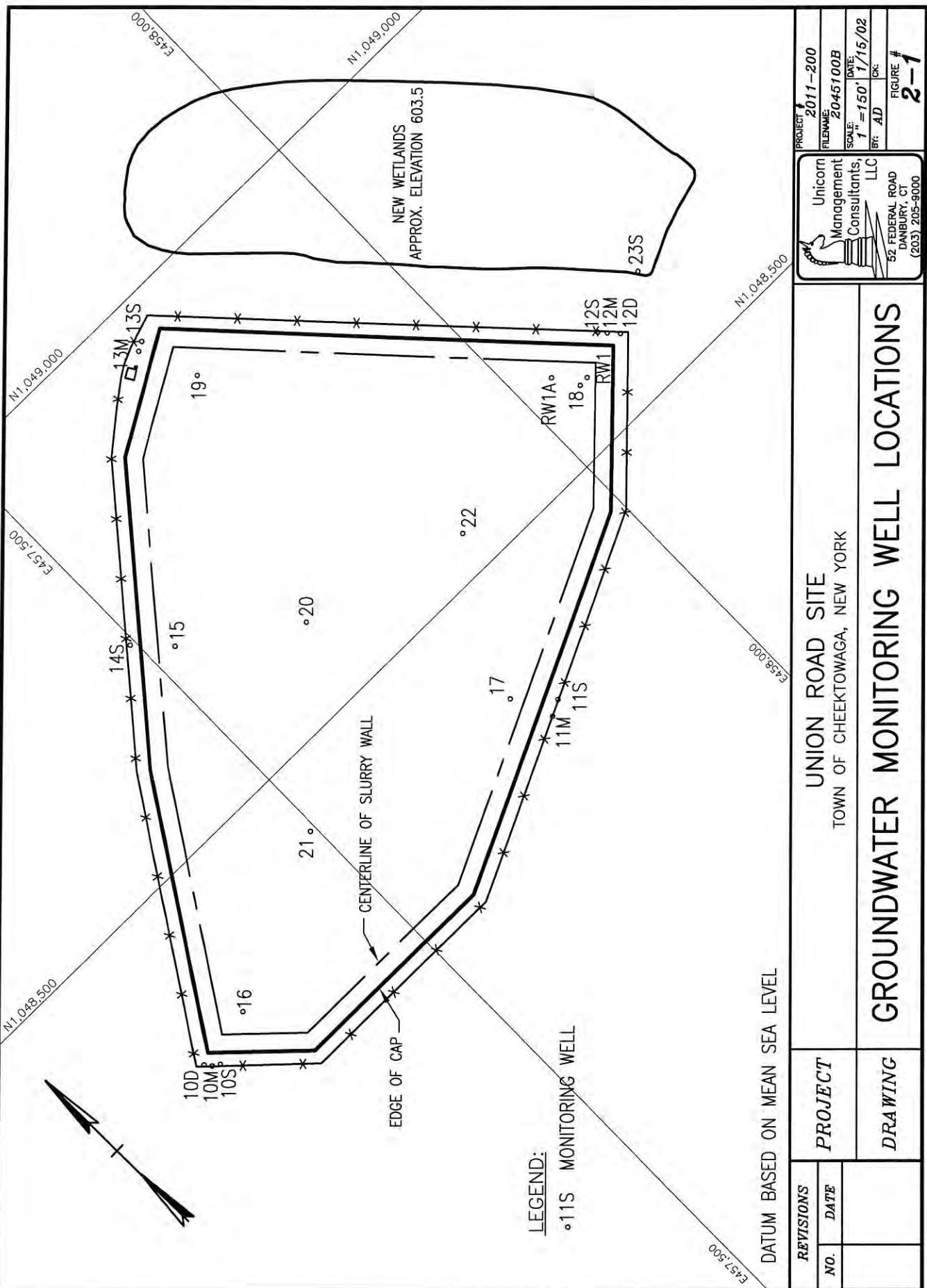


2. WELL INSTALLATION

As proposed in the GMP, five well clusters were installed along the outside perimeter of the slurry wall. These exterior wells are identified as MW-10S-M-D, MW-11S-M, MW-12S-M-D, MW-13S-M, and MW-14S. Adjacent to these wells, along the inside perimeter of the slurry wall, five shallow wells identified as MW-15, MW-16, MW-17, MW-18, and MW-19 were installed.

Three additional shallow wells (not originally proposed) were also installed. These wells (MW-20, MW-21, and MW-22) were installed in the center of the landfill to monitor the elevation of groundwater inside the landfill closure. Proposed well MW-20S adjacent to the outfall of the new wetland was installed; however, the identification of this well was changed from MW-20S to MW-23S. As discussed in the Groundwater Monitoring Report for the Second Quarter 1997, the original Monitoring Well 14S (MW-14S) was decommissioned and the replacement was reinstalled nine (9) feet southwest (along the fence line). The MW-14S replacement was installed, surveyed and developed on August 19, 1997. Well designations and locations are shown on Figure 2-1.

Installation of monitoring wells proceeded according to Section 02170 of the Technical Specifications. Installation of the interior wells occurred from February 19-23, 1996. Installation of the exterior wells took place from December 10, 1996 through January 6, 1997 and August 19, 1997. Copies of the Boring Logs and Well Construction Drawings are included as Appendix A.



3. GROUNDWATER SAMPLING AND ANALYSES

The purpose of groundwater sampling and analyses is to assess the effectiveness of the remedial action by evaluating the groundwater quality.

According to the GMP, groundwater samples will be collected from the outside perimeter monitoring wells by the following schedule:

- Quarterly the first year (1997);
- Semi-annually the second year (1998); and
- Annually (during the dry season) thereafter.

The parameters and applicable methods for the analyses are as follows:

- Total petroleum hydrocarbons (TPH) by EPA Method 1664A;
- Volatile organic compounds (VOCs) by EPA Method 8260;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and
- Soluble metals (lead and arsenic) by EPA Method 6010B, respectively.

The sampling frequency, analytical parameters, and/or sampling of specific wells will be modified based on the results of previous sampling events (since the landfill closure) and with written approval from the NYSDEC.

To evaluate the immediate effects of remedial activities on the groundwater around the landfill closure, the results of this sampling event are compared to results gathered from previous investigation reports performed by Dvirka and Bartilucci prior to the landfill closure. The data from the reports dated June, 1991 and August, 1991 are summarized in Table 3-1. Comparison between the averages prior to closure with post closure in the shallow wells shows significant decreases in all of the contaminants analyzed. To determine the continued effectiveness of the containment system, future sampling will be compared to the pre-closure concentrations.

Groundwater sampling for the annual monitoring event of 2014 was conducted on September 25, 2014. Table 3-2 summarizes the water depth measurements and well purging operations completed on the wells along the outside perimeter of the slurry wall during the annual sampling event. Analysis was performed by ALS Group USA Corp. dba ALS Environmental (Formerly Columbia Analytical Services, Inc.) of Rochester, New York. Tables 3-3 through 3-8 present the analytical results from this sampling event.

Bis(2-ethylhexyl)phthalate was detected in MW-11M at 50 µg/L and MW-12D at 22 µg/L, but was not detected in any other sample collected. Bis(2-ethylhexyl)phthalate has been detected in monitoring wells 10D, 11M, and 12D at similar concentrations between 2001 and 2006. No other SVOCs were detected in any of the monitoring wells during this annual sampling event. Additionally no TPH, Arsenic, Lead, or VOCs were detected in any of the monitoring wells during this annual sampling event.



TABLE 3-1
UNION ROAD GROUNDWATER MONITORING REPORT
YEAR 18 (2014)

PRE-CONSTRUCTION SAMPLIN OF SHALLOW WELLS
(JUNE - AUGUST, 1991)

(Concentrations in ug/L)

ANALYTE	MW-4S	MW-4S	MW-4S	MW-5S	MW-6S	MW-6S	AVERAGE
	PHASE I	PHASE II	PHASE I	PHASE I	PHASE II	PHASE II	
SVOC's (Base Neutrals)	17	16	120	290	100	100	109
Total VOC's	ND	5.9	ND	42	3	3	10
TPH	4,400	1,800	2,200	5,800	ND	ND	2,840
Soluble Arsenic	34.8	35.5	14.7	27.1	5.7	5.7	24
Soluble Lead	10,100	8,090	4,450	3,560	367	367	5,313

ND- analyte not detected

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-2
UNION ROAD
GROUNDWATER MONITORING REPORT
September 25, 2014
WELL PURGING SUMMARY

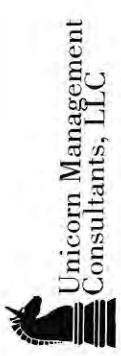


TABLE 3-2

UNION ROAD

GROUNDWATER MONITORING REPORT

September 25, 2014
WELL PURGING SUMMARY

Well Number	(1) Riser Elev. (Feet)	Original Bottom Elev. (Feet)	Depth to Water (Feet)	Water Elev. (Feet)	Water Height in Well (Feet)	Water Volume in Well (Gallons)	Water Removed from Well (Gallons)	Notes
10S	623.09	599.9	10.48	612.61	12.71	2.0	6.20	
10M	622.50	589.6	13.74	608.76	19.16	3.1	9.20	
10D	622.02	574.1	16.73	605.29	31.19	5.0	7.00	
11S	622.74	597.1	16.60	606.14	9.04	1.4	4.40	
11M	622.86	578.4	21.51	601.35	22.95	3.7	9.70	
12S	622.62	595.8	22.47	600.15	4.35	0.7	1.40	
12M	622.97	578.8	22.50	600.47	21.67	3.5	10.60	
12D	621.18	557.8	19.62	601.56	43.76	7.0	21.00	
13S	622.96	599.1	13.29	609.67	10.57	1.7	5.10	
13M	621.66	585.8	13.12	608.54	22.74	3.6	7.00	
14S ⁽²⁾	621.61	602.1	11.68	609.93	7.83	1.3	3.30	

(1) Elevations were surveyed by Douglas C. Meyers P.L.S., P.C. on March 17, 1997

(2) Reinstalled, developed and resurveyed on August 19, 1997

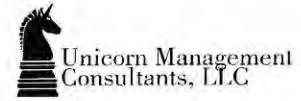
All Elevations are referenced to Mean Sea Level

All wells are two (2) inches in diameter

Well development was performed on 1/16/1997

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-3
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014



SHALLOW WELL SVOCs

ANALYTE	ANALYTICAL RESULTS (ug/L)					Detection Limit
	MW-10S	MW-11S	MW-12S	MW-13S	MW-14S	
Dilution	1.00	1.00	1.00	1.00	1.00	
acenaphthene	ND	ND	ND	ND	ND	9.4
acenaphthylene	ND	ND	ND	ND	ND	9.4
anthracene	ND	ND	ND	ND	ND	9.4
benzo(a)anthracene	ND	ND	ND	ND	ND	9.4
benzo(a)pyrene	ND	ND	ND	ND	ND	9.4
benzo(b)fluoranthene	ND	ND	ND	ND	ND	9.4
benzo(g,h,i)perylene	ND	ND	ND	ND	ND	9.4
benzo(k)fluoranthene	ND	ND	ND	ND	ND	9.4
benzyl alcohol	ND	ND	ND	ND	ND	9.4
butyl benzyl phthalate	ND	ND	ND	ND	ND	9.4
di-n-butylphthalate	ND	ND	ND	ND	ND	9.4
carbazole	ND	ND	ND	ND	ND	9.4
indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	9.4
4-chloroaniline	ND	ND	ND	ND	ND	9.4
bis(-2-chloroethoxy)methane	ND	ND	ND	ND	ND	9.4
bis(2-chloroethyl)ether	ND	ND	ND	ND	ND	9.4
2-chloronaphthalene	ND	ND	ND	ND	ND	9.4
2-chlorophenol	ND	ND	ND	ND	ND	9.4
2,2'-oxybis(1-chloropropane)	ND	ND	ND	ND	ND	9.4
chrysene	ND	ND	ND	ND	ND	9.4
dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	9.4
dibenzofuran	ND	ND	ND	ND	ND	9.4
1,2-dichlorobenzene	ND	ND	ND	ND	ND	9.4
1,3-dichlorobenzene	ND	ND	ND	ND	ND	9.4
1,4-dichlorobenzene	ND	ND	ND	ND	ND	9.4
3,3'-dichlorobenzidine	ND	ND	ND	ND	ND	9.4
2,4-dichlorophenol	ND	ND	ND	ND	ND	9.4
diethylphthalate	ND	ND	ND	ND	ND	9.4
dimethyl phthalate	ND	ND	ND	ND	ND	9.4
2,4-dimethylphenol	ND	ND	ND	ND	ND	9.4
2,4-dinitrophenol	ND	ND	ND	ND	ND	47
2,4-dinitrotoluene	ND	ND	ND	ND	ND	9.4
2,6-dinitrotoluene	ND	ND	ND	ND	ND	9.4
bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	9.4
fluoranthene	ND	ND	ND	ND	ND	9.4
fluorene	ND	ND	ND	ND	ND	9.4
hexachlorobenzene	ND	ND	ND	ND	ND	9.4
hexachlorobutadiene	ND	ND	ND	ND	ND	9.4
hexachlorocyclopentadiene	ND	ND	ND	ND	ND	9.4
hexachloroethane	ND	ND	ND	ND	ND	9.4
isophorone	ND	ND	ND	ND	ND	9.4
2-methylnaphthalene	ND	ND	ND	ND	ND	9.4
4,6-dinitro-2-methylphenol	ND	ND	ND	ND	ND	47

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-3
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014



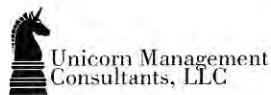
SHALLOW WELL SVOCs

4-chloro-3-methylphenol	ND	ND	ND	ND	ND	9.4
2-methylphenol	ND	ND	ND	ND	ND	9.4
3+4-methylphenol	ND	ND	ND	ND	ND	9.4
naphthalene	ND	ND	ND	ND	ND	9.4
2-nitroaniline	ND	ND	ND	ND	ND	47
3-nitroaniline	ND	ND	ND	ND	ND	47
4-nitroaniline	ND	ND	ND	ND	ND	47
nitrobenzene	ND	ND	ND	ND	ND	9.4
2-nitrophenol	ND	ND	ND	ND	ND	9.4
4-nitrophenol	ND	ND	ND	ND	ND	47
n-nitrosodimethylamine	ND	ND	ND	ND	ND	9.4
n-nitrosodiphenylamine	ND	ND	ND	ND	ND	9.4
di-n-octyl phthalate	ND	ND	ND	ND	ND	9.4
pentachlorophenol	ND	ND	ND	ND	ND	47
phenanthrene	ND	ND	ND	ND	ND	9.4
phenol	ND	ND	ND	ND	ND	9.4
4-bromophenyl-phenylether	ND	ND	ND	ND	ND	9.4
4-chlorophenyl-phenylether	ND	ND	ND	ND	ND	9.4
n-nitroso-di-n-propylamine	ND	ND	ND	ND	ND	9.4
pyrene	ND	ND	ND	ND	ND	9.4
1,2,4-trichlorobenzene	ND	ND	ND	ND	ND	9.4
2,4,5-trichlorophenol	ND	ND	ND	ND	ND	9.4
2,4,6-trichlorophenol	ND	ND	ND	ND	ND	9.4
TOTALS	ND	ND	ND	ND	ND	
Average Outside Landfill (MW 10S - 14S)	ND					
Average Inside Landfill (Table 3-1)		109				

ND - Not Detected, above the laboratory detection limit

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-4
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014



SHALLOW WELL VOCs, TPH, and METALS

ANALYTE	ANALYTICAL RESULTS (ug/L)					Detection Limit
	MW-10S	MW-11S	MW-12S	MW-13S	MW-14S	
Dilution	1.00	1.00	1.00	1.00	1.00	
acetone	ND	ND	ND	ND	ND	10
benzene	ND	ND	ND	ND	ND	5.0
bromodichloromethane	ND	ND	ND	ND	ND	5.0
bromoform	ND	ND	ND	ND	ND	5.0
bromomethane	ND	ND	ND	ND	ND	5.0
2-butanone (MEK)	ND	ND	ND	ND	ND	10
carbon disulfide	ND	ND	ND	ND	ND	10
carbon tetrachloride	ND	ND	ND	ND	ND	5.0
chlorobenzene	ND	ND	ND	ND	ND	5.0
chloroethane	ND	ND	ND	ND	ND	5.0
chloroform	ND	ND	ND	ND	ND	5.0
chloromethane	ND	ND	ND	ND	ND	5.0
dibromochloromethane	ND	ND	ND	ND	ND	5.0
1,1-dichloroethane	ND	ND	ND	ND	ND	5.0
1,2-dichloroethane	ND	ND	ND	ND	ND	5.0
1,1-dichloroethene	ND	ND	ND	ND	ND	5.0
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	5.0
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	5.0
1,2-dichloropropane	ND	ND	ND	ND	ND	5.0
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	5.0
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	5.0
ethylbenzene	ND	ND	ND	ND	ND	5.0
2-hexanone	ND	ND	ND	ND	ND	10
methylene chloride	ND	ND	ND	ND	ND	5.0
4-methyl-2-pentanone (MIBK)	ND	ND	ND	ND	ND	10
styrene	ND	ND	ND	ND	ND	5.0
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	5.0
tetrachloroethene	ND	ND	ND	ND	ND	5.0
toluene	ND	ND	ND	ND	ND	5.0
1,1,1-trichloroethane	ND	ND	ND	ND	ND	5.0
1,1,2-trichloroethane	ND	ND	ND	ND	ND	5.0
trichloroethene	ND	ND	ND	ND	ND	5.0
vinyl chloride	ND	ND	ND	ND	ND	5.0
m+p xylene	ND	ND	ND	ND	ND	5.0
o-xylene	ND	ND	ND	ND	ND	5.0
TOTAL VOC'S	ND	ND	ND	ND	ND	
TPH	ND	ND	ND	ND	ND	4,700
SOLUBLE ARSENIC	ND	ND	ND	ND	ND	10
SOLUBLE LEAD	ND	ND	ND	ND	ND	50

Average Outside Landfill (MW 10S - 14S)	Average Inside Landfill (Table 3-1)
0	10
0.0	2,840
0.0	24
0.0	5,313

ND - Not Detected, above the laboratory detection limit

Prepared by: MP
 Date: 10/31/14
 Checked by: MO
 Date: 1/22/15

TABLE 3-5
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014



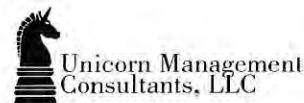
Unicorn Management
 Consultants, LLC

MEDIUM WELL SVOCs

ANALYTE	ANALYTICAL RESULTS (ug/L)				Detection Limit
	MW-10M	MW-11M	MW-12M	MW-13M	
Dilution	1.00	1.00	1.00	1.00	
acenaphthene	ND	ND	ND	ND	9.4
acenaphthylene	ND	ND	ND	ND	9.4
anthracene	ND	ND	ND	ND	9.4
benzo(a)anthracene	ND	ND	ND	ND	9.4
benzo(a)pyrene	ND	ND	ND	ND	9.4
benzo(b)fluoranthene	ND	ND	ND	ND	9.4
benzo(g,h,i)perylene	ND	ND	ND	ND	9.4
benzo(k)fluoranthene	ND	ND	ND	ND	9.4
benzyl alcohol	ND	ND	ND	ND	9.4
butyl benzyl phthalate	ND	ND	ND	ND	9.4
di-n-butylphthalate	ND	ND	ND	ND	9.4
carbazole	ND	ND	ND	ND	9.4
indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	9.4
4-chloroaniline	ND	ND	ND	ND	9.4
bis(-2-chloroethoxy)methane	ND	ND	ND	ND	9.4
bis(2-chloroethyl)ether	ND	ND	ND	ND	9.4
2-chloronaphthalene	ND	ND	ND	ND	9.4
2-chlorophenol	ND	ND	ND	ND	9.4
2,2'-oxybis(1-chloropropane)	ND	ND	ND	ND	9.4
chrysene	ND	ND	ND	ND	9.4
dibenzo(a,h)anthracene	ND	ND	ND	ND	9.4
dibenzofuran	ND	ND	ND	ND	9.4
1,2-dichlorobenzene	ND	ND	ND	ND	9.4
1,3-dichlorobenzene	ND	ND	ND	ND	9.4
1,4-dichlorobenzene	ND	ND	ND	ND	9.4
3,3'-dichlorobenzidine	ND	ND	ND	ND	9.4
2,4-dichlorophenol	ND	ND	ND	ND	9.4
diethylphthalate	ND	ND	ND	ND	9.4
dimethyl phthalate	ND	ND	ND	ND	9.4
2,4-dimethylphenol	ND	ND	ND	ND	9.4
2,4-dinitrophenol	ND	ND	ND	ND	47
2,4-dinitrotoluene	ND	ND	ND	ND	9.4
2,6-dinitrotoluene	ND	ND	ND	ND	9.4
bis(2-ethylhexyl)phthalate	ND	50	ND	ND	9.4
fluoranthene	ND	ND	ND	ND	9.4
fluorene	ND	ND	ND	ND	9.4
hexachlorobenzene	ND	ND	ND	ND	9.4
hexachlorobutadiene	ND	ND	ND	ND	9.4
hexachlorocyclopentadiene	ND	ND	ND	ND	9.4
hexachloroethane	ND	ND	ND	ND	9.4
isophorone	ND	ND	ND	ND	9.4
2-methylnaphthalene	ND	ND	ND	ND	9.4

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-5
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014



MEDIUM WELL SVOCs

2-methylphenol	ND	ND	ND	ND	47
4,6-dinitro-2-methylphenol	ND	ND	ND	ND	9.4
4-chloro-3-methylphenol	ND	ND	ND	ND	9.4
3+4-methylphenol	ND	ND	ND	ND	9.4
napthalene	ND	ND	ND	ND	9.4
2-nitroaniline	ND	ND	ND	ND	47
3-nitroaniline	ND	ND	ND	ND	47
4-nitroaniline	ND	ND	ND	ND	47
nitrobenzene	ND	ND	ND	ND	9.4
2-nitrophenol	ND	ND	ND	ND	9.4
4-nitrophenol	ND	ND	ND	ND	47
n-nitrosodimethylamine	ND	ND	ND	ND	9.4
n-nitrosodiphenylamine	ND	ND	ND	ND	9.4
di-n-octyl phthalate	ND	ND	ND	ND	9.4
pentachlorophenol	ND	ND	ND	ND	47
phenanthrene	ND	ND	ND	ND	9.4
phenol	ND	ND	ND	ND	9.4
4-bromophenyl-phenylether	ND	ND	ND	ND	9.4
4-chlorophenyl-phenylether	ND	ND	ND	ND	9.4
n-nitroso-di-n-propylamine	ND	ND	ND	ND	9.4
pyrene	ND	ND	ND	ND	9.4
1,2,4-trichlorobenzene	ND	ND	ND	ND	9.4
2,4,5-trichlorophenol	ND	ND	ND	ND	9.4
2,4,6-trichlorophenol	ND	ND	ND	ND	9.4
TOTALS	ND	50	ND	ND	

Prepared by: MP
 Date: 10/31/14
 Checked by: MO
 Date: 1/22/15

TABLE 3-6
UNION ROAD
ANNUAL GROUNDWATER MONITORNG
for 2014



MEDIUM WELL VOCs, TPH, and METALS

ANALYTE	ANALYTICAL RESULTS (ug/L)				Detection Limit
	MW-10M	MW-11M	MW-12M	MW-13M	
Dilution	1.00	1.00	1.00	1.00	
acetone	ND	ND	ND	ND	10
benzene	ND	ND	ND	ND	5.0
bromodichloromethane	ND	ND	ND	ND	5.0
bromoform	ND	ND	ND	ND	5.0
bromomethane	ND	ND	ND	ND	5.0
2-butanone (MEK)	ND	ND	ND	ND	10
carbon disulfide	ND	ND	ND	ND	10
carbon tetrachloride	ND	ND	ND	ND	5.0
chlorobenzene	ND	ND	ND	ND	5.0
chloroethane	ND	ND	ND	ND	5.0
chloroform	ND	ND	ND	ND	5.0
chloromethane	ND	ND	ND	ND	5.0
dibromochloromethane	ND	ND	ND	ND	5.0
1,1-dichloroethane	ND	ND	ND	ND	5.0
1,2-dichloroethane	ND	ND	ND	ND	5.0
1,1-dichloroethene	ND	ND	ND	ND	5.0
cis-1,2-dichloroethene	ND	ND	ND	ND	5.0
trans-1,2-dichloroethene	ND	ND	ND	ND	5.0
1,2-dichloropropane	ND	ND	ND	ND	5.0
cis-1,3-dichloropropene	ND	ND	ND	ND	5.0
trans-1,3-dichloropropene	ND	ND	ND	ND	5.0
ethylbenzene	ND	ND	ND	ND	5.0
2-hexanone	ND	ND	ND	ND	10
methylene chloride	ND	ND	ND	ND	5.0
4-methyl-2-pentanone (MIBK)	ND	ND	ND	ND	10
styrene	ND	ND	ND	ND	5.0
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	5.0
tetrachloroethene	ND	ND	ND	ND	5.0
toluene	ND	ND	ND	ND	5.0
1,1,1-trichloroethane	ND	ND	ND	ND	5.0
1,1,2-trichloroethane	ND	ND	ND	ND	5.0
trichloroethene	ND	ND	ND	ND	5.0
vinyl chloride	ND	ND	ND	ND	5.0
m+p xylene	ND	ND	ND	ND	5.0
o-xylene	ND	ND	ND	ND	5.0
TOTAL VOC'S	ND	ND	ND	ND	
TPH	ND	ND	ND	ND	4,700
SOLUBLE ARSENIC	ND	ND	ND	ND	10
SOLUBLE LEAD	ND	ND	ND	ND	50

ND - Not Detected, above the laboratory detection limit

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-7
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014
DEEP WELL SVOCs



ANALYTE	ANALYTICAL RESULTS (ug/L)		Detection Limit
	MW-10D	MW-12D	
Dilution	1.00	1.00	
acenaphthene	ND	ND	9.4
acenaphthylene	ND	ND	9.4
anthracene	ND	ND	9.4
benzo(a)anthracene	ND	ND	9.4
benzo(a)pyrene	ND	ND	9.4
benzo(b)fluoranthene	ND	ND	9.4
benzo(g,h,i)perylene	ND	ND	9.4
benzo(k)fluoranthene	ND	ND	9.4
benzyl alcohol	ND	ND	9.4
butyl benzyl phthalate	ND	ND	9.4
di-n-butylphthalate	ND	ND	9.4
carbazole	ND	ND	9.4
indeno(1,2,3-cd)pyrene	ND	ND	9.4
4-chloroaniline	ND	ND	9.4
bis(-2-chloroethoxy)methane	ND	ND	9.4
bis(2-chloroethyl)ether	ND	ND	9.4
2-chloronaphthalene	ND	ND	9.4
2-chlorophenol	ND	ND	9.4
2,2'-oxybis(1-chloropropane)	ND	ND	9.4
chrysene	ND	ND	9.4
dibenzo(a,h)anthracene	ND	ND	9.4
dibenzofuran	ND	ND	9.4
1,2-dichlorobenzene	ND	ND	9.4
1,3-dichlorobenzene	ND	ND	9.4
1,4-dichlorobenzene	ND	ND	9.4
3,3'-dichlorobenzidine	ND	ND	9.4
2,4-dichlorophenol	ND	ND	9.4
diethylphthalate	ND	ND	9.4
dimethyl phthalate	ND	ND	9.4
2,4-dimethylphenol	ND	ND	9.4
2,4-dinitrophenol	ND	ND	47
2,4-dinitrotoluene	ND	ND	9.4
2,6-dinitrotoluene	ND	ND	9.4
bis(2-ethylhexyl)phthalate	ND	22	9.4
fluoranthene	ND	ND	9.4
fluorene	ND	ND	9.4
hexachlorobenzene	ND	ND	9.4

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 3-7
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014
DEEP WELL SVOCs



hexachlorobutadiene	ND	ND	9.4
hexachlorocyclopentadiene	ND	ND	9.4
hexachloroethane	ND	ND	9.4
isophorone	ND	ND	9.4
2-methylnaphthalene	ND	ND	9.4
2-methylphenol	ND	ND	47
4,6-dinitro-2-methylphenol	ND	ND	9.4
4-chloro-3-methylphenol	ND	ND	9.4
3+4-methylphenol	ND	ND	9.4
naphthalene	ND	ND	9.4
2-nitroaniline	ND	ND	47
3-nitroaniline	ND	ND	47
4-nitroaniline	ND	ND	47
nitrobenzene	ND	ND	9.4
2-nitrophenol	ND	ND	9.4
4-nitrophenol	ND	ND	47
n-nitrosodimethylamine	ND	ND	9.4
n-nitrosodiphenylamine	ND	ND	9.4
di-n-octyl phthalate	ND	ND	9.4
pentachlorophenol	ND	ND	47
phenanthrene	ND	ND	9.4
phenol	ND	ND	9.4
4-bromophenyl-phenylether	ND	ND	9.4
4-chlorophenyl-phenylether	ND	ND	9.4
n-nitroso-di-n-propylamine	ND	ND	9.4
pyrene	ND	ND	9.4
1,2,4-trichlorobenzene	ND	ND	9.4
2,4,5-trichlorophenol	ND	ND	9.4
2,4,6-trichlorophenol	ND	ND	9.4
TOTALS	ND	22	

ND - Not Detected, above the laboratory detection limit

Prepared by: MP
 Date: 10/31/14
 Checked by: MO
 Date: 1/22/15

TABLE 3-8
UNION ROAD
ANNUAL GROUNDWATER MONITORING
for 2014
DEEP WELL VOCs, TPH, and METALS



ANALYTE	ANALYTICAL RESULTS (ug/L)		Detection Limit
	MW-10D	MW-12D	
Dilution	1.00	1.00	
acetone	ND	ND	10
benzene	ND	ND	5.0
bromodichloromethane	ND	ND	5.0
bromoform	ND	ND	5.0
bromomethane	ND	ND	5.0
2-butanone (MEK)	ND	ND	10
carbon disulfide	ND	ND	10
carbon tetrachloride	ND	ND	5.0
chlorobenzene	ND	ND	5.0
chloroethane	ND	ND	5.0
chloroform	ND	ND	5.0
chloromethane	ND	ND	5.0
dibromochloromethane	ND	ND	5.0
1,1-dichloroethane	ND	ND	5.0
1,2-dichloroethane	ND	ND	5.0
1,1-dichloroethene	ND	ND	5.0
cis-1,2-dichloroethene	ND	ND	5.0
trans-1,2-dichloroethene	ND	ND	5.0
1,2-dichloropropane	ND	ND	5.0
cis-1,3-dichloropropene	ND	ND	5.0
trans-1,3-dichloropropene	ND	ND	5.0
ethylbenzene	ND	ND	5.0
2-hexanone	ND	ND	10
methylene chloride	ND	ND	5.0
4-methyl-2-pentanone (MIBK)	ND	ND	10
styrene	ND	ND	5.0
1,1,2,2-tetrachloroethane	ND	ND	5.0
tetrachloroethene	ND	ND	5.0
toluene	ND	ND	5.0
1,1,1-trichloroethane	ND	ND	5.0
1,1,2-trichloroethane	ND	ND	5.0
trichloroethene	ND	ND	5.0
vinyl chloride	ND	ND	5.0
m+p xylene	ND	ND	5.0
o-xylene	ND	ND	5.0
TOTAL VOC'S	ND	ND	
TPH	ND	ND	4,700
SOLUBLE ARSENIC	ND	ND	10
SOLUBLE LEAD	ND	ND	50

ND - Not Detected, above the laboratory detection limit

4. GROUNDWATER ELEVATION MONITORING

The purpose of Groundwater Elevation Monitoring is to determine the groundwater gradient of the three hydrogeologic units in and around the closure area. The three hydrogeologic units (layers) are:

- 1) The overburden layer (shallow), which is above the clay layer;
- 2) The till layer (medium), which is beneath the clay layer; and
- 3) Bedrock (deep), which is beneath the till layer.

As stated in the NYSDEC approved Design Report, the frequency of groundwater elevation measurements are as follows:

- Monthly for the first six months after closure (Jan – June 1997);
- Quarterly thereafter until the end of year two (July 1997 – December 1998); and
- Annually (during the dry season) thereafter.

As stated previously, the sampling frequency, sampling parameters, and/or sampling of specific wells will be modified based on the results of previous sampling events (since the landfill closure) and with written approval from the NYSDEC.

The objective for collecting groundwater elevation measurements is to gain knowledge of the groundwater flows and hydraulic gradients in and around the closure. This information is used to generate groundwater flow maps and demonstrate an inward gradient of groundwater around the closure.

On September 25, 2014, UMC measured the depth to groundwater in the monitoring wells. Table 4-1 summarizes the results of these measurements. The data from Table 4-1 were used to create Groundwater Contour Maps (Figures 4-1 through 4-3), which depict groundwater elevations and inferred groundwater flow directions in the three hydrogeologic units. Figure 4-1 shows an inward gradient of shallow (overburden) groundwater across the slurry wall and towards the dewatering trench at the east corner of the closure.

Figures 4-2 and 4-3 depict groundwater elevations in the medium and deep units. The inferred groundwater flow direction for the medium unit is toward the southeast. The inferred groundwater flow direction for the deep unit is easterly. However, since only two (2) monitoring wells intercept the deep unit, a groundwater contour map cannot be produced. Flow is generally toward the southeast and east respectfully and has not been affected by the placement of the landfill closure.

Prepared by: MP
Date: 10/31/14
Checked by: MO
Date: 1/22/15

TABLE 4-1
UNION ROAD
GROUNDWATER MONITORING REPORT



Unicorn Management
Consultants, LLC

GROUNDWATER WELL MEASUREMENTS
September 25, 2014

Well Number	Riser Elev. ¹ (Feet)	Depth to Water (Feet)	Water Elev. (Feet)
10S	623.09	10.48	612.61
10M	622.50	13.74	608.76
10D	622.02	16.73	605.29
11S	622.74	16.60	606.14
11M	622.86	21.51	601.35
12S	622.62	22.47	600.15
12M	622.97	22.50	600.47
12D	621.18	19.62	601.56
13S	622.96	13.29	609.67
13M	621.66	13.12	608.54
14S ²	621.61	11.68	609.93
15	624.67	16.61	608.06
16	624.51	15.31	609.20
17	624.44	28.01	596.43
18 ³	624.67	Dry	<602.75
19	625.08	21.42	603.66
20 ⁴	631.98	28.24	603.74
21	629.25	25.60	603.65
22 ⁴	629.24	25.75	603.49
23S	607.45	11.05	596.40
RW1 ⁵	623.76	NM	

¹ Elevations were surveyed by Douglas C. Meyers P.L.S., P.C. on March 17, 1997.

² MW-14S was reinstalled and resurveyed on August 19, 1997.

³ MW-18 is dry; measuring tape stopped without indicating water.

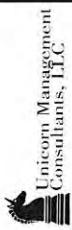
⁴ Depth measured to free product.

⁵ Groundwater measurement was not taken in RW1. The assumed elevation is at the pump inlet (598.76).

NM/NR: Not Measure/Not Recorded

MW-20 and MW-22 have free product on water surface; therefore water level measurement conservatively assumed as the top of the oil layer (Because of the less dense oil, the actual water elevation would be lower).

All Elevations are referenced to Mean Sea Level



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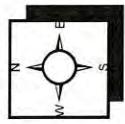
Project Name: Union Road

FIGURE 4-1

Author: RTM	Checked By: —
Project #: 2011	Created: 10/10/2011
	Revised: 1/20/15
File: GWContour_S_2014	Scale: 1 in.:100 ft

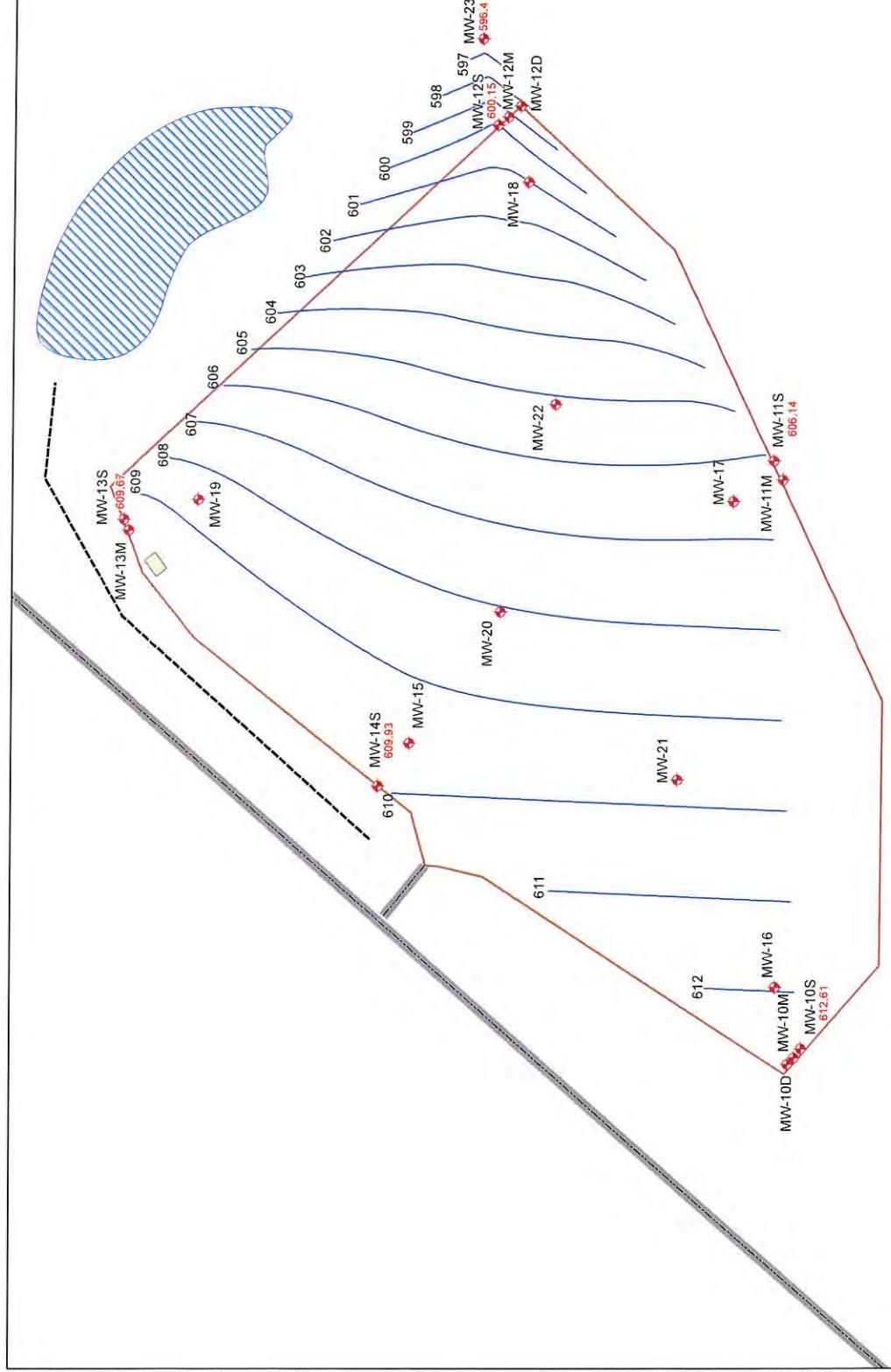


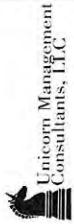
●=Approximate Site Locations
Monitoring Wells
Contour
Road
Ditch
Fence
Shed
Pond



0 62.5 125 187.5 250 312.5 375 437.5 500 Feet

Union Road- Shallow Groundwater Elevation Contour Map for 9/25/14





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Consultants, LLC
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Project Name: Union Road

FIGURE 4_2

Author: RTM	Checked By: -----
Project #: 2011	Created: 10/10/2011
	Revised: 1/20/15

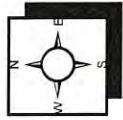
File: GMContour_M_2014
Scale: 1 in.:100 ft



● = Approximate Site Location

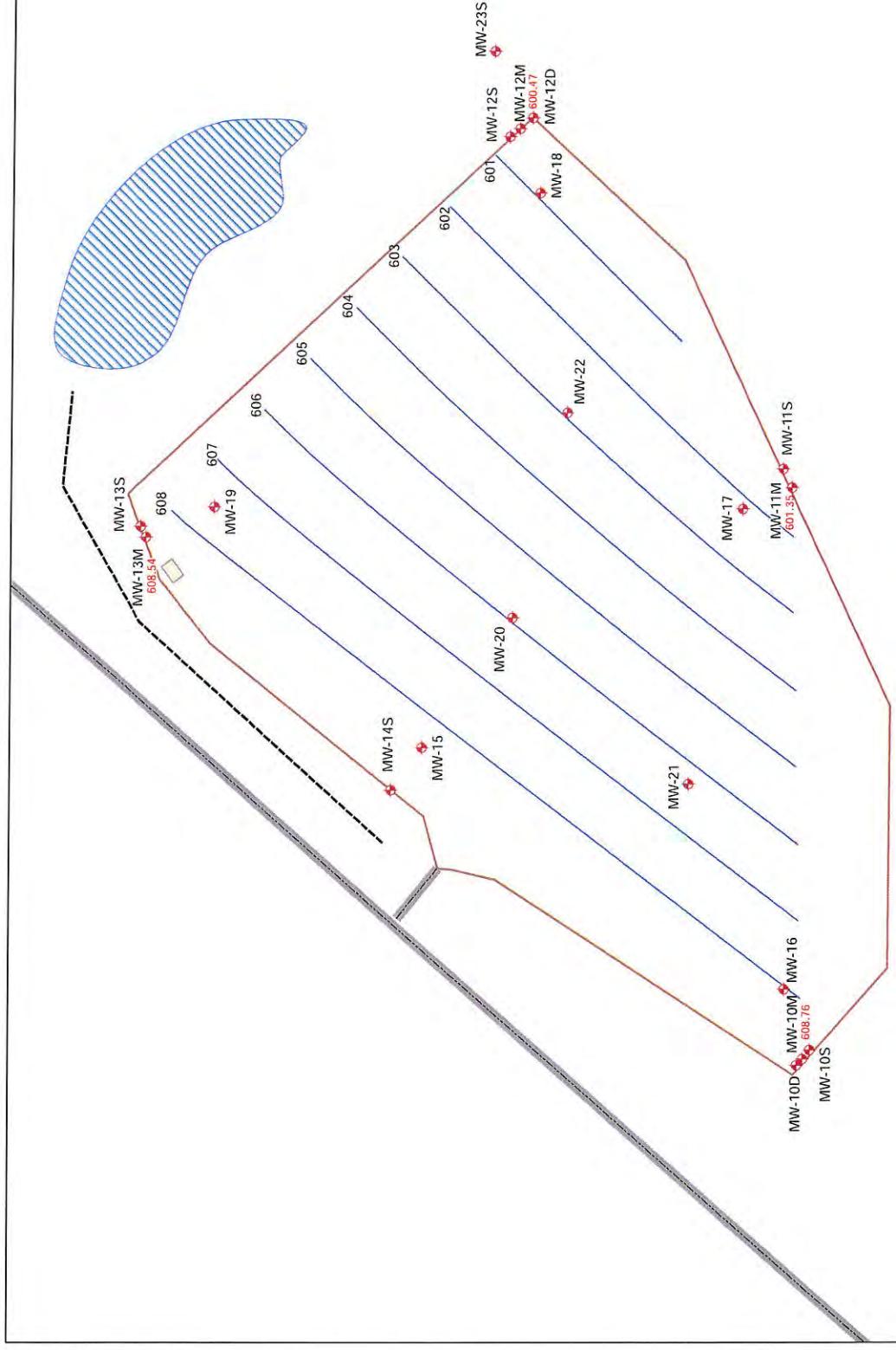
Legend

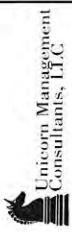
- ♦ Monitoring Wells
- Contour
- Road
- Ditch
- Fence
- Shed
- Pond



Union Road- Middle Groundwater
Elevation Contour Map for 9/25/14

0 62.5 125 250 375 500 Feet



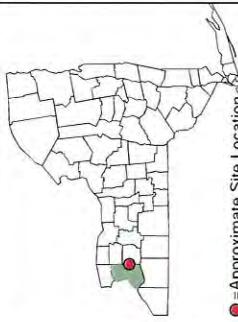


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Project Name: Union Road

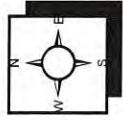
FIGURE 4.3

Author:	RTM	Checked By:	----
Project #:	2011	Created:	10/10/2011
Revised:	1/20/15	File:	GWContour_D_2014
Scale:	1 in:100 ft		



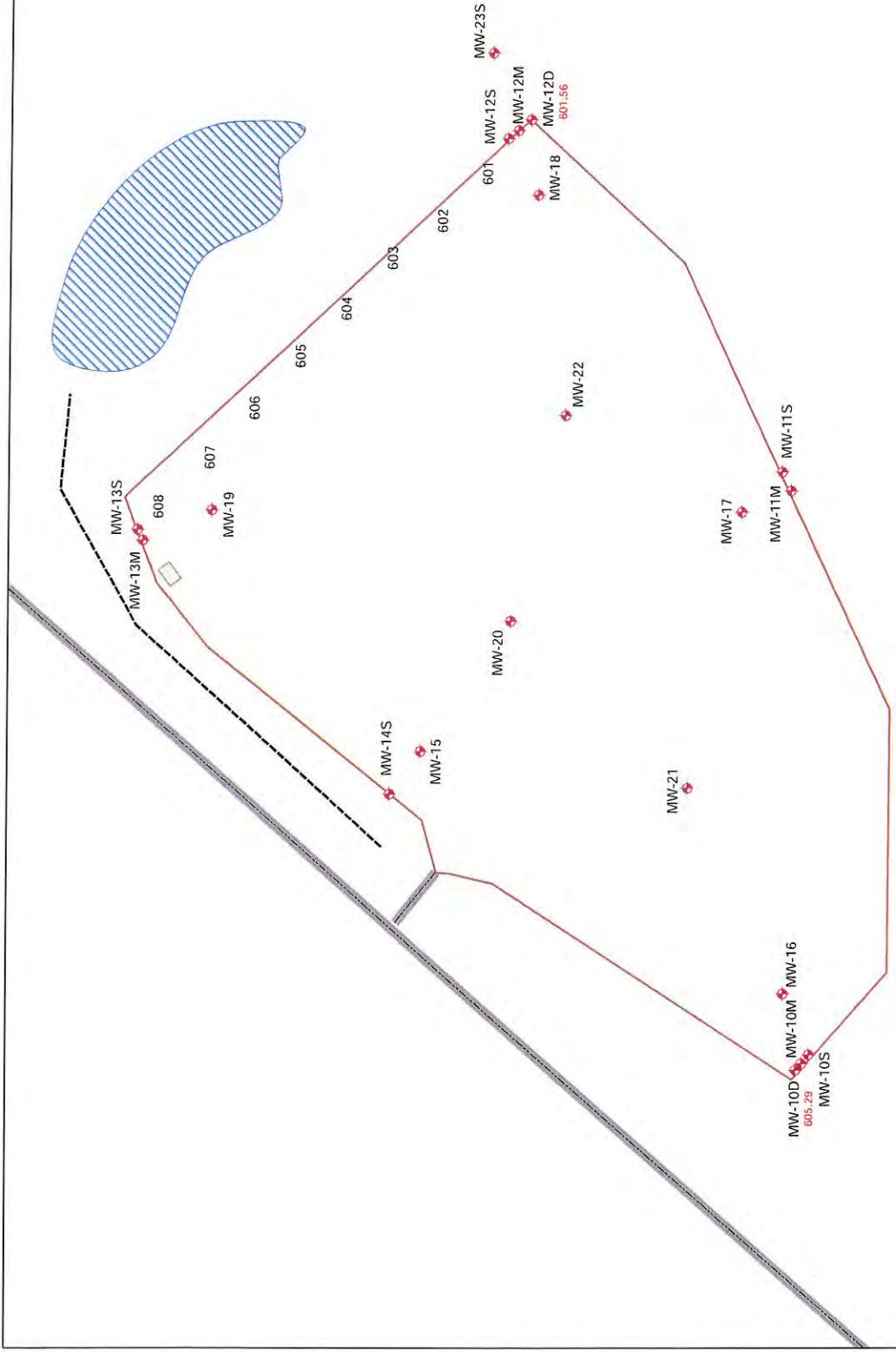
Legend

Monitoring Wells	Red diamond with cross
Road	Solid grey line
Ditch	Dashed grey line
Fence	Solid red line
Shed	Yellow rectangle
Pond	Blue hatched rectangle



Union Road- Deep Groundwater Elevation Contour Map for 9/25/14

0 62.5 125 187.5 250 312.5 375 437.5 500 Feet



5. SITE INSPECTION AND MAINTENANCE

UMC performed an annual site inspection on April 16, 2014. Mr. David Szymanski of the NYSDEC accompanied UMC on the inspection. The inspections consisted of walking the site and documenting the observations. Following is a summary of the inspection and maintenance activities that have occurred this year:

Roundhouse Area: The area is well vegetated and stabilized. During the inspection, several large holes were observed where the concrete of the former roundhouse has collapsed. These holes are large enough for a person to fall into. However, this land is not owned by APU. Numerous property owners adjacent to this area have encroached on it and are maintaining it with the rest of their properties. No action is needed.

Landfill Closure: There are no signs of erosion, no areas of distressed vegetation, and no evidence of any outbreak of any substance (slurry wall material or oil) on the landfill. Erie County Water Company was notified that a small quantity of contaminated soil is located northeast of the new wetland area and beneath the existing water pipe. UMC has an account with Dig Safely New York so when someone needs to dig in the area and calls Dig Safely, UMC will be notified. Except for periodic grass cutting, annual groundwater monitoring, and quarterly groundwater discharge monitoring required by the Erie County Sewer Authority, no action is needed.

A woodchuck eradication program was implemented during 2009 and continued in 2014. During 2009, woodchuck burrows were noted at several locations on the cap and around the pump control building. The woodchucks were captured and removed. On the morning of April 16, 2014, UMC filled in previously identified woodchuck burrows on the landfill cap. During the 2014 site inspection, some additional woodchuck burrows were noted along the north eastern side of the landfill. Additionally some animal burrows were observed on the slope between the landfill and the wetlands. On August 13, 2014 UMC filled in the remaining woodchuck burrows.

As requested by the NYSDEC, grass on the landfill area was mowed only once during September 2014.

Wetland Restoration: The wetlands north of the landfill closure, which was created during the remediation activities has continued to reestablish itself. The wetlands have completely revegetated itself and wildlife (e.g., ducks, geese and deer) have returned to the area. No action is needed.

Stream Restoration: A letter to the Town of Cheektowaga (Town) was sent by APU's Legal Counsel on October 7, 2005. This letter informs the Town that it must notify the NYSDEC prior to any activity in those creeks where the reno mattresses are located (see Figure 1-2).

The reno mattresses installed in 1995/1996 and repaired in 2006 on the creek channel has stabilized and vegetation has established itself through the reno mattresses. There is some sediment accumulation within the creek channels, but at some locations the reno mattress wire mesh was visible at the base of the channel.

On April 15, 2014, UMC refilled three empty gabion baskets conducted located in the wing wall adjacent to the Conrail Culvert which were identified during previous site inspections.

At the time of the inspection on April 16, 2014, the reno mattresses installed along the creek are in good condition with the exception of one area near the confluence of Slate Bottom and Deer

Lik Creeks. The mattress cover in this area was repaired once before in August 2006, and was again being worn away by all terrain vehicle (ATV) traffic. UMC observed a patch of exposed soil beginning to appear where the reno-mattress and gabion stone have been worn away. UMC replaced the missing gabion stone and repaired the damaged area of reno-mattress on August 12-13, 2015.

The gabion basket wing-walls are stable. No other action is needed.

Downstream Area: Though some of the trees planted in this area have died, there are no signs of erosion in this area. Grass has established itself in this area. No action is needed.

UMC will continue to inspect and repair all closure areas to ensure that the closure remains intact and successful.

Dewatering System: On November 24, 2014, UMC informed NYSDEC by phone of its intent to upgrade the onsite telemetry unit. UMC planned to replace the previous telemetry unit, a Sensaphone 1400, with a Sensaphone CELL682. The new CELL682 unit utilizes a wireless network to connect to the internet and includes several dry and analog inputs which can be monitored and programmed via an online interface. Because the telemetry system upgrade does not change how the dewatering system operates, NYSDEC stated that there was no need for a formal approval of the upgrade.

On December 10, 2014, UMC installed the new CELL682 telemetry unit and a high gain antenna.

UMC is currently assessing the possibility of interfacing the on-site totalizer to the CELL682 unit. The existing totalizer appears to have output terminals which can be connected to the CELL682 unit. This would allow UMC to remotely monitor the number of gallons discharged into the Buffalo sanitary sewers in real-time. If feasible, UMC will perform this modification during 1Q15.

6. CONCLUSION

The groundwater quality within the exterior wells and the groundwater elevation measurements during the annual 2014 monitoring event demonstrate that remedial activities at the Union Road Site are successful. The groundwater quality outside the landfill closure is better than groundwater quality in the interior of the closure.

The groundwater elevation measurements indicate that an inward gradient of shallow groundwater flow has been established across the slurry wall. This inward gradient in combination with the groundwater quality outside the closure demonstrates that the contamination is contained within the slurry wall.

Other than bis(2-ethylhexyl)phthalate, which was detected in MW-11M and MW-12D, no SVOCs were detected in any of the monitoring wells during this annual sampling event. Bis(2-ethylhexyl)phthalate has been detected in monitoring wells 10D, 11M, and 12D at similar concentrations between 2001 and 2006. Additionally no TPH, Arsenic, Lead, or VOCs were detected in any of the monitoring wells during this annual sampling event.

Though samples collected from Monitoring wells MW-11S and MW-14S did not contain detectable concentrations of TPH during this monitoring period, detectable concentrations of TPH have existed in samples from both MW-11S and MW-14S since their construction in 1997. As discussed in previous monitoring reports, the contamination appears to be isolated and stabilized within those areas of the site (northwest and south sides) and there are inward groundwater gradient into the landfill closure at MW-11S and MW-14S areas.

Though arsenic has been detected in several wells over the duration of the groundwater monitoring activities, during this sample event, arsenic was not detected in any of the wells.

UMC will continue to monitor and evaluate the groundwater surrounding the landfill in accordance with the GMP.

APPENDIX A

BORING LOGS AND WELL CONSTRUCTION DRAWINGS (ON CD)

APPENDIX A

BORING LOGS AND WELL CONSTRUCTION DRAWINGS

~~ICING NO.~~
10-5

TEST BORING LOG

PROJECT NO., NAME

LOCATION

WoolRoad - 2035 - 205

Buffalo N.Y.

CALLING FOR ACTORS/ACTRESSES

Маки

U.S. GEOLOGIST. OFFICE

JOHN J ZACHER JR

BILLING EQUIPMENT - METHODS

HSA

ପ୍ରକାଶକ ମେଲା

158

1447 1998 MEDICAL

THE EIGHTH

WELL INSTALLED? CASHING MAT./CIA. SCREEN: YES NO UNKNOWN STATE: YES NO UNKNOWN

ELEVATION OF: GROUND SURFACE TOP OF WELL Casing TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.)

REMARKS: _____

• 100 •

HIRE TO 21', SAMPLES TO 20'

LOG OF TEST DRIVING

LOG OF TEST BORING				
DEPTH (ft)	SAMPLE NO. AND TYPE	RECOVERY (ft)	TESTATION ASSTN. NAME & SIGNATURE	
		DESCRIPTION		
SAMPLING STARTS AT 4' B.G.		REMARKS		
4	6	BROWN TO GREY CLAY w LITTLE ANTHRACITE Debris 1-1/2"	STIFF, DRY	
4	6	6		
4	8	6	STIFF, DRY	
4	10	6		
6	10	6	STIFF, DRY	
6	15	5		
8	20	5	NO VISIBLE LITTLE H2O	
8	25	5		
8	30	5	STIFF, LITTLE H2O	
8	35	5		
10	21"	TAN/BROWN CLAY	HARD STIFF SOME H2O	
10	24"	2		
10	26"	3	MED STIFF SOME H2O	
12	28"	3		
12	30"	2	MED STIFF SOME H2O	
12	32"	3		
14	34"	3	MED STIFF SOME H2O	
14	36"	4		
15	38"	2	MED STIFF SOME H2O	
15	40"	2		
16	42"	3	MED STIFF SOME H2O	
16	44"	4		
18	46"	2	MED STIFF SOME H2O	
18	48"	3		
18	50"	5	MED STIFF SOME H2O	
18	52"	2		
18	54"	2	MED STIFF SOME H2O	
20	56"	3		
20	58"	3	MED STIFF SOME H2O	
20	60"	3		
End Boring 21' B.S.S - 2008.20'		WELL COMBY GRAPHIC EXPLANATION		

Proportionate Use. Tracez à 0-10%, Lissez à 10-20%, Serrez à 20-35%, Annez à 35-50%.

Sampling Abbreviations: SS = Split Spoon, ST = Shallow Tube, CSC = Continuous Soil Core

BORENG NO.
10-M**TEST BORING LOG**

PROJECT NO.-NAME

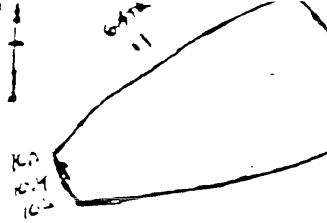
DUGLOAD - 2035-200

LOCATION

BUFFALO NY

DRILLING CONTRACTOR/DRILLER

HANM



GEOLOGIST, OFFICE

JOHN J ZACHER JR.

DRILLING EQUIPMENT, METHOD

HSA

SIZE TYPE OF BIT

6" HSA

SAMPLING METHOD

SPLIT SPOON

START, FINISH D.

1/13/97

WELL INSTALLED? YES NO Casing Mat./dia. STAINLESS STEEL 1/2"

SCREEN TYPE SLOT MAT. STAINLESS LENGTH 10' dia 2" slot size 0.02

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN ON SURFACE DATE

(FT. ABOVE M.S.L.)

REMARKS:

DEPTH (ft)	SAMPLE NO. AND TYPE	RECOVERY (ft)	PENETRATION RESISTANCE IN OWS FT	LOG OF TEST BORING		WELL COMPT.	DRAWING NO.
				DESCRIPTION	REMARKS		
				SAMPLING STARTS 4' BG.			
5	"	6	6	BLK TO TAN/GREY CLAY W/LITTLE ROCKS 70%	STIFF, DAMP		
6	25"	3	3				
6	25"	3	3	C-7" BLACK TO TAN/GREY CLAY SLICE ROCKS	STIFF DAMP		
7	22"	45	45	74" CINDER	DRY		
8	22"	50	50	H-22" BROWN CLAY LITTLE ROCKS	MED-STIFF, LITTLE H2O		
9	12	7	7	TAN/LT BROWN CLAY	STIFF, LITTLE H2O		
10	24"	4	4				
10	10"	3	3	TAN/LT Brown CLAY	MED STIFF SEMI H2O		
11	15"	4	4				
11	12	5	5	TAN/LT Brown CLAY	MED STIFF SEMI H2O		
12	15"	3	3				
12	12	3	3	TAN/LT Brown CLAY	MED STIFF SEMI H2O		
13	15"	5	5				
14	14"	3	3	TAN/LT Brown CLAY, LITTLE GREY	MED STIFF SEMI H2O		
15	20"	4	4	LITTLE REDD ROCKS			
16	16"	4	4				
16	16"	3	3	TAN/LT Brown CLAY	MED STIFF SEMI H2O		
17	19"	3	3				
18	18"	4	4	GREYISH BROWN CLAY, SEMI ORGANIC	MED STIFF SEMI H2O		
19	20"	3	3				
20	20"	4	4				

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, Amt = 35-50%

Sampling Abbreviations: SS = SPLIT SPOON, ST = Shovel Test, CSC = Continuous Soil Core

BOREHOLE NO.
10PTEST BORING LOG

PROJECT NO. NAME

Wing Road - 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

MAHM

GEOLOGIST, OFFICE

JOHN J ZACHER JR.

DRILLING EQUIPMENT, METHOD

HSA

SIZE/TYPE OF BIT

6" HSA

SAMPLING METHOD

SPLIT SPOON

START. DATE

1/13/97

WELL INSTALLED? CASING MAT./DIA.
YES NO STAINLESS STEEL 2"

SCREEN

TYPE SLOT

MAT. STAINLESS

LENGTH 10'

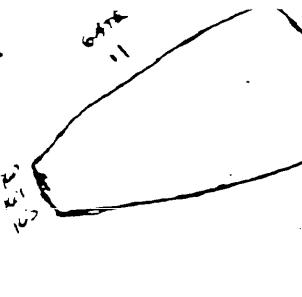
DIA 2"

SLOT SIZE 0.02

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE
(FT. ABOVE M.S.L.)

DATE

REMARKS:



LOG OF TEST BORING

DEPTH (ft)	SAMPLE NO. AND TYPE	INCOHERENT (ft)	PENETRATION RESISTANCE IN OWS (ft)	DESCRIPTION		REMARKS	WELL COMB.	GRAPHIC
				DESCRIPTION	REMARKS			
20	21	1 3 5 8	-	DARK GREY w/ SOME ORGANICS LITTLE	MED STIFF -LITTLE H2O			
22	21	4 5	-	GREY w/ SOME BROWN CLAYS	MED STIFF -LITTLE H2O			
24	21	9	-	-	SOFT, WET			
25	20	2 3 5	-	GREEN CLAY				
26	21	1	-	TOP 14" GREY CLAY	SOFT WET			
28	21	2 10	-	BCT 7" GREY/LT BROWN CLAY, SOME ROCK FIZZES, LITTLE SAND	WET, MICROFOLIATE			
29	17	12 8 4 2	-	LT BROWN SILT w/ SOME SAND 0.6" LT BROWN CLAY, SOME ROCKS 0.7" 1/2-1"	WET, LOOSE			
30				Bob @ 31' Bgl	SOFT-WET			
18								

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

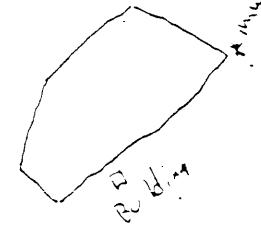
Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

BORING NO. MW-10D	TEST BORING LOG		
PROJECT NO., NAME Union Road	LOCATION Buffalo, NY		
DRILLING CONTRACTOR/DRILLER Maxim (Dick Miller, Ron Brown)			
GEOLOGIST, OFFICE James Dunn			
DRILLING EQUIPMENT, METHOD Air Rotary / HSA	SIZE, TYPE OF BIT 8 1/4" HSA / 7 7/8"	SAMPLING METHOD Split Spoon	START, FINISH DATE 12/6 - 12/7/86
WELL INSTALLED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CASING MAT./DIA. Stainless / 2"	SCREEN: TYPE SLOT MAT. stainless LENGTH 10' DIA. 2" SLOT SIZE .020	
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE	DATE
REMARKS:			

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING			
				DESCRIPTION	REMARKS	WELL CONST.	GRAPHIC PROFILE LOG
				Sampling started @ 9' BG.			
5		15 6 8 10		BLK to tan/Grey clay w/ trace angular Fragmented Rock up to 1" in size	Stiff, Damp		
5		21"		Top 8" BLK, tan/Grey Clay w/ Trace angular Fragmented Rock up to 1" in size next 6" Cinder like material w/ some w/ angular Fragmented Rocks Bottom 6" Brown/Tan Sand/Silty Clay w/ 10%-20% Rx Frag. 2"	Stiff, Damp Dry Not Cohesive, little H ₂ O		
10		22"	7 30 18 11	Tan to lt Brown clay, No Rocks	m. stiffness w/ some H ₂ O		
10		24"	7 8 10 19	Tan to lt Brown clay w/o Rocks	m. stiffness w/ some H ₂ O		
15		15"	3 5	Tan to lt Brown Clay w/o Rocks Possibly some silts	w/ some H ₂ O		
15		20"	2 2 3 4	Grey to lt Brown Mottled clay w/ trace rounded Rocks, 1/4 - 1/2" diameter.	m. stiffness w/ some H ₂ O		
18"		18"	1 3 4 6	Tan to lt Brown Clay w/o Rxs	m. stiffness w/ some H ₂ O		
		21"	2 2 3	Grayish/Brown/BLK clay w/ 10-20% organics	m. stiffness w/ some H ₂ O		

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, and = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core



BORING NO.

MW- 103

PROJECT NO.. NAME

Union Road 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

MAXIM (Dick Miller, Ron Brown)

GEOLOGIST OFFICE

James Duan

DRILLING EQUIPMENT, METHOD

HSA / Air Rotary

SIZE TYPE OF BIT

HSA 8 1/4" / 7 7/8"

SAMPLING METHOD

Split SPOON

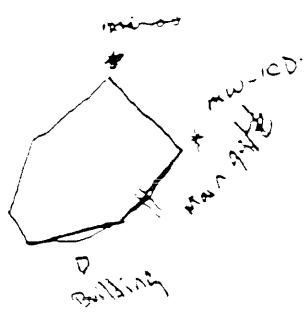
START FINISH DATE

WELL INSTALLED? YES NO Casing Mat./dia. Stainless Steel / 2" Screen: TYPE SLOT MAT. stainless LENGTH 10' DIA. 2" SLOT SIZE .020

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

(FT. ABOVE M.S.L.)

REMARKS:



DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING		WELL CONST.	GRAPHIC DRAWING
				DESCRIPTION	REMARKS		
20'-22'	21"	3 5 8		Greyish/Brown/ Dark Grey clays w/ traces organics	m. stiffness w/ Some H ₂ O		
22'	20"	3 5 8		Grey + Brown Clays	m. stiffness w/ Trace H ₂ O		
24'	20"	9					
24'-26'	0"	2 2 3 2		The inside of the spoon was v. wet; No Basket.			
26'	22"	1		Top 16" Grey clays	soft wet		
28'	22"	3 17		mid 4" Grey clays, w/ trace organics	soft wet		
				Bottom 2" Grey/H Brown/ Clays w/ some Clay, R+s, Sands	not cohesive wet		
30'-32'	17"	3 3 3 3		Ht Brown/Tan clays w/ silts 20% Rock Frag.	soft wet		
30'	18"	6 2 2		Y ₄ " - 2"			
30'-32'	18"	2		Top 3" Sands w/ Ht Brown/Tan silts + clays	Not cohesive wet		
32'	4"	3 1/2		Bottom 15" H Brown/Tan clays w/ silts, 20%	Soft Wet		
				Rock Fragments Y ₄ " - 2" in size			
34'	4"	3 1/2		Ht Brown/Tan clays w/ silts, 20% Rx2 Frag	soft wet		
				Y ₄ " - 2" in size			
34'				Bed Rock.			
				② 38' BG Bottom of Protective casing	Bottom of The Protective casing		

DANBURY, CT 06810
(203) 796-5279

TEST BORING LOG

BORING NO.
MW- 100

PROJECT NO., NAME
Union Road 2035-200

DRILLING CONTRACTOR/DRILLER
Maxim

GEODELOGIST OFFICE
James Dean

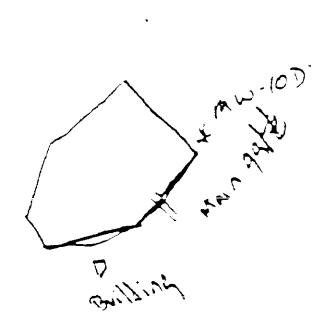
DRILLING EQUIPMENT, METHOD
HS A

WELL INSTALLED? YES NO Casing Mat./Dia. Stainless Steel 1/2" SCREEN: TYPE SLOT MAT. stainless LENGTH 10' DIA. 2" SLOT SIZE .025

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

(FT. ABOVE M.S.L.)

REMARKS:



LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION	REMARKS	WELL CONST.	GRAPHIC LOG
5				② 45' the water bearing zone The hole has collapsed The rock isn't very consolidated	B.O.B 45.5' BG		
10							
15							

TEST BORING LOG						
BORING NO. MW-11S						
PROJECT NO. NAME 11-11-11	LOCATION Buffalo NY					
DRILLING CONTRACTOR/DRILLER Mazum						
SPEC GEOLOGIST, OFFICE John J Zacher Jr						
DRILLING EQUIPMENT, METHOD HSA	SIZE TYPE OF BIT 6"		SAMPLING METHOD SPLIT SPOON	START, FINISH CAT 1/2/97		
WELL INSTALLED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CASING MAT./DIA STAINLESS STEEL 7 1/2"	SCREEN: TYPE SLOT MAT. STAINLESS LENGTH 10' DIA. 2"	SLOT SIZE 0.00 DATE			
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE			
REMARKS:						

LOG OF TEST BORING						
DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWN AT C.S. FT	DESCRIPTION	REMARKS	WELL CONST. GRAPHIC LOG
				SAMPLING STARTED AT 4' B.G.		
4'		10'		Brown/Dek Brown SILTS & CLAYS TRACE RA FRACTURES < 1/8"	STIFF DRY - LITTLE H2O	
5'	15'	9'	10'			
6'		4'		Brown/Dek Brown SILTS AND CLAYS	STIFF	
7'	15'	9'	12'	NO 2x5 FILL	LITTLE TO NO H2O	
8'		11'		Brown/Dek Brown CLAYS	STIFF	
9'	15'	12'	12'	TRACE RA FRAGS	LITTLE TO NO H2O	
10'	10"	12"	12"	FILL		
10'		4"		TOP 9" Dek Brown CLAYS WITH CERAMICS	STIFF - LITTLE H2O	
	13"	6"		BOTTOM 4" - GREY SILTS / CLAYS & ANG CERAMICS	STIFF - LITTLE H2O MED	
11'		8"		GREY CLAYS LITTLE CERAMICS	MEDIUM STIFFNESS SOME H2O	
12'	20"	10"	10"			
12'		13"		TOP 6" - GREY CLAYS, LITTLE CERAMICS	MED STIFFNESS - SOME H2O	
13'	15"	5"				
14'		11"		BROWN 12" - REDDISH BROWN CLAY w/ CERAMICS	STIFF - LITTLE H2O	
15'	16"	15"	15"	REDDISH BROWN CLAYS w/ GREY LAYERS	STIFF - LITTLE H2O	
15'	21"	20"	20"	GREY LAYERS MAY BE EVIDENCE OF VARBED CLAYS	TO NO H2O	
15'	22"	22"	22"			
16'		5"		REDDISH Brown CLAYS w/ GREY LAYERS	M. STIFFNESS	
16'	12"	5"	5"	GREY LAYERS MAY BE EVIDENCE OF VARBED CLAYS	DAMP	
20'		1"				

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%
 Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW - 113

PROJECT NO.. NAME
ENVIRO 2070 - 2035-200

LOCATION
BUFFALO NY

DRILLING CONTRACTOR/DRILLER
MAXIM

GEOLOGIST, OFFICE

John J Zacher Jr

DRILLING EQUIPMENT. METHOD	SIZE TYPE OF BIT	SAMPLING METHOD	START, FINISH DATE
HSA	6" HSA	SPLIT SPOON	1/2/97

WELL INSTALLED?	CASING MATERIAL	SCREEN:	LENGTH 10'	DIA. 2"	SLOT SIZE 0.250"
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	SS / 2"	TYPE SLOT	MAT. STAINLESS	DATE

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
(FT. ABOVE M.S.L.)				

REMARKS:

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO.	RECOVERY (FT)	PENETRATION RESISTANCE BELOW SPT	DESCRIPTION		REMARKS	WEIL CONST.	GRAPHIC LOG
				DESCRIPTION	REMARKS			
20	20	3		Brown / Dark Brown CLAYS, no 2xs.		STIFF		
		5				LITTLE H2O		
22	22	24"	6					
22	22	—	5					
		2						
		4						
24	24	23"	5	Brown w/ some GREY CLAYS		STIFF		
		4				TRACE H2O		
		—						
5								
10								
15								

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.

MW-11m

PROJECT NO.. NAME

Union Road 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

Maxim

GEOLOGIST OFFICE

James Dorn

DRILLING EQUIPMENT, METHOD

HSA

SIZE: TYPE OF BIT

SAMPLING METHOD

START, FINISH DATE

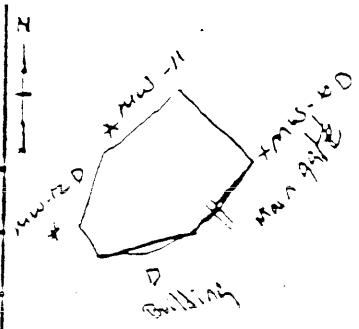
12/18 - 12/19/96

WELL INSTALLED? YES NO Casing Mat./Dia. Stainless Steel 1/2" SCREEN: TYPE SLOT MAT. stainless LENGTH 10' Dia. 2" SLOT SIZE .020

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

FT. ABOVE M.S.L.)

REMARKS:



DEPTH (ft)	SAMPLE NO. AND TYPE	RECOVERY (ft)	PENETRATION RESISTANCE BLOWS/ft	LOG OF TEST BORING		WELL CONST.	GRAPHIC LOG
				DESCRIPTION	REMARKS		
4'	10"	10		Brown/DRK Brown silts + clays w/ trace amounts of Rx Fragments. less than 1/8"	Sampling started @ 4' BG		
5'	14"	10		Brown/Drk Brown silt+clays, w/o Rx's			
6'	10"	10		Most likely Fill			
6'	8"	8		Brown/Drk Brown clays w/ trace amounts of Rx frags.			
8'	13"	12		most likely Fill			
8'	14"	12		Brown/Drk Brown clays w/ trace amounts of Rx frags.			
10'	4"			most likely Fill			
10'	3"	5		Top 8" Drk Brown clays w/ some organics			
12'	10"	9		Bottom 2" Grey silts + clays w/ some organics			
12'	5"	5		Top 4" discarded looked as if they fell into hole			
12'	18"	18		Bottom 14" Grey clays w/ some organics + trace ash + soot.			
14'	15"	15			m. stiffness some H ₂ O		
14'	7"	11		Reddish Brown clay w/ no Rx's or organics	Stiff little to no H ₂ O		
15'	19"	11			Stiff little to no H ₂ O		
16'	20"	20			Stiff little to no H ₂ O		
16'	19"	25		Reddish Brown clays w/ grey layers	Stiff little to no H ₂ O		
18'	18"	18		evidence of The grey layers may be varbed clays.	m. stiffness		
18'	-	20			Damp		
18'	5"	5		Reddish Brown clays w/ grey layers			
20	4"	4		The grey layers may be evidence of varbed clays			
20	5"	5					

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

- - - - - Continuous Soil Core

TEST BORING LOG

BORING NO.
MW- 11M

PROJECT NO.. NAME
Union Road 2035-200

LOCATION
Buffalo NY

DRILLING CONTRACTOR/DRILLER
Maxim

GEOLOGIST, OFFICE
James Dean

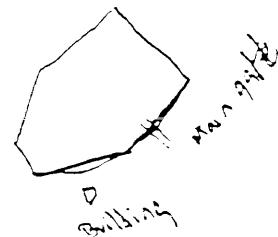
DRILLING EQUIPMENT, METHOD
HSA

WELL INSTALLED? YES NO CASING MAT./DIA.
Stainless Steel / 2"

SCREEN:
TYPE SLOT MAT. Stainless LENGTH 10' DIA. 2" SLOT SIZE .025

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.)

REMARKS:



SPLIT SPOON

START, FINISH DATE

DEPTH (FT)	SAMPLE NO.	AND TYPE	DESCRIPTION	REMARKS	WEIL CONST.	GRAPHIC LOG
20'	24"	6	- Reddish brown varbed clays w/ Red, Grey, and dark Brown layers.	Soft Wet		
22'	12"	3	Reddish/ Brown clays	Soft		
24'	12"	3	Reddish Brown (Fleshy Color) clays $\frac{1}{4}$ " - $\frac{1}{2}$ " Rx frags. w/ rounded edges.	Wet		
26'	18"	3	Reddish Brown(Fleshy Color) clays $\frac{1}{4}$ " - 2" Rx frags w/ rounded edges.	Soft Wet		
28'	18"	5	Reddish Brown(Fleshy Color) clays + $\frac{1}{4}$ "-50% Rock fragments w/ some rounded edges	Soft Wet		
30'	13"	2	- mostly Rocks $\frac{1}{2}$ " w/ some Reddish Brown (Fleshy color) clays	Soft Wet		
32'	4"	5	- Reddish Brown (flesh color) clays & silts	Soft		
32'	14"	7	- some sands 20-30% rock, mostly smoothed pebbles $\frac{1}{4}$ " - 1"	Wet		
34'	13"	13	Reddish Brown/Grey Silts & clays 60% Rocks & Sands	The sample ranged from soft → hard		
35'	13"	1	Reddish Brown/Grey silts, clays, sands + rocks.	Wet		
36'	5"	24 $5\frac{1}{2}"$	Reddish Brown/Grey silts, clays, sands + rocks.	soft → Hard		
			Bed Rock @ 39' BG	Wet		

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%
CSC = Continuous Soil Core

BORENG NO.
17-S

TEST BORING LOG

PROJECT NO. - NAME

Univ. Plaza - 2035 - 200

LOCATION

Buffalo NY

DRILLING CONTRACTOR / DRILLER

HANIM

GEOLOGIST, OFFICE

JOHN J ZACHER JR.

DRILLING EQUIPMENT, METHOD

HSA

SIZE TYPE OF BIT

6" x 4"

HSA

SAMPLING METHOD

SLIT SPOON

START, FINISH SA
1-2-47

WELL INSTALLED? CASING MAT. / DIA.

YES NO

STAINLESS STEEL / 2"

SCREEN

TYPE

SLOT

MAT. STAINLESS

LENGTH 10'

DIA. 2"

SLOT SIZE 0.020

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN ON SURFACE DATE

(FT. ABOVE M.S.L.)

1-2-47

REMARKS:

LOG OF TEST BORING

DEPTH (ft)	SAMPLE NO.	AND TYPE	RECOVERY (%)	PERMEATION TEST	DEPTH IN OWN FT	DESCRIPTION		REMARKS	WELL COMBY.	DRAWING	INSTRUMENT
						DESCRIPTION	REMARKS				
1						SAMPLING START AT 15' BG					
3											
6											
9											
12											
15	10	21"	6			Brown CLAYS - FILL		STIFF LITTLE H2O	10		
17	17	21"	9			Brown CLAYS FILL		STIFF TRACE H2O	12		
17	17	24"	7								
19	19	24"	5			Brown to Dark Brown CLAYS		STIFF LITTLE H2O	14		
20	20	23	6								
21	21	-	7			Brown TO TAN CLAY w/LITTLE GREY		STIFF SOME LITTLE H2O	15		
21	21	24"	5								
23	23	24"	5								
23	23	24"	5								
25	25	24"	5								
25	25	24"	4								
26											

P.B. 3

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-30%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

BOREHOLE
12-M

PROJECT NO. NAME

Wing Road - 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

MAXIM

GEOLOGIST OFFICE

JOHN J ZACHER JR

DRILLING EQUIPMENT, METHOD

HSA

SIZE OF BIT

6" \times 4" HSA

SAMPLING METHOD

SPLIT SPOON

START, FINISH SA

12/31/96

WELL INSTALLED? CASING MAT./DIA.
YES NO STAINLESS STEEL 2"

SCREEN

TYPE

SLOT MAT. STAINLESS

LENGTH

10'

DIA.

2"

SLOT SIZE

0.020

ELEVATION OF: GROUND SURFACE

TOP OF WELL CASING TOP & BOTTOM SCREEN ON SURFACE

DATE

(FT. ABOVE M.S.L.)

REMARKS: NO SAMPLES 0-26' FILL MATERIAL, CUTTINGS BROWN DRY SAWDUST 46-72 - no necessary refusal at 25'

LOG OF TEST BORING

DEPTH (ft)	SAMPLE NO.	AND TYPE	DESCRIPTION	REMARKS	WELL COMB.	GRAPHIC FORM
20	9		Brown DARK Brown CLAYS	STIFF - LITTLE TO NO H ₂ O		
22	22	5				
22	4		Brown to TAN CUM SMOOTH	STIFF SEE TO TRACE H ₂ O		
24	24	4				
24	24	2	GRAY TO RED Brown CLAY, TRACHELLUS	SOFT, MOIST		
26	26	1				
26	4		RED Brown CLAY	STIFF, LITTLE H ₂ O		
28	7					
28	8		LT BROWN TAN CLAY, TRACHELLUS, LITTLE ROCKS (1/8")	SOFT, DAMP		
30	18	2				
30	2	2	LT BROWN/TAN CUM - LITTLE GRAY, LITTLE ROCKS (1/8-1/4")	SOFT DAMP		
32	16	3				
32	18	8	TCP 12" - LT Brown / TAN CLAY - SOFT GRAY, LITTLE ROCKS	SOFT DAMP, SEE H ₂ O		
34	12					
34	10		BLT 6" - GRAY CLAY AND SAND, NO COHESIVE STRENGTH	WET		
34	1		GREEN CLAY AND SAND	NO STRENGTH, wet		
36	2					
36	2		GRAY CLAY AND SAND 0-15'	NO STRENGTH		
36	20			WET		
38	15-20		15-20" - GRAY CLAY AND ROCKS 1/4-1/2"	WET		
38	7			WET, STIFF		
HC	6"	50/3"	HOLSTY ROCK - WISCHIE GRAY/TAN CLAY			

PROPORTIONS USED: Trace = 0-10%, Little = 10-20%, Some = 20-30%, And = 30-50%

SAMPLING ABBREVIATIONS: SS = SOLID SAMPLE, ST = SHIRLEY TUBE, CSC = CONTINUOUS SOIL CORE

WEATHERED Bedrock

BOB - 42.5

41.5

44 SHELTER ROCK ROAD
DANBURY, CT 06810
(203) 796-5279

TEST BORING LOG

BORING NO.

MW-12D

PROJECT NO.. NAME

Union Road 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

Maxim (Ron Brown, Dick Miller)

GEOLOGIST, OFFICE

James Darr

DRILLING EQUIPMENT, METHOD

HSA / Air Rotoray

WELL INSTALLED? CASING MAT./DIA.

YES NO Stainless Steel 1/2"

SCREEN: TYPE SLOT MAT. stainless LENGTH 10' DIA. 2" SLOT SIZE .020

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

(FT. ABOVE M.S.L.)

REMARKS:

N
+
MW-12D

+
MW-12D

12/12/96

12/12/96

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DANBURY, CT 06810
(203) 796-5279

< 01 >

TEST BORING LOG

BORING NO.

MW-127

PROJECT NO., NAME

Union Road 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

Maxim

GEOLOGIST, OFFICE

James Dean

DRILLING EQUIPMENT, METHOD

HSA

WELL INSTALLED?	CASING MAT./DIA.	SCREEN:	SAMPLING METHOD	START, FINISH DATE
YES <input checked="" type="checkbox"/>	Stainless Steel 2"	TYPE SLOT MAT. stainless	Split SPOON	DATE
NO <input type="checkbox"/>		TOP OF WELL CASING TOP & BOTTOM SCREEN	GW SURFACE	

ELEVATION OF: GROUND SURFACE (FT. ABOVE M.S.L.)

REMARKS:



DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING		WELL CONST.	GRAPHIC DRAWING
				DESCRIPTION	REMARKS		
20'	3	5		Brown to Drk Brown Clays, no Rx's	stiff		
22'	24"	6		-	little to no H ₂ O		
22'	24"	8		-			
24'	3	5		Brown/Tan, w/ some Greys	stiff		
24'	4	4		-	w/ trace H ₂ O		
24'	1	1		-			
5	24"	1		Greyish/ Red Brown Clays, Trace Rx Fragments $\frac{1}{8}'' - \frac{1}{4}''$	soft		
26'	1	1		-	Damp		
26'	4	6		Top 6" Red Brown Clay, No Rx's	stiff		
28'	17"	14		Bottom 11" Lt Brown/Tan (Fleshy color) Clays, Trace silt & Rx Fragments	soft w/ some H ₂ O		
28'	20	20		-			
30'	1	2		1/2" Lt Brown/Tan (Fleshy color) clays, Trace silts + Some rock fragments. $\frac{1}{8}'' - \frac{1}{4}''$	soft		
30'	1	3		-	Some H ₂ O		
32'	14"	1		1/2" Lt Brown/Tan (Fleshy color) clays, Trace silts + Some rock fragments	soft		
32'	34	1		-	Some H ₂ O		
32'	24"	8		Top 12" Lt Brown/Tan, w/ some grey clays some Rx Fragments.	soft, damp		
32'	16	16		-	No Cohesive Strata		
34'	50	50		Bottom 12" Greyish Lt Brown/Tan (Fleshy color) clays + silts	Wet to Damp		
34'				50% Sands No Rx's			
15				Sample skipped due augers into hard unconsolidated Rocks			
37'	50"	5"		It Brown/Tan/Grey Clays w/ silts + Angular Rock Fragments 40-50% $\frac{1}{8}'' - 1''$	soft wet		
39'							

Percentages used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%
- = 50% - Continuous Soil Core

DANBURY, CT 06810
(203) 796-5279

SOT 5

TEST BORING LOG

BORING NO. 120

PROJECT NO.. NAME

Union Road 2035-200

LOCATION

Buffalo NY

DRILLING CONTRACTOR/DRILLER

Maxim

GEOLOGIST, OFFICE

James Dean

DRILLING EQUIPMENT, METHOD

HSA

WELL INSTALLED? YES NO C Casing Mat./DIA. Stainless Steel 1/2" SCREEN: TYPE SLOT MAT. stainless LENGTH 10' DIA. 2" SLOT SIZE .025

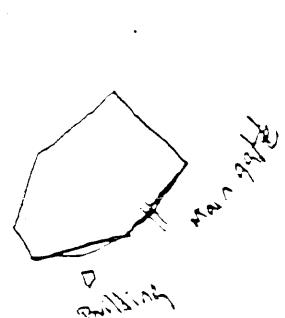
NO C

TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

FT. ABOVE M.S.L.)

REMARKS:



DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING		WELL CONST.	GRAPHIC PROFILE LOG
				DESCRIPTION	REMARKS		
40'				mostly RX 1/4"-2" in size w/ a matrix of lt Brown/Tan/Grey Clays + Silts		Wet	
42'	2"	50 1/2"	--	- Bed Rock @ -41' BG	Stiff	Cement	
5				Bottom of Protective casing @ 46'		BG	
						Bentonite Seal	
10				Stainless Steel Riser			
15				Stainless Steel/ Screen			
				Scm d			
				Bottom of hole 61.5' BG			

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

100% = Continuous Soil Core

61.5'

TEST BORING LOG

BORING NO.
MW -135

PROJECT NO. NAME
UNION ROAD 2035-200

DRILLING CONTRACTOR/DRILLER
MAXIM

LOCATION

BUFFALO NY

GEOLOGIST, OFFICE

JON ZACHER JR

DRILLING EQUIPMENT, METHOD

HSA

SIZE, TYPE OF BIT

6" HSA

SAMPLING METHOD

SPLIT SPECN

START, FINISH DATE

12/20/96

WELL INSTALLED? YES NO Casing Mat./dia.

SCREEN:

TYPE SLCT

MAT. STAINLESS

LENGTH 10' DIA. 2" SLOT SIZE 0.020

ELEVATION OF: GROUND SURFACE

TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE

DATE

(FT. ABOVE M.S.L.)

REMARKS: BORING TO 21', last 1' NOT SPLIT SCREENED Well ESTD Riser at 205' B.G.

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION	REMARKS	WELL CONST.	GRAPHIC RECORD
SAWING STARTED AT 4' B.G.							
4		15		DARK BROWN CLAYS		STIFF	
5	14"	10		NE 20.0%		LITTLE NO H2O	
6		5		SOME CINDER			
6		12		DARK BROWN CLAYS		STIFF	
6		10		SOME CINDER		TRACE H2O	
8		12					
8		10					
9		12		5' → Dark Brown Clays, Little Cinders		STIFF, LITTLE H2O	
10		10		80'-5" - BLACK SANDS /CINDERS NET NITRUE		DRY	
10		13					
10		8		80'-3" - BLACK SANDS CINDERS		DRY	
10		5					
11		11		80'-3" - WOOD LEAVES CREEPAGE DIA. 2			
12		10				WET	
12		8		BLACK SAND / CINDERS			
14		10				WET	
14		7		BLACK SAND / CINDERS			
15		12		SOME BRICK AND WOOD			
16		5				DAMP	
16		5		BLACK SAND CINDERS WITH SOME RED CLAY			
17		7					
18		4					
18		3		TOP 6" BLACK CINDERS		WET	
20		21		6"-15" RED CLAY, NO ROCKS		MED STIFF SOME H2O	

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Screen, ST = Shelby Tube, CSC = Continuous Soil Core

B.G. 21'

ESI
44 SHELTER ROCK ROAD
DANBURY, CT 06810
(203) 796-5279

Zot Z

BORING NO.
MW- 15M

PROJECT NO.. NAME
Union Road 2035-200

LOCATION
Buffalo NY

DRILLING CONTRACTOR/DRILLER
MAXIM

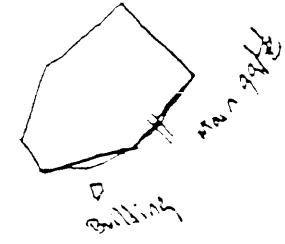
GEOLOGIST, OFFICE
James Dean

DRILLING EQUIPMENT, METHOD
HSA

WELL INSTALLED? YES NO CASING MAT./DIA. Stainless Steel /2" SCREEN: TYPE SICL MAT. stainless LENGTH 10' DIA. 2" SLOT SIZE .020
ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE

FT. ABOVE M.S.L.)

REMARKS:



TEST BORING LOG

N START, FINISH DATE

SAMPLING METHOD
Split Spoon

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING		REMARKS	WELL CONST.	GRAPHIC LOG
				DESCRIPTION				
24'	7	7	5	Top 5" Wood		Stiff \rightarrow soft		
5	24'	5	5	Bottom 19" Greyish red clays, No Rocks		little to no H ₂ O		
26'	26'	5	5	reddish grey clays w/ some rocks				
10	30'	1	1	Top 2" Wood - maybe from a plug in bottom of auger		Soft + wet.		
32	12"	1	1	Bottom 10" Reddish/Grey Clays w/ some Rx Pebbles				
32	0"	2	5	There wasn't a basket in the spoon.				
34	0"	5	8					
15	34'	6	6					
36'	0"	50/0"	50/0"	Bed Rock		Bottom of Boring		

TEST BORING LOG

14-S

BORING NO.
14-S

LOCATION

Buffalo, NY

PROJECT NO., NAME
UNION ROADDRILLING CONTRACTOR/DRILLER
MAXIM Technologies

GEOLOGIST, OFFICE

Mark Cambra

NES Danbury, Ct

DRILLING EQUIPMENT, METHOD
HSA

SIZE, TYPE OF BIT

6" HSA

SAMPLING METHOD

AF

START, FINISH DATE
8/19/97WELL INSTALLED? YES NO Casing Mat./Dia.
Steel 4"SCREEN:
TYPE

Sloped

Mat. Stainless Steel

Length

10

DIA.

2"

SLOT SIZE 020

ELEVATION OF: GROUND SURFACE (FT. ABOVE M.S.L.)

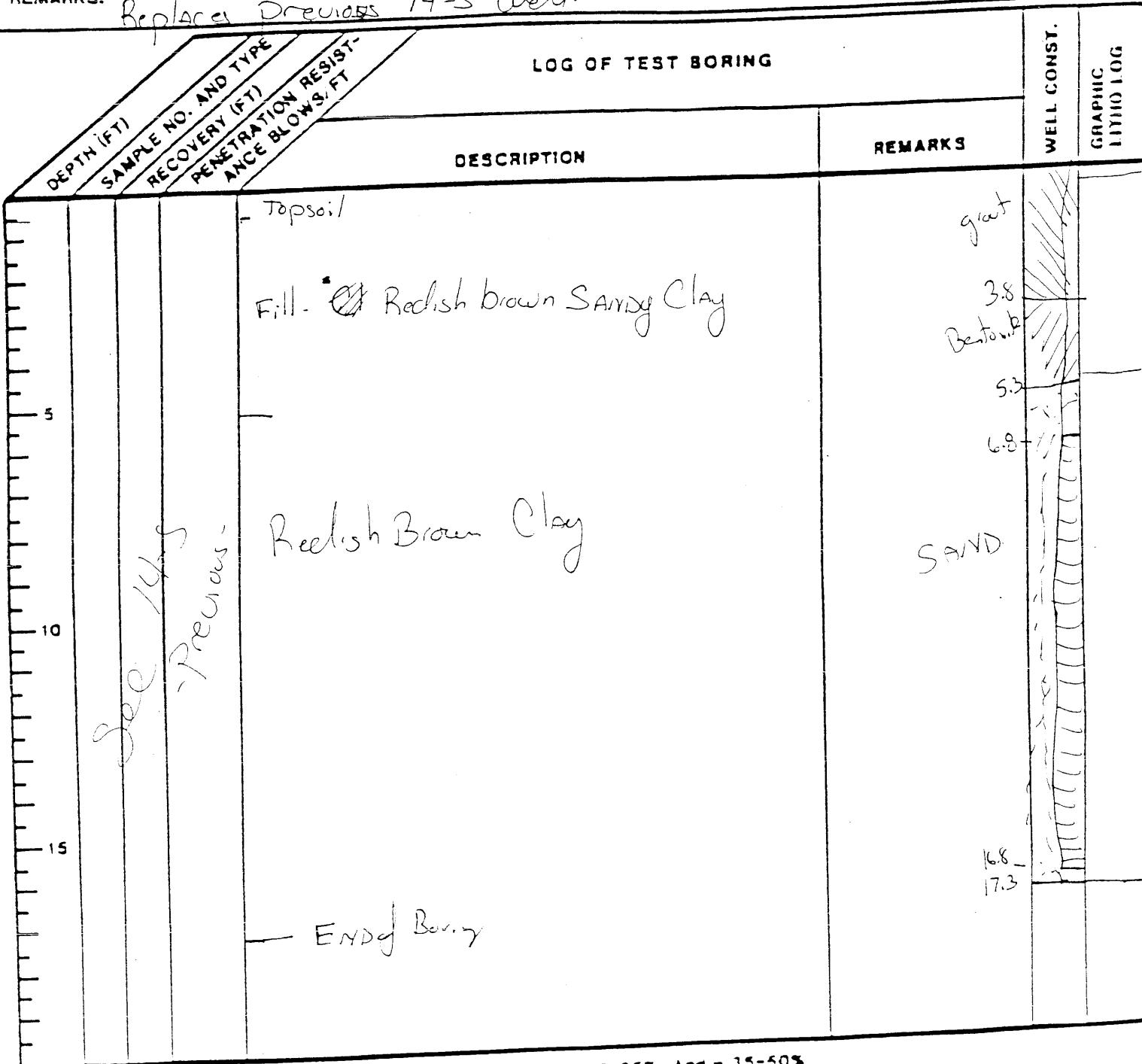
TOP OF WELL CASING

TOP & BOTTOM SCREEN

GW SURFACE

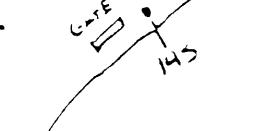
DATE
8/19/97

REMARKS: Replaced previous 14-S well.



Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

BORING NO. 14-S	TEST BORING LOG		
PROJECT NO.. NAME Union Run 2035-200	LOCATION BUFFALO NY		
DRILLING CONTRACTOR/DRILLER MAXIM			
GEOLOGIST, OFFICE J. J. ZACHER JR.			
DRILLING EQUIPMENT. METHOD HSA	SIZE/TYPE OF BIT 6" HSA	SAMPLING METHOD SOIL SPEC	START. FINISH CAT 12-3C-91.
WELL INSTALLED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CASING MAT./DIA. STAINLESS STEEL / 2"	SCREEN: TYPE SLOT MAT. STAINLESS LENGTH 10' DIA. 2" SLOT SIZE 0.020	GATE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE	
REMARKS:			

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION	REMARKS	WELL CONST.	GRAPHIC SKETCHING
4'		7		SAMPLING STAR IS AT 4' B.G.			
5		14		A Bedrock			
6		20"					
6		17					
6		12					
6		17-20					
6		12					
6		17-20					
6		12					
6		19					
6		14					
6		17					
7'		19"					
7'		14					
7'		17					
7'		23					
7'		5					
7'		7					
7'		7-22"					
7'		90					
8'		16					
8'		12					
8'		13					
8'		14					
8'		8					
8'		5					
8'		7					
8'		7-22"					
8'		RED/BROWN CLAY					
9'		22"					
9'		27					
9'		90					
10'		16					
10'		12					
10'		13					
10'		14					
10'		8					
10'		5					
10'		7					
10'		7-22"					
10'		RED/BROWN CLAY					
11'		24"					
11'		32					
11'		9					
11'		10					
11'		8					
11'		5					
11'		7					
11'		7-22"					
11'		RED/BROWN CLAY					
12'		24"					
12'		3					
12'		5					
12'		8					
12'		10					
12'		7					
12'		5					
12'		7					
12'		7-22"					
12'		RED/BROWN CLAY					
13'		24"					
13'		12					
13'		13					
13'		13					
13'		13					
13'		0					
13'		3					
13'		5					
13'		7					
13'		4-24"					
13'		GREY SANDY CLAY (40-50%)					
20							

Sampling Abbreviations: SS = Soil Spec. ST = Shallow Tubs. CSC = Continuous Soil Care

BORING NO.
145

TEST BORING LOG

PROJECT NO., NAME

LOCATION

DRILLING CONTRACTOR/DRILLER

GEOLOGIST, OFFICE

DRILLING EQUIPMENT, METHOD

SIZE TYPE OF BIT

SAMPLING METHOD

START, FINISH DE

WELL INSTALLED? CASING MAT./DIA.

YES NO

SCREEN:

TYPE

MAT.

LENGTH

DIA.

SLOT SIZE

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.)

REMARKS:

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE (LBS/IN²)	DESCRIPTION		REMARKS	WELL CONST.	GRAPHIC LOG
				DESCRIPTION	REMARKS			
20'		6'	6	GREY CLAY		SOFT, WET		
22	15'	9'	8					
22		7'	7					
	wet/gt							
	or							
24		5"	200					
24		0"	0	GREY CLAY		SOFT, WET		
25		10"	0					
26	15'	2	2					
26		2	2	GREY CLAY		SOFT		
28	24'	3	3			SATURATED		
28		0	0	0-3 GREY CLAY		SATURATED, SOFT		
30	26'	1	1	5-20' GREY CLAY, SOME ROCKS	BUD	Very wet - 1 ft		
30		1	1					
35								

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

DANBURY, CT 06810
(203) 796-5279

TEST BORING LOG

BORING NO.
MW-15

PROJECT NO., NAME
UNION ROAD

LOCATION

ON LANDFILL CAP

DRILLING CONTRACTOR/DRILLER

MARIM- Engine P. JENCE

GEODELOGIST, OFFICE

MANHUA / SWAHA DENG JIN

DRILLING EQUIPMENT, METHOD

855 RIA

HSA

SIZE TYPE OF BIT
6.25" H.S.A.

SAMPLING METHOD
SS

START, FINISH DATE
2/20/06

WELL INSTALLED? CASING MAT., DIA.

YES

NO

SS

2"

SCREEN:
TYPE

MAT. SS

LENGTH ID'

DIA.)

11"

SLOT SIZE 0

20

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE
(FT. ABOVE M.S.L.) 619.8 620.0' 610'-600' NR

DATE

2/20/06

REMARKS:

ELAVATION AND DEPTHS RELATIVE TO PRECIP SURFACE

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION		REMARKS	WELL CONST.	GRAPHIC LOG	PHOTO LOG
				DESCRIPTION	REMARKS				
2'	26/8	26/8		Post grad silt ^{clay} & sand. Relatively organic. Tan/Brown filled with moist (frozen) - Little 1/4" gravel.					
4'	1'	13/4		Tan/Brown CLAY, FIRM, NO COHESIVE MATERIALS FIRMING.					
5'	1.5'	27/8		CONGLOMATE MATERIAL CONSIST. BLOCKS SAND & GRAVEL OF MEDIUM FINES. TAN. ^{irregular} FRAG. TAN FIRM CLAY. NO COHESIVE MATERIALS				650 ft	
6'	1.5'	11/4		ARE 1/2 CLAY. NO COHESIVE MATERIALS, SFT. TRACE SILT green				5-6 sand	
8'	18'	9/8		ARE SAME BUT SOFT. SILTY CONG. TRACE CLAY SAND BUT ARE/CLAY, SILTY CONG.				Conso 6-7	
10'	21'	5/8		ARE/60% SILT. SOFT SOFT CLAY. SOFT.					
12'	15'	6/8		SAND					
14'	11.5'	4/8		SAME					
16'	2'	4		SAME					
18'									
				EOB 19.0'					

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
Min - 16

PROJECT NO., NAME

UNION ROAD

LOCATION

CABINET DIST.

DRILLING CONTRACTOR/DRILLER

MAXIM/EMPIRE BÉNÉCIE

GEOLOGIST/OFFICE

MANSON/S 2 MARYA

Dumbart

DRILLING EQUIPMENT, METHOD

CME 450 HSA

SIZE TYPE OF BIT

6 1/4"

SAMPLING METHOD

SS

START FINISH DATE

2/21/96

WELL INSTALLED? CASING MAT./DIA.

YES NO

2" SS

SCREEN:

TYPE 0.30

MAT. SS

LENGTH 10 DIA. 2"

SLOT SIZE 0.20

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE
(FT. ABOVE M.S.L.) 678.3 673.9 670.0 670.0 670.0 NA DATE

REMARKS:

ALL ELEVATIONS AND DEPTHS RELATIVE TO PRE-LAP GRAVE

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS, FT	LOG OF TEST BORING		WELL CONST.	GRAPHIC BORING LOG
				DESCRIPTION	REMARKS		
2'	2.0	35		Hard Brown Clay, 10% Gravel	FIRM		
2'	1.5	20		Upper 12" same Bottom 6" CHALK	DRY		
4'						60ft →	
5'	1.0	8/ft		SAME			
6'	9"	12/ft		TAN SAND, 20%, angular fragments, well rounded		Firm → Sand	
8'				+ 1" of surface compact soil			
10'	2'	5/ft		TAN sand, no angular fragments			
10'				SOFT TAN/BROWN CLAY, NO CONCRETE MATERIAL. SAND BUT ANGULAR			
11.5'				SLIGHT FC STABILITY			
11.5'	5/ft						
11.5'				SAME + trace organic.			
12'							
13'	1.5'	8/ft		SAME			
14'							
15'	1.5'	4/ft		SAME + rock (20%) fragments to 1/4", angular in bottom			
16'							
17'	1.5'	12/ft		SAME.	MUDS		
18'							
				EOB 19.0'			

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW-17

PROJECT NO. NAME
UNIV. ROAD

DRILLING CONTRACTOR/DRILLER
MICH-EAGLE P. BEALE

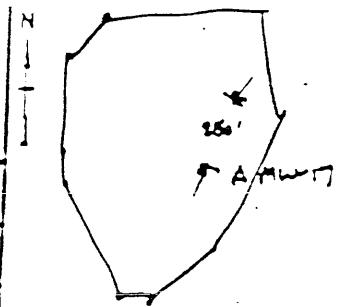
GEOLOGIST, OFFICE
M. SWAKA / DANBURY

DRILLING EQUIPMENT, METHOD | SIZE TYPE OF BIT | SAMPLING METHOD | START FINISH DATE
6.25" HSA 2" SS 2/22/96

WELL INSTALLED? CASING MAT./DIA. SCREEN: LENGTH 10' DIA. 2" SLOT SIZE 20'
YES NO 2" SS TYPE MAT. SS DATE

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.)

REMARKS:



LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO.	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION		REMARKS	WELL CONST.	GRAPHIC LOG
				TYPE	DESCRIPTION			
1.5'	101	20 ft			TAUPE BROWN CLAY. FROZEN. NO LIME MATERIAL.	FROZEN		
2'		.15'	42/ft		BLACK/DARK RED SILT-SAND. GRAVEL PRESENT. FEW STRINGS.	WET		
4'		1.0'	11/ft		TAUPE BROWN CLAY. SURF. NO LIME MATERIAL. FEW STRINGS.	PITS		
5'					BLACK BROWN CLAY. TRACE ORGANIC (WOOD).			
6'		1.0'	24/ft		BLACK CLAY. 30% ORGANIC (WOOD), TRACE LIME MATERIAL (LIMESTONE, LIME). 6.0m			
8'		1.5'	11/ft		SOFT BLACK CLAY. FEW STRINGS. NO LIME MATERIAL. TRACE BLACK COLOR FILM MIL.			
10'		0.5'	11/ft		SAME			
12'		0.5'	11/ft		NO RECOVERY	WET		
14'		0	3/ft		No Recovery			
15'		0.5'	11/ft		SAME. NO RECOVERY. TRACE SULFURIC (SULFIDE)			
18'		0.8'	11/ft		SAME. NO RECOVERY. TRACE SULFURIC (SULFIDE)			
		1.5'	14/ft		GREY/BLACK CLAY. NO HUMUS STRINGS. TRACE ORGANIC (WOOD) NO LIME MATERIAL. FEW STRINGS (SLIGHT)			

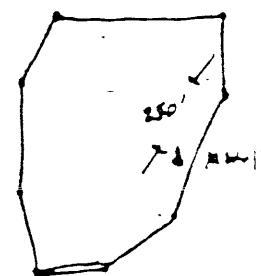
Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

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TEST BORING LOG

BORING NO. MW-17	TEST BORING LOG		
PROJECT NO., NAME 17410, V PIA 20	LOCATION LAND FILL CAP		
DRILLING CONTRACTOR/DRILLER MARIA-EMPIRE	D. BENNE		
GEOLOGIST, OFFICE M. SWAYA DRAMUW			
DRILLING EQUIPMENT, METHOD D33 HSA	SIZE/TYPE OF BIT 6.25" HSA	SAMPLING METHOD 2" SS	START, FINISH CAT 2/22/76
WELL INSTALLED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CASING MAT./DIA. 2" SS	SCREEN: TYPE MAT. SS LENGTH 10' DIA. 4" SLOT SIZE 10	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE 619.1	TOP OF WELL CASING 620'	TOP & BOTTOM SCREEN 605'-595'	GW SURFACE -605' DATE 3/2
REMARKS: Elevation is relative to PRE-AP TOPS.			



LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING		WELL CONST.
				DESCRIPTION	REMARKS	
22'	2'	14'/ft	(3 AMT.) 6 in./6 in. core. Y grain staining. Trace of glauconite. Slight silt stain.		W.R.T. ↓	
23'	1.5'	15'/ft	23.0' Boring surface sand. trace ^{trace} organic mat'ls.			
24'			E.D. 24.0'			
25'						
10						
15						

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%
 Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core



A DIVISION OF NEES
44 SHELTER ROCK ROAD
DANBURY, CT 06810
(203) 796-5279

TEST BORING LOG

BORING NO.
MW-3

PROJECT NO./NAME

UNION ROAD

LOCATION

CAP INTERIOR

DRILLING CONTRACTOR/DRILLER

MAXIM EMPIRE PHIL DENTE

GEOLOGIST OFFICE

Hanlon/S2W+767, ANALYST

DRILLING EQUIPMENT/METHOD

CME 35-

SIZE TYPE OF BIT
5" HGA

SAMPLING METHOD
SS

START. FINISH CAT
2/17/46

WELL INSTALLED?

YES NO

CASING MAT./DIA.
SS 7"

SCREEN:
TYPE

MAT. SS

LENGTH 16' DIA. 2"

SLOT SIZE 0.20
DATE

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE
(FT. ABOVE M.S.L.) (19.1 620.0 605.0 - 595.0 NA

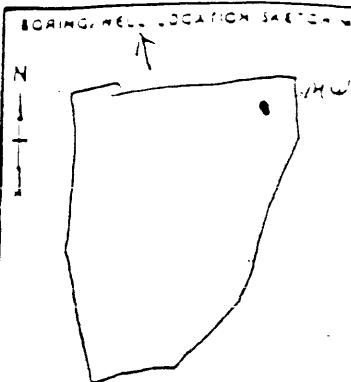
2/19/46

REMARKS: ELEVATIONS AND DEPTHS RELATIVE TO PRE-CAP SURFACE

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING	
				DESCRIPTION	REMARKS
0	1	32/FT		Tan clay, Hard, No coarse, Dr.	Friction
1	1	12/FT		Tan clay, Firm, No coarse, Dr.	
2	1	12/FT		Tan/Orn Clay, Firm, No coarse, Dr.	
3	1	12/FT		Brown Clay, Silt Firm, few coarse, Dr.	Bottom
4	1	12/FT		Same	
5	1	24/FT		Same w/trace organics + silt bottom 6'	Fine sand
6	1	27/FT		Same w/trace rock frags (angular, fine)	
7	1	20/FT		Same (5 ft closer to 10%)	Coarse sand
8	1	34/FT		Same	
9	1	41/FT		Same but soft + moist	

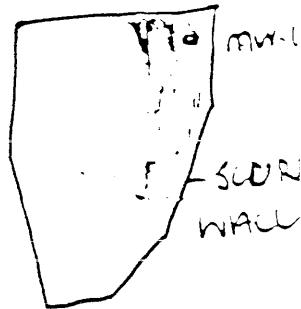
Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core



44 SHELTER ROCK ROAD
DANBURY, CT 06810
(203) 796-5279

BORING WELL LOCATION SHEET



BORING NO.
111-13

TEST BORING LOG

PROJECT NO.. NAME

UNION RD#1

LOCATION

INSIDE CAR AREA

DRILLING CONTRACTOR/DRILLER

MARTIN/EMPIRE P. GENÉ

GEOLOGIST, OFFICE

HAROLD SEMATI DANBURY

DRILLING EQUIPMENT, METHOD

CME 450 HSA

SIZE/TYPE OF BIT

6 1/4 HSA

SAMPLING METHOD

SS

START, FINISH DATE

2/19/96

WELL INSTALLED? CASING MAT., DIA.

YES

NO

5 1/2"

SCREEN:
TYPE

MAT.

SS

LENGTH 10' DIA. 2" SLOT SIZE 0.20

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.) 619.1 620.0 605.0 - 595.0 NA 2/19/96

REMARKS:

ELEVATIONS AND DEPTHS RELATED TO PRE-CAD SURFACE

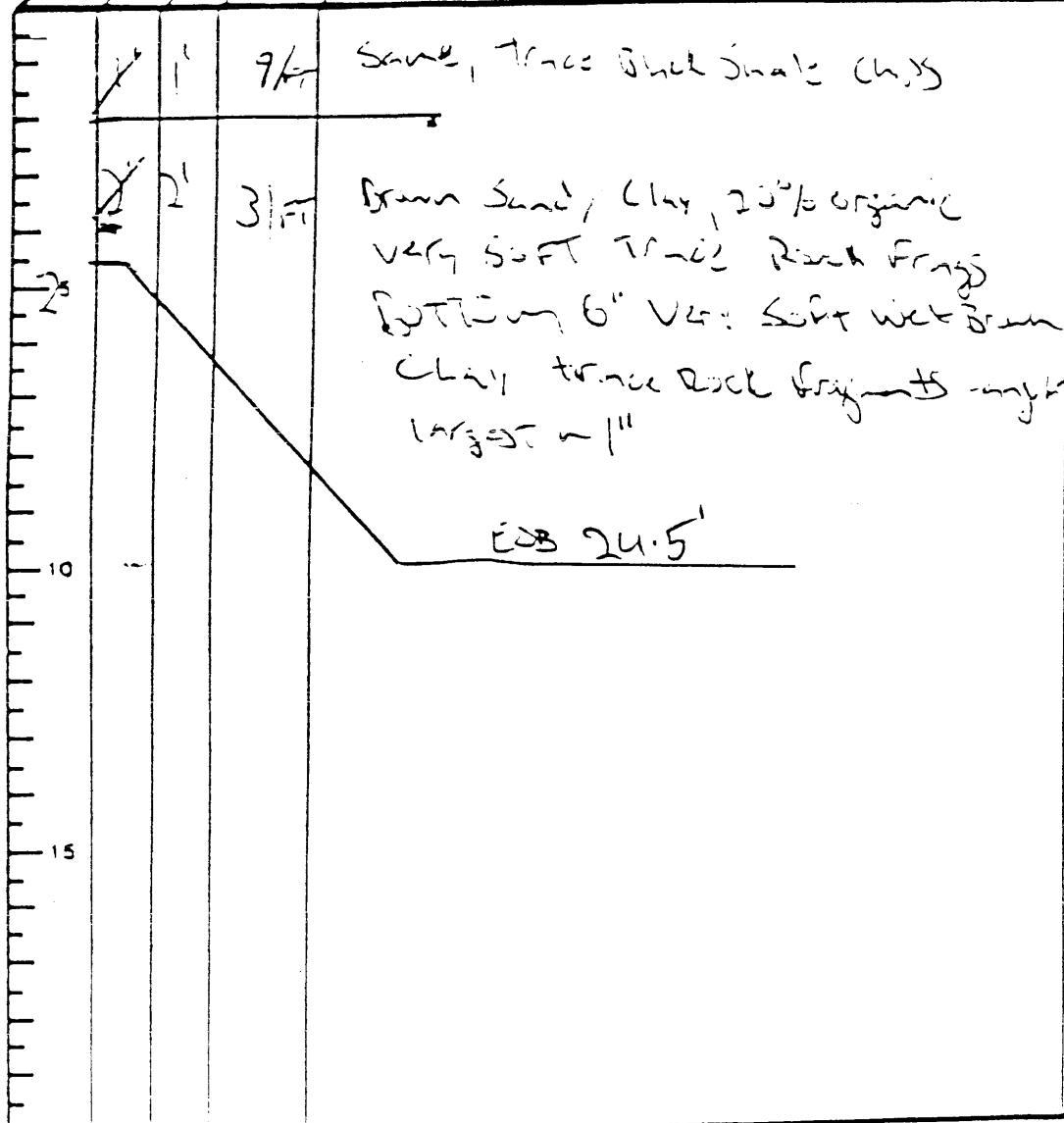
LOG OF TEST BORING

DEPTH (FT)
SAMPLE NO. AND TYPE
RECOVERY (FT)
PENETRATION RESIST-
ANCE BLOWS, FT

DESCRIPTION

REMARKS

WELL CONST.
GRAPHIC
LOG



Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW-19PROJECT NO., NAME
Upper Road

DRILLING CONTRACTOR/DRILLER

MAXIM-EMCO, P. BENET

GEOLOGIST, OFFICE

SFWHYA, DANIEL R.

DRILLING EQUIPMENT, METHOD

85B HSA

SIZE/TYPE OF BIT

6.25" HSA

SAMPLING METHOD

2" SS

START, FINISH DATE

2/23/96

WELL INSTALLED? CASING MAT./DIA.

YES NO

2" SS

SCREEN:

TYPE

MAT. SS

LENGTH

DIA. 2" SLOT SIZE 20

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.) 619.5' 617.5' 605' - 595' 2/23/96

REMARKS:

Elevations i DEPTH RELATIVE TO TEST CAP ELEV.

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION	REMARKS	WELL CONST.	GRAPHIC LOGGING
5							
10							
15							
				← 20' E.O.B →			

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW-20

PROJECT NO., NAME

UNION RD

LOCATION

INTERIOR CAP

DRILLING CONTRACTOR/DRILLER

MAXIM/EMPIRE BÉNÉCÉ/BONHACKET

GEOLOGIST, OFFICE

HANCOM/SCHWARTZ DANBURY

DRILLING EQUIPMENT, METHOD

CMC 450 HSA

SIZE TYPE OF BIT
6 1/4"SAMPLING METHOD
SSSTART, FINISH DATE
2/2/56

WELL INSTALLED? CASING MAT./DIA.

YES NO

SS 7"

SCREEN:

TYPE

MAT. SS

LENGTH

10'

DIA. 7"

SLOT SIZE

0.20

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.) 6-7-8 614.6 617.0 607.0 - 597.0 NA 2/1/56

REMARKS: ELEVATION AND DEPTHS RELATIVE TO PRE-GAD SURFACE

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION		REMARKS	WELL CONST.	GRAPHIC DRAWING
				DESCRIPTION	REMARKS			
1.5	8	8	100	Brown CLAY; NO COARSE, FROZEN, BOTTOM 4" BLACK w/15% ORGANICS	FROZEN			
1.0	26	26	100	FIRM Brown Clay trace organics + 5% silt	WET			
5	1.5 19	19	100	Same	WET			
7	14	14	100	BOTTOM 12" Black fine granular material w/charcoal 0.002, 10% organics 10% fiber BOARD	WET			
10	24	24	100	Black f.m. Clay 0% org 10% trace 4" rock frags	WET			
12	16	16	100	Bottom 4" Firm tan clay, no coarse first 6" sand w/organic next 6" red sand w/black cinders same clay next 6" white sandy ash w/30% wood	WET			
14	8	8	100	soft tan clay, no coarse	WET			
15	2	8	100	fine sand/silt red w/black staining 10% organic	WET			
15	2	8	100	fine black sand true red fine sand	WET			
1.5	3	3	100	Same trace organics	WET			
1.5	3	3	100	Brown CLAY+SAND w/Black staining, strong Petiferous odor, sheering, 20% rock frags up to 0.5"	WET			

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
M.W.-21

PROJECT NO.. NAME
UNION ROAD

DRILLING CONTRACTOR/DRILLER
MAGIN-EMD INC

GEOLOGIST, OFFICE
SEWAKA/HANLON, DANIEL

DRILLING EQUIPMENT, METHOD
953 HSA

LOCATION

LINDA CAP

N
—
—

M.W.-21

X 175'
270'

SIZE, TYPE OF BIT
6.25" HSA

SAMPLING METHOD
2" SS

START, FINISH DATE
2/22/96

WELL INSTALLED? CASING MAT./DIA.
YES NO 2" SS

SCREEN:
TYPE

MAT. S.S.

LENGTH 10' DIA. 2" SLOT SIZE 20

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.) 623.9 625' 505'-605' 2/22/96

REMARKS:

All elevations & depths relative to pre-cap grade

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION		REMARKS	WELL CONST. GRAPHIC LITHOLOGY LOG
				DESCRIPTION	REMARKS		
2'	41/8	41/8	-	Brown Friction clst. Black core and crushed clunch full material trace + organic. Hard/very hard.		know	
2'	1.25'	UNL.	-	strong			
4'	1.25'	9/8	-	SAME + light black clay. Fe+ staining. 10-15% org. mat.			
5'	1.25'	9/8	-	black clay. Organic present.			
6'	1'	50/8	-	light tan. dry. some gravel. No fiss. 20, min 120 - black in red lower fine material. 0.25. traces fiss., few fiss. 1", 2", 3".		024	
7'	1'	7/8	-	medium gray sand. poorly sorted. 0.25.			
10'	1'	7/8	-	same + more gravel (1/4") 10-15% organic. brownish. dark tan + tan + tan. trace organic. 0.25.			
12'	12.25'	9/8	-	poorly sorted tan no organic material. dry. Fe+ staining			
14'	0'	15/8	-				
15'	1'	5/8	-	strong			
16'	0.5'	9/8	-	medium light sand. white. good, well mat.		00951	
17'	0.5'	4/8	-	strong			

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW-21

PROJECT NO. NAME
U.V.ON ROAD

DRILLING CONTRACTOR/DRILLER
MANH-EMPIRE : D. BENCE

GEOLOGIST, OFFICE
M. SAWADA : DANBURY

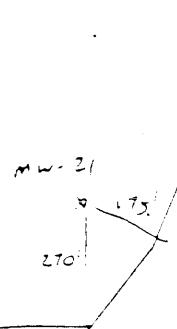
DRILLING EQUIPMENT, METHOD
35# HSA

WELL INSTALLED? CASING MAT./DIA.
YES NO 2" SS

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
(FT. ABOVE M.S.L.) 623.9 625' 607'-54T' 2/22/74

REMARKS:

All elevations & depths relative to 1st cut grade



LOCATION
LANDFILL CR.

SAMPLING METHOD

START, FINISH DA

2" SS

2/22/74

SIZE TYPE OF BIT
6.25" H.S.A.

SCREEN:

TYPE MAT. S.S.

LENGTH 10' DIA. 2"

SLOT SIZE 20

TOP & BOTTOM SCREEN

GW SURFACE

DATE

2/22/74

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	LOG OF TEST BORING		WELL CONST.	GRAPHIC LINE LOG
				DESCRIPTION	REMARKS		
0				SOIL: 2" RIG DRILLED SS opening			
6.25	40/H						
12				BRICK SURFACE. ANGLED ROCK, STONE. SOFT POTTED WALL			
18	16	16/H					
24				BRICK SURF. IN WHITE MARL			
25	15	11/H					
30							
35							
40							
45							
50							
55							
60							
65							
70							
75							
80							
85							
90							
95							
100				EOB 026			

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Solid Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW-12

LOCATION

Inside Landfill Cap

PROJECT NO., NAME

Union Road

DRILLING CONTRACTOR/DRILLER

MARIM Empire

D. BENGE

GEOLOGIST, OFFICE

HANLON/SBMAWA,

Danbury

DRILLING EQUIPMENT, METHOD

CME SS3, HSA

SIZE, TYPE OF BIT

6.25" HSA

SAMPLING METHOD

SS

START, FINISH DATE

2/20/96

WELL INSTALLED? CASING MAT./DIA.

Z" SS

SCREEN:

TYPE 10 slot MAT. SS

LENGTH 10' DIA. 2" SLOT SIZE 10

YES NO

Z" SS

DATE

2/20/96

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE

(FT. ABOVE M.S.L.) 623.4

626.40

600'D' - 596.6'

NA

REMARKS:

~2' at 200 ft above current surface

PRE-CAP SURFACE

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (FT)	PENETRATION RESISTANCE BLOWS/FT	DESCRIPTION		REMARKS	WELL CONST.	GRAPHIC BORING LOG
				DESCRIPTION	REMARKS			
2'	13/4"	13/4"	100	TAN CLAY, WET. FIRM. Bottom 6" PETROL. UNSTAB., BLOCK STRNG. 20% organic COMB. MATL.				
3'	5/8"	5/8"	100	SAME. NOT AS COARSE				
4'	1.5"	1.5"	100	SAME				
5'	12/8"	12/8"	100	260 FINE/MED. SAND. NO FLITS. AWAY 6' RAD.				
6'	10/36"	10/36"	100	SAME				
8'	10/36"	10/36"	100	CINDER FILL MATERIAL. CUMUL. BLOCK MATERIOL. SIZE FEADS TO 1/2".				
10'	5/8"	5/8"	100	SAME w/ 1/2" RAKS. ROCK-LIKE MATL.				
12'	4/in	4/in	100	SAME				
14'	5/8"	5/8"	100	Same w/ wood matrl. & Fe Strng.				
15'	2/8"	2/8"	100	SAME				
16'	2/8"	2/8"	100	SAME				
18'	6/4"	6/4"	100	SAME w/ block frags.				

Fine
SandCoarse
Sand

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%

Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
MW-22

PROJECT NO., NAME
UNION ROAD

LOCATION
INSIDE CAP

DRILLING CONTRACTOR/DRILLER
MARSH-ENIGA

P. DENNIS

GEOLOGIST, OFFICE
Hawley / SWARNA DANIEL

DRILLING EQUIPMENT, METHOD
CME 855

SIZE TYPE OF BIT
6.25" HSA

SAMPLING METHOD
SS

START, FINISH DATE
2/20/96

WELL INSTALLED? Casing Mat./dia.
YES NO 2"

SCREEN:
TYPE

MAT. SS

LENGTH 10' DIA. 2" SLOT SIZE 10

ELEVATION OF: GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE
(FT. ABOVE M.S.L.) 623.4 626.40 606' 596' DATE 4/20/96

REMARKS:

PRE-LAD SURFACE

WELL CONST.
GRAPHIC
LOG

LOG OF TEST BORING

DEPTH (FT)	SAMPLE NO.	RECOVERY (FT)	DESCRIPTION	REMARKS	WELL CONST.
					GRAPHIC LOG
6'	15/ft	15/ft	Angular gravelly matl. Remained loose & sheared. Trace 40% 2" Ag. dia rule.		
6'	15/ft	15/ft	Same		
11'	11/ft	11/ft	Crust clay, firm. Traces of elongated angular matl.	Concl 4/20	
21'	9/ft	9/ft	Same	EOB 28.0'	
10'					
15'					

Proportions Used: Trace = 0-10%, Little = 10-20%, Some = 20-35%, And = 35-50%
Sampling Abbreviations: SS = Split Spoon, ST = Shelby Tube, CSC = Continuous Soil Core

TEST BORING LOG

BORING NO.
23-S

PROJECT NO.. NAME
Dwight Road 2035-200

DRILLING CONTRACTOR/DRILLER
MAXIM

GEOLOGIST, OFFICE

JOHN J ZACHER Jr

DRILLING EQUIPMENT. METHOD HSA	SIZE TYPE OF BIT 1/2" HSA	SAMPLING METHOD SPLIT SPOON	START. FINISH CA 1-6-97
-----------------------------------	------------------------------	--------------------------------	----------------------------

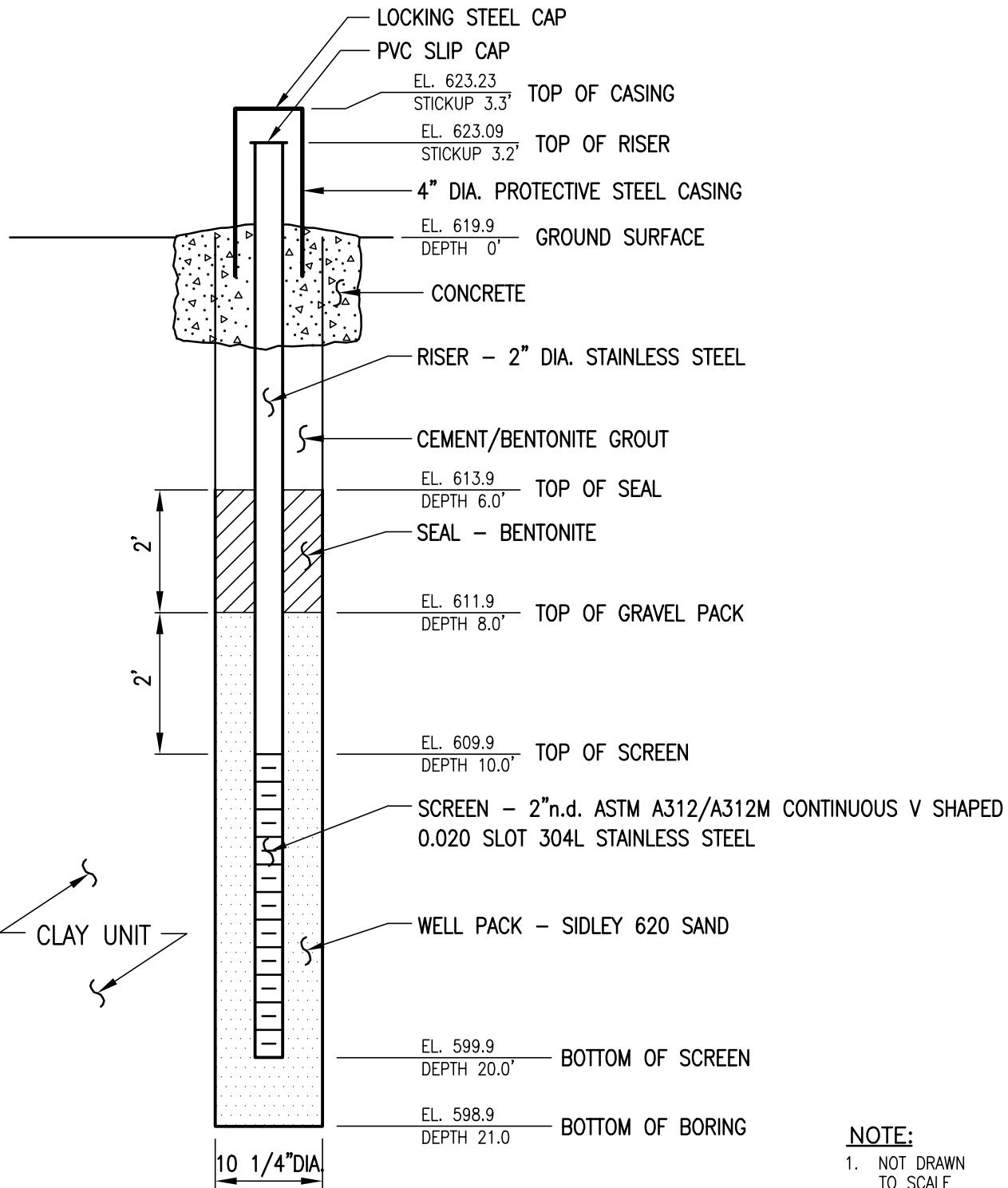
WELL INSTALLED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CASING MAT./DIA. STAINLESS STEEL 1/2"	SCREEN: TYPE SLOT MAT STAINLESS	LENGTH 10' DIA. 2" SLOT SIZE .020
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING TOP & BOTTOM SCREEN SW SURFACE	DATE

REMARKS:

DEPTH (FT)	SAMPLE NO. AND TYPE	RECOVERY (ft)	PENETRATION RESISTANCE BORNS/FT	LOG OF TEST BORING		WELL CONST.
				DESCRIPTION	REMARKS	
SAMPLING STARTS 2' BG.						
2'	-	4	0-4	0-4 TURBID, INLAND		
	18'	5	4-5	4-5 RED/BROWN CLAY	STIFF - DRY	
4'	9	9	15-18	15-18 RED/Brown CLAY, SOME C.R.	STIFF, TRACE H2O	
4	"	4	0-4	0-4 RED/Brown CLAY	STIFF, TRACE H2O	
5	21	6	15-21	15-21 SOFT MCISUE		
6	"	9	0-10	0-10 RED/Brown CLAY	MED-STIFF DAMP	
	24	6	10-14	10-14 RED/Brown - GREY CLAY	MED-STIFF DAMP.	
8	"	4	14-24	14-24 GREY CLAY	MED-STIFF, DAMP.	
5	"	2		GREY CLAY, LITTLE SAND, LITTLE R.S	SOFT, WET	
10	12	2				
10	"	6		GREY CLAY, LITTLE SAND, LITTLE R.S	SOFT WET	
12	17	4				
12	"	2		GREY CLAY, LITTLE SAND, LITTLE R.S	SOFT WET	
14	8	3				
14	"	4		GREY CLAY, LITTLE SAND LITTLE R.S	SOFT, WET	
15	10	3				
					Bob 16	

Proportions used: Trace = 0-10%. Little = 10-20%. Some = 20-35%. And = 35-50%
 Sampling Abbreviations: SS = Split Spoon. ST = Shelby Tube. CSC = Continuous Soil Core

MW-10S

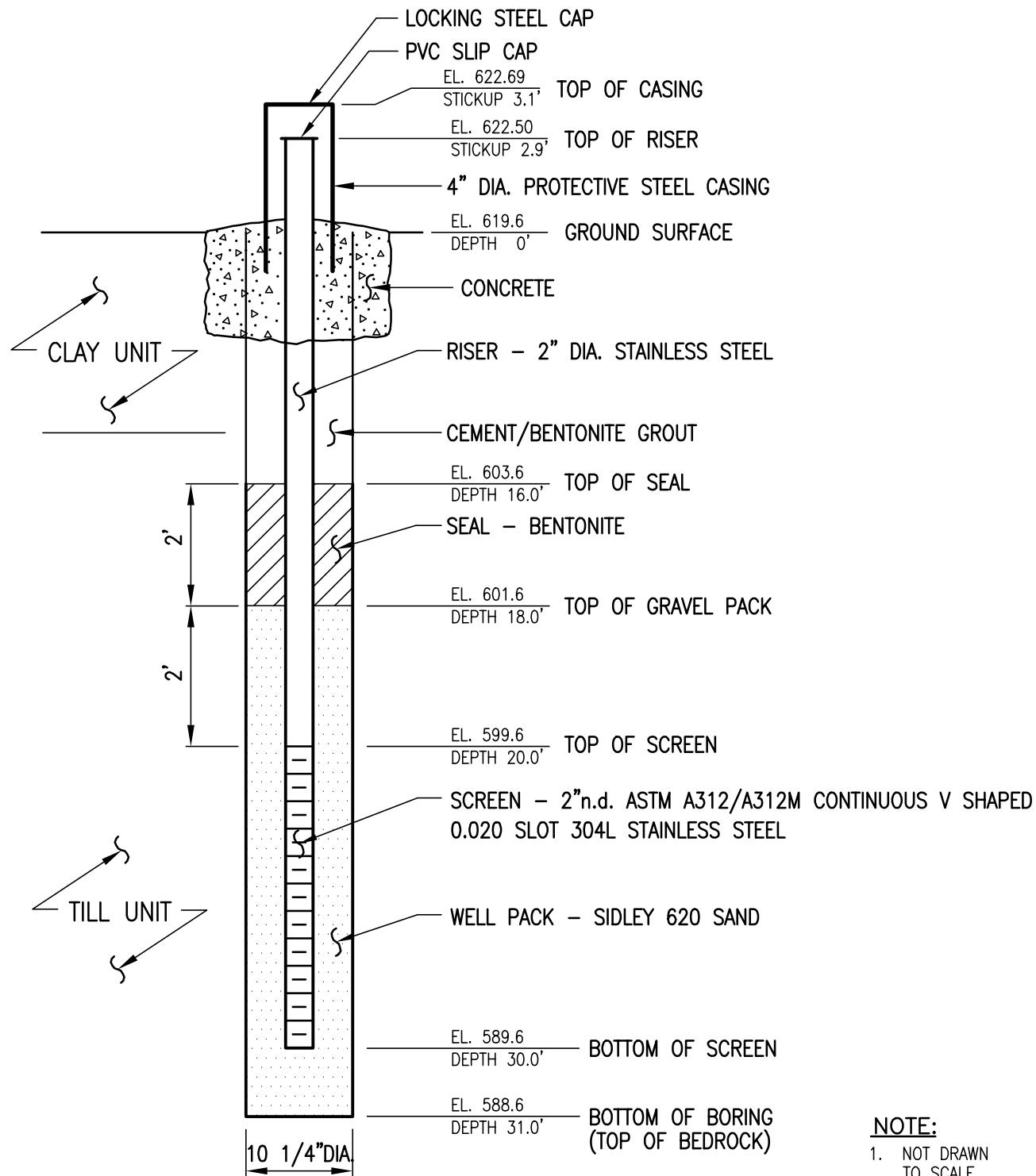


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		SHALLOW GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD CK:
			FIGURE # MW-10S 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-10M

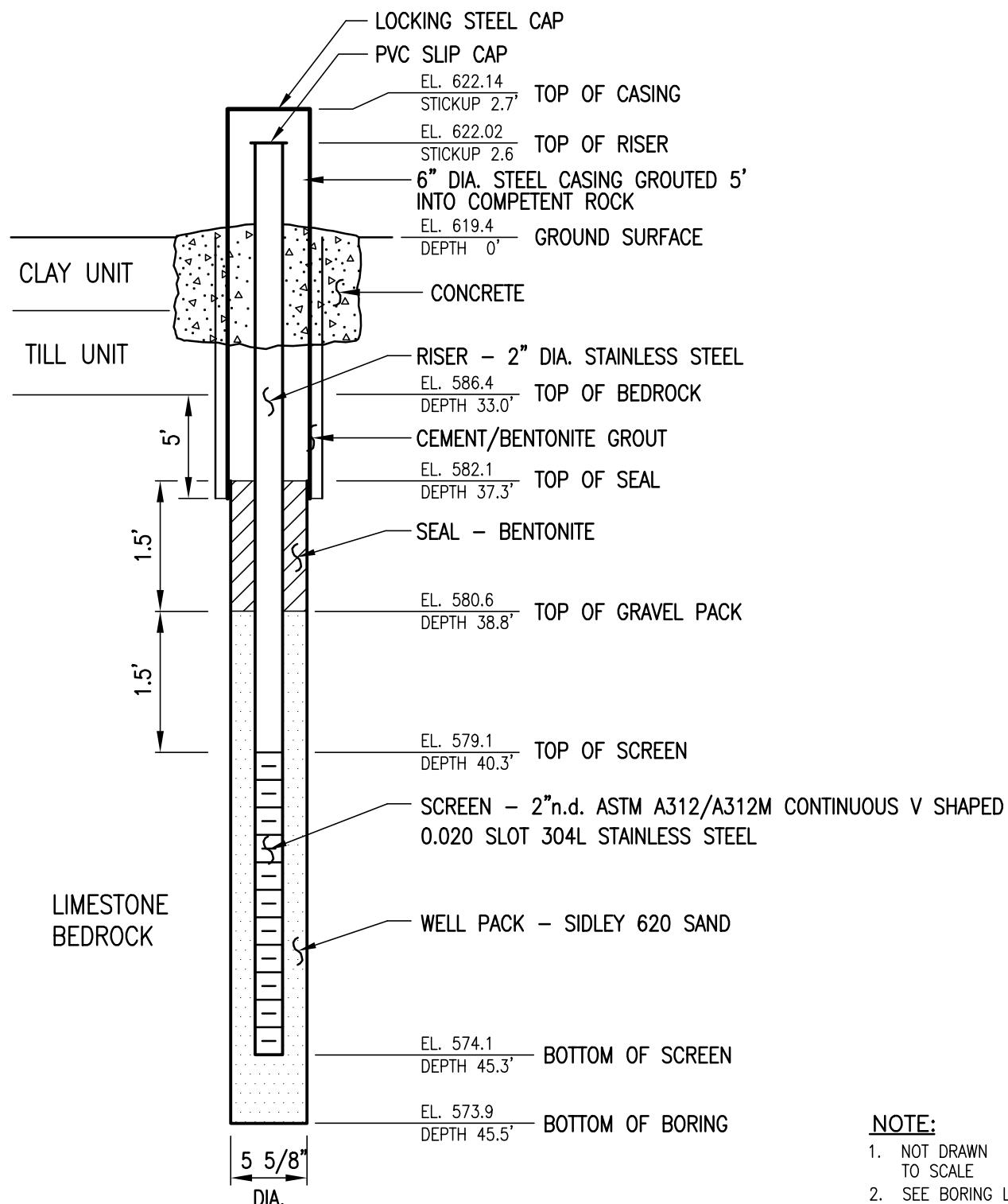


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		MEDIUM GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE # MW-10M
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-10D

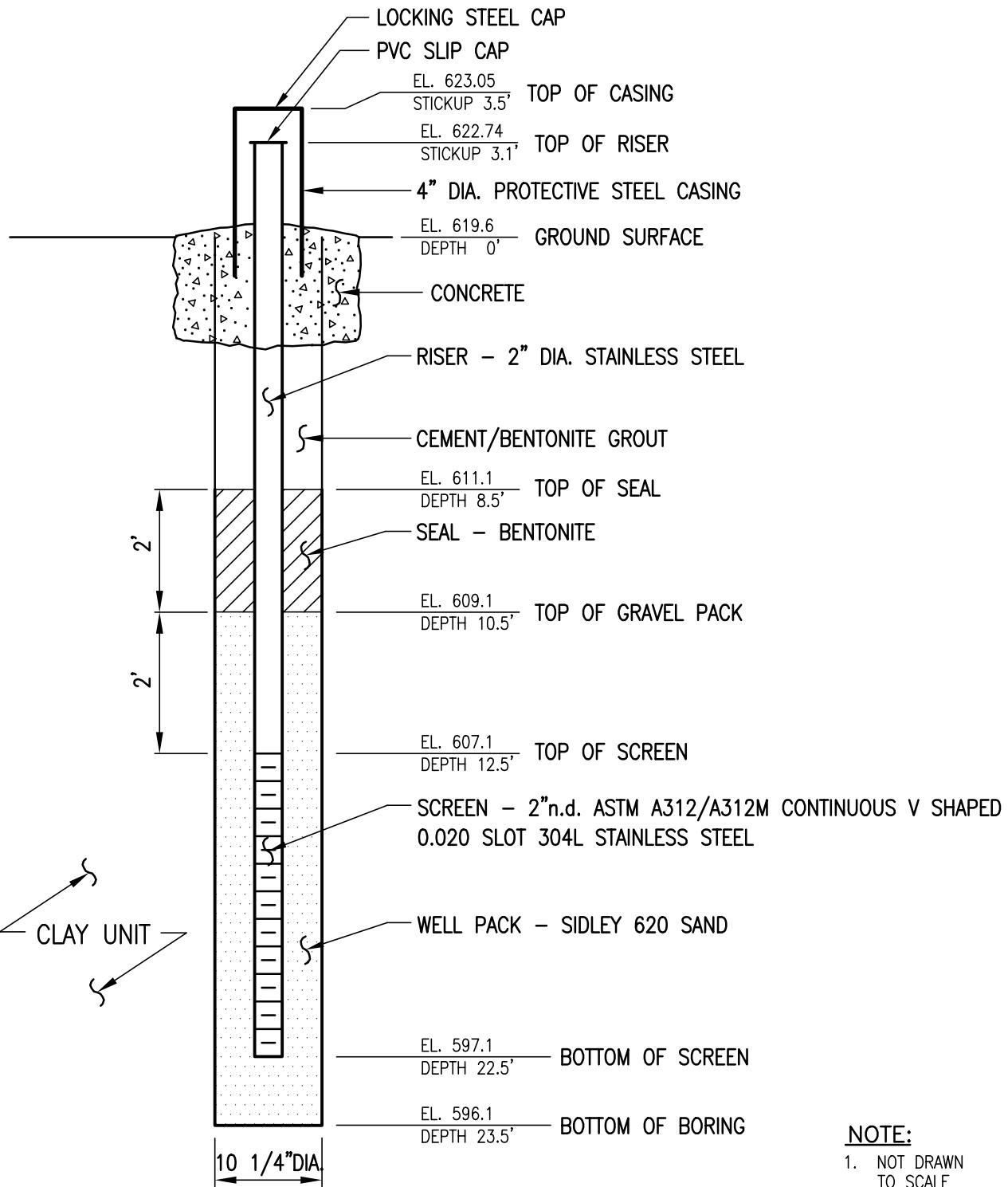


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		BEDROCK GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE # MW-10D
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-11S

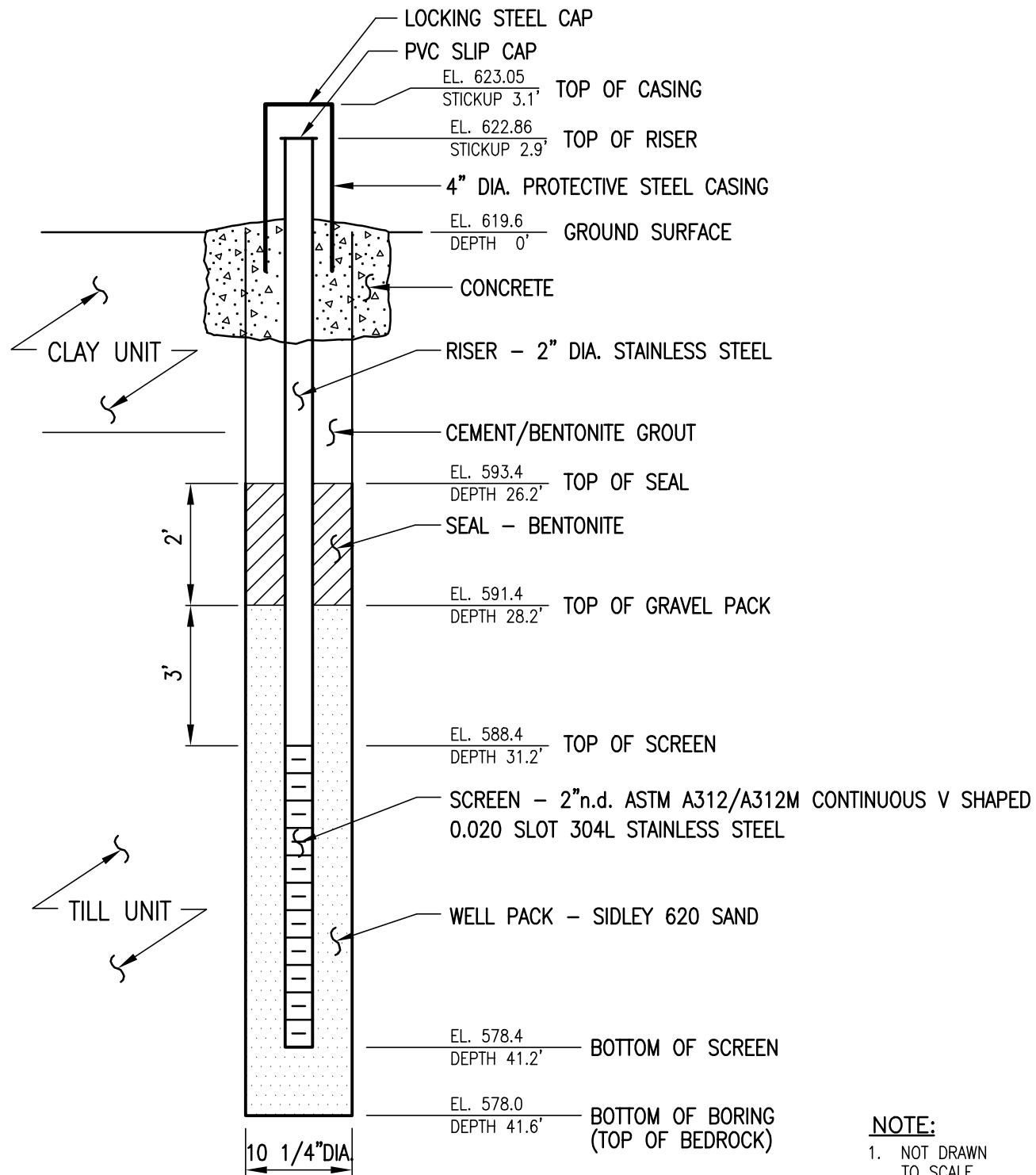


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		SHALLOW GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE #
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000 MW-11S

MW-11M

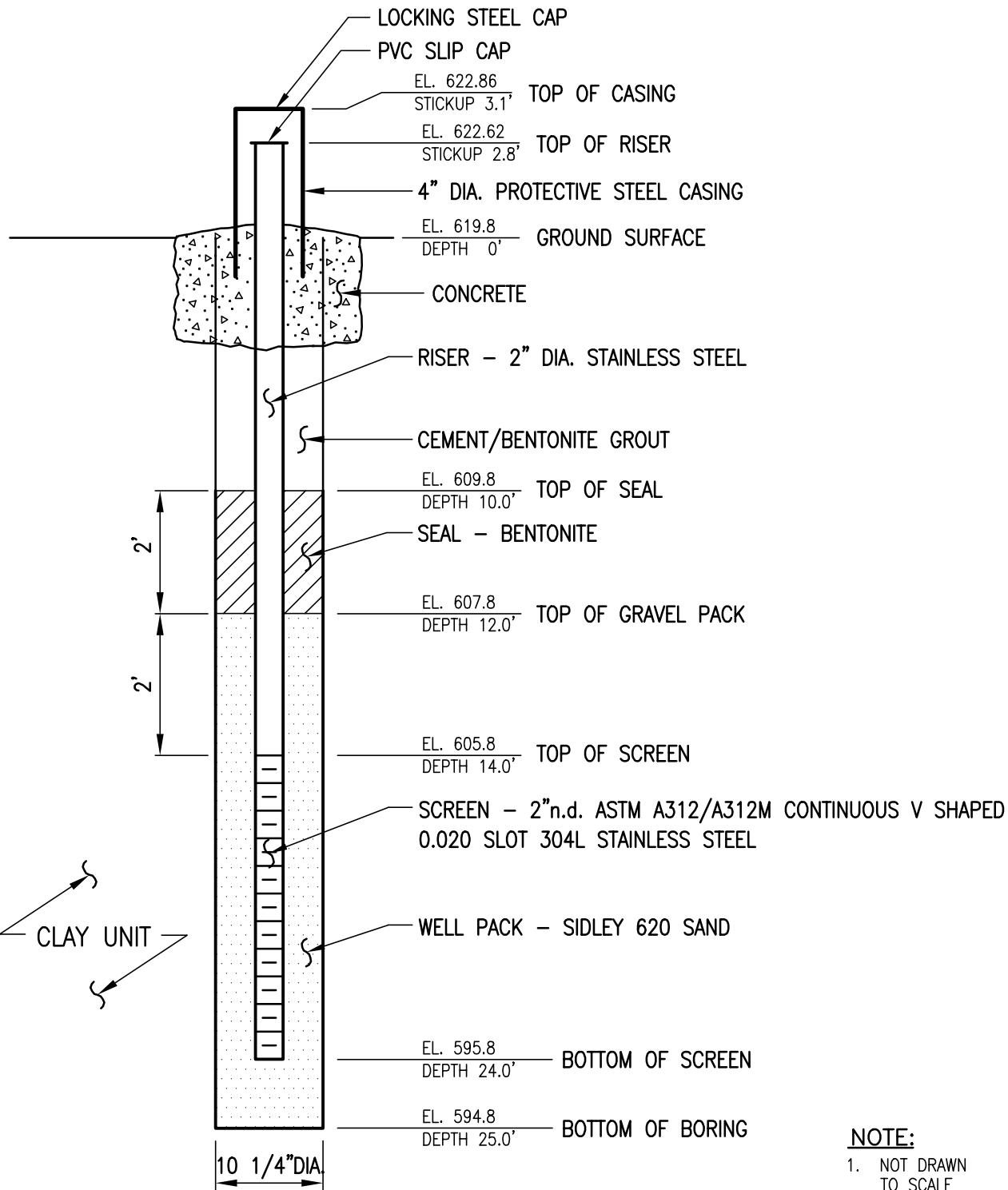


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		MEDIUM GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE # MW-11M
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-12S

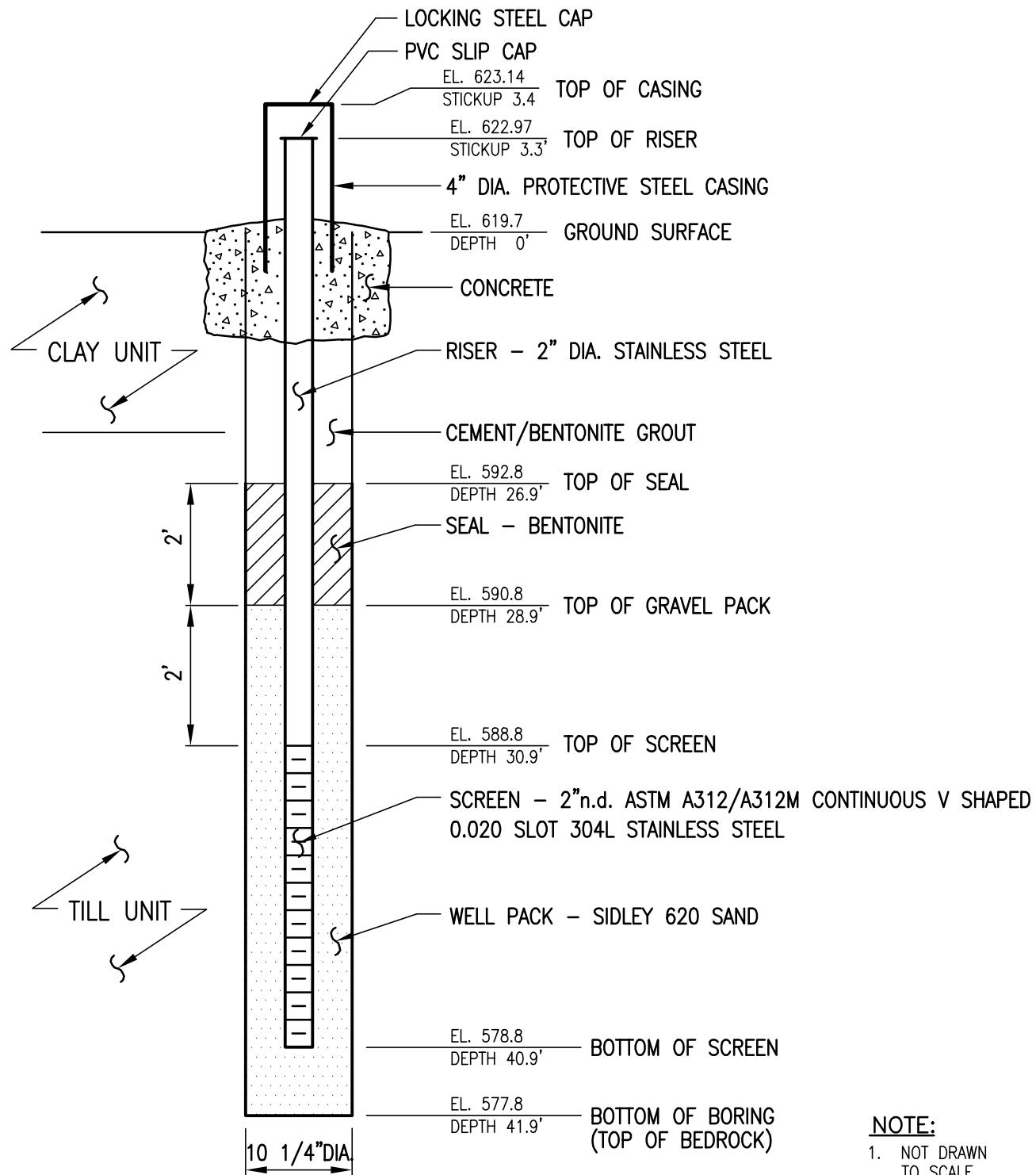


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200 FILENAME: 2035200A SCALE: NTS DATE: 1/15/02 BY: AD CK:
NO.	DATE	DRAWING	FIGURE # MW-12S
		SHALLOW GROUNDWATER MONITORING WELL DETAIL	 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-12M

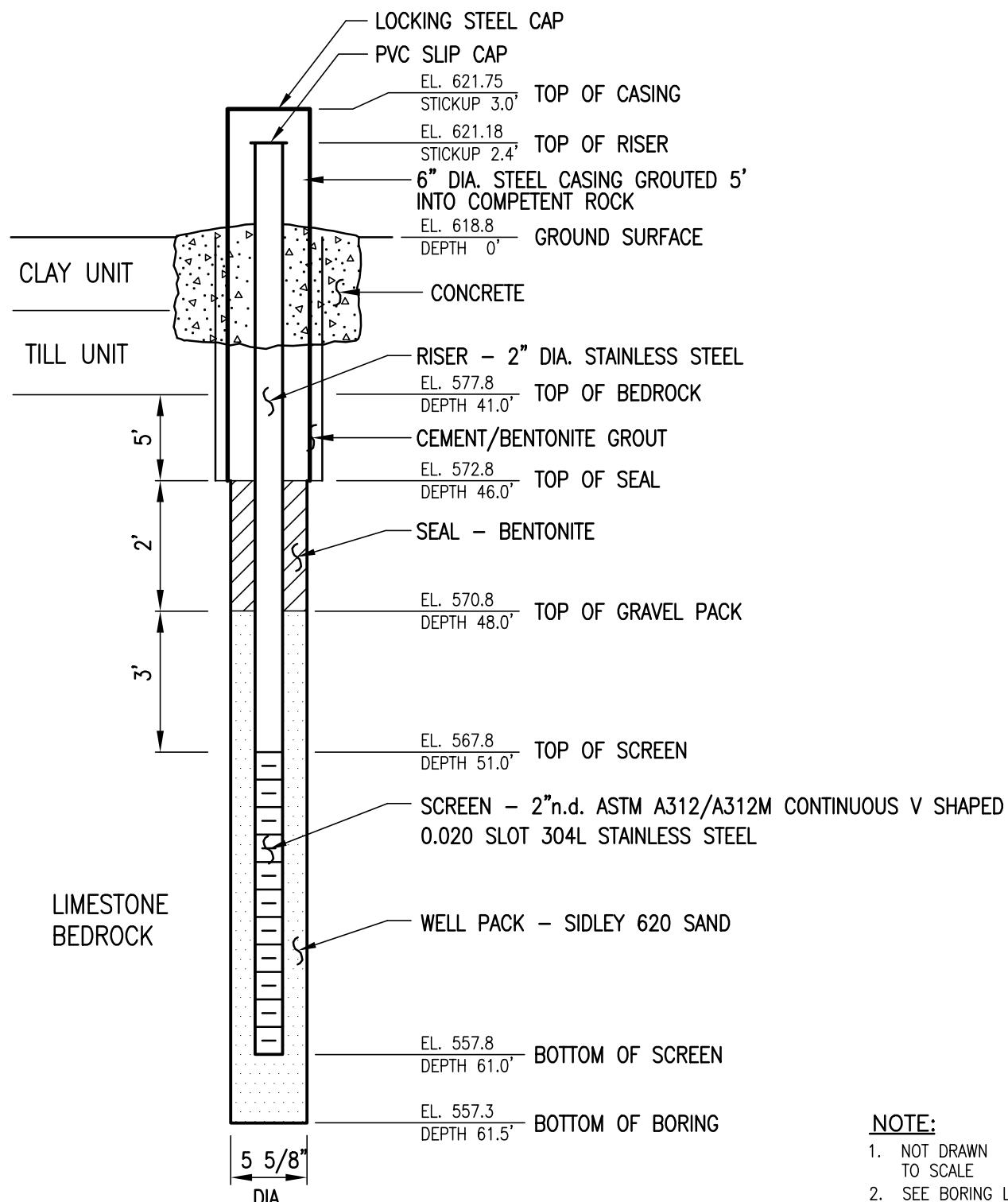


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		MEDIUM GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE # MW-12M
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-12D



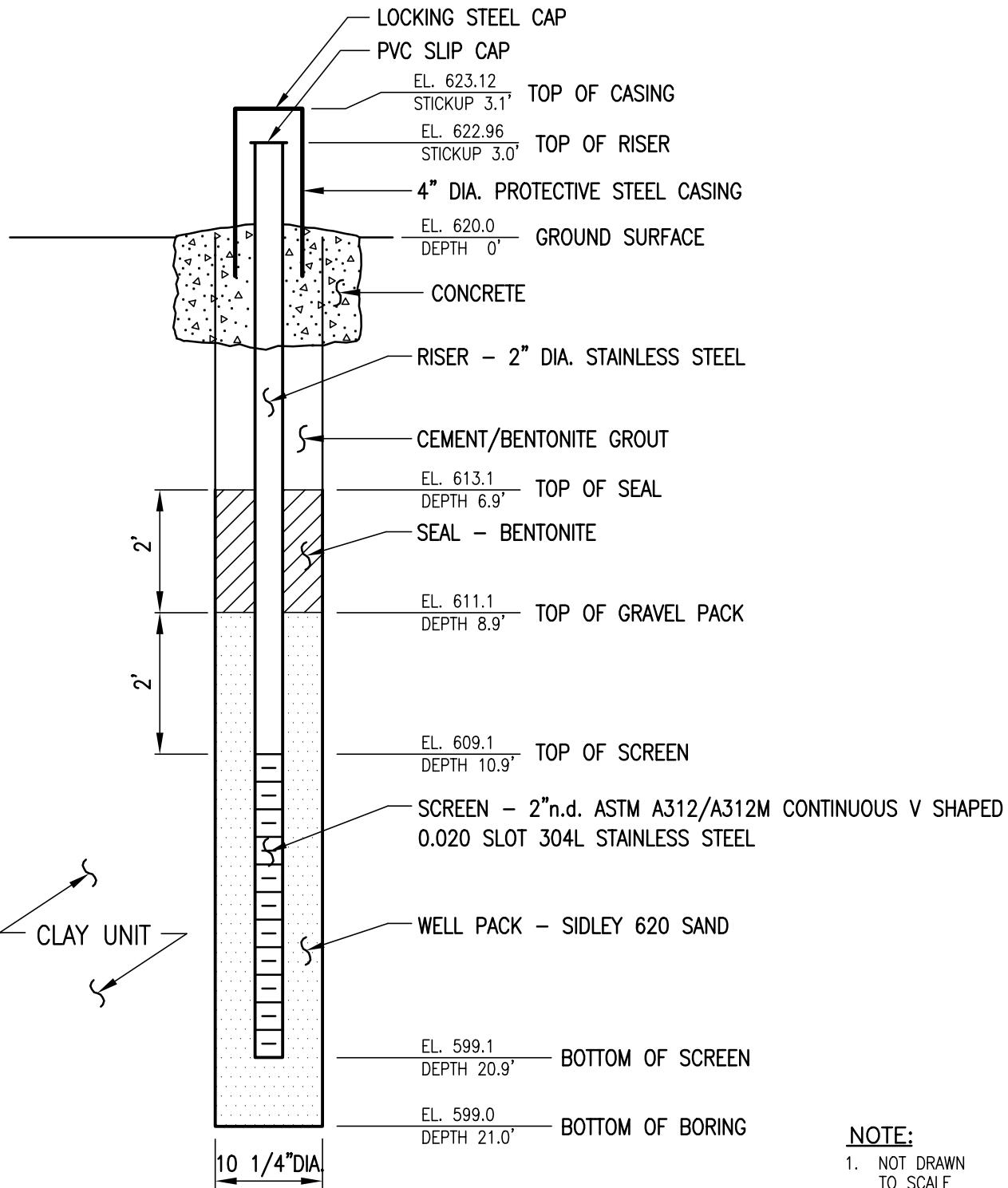
NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		BEDROCK GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-12D



MW-13S

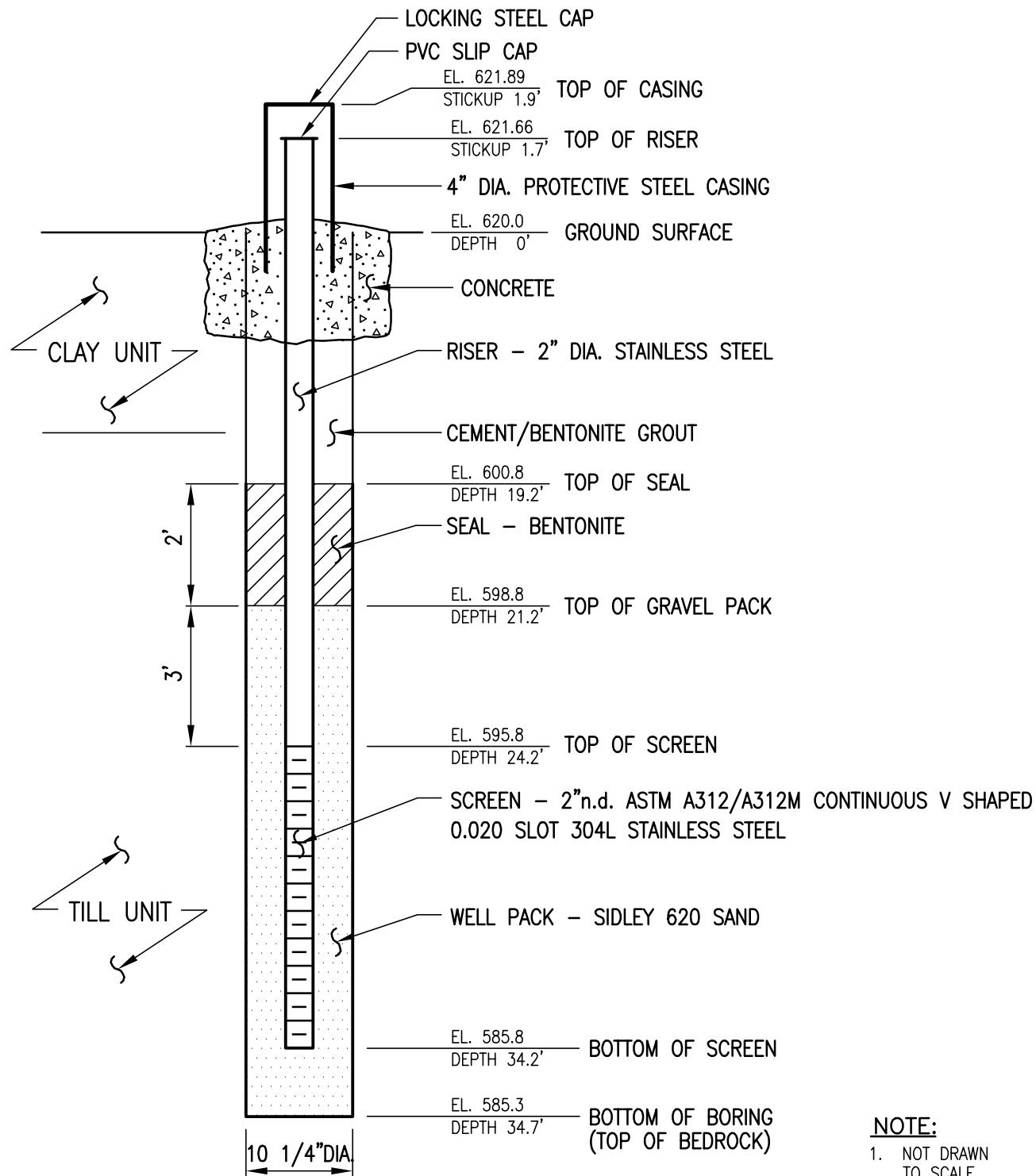


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200 FILENAME: 2035200A SCALE: NTS DATE: 1/15/02 BY: AD CK:
NO.	DATE	DRAWING	FIGURE # MW-13S
		SHALLOW GROUNDWATER MONITORING WELL DETAIL	 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-13M

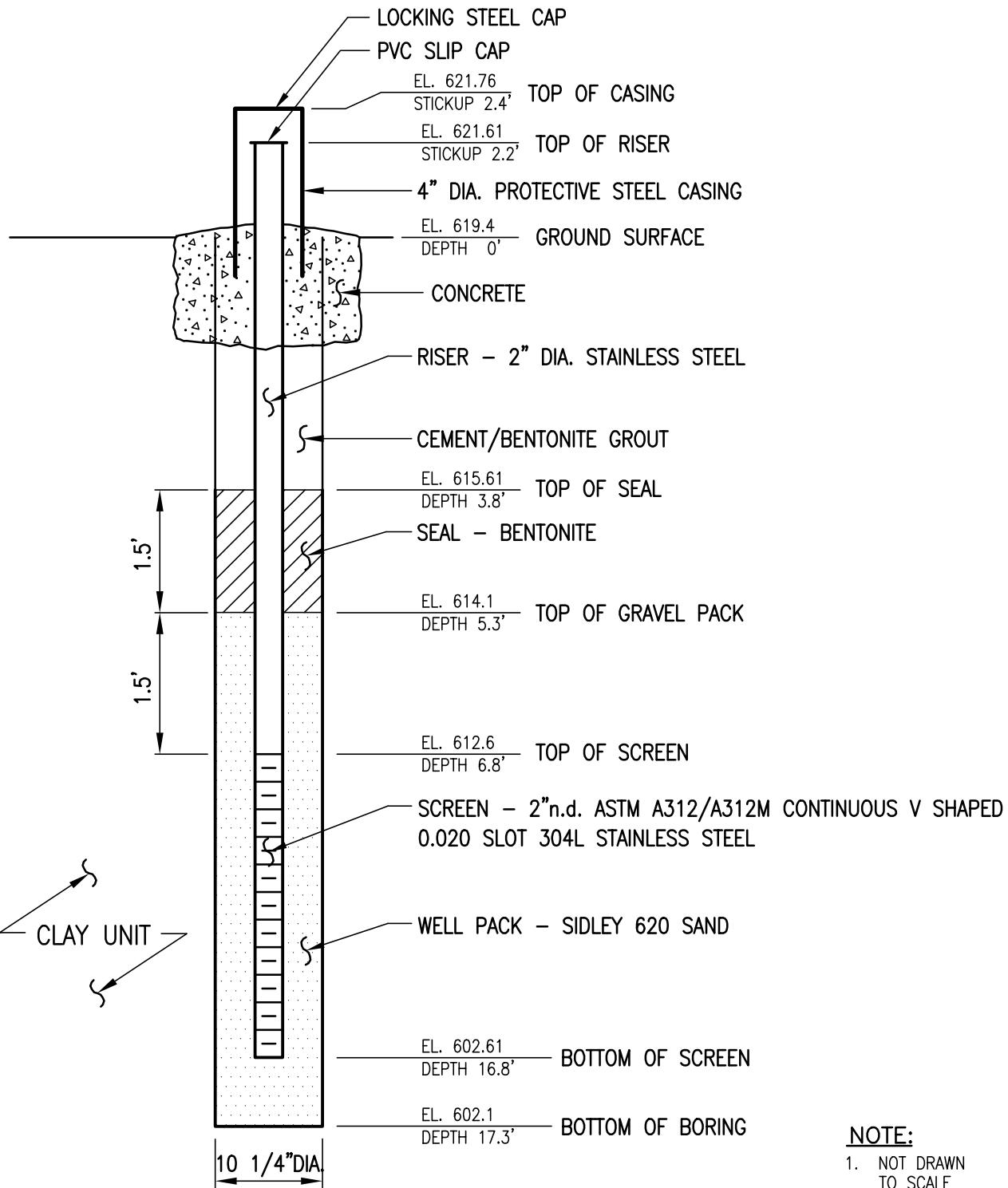


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		MEDIUM GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-13M 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-14S

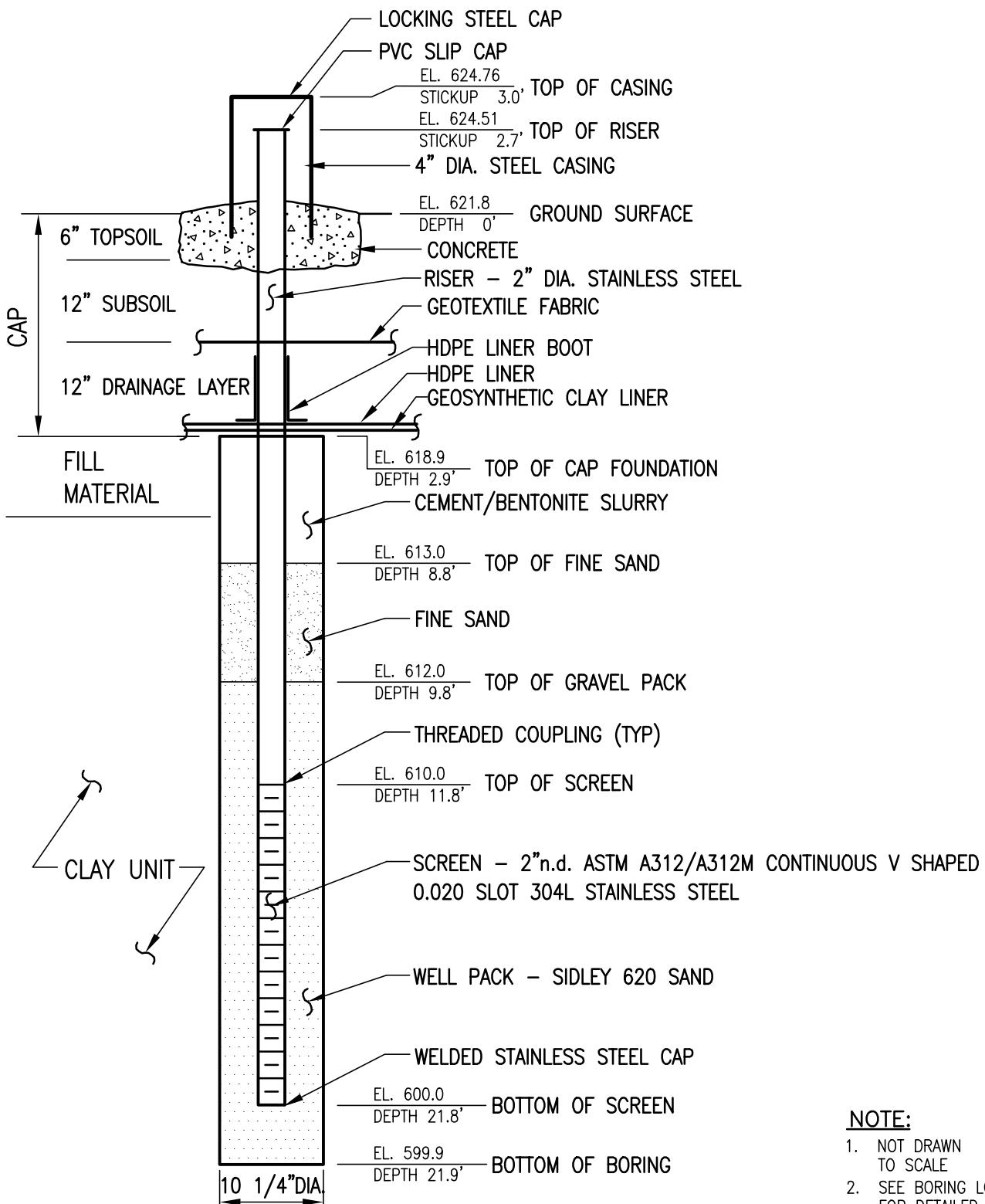


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		SHALLOW GROUNDWATER MONITORING WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE # MW-14S
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-16



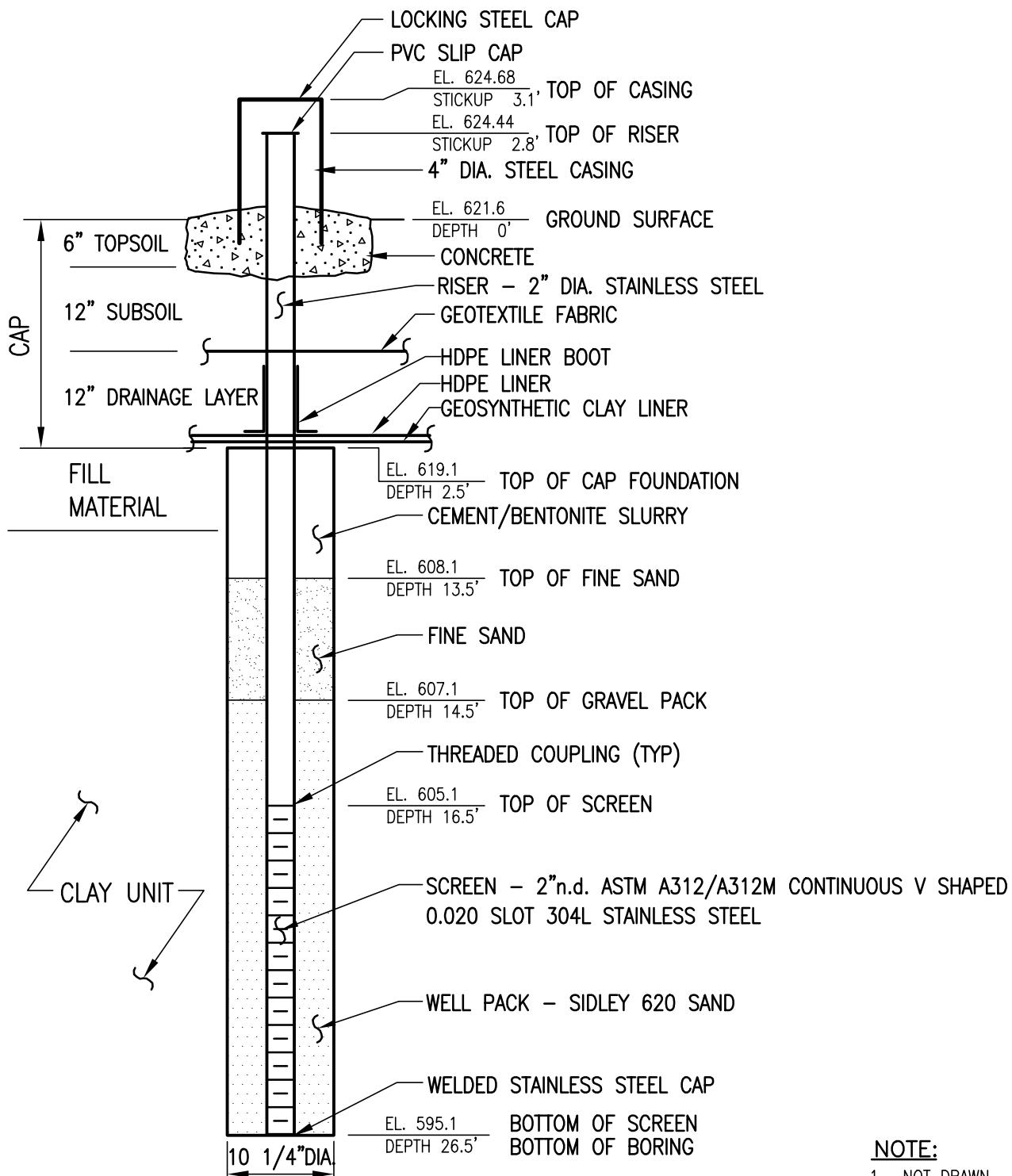
NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		GROUNDWATER OBSERVATION WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-16



MW-17

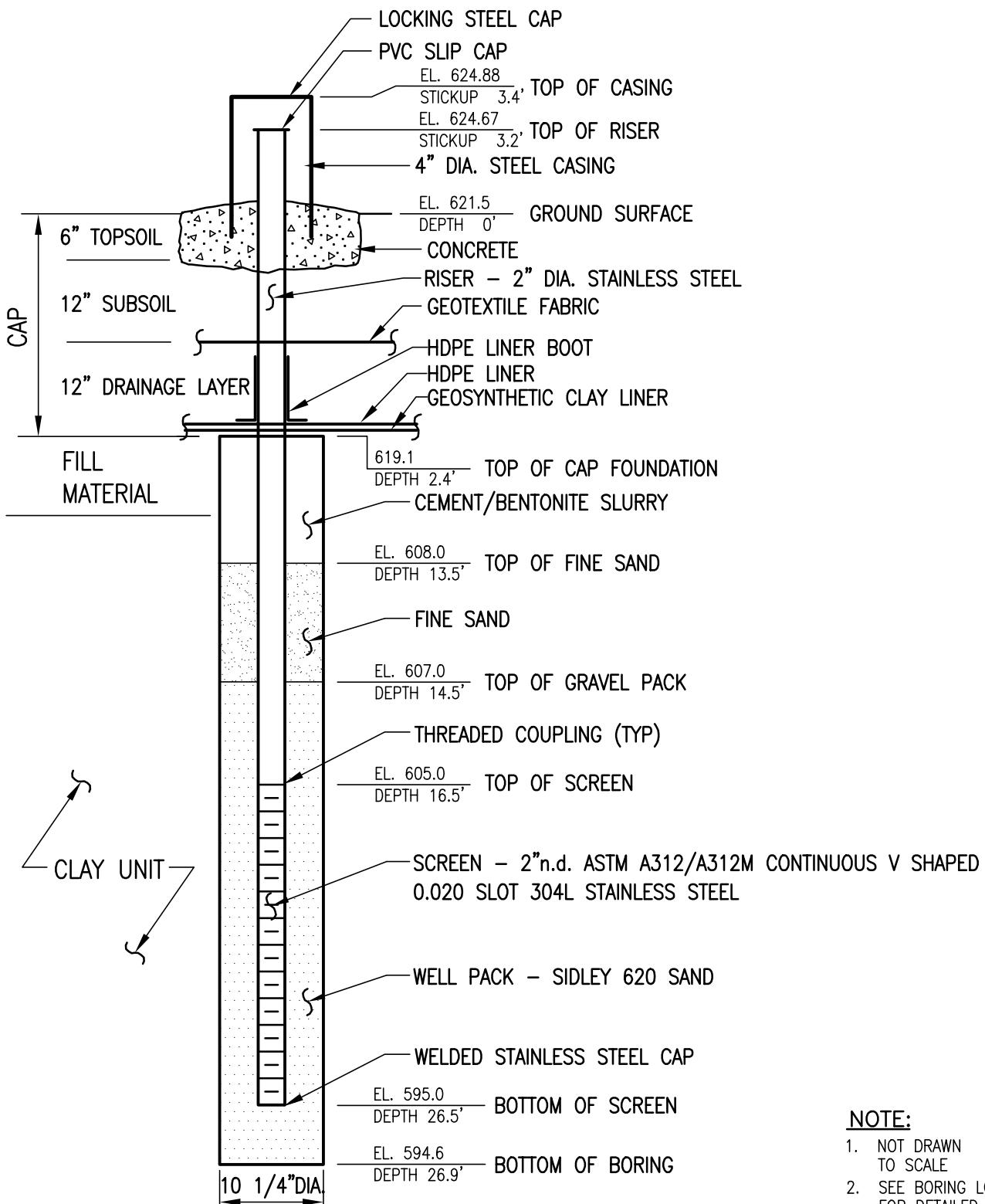


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

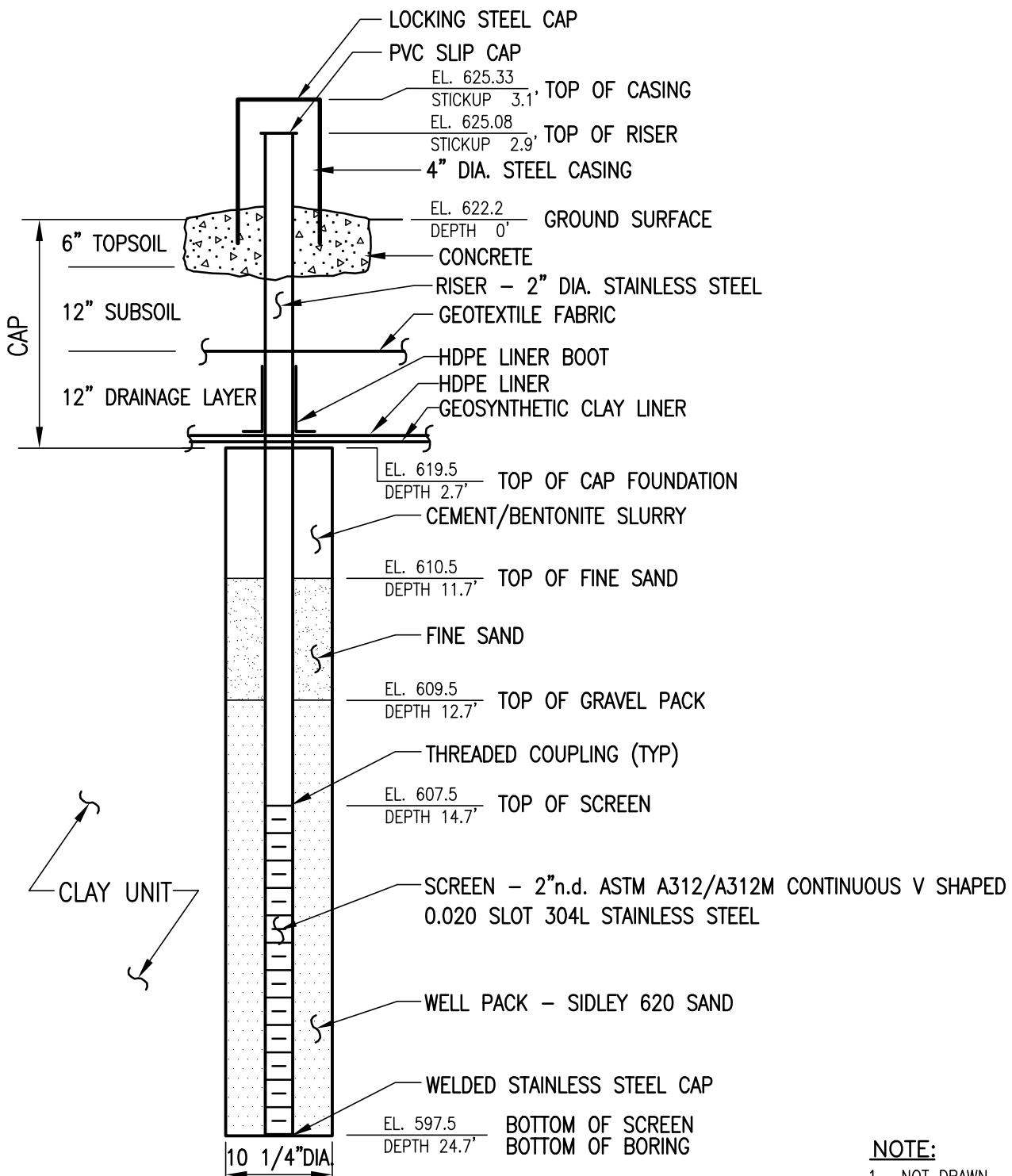
REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		GROUNDWATER OBSERVATION WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK: FIGURE # MW-17
			52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-18



REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		GROUNDWATER OBSERVATION WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-18 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-19



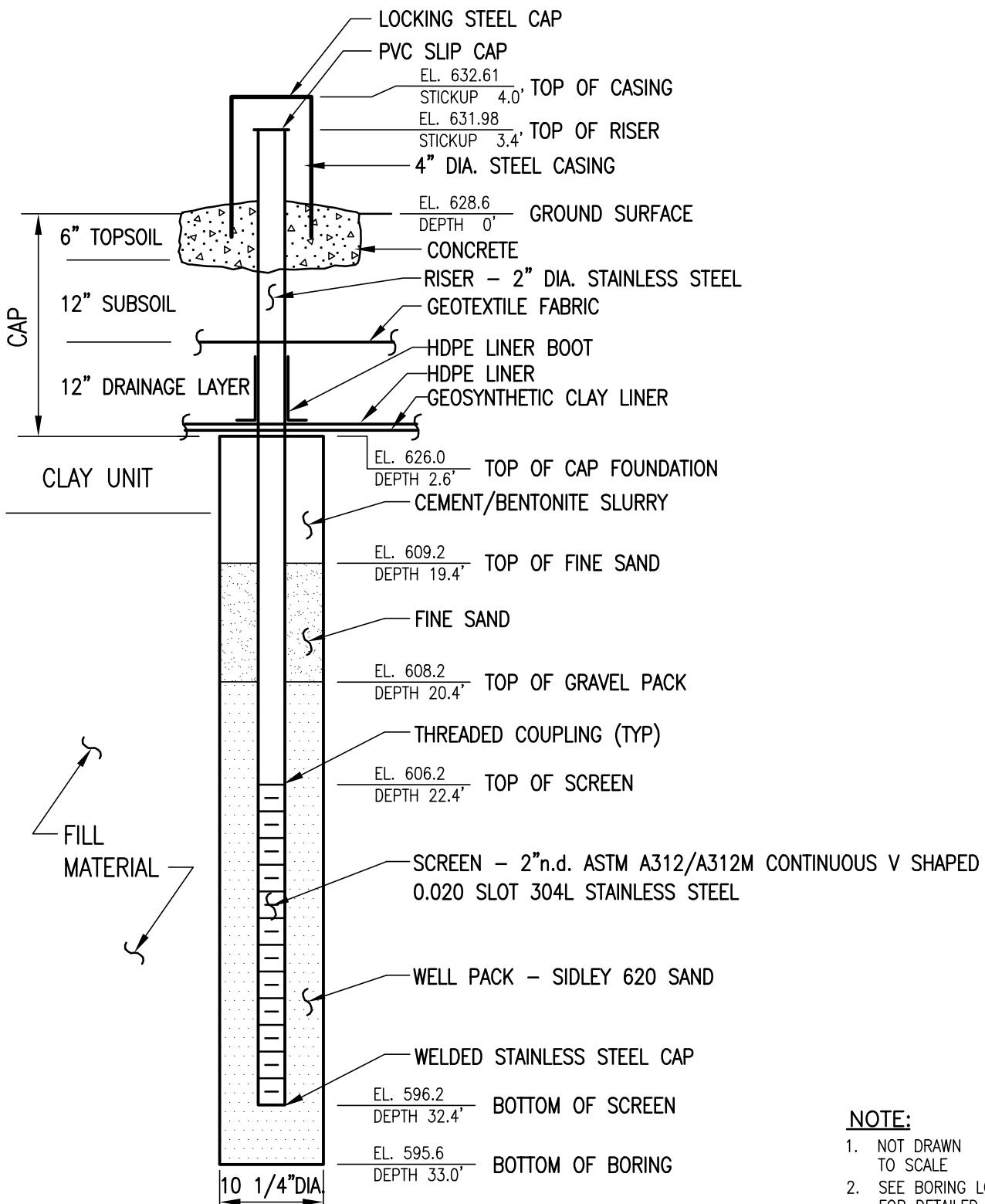
NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		GROUNDWATER OBSERVATION WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-19



MW-20

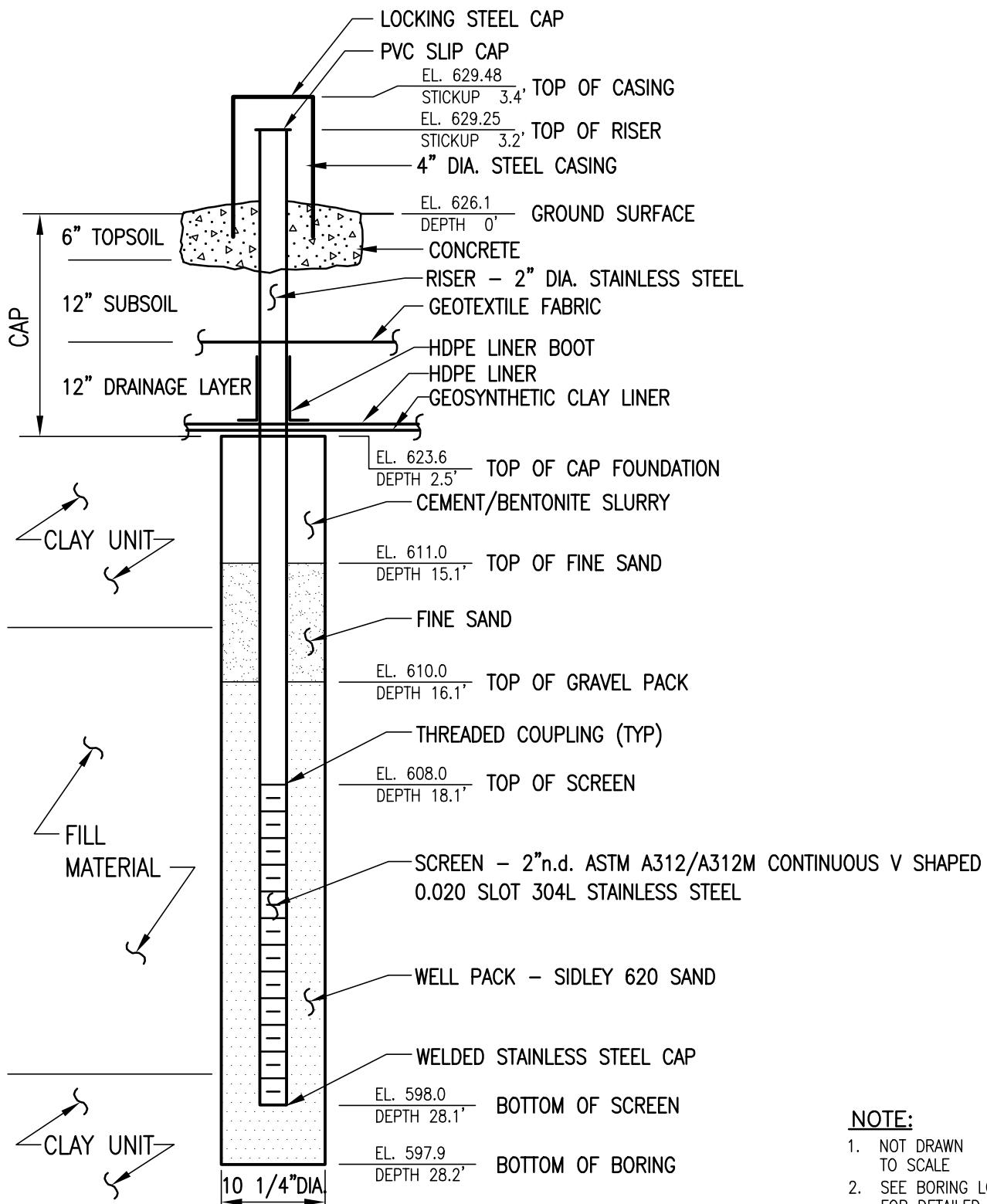


NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTONWAGA, NEW YORK	PROJECT # 2011-200 FILENAME: 2035200A SCALE: NTS DATE: 1/15/02 BY: AD CK:
NO.	DATE	DRAWING	FIGURE # MW-20
		GROUNDWATER OBSERVATION WELL DETAIL	 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

MW-21



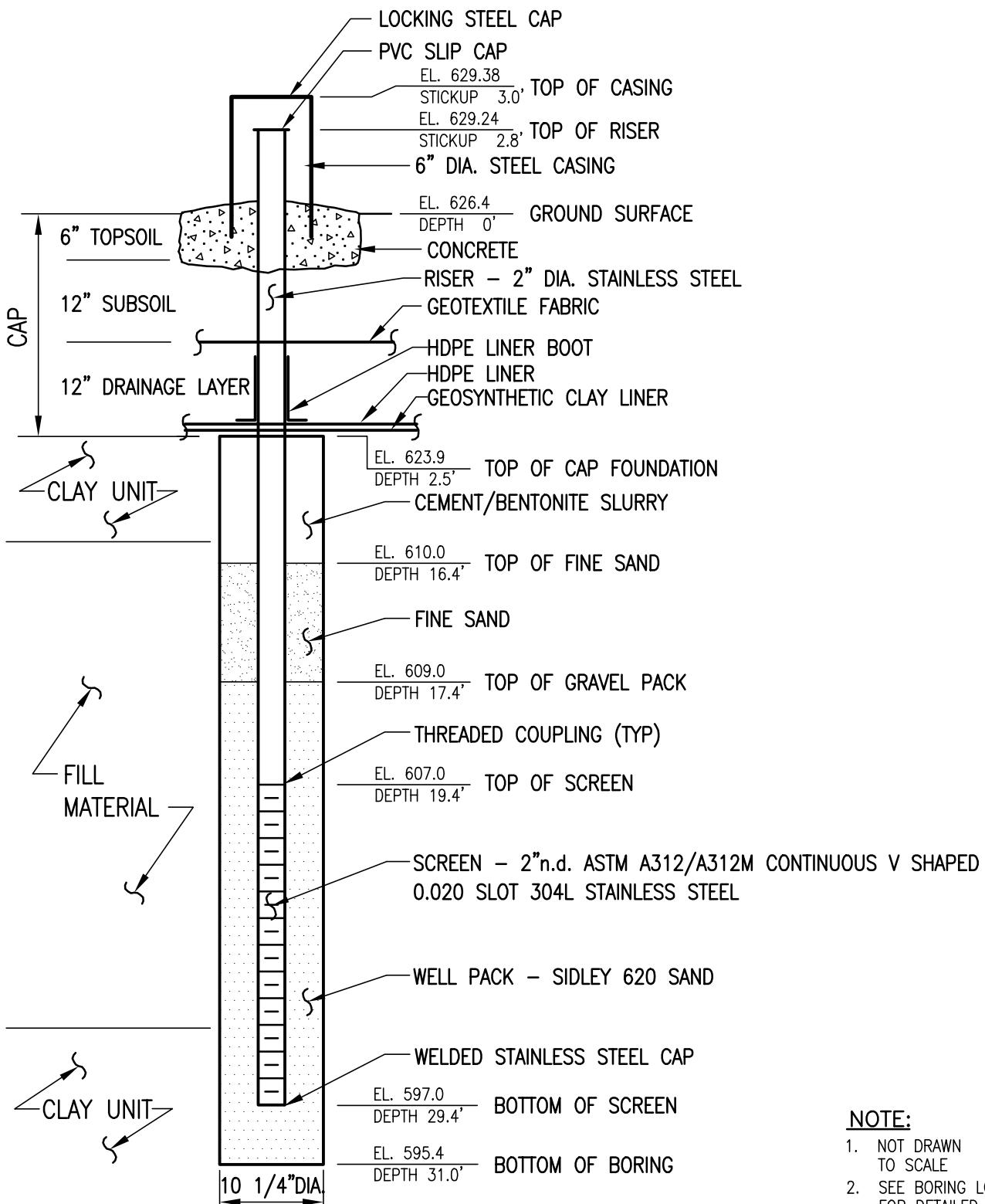
NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTONWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		GROUNDWATER OBSERVATION WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-21



MW-22



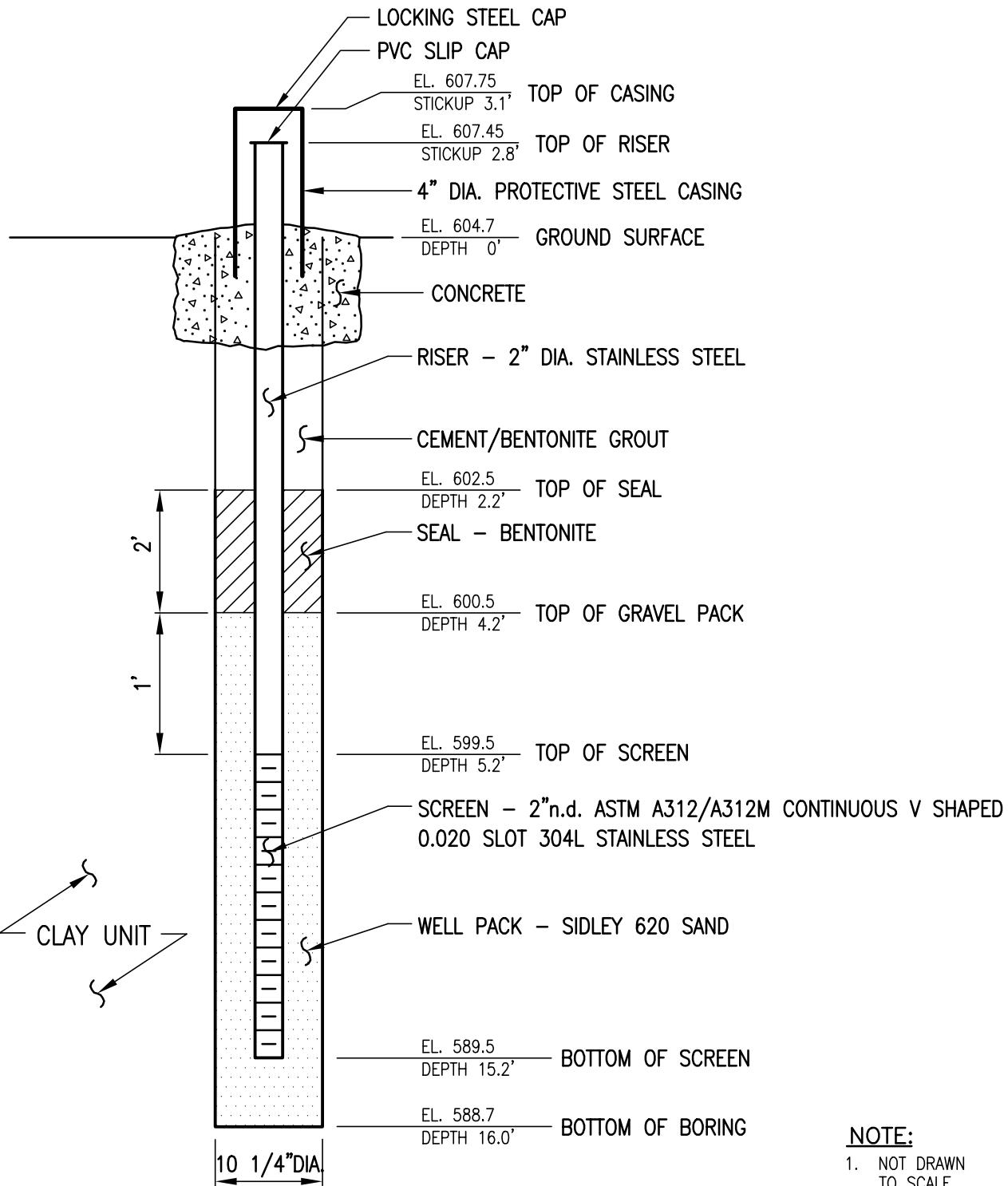
NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200
NO.	DATE	DRAWING	FILENAME: 2035200A
		GROUNDWATER OBSERVATION WELL DETAIL	SCALE: NTS DATE: 1/15/02 BY: AD OK:
			FIGURE # MW-22



MW-23S



NOTE:

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

REVISION NO.	PROJECT	UNION ROAD CHEEKTOWAGA, NEW YORK	PROJECT # 2011-200 FILENAME: 2035200A SCALE: NTS DATE: 1/15/02 BY: AD CK:
NO.	DATE	DRAWING	FIGURE # MW-23S
		SHALLOW GROUNDWATER MONITORING WELL DETAIL	 52 FEDERAL ROAD DANBURY, CT (203) 205-9000

APPENDIX B

LABORATORY REPORT (ON CD)



October 10, 2014

Service Request No: R1407529

Mr. Michael Persico
Unicorn Management Consultants
52 Federal Road
Suite 2C
Danbury, CT 06810

Laboratory Results for: Union Rd #2011-100 9/25/14/ 2011-100

Dear Mr. Persico:

Enclosed are the results of the sample(s) submitted to our laboratory on September 25, 2014. For your reference, these analyses have been assigned our service request number **R1407529**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

Page 1 of 102

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company



www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

00001

Client: Unicorn Management Consultants
Project: Union Rd #2011-100
Sample Matrix: Water

Service Request No.: R1407529
Date Received: 9/25/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental (ALS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

Sample Receipt

Eleven (11) water samples were collected by the client on 9/25/14 and were received at the lab via the client on the same day as sampled. The samples were received at a cooler temperature range of 2.5- 4.8°C, within the guidelines of 0-6°C. All samples were received intact. No bubbles were noted in any of the sample vials on the Cooler Receipt and Preservation Check Form.

Volatile Organic Compounds

Eleven (11) water samples were analyzed for Volatile Organics by GC/MS Method 8260C from SW-846.

The Initial calibration criteria was met for these samples. The Continuing Calibration Verifications (CCV's) were acceptable except for the following compounds which had a % Difference (%D) greater than ±20%:

CCV 10/3/14: Bromoform, Bromomethane, trans-1,3-Dichloropropene, 2-Hexanone, 4-Methyl-2-pentanone, and Trichloroethene.

Any hits for these compounds associated with this CCV should be considered as estimated.

All BFB Tune requirements were met for the GC/MS method.

Surrogate standard recoveries were within acceptance limits.

All Laboratory Method Blanks (MB) were free from contamination.

Batch QC is included in the report. All Laboratory Control Sample (LCS) and LCS Duplicate (LCSD) recoveries were within QC limits except for trans, 1,3-Dichloropropene (LCSD only) and 1,1,2-Trichloroethane (LCSD only). The recoveries are flagged as **. No data was affected. All Relative Percent Difference (RPD) calculations were acceptable.

All samples were analyzed within the 14 day holding time from collection to analysis for preserved samples. All vials are checked for preservation after analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of <2 or run within the 7 day holding time for unpreserved samples.

No other analytical or QC problems were encountered.

SemiVolatile Organic Compounds

Eleven (11) water samples were analyzed for SemiVolatile Organics by GC/MS Method 8270D from SW-846.

The initial calibration criteria were met for all samples. Continuing Calibration criteria was acceptable except for the following CCV compounds which were outside the ±20% D on the following run:

Hexachlorocyclopentadiene on the 9/30/14 run.

Any data hits for this compound associated with this CCV should be considered as estimated.

All Tune requirements were met for the GC/MS method.

Surrogate standard recoveries were within acceptance limits for all samples.

Approved by _____

Karen Bender

Date 10/13/14

00002

The Laboratory Method Blank (MB) was free from contamination for target compounds.

Batch QC is included in the report. All Laboratory Control Sample (LCS), LCS Duplicate (LCSD) recoveries and RPD calculations were within acceptance limits except for Di-n-octyl Phthalate (LCSD only) on the 9/30/14 run.

All samples were extracted within the 7 day holding time from collection and analyzed within the 40 day holding time from extraction to analysis.

No other analytical or QC problems were encountered.

Inorganic and Metals Parameters

Eleven (11) water samples were analyzed for Oil and Grease by method 1664A and Dissolved Arsenic and Lead by ICP Method 6010C. Dissolved metals were filtered in the laboratory.

All Initial and Continuing Calibration Criteria was met for all analyses.

Metals analyses are reported in ug/L in this report.

Batch QC is included in the report. All Laboratory Control Sample (LCS), LCS Duplicate (LCSD) and RPD's were within acceptance limits.

All Laboratory Method Blanks (MB) were free from contamination.

All samples were analyzed within the 28 day (O/G) and 6 month (ICP Metals) holding times for these analyses.

No problems were encountered during the analysis of these samples.

Approved by Karen Bunker Date 10/13/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1407529

<u>Lab ID</u>	<u>Client ID</u>
R1407529-001	MW-14S-2014
R1407529-002	MW-14S-2014 Dissolved
R1407529-003	MW-13M-2014
R1407529-004	MW-13M-2014 Dissolved
R1407529-005	MW-13S-2014
R1407529-006	MW-13S-2014 Dissolved
R1407529-007	MW-12S-2014
R1407529-008	MW-12S-2014 Dissolved
R1407529-009	MW-12M-2014
R1407529-010	MW-12M-2014 Dissolved
R1407529-011	MW-12D-2014
R1407529-012	MW-12D-2014 Dissolved
R1407529-013	MW-11S-2014
R1407529-014	MW-11S-2014 Dissolved
R1407529-015	MW-11M-2014
R1407529-016	MW-11M-2014 Dissolved
R1407529-017	MW-10S-2014
R1407529-018	MW-10S-2014 Dissolved
R1407529-019	MW-10M-2014
R1407529-020	MW-10M-2014 Dissolved
R1407529-021	MW-10D-2014
R1407529-022	MW-10D-2014 Dissolved



Environmental

REPORT QUALIFIERS AND DEFINITIONS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- * Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
- X See Case Narrative for discussion.
- MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
- MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
- LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.
- ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.



Rochester Lab ID # for State Certifications¹

NELAP Accredited	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Connecticut ID # PH0556	Nebraska Accredited	
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	3010A
200.8	ILM05.3
6010C	3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3010A
6010 SPLP (1312) extract	3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-14S-2014
Lab Code: R1407529-001

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14
Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-14S-2014 Dissolved
Lab Code: R1407529-002

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 21:52	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 21:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14
Date Analyzed: 10/4/14 02:25

Sample Name: MW-14S-2014
Lab Code: R1407529-001

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2605.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-14S-2014
Lab Code: R1407529-001

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14
Date Analyzed: 10/4/14 02:25

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoal0\data\100314\A2605.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	85-122	10/4/14 02:25	
Toluene-d8	101	87-121	10/4/14 02:25	
Dibromofluoromethane	103	89-119	10/4/14 02:25	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 22:47

Sample Name: MW-14S-2014
Lab Code: R1407529-001

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY253.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 22:47

Sample Name: MW-14S-2014
Lab Code: R1407529-001

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY253.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0830
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 22:47

Sample Name: MW-14S-2014
Lab Code: R1407529-001

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY253.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	102	28-157	9/30/14 22:47	
2-Fluorobiphenyl	85	39-119	9/30/14 22:47	
2-Fluorophenol	45	10-105	9/30/14 22:47	
Nitrobenzene-d5	77	37-117	9/30/14 22:47	
Phenol-d6	30	10-107	9/30/14 22:47	
p-Terphenyl-d14	103	40-133	9/30/14 22:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-13M-2014
Lab Code: R1407529-003

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-13M-2014 Dissolved
Lab Code: R1407529-004

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14

Basis: NA**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 21:59	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 21:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14
Date Analyzed: 10/4/14 02:55

Sample Name: MW-13M-2014
Lab Code: R1407529-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2606.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-13M-2014
Lab Code: R1407529-003

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14
Date Analyzed: 10/4/14 02:55

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2606.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	85-122	10/4/14 02:55	
Toluene-d8	103	87-121	10/4/14 02:55	
Dibromofluoromethane	104	89-119	10/4/14 02:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 23:14

Sample Name: MW-13M-2014
Lab Code: R1407529-003

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\S973D\Data\093014\AY254.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 23:14

Sample Name: MW-13M-2014
Lab Code: R1407529-003

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY254.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0850
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 23:14

Sample Name: MW-13M-2014
Lab Code: R1407529-003

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY254.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	110	28-157	9/30/14 23:14	
2-Fluorobiphenyl	88	39-119	9/30/14 23:14	
2-Fluorophenol	47	10-105	9/30/14 23:14	
Nitrobenzene-d5	80	37-117	9/30/14 23:14	
Phenol-d6	31	10-107	9/30/14 23:14	
p-Terphenyl-d14	111	40-133	9/30/14 23:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-13S-2014
Lab Code: R1407529-005

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-13S-2014 Dissolved
Lab Code: R1407529-006

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 22:05	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 22:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14
Date Analyzed: 10/4/14 03:24

Sample Name: MW-13S-2014
Lab Code: R1407529-005

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2607.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-13S-2014
Lab Code: R1407529-005

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14
Date Analyzed: 10/4/14 03:24

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2607.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	85-122	10/4/14 03:24	
Toluene-d8	101	87-121	10/4/14 03:24	
Dibromofluoromethane	105	89-119	10/4/14 03:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 23:39

Sample Name: MW-13S-2014
Lab Code: R1407529-005

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY255.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Choronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 23:39

Sample Name: MW-13S-2014
Lab Code: R1407529-005

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY255.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0910
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 23:39

Sample Name: MW-13S-2014
Lab Code: R1407529-005

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\S973D\Data\093014\AY255.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	113	28-157	9/30/14 23:39	
2-Fluorobiphenyl	88	39-119	9/30/14 23:39	
2-Fluorophenol	48	10-105	9/30/14 23:39	
Nitrobenzene-d5	79	37-117	9/30/14 23:39	
Phenol-d6	32	10-107	9/30/14 23:39	
p-Terphenyl-d14	109	40-133	9/30/14 23:39	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-12S-2014
Lab Code: R1407529-007

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14
Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7	U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-12S-2014 Dissolved
Lab Code: R1407529-008

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 22:12	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 22:12	

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-12S-2014
Lab Code: R1407529-007

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14
Date Analyzed: 10/4/14 03:54

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2608.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-12S-2014
Lab Code: R1407529-007

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14
Date Analyzed: 10/4/14 03:54

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2608.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	85-122	10/4/14 03:54	
Toluene-d8	103	87-121	10/4/14 03:54	
Dibromofluoromethane	106	89-119	10/4/14 03:54	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:05

Sample Name: MW-12S-2014
Lab Code: R1407529-007

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY256.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:05

Sample Name: MW-12S-2014
Lab Code: R1407529-007

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY256.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0930
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:05

Sample Name: MW-12S-2014
Lab Code: R1407529-007

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY256.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	104	28-157	10/1/14 00:05	
2-Fluorobiphenyl	86	39-119	10/1/14 00:05	
2-Fluorophenol	42	10-105	10/1/14 00:05	
Nitrobenzene-d5	79	37-117	10/1/14 00:05	
Phenol-d6	29	10-107	10/1/14 00:05	
p-Terphenyl-d14	103	40-133	10/1/14 00:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-12M-2014
Lab Code: R1407529-009

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7	U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-12M-2014 Dissolved
Lab Code: R1407529-010

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 22:18	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 22:18	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-12M-2014
Lab Code: R1407529-009

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14
Date Analyzed: 10/4/14 04:24

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2609.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-12M-2014
Lab Code: R1407529-009

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14
Date Analyzed: 10/4/14 04:24

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2609.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	85-122	10/4/14 04:24	
Toluene-d8	101	87-121	10/4/14 04:24	
Dibromofluoromethane	103	89-119	10/4/14 04:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:30

Sample Name: MW-12M-2014
Lab Code: R1407529-009

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY257.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:30

Sample Name: MW-12M-2014
Lab Code: R1407529-009

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY257.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 0945
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:30

Sample Name: MW-12M-2014
Lab Code: R1407529-009

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUDATA\5973D\Data\093014\AY257.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	107	28-157	10/1/14 00:30	
2-Fluorobiphenyl	89	39-119	10/1/14 00:30	
2-Fluorophenol	46	10-105	10/1/14 00:30	
Nitrobenzene-d5	82	37-117	10/1/14 00:30	
Phenol-d6	30	10-107	10/1/14 00:30	
p-Terphenyl-d14	106	40-133	10/1/14 00:30	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-12D-2014
Lab Code: R1407529-011

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14
Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-12D-2014 Dissolved
Lab Code: R1407529-012

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	9/30/14	10/2/14 22:25	
Lead, Dissolved	6010C	50	U	µg/L	50	1	9/30/14	10/2/14 22:25	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-12D-2014
Lab Code: R1407529-011

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14
Date Analyzed: 10/4/14 04:54

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2610.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-12D-2014
Lab Code: R1407529-011

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14
Date Analyzed: 10/4/14 04:54

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoal0\data\100314\A2610.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	10/4/14 04:54	
Toluene-d8	103	87-121	10/4/14 04:54	
Dibromofluoromethane	104	89-119	10/4/14 04:54	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:56

Sample Name: MW-12D-2014
Lab Code: R1407529-011

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY258.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:56

Sample Name: MW-12D-2014
Lab Code: R1407529-011

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY258.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	22	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1000
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 00:56

Sample Name: MW-12D-2014
Lab Code: R1407529-011

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY258.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	91	28-157	10/1/14 00:56	
2-Fluorobiphenyl	90	39-119	10/1/14 00:56	
2-Fluorophenol	49	10-105	10/1/14 00:56	
Nitrobenzene-d5	83	37-117	10/1/14 00:56	
Phenol-d6	31	10-107	10/1/14 00:56	
p-Terphenyl-d14	112	40-133	10/1/14 00:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-11S-2014
Lab Code: R1407529-013

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-11S-2014 Dissolved
Lab Code: R1407529-014

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14
Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	9/30/14	10/2/14 22:31	
Lead, Dissolved	6010C	50	U	µg/L	50	1	9/30/14	10/2/14 22:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14
Date Analyzed: 10/4/14 05:24

Sample Name: MW-11S-2014
Lab Code: R1407529-013

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2611.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-11S-2014
Lab Code: R1407529-013

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14
Date Analyzed: 10/4/14 05:24

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2611.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	85-122	10/4/14 05:24	
Toluene-d8	102	87-121	10/4/14 05:24	
Dibromofluoromethane	105	89-119	10/4/14 05:24	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 01:22

Sample Name: MW-11S-2014
Lab Code: R1407529-013

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY259.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 01:22

Sample Name: MW-11S-2014
Lab Code: R1407529-013

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY259.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1020
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 01:22

Sample Name: MW-11S-2014
Lab Code: R1407529-013

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY259.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	86	28-157	10/1/14 01:22	
2-Fluorobiphenyl	92	39-119	10/1/14 01:22	
2-Fluorophenol	47	10-105	10/1/14 01:22	
Nitrobenzene-d5	82	37-117	10/1/14 01:22	
Phenol-d6	30	10-107	10/1/14 01:22	
p-Terphenyl-d14	106	40-133	10/1/14 01:22	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-11M-2014
Lab Code: R1407529-015

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14
Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-11M-2014 Dissolved
Lab Code: R1407529-016

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	9/30/14	10/2/14 22:50	
Lead, Dissolved	6010C	50	U	µg/L	50	1	9/30/14	10/2/14 22:50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14
Date Analyzed: 10/4/14 05:53

Sample Name: MW-11M-2014
Lab Code: R1407529-015

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2612.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-11M-2014
Lab Code: R1407529-015

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14
Date Analyzed: 10/4/14 05:53

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoal0\data\100314\A2612.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	109	85-122	10/4/14 05:53	
Toluene-d8	102	87-121	10/4/14 05:53	
Dibromofluoromethane	105	89-119	10/4/14 05:53	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 01:48

Sample Name: MW-11M-2014
Lab Code: R1407529-015

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY260.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Choronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 01:48

Sample Name: MW-11M-2014
Lab Code: R1407529-015

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY260.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	50	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1030
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 01:48

Sample Name: MW-11M-2014
Lab Code: R1407529-015

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY260.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	92	28-157	10/1/14 01:48	
2-Fluorobiphenyl	92	39-119	10/1/14 01:48	
2-Fluorophenol	51	10-105	10/1/14 01:48	
Nitrobenzene-d5	82	37-117	10/1/14 01:48	
Phenol-d6	29	10-107	10/1/14 01:48	
p-Terphenyl-d14	105	40-133	10/1/14 01:48	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-10S-2014
Lab Code: R1407529-017

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14
Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7	U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-10S-2014 Dissolved
Lab Code: R1407529-018

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 22:57	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 22:57	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14
Date Analyzed: 10/4/14 06:23

Sample Name: MW-10S-2014
Lab Code: R1407529-017

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2613.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-10S-2014
Lab Code: R1407529-017

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14
Date Analyzed: 10/4/14 06:23

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2613.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	85-122	10/4/14 06:23	
Toluene-d8	102	87-121	10/4/14 06:23	
Dibromofluoromethane	103	89-119	10/4/14 06:23	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 16:44

Sample Name: MW-10S-2014
Lab Code: R1407529-017

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY177.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Choronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 16:44

Sample Name: MW-10S-2014
Lab Code: R1407529-017

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY177.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1050
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 16:44

Sample Name: MW-10S-2014
Lab Code: R1407529-017

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY177.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	97	28-157	10/1/14 16:44	
2-Fluorobiphenyl	89	39-119	10/1/14 16:44	
2-Fluorophenol	45	10-105	10/1/14 16:44	
Nitrobenzene-d5	79	37-117	10/1/14 16:44	
Phenol-d6	29	10-107	10/1/14 16:44	
p-Terphenyl-d14	96	40-133	10/1/14 16:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-10M-2014
Lab Code: R1407529-019

Service Request: R1407529
Date Collected: 9/25/14 1110
Date Received: 9/25/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7	U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-10M-2014 Dissolved
Lab Code: R1407529-020

Service Request: R1407529
Date Collected: 9/25/14 1110
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	9/30/14	10/2/14 23:03	
Lead, Dissolved	6010C	50	U	µg/L	50	1	9/30/14	10/2/14 23:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1110
Date Received: 9/25/14
Date Analyzed: 10/4/14 06:53

Sample Name: MW-10M-2014
Lab Code: R1407529-019

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2614.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-10M-2014
Lab Code: R1407529-019

Service Request: R1407529
Date Collected: 9/25/14 11:10
Date Received: 9/25/14
Date Analyzed: 10/4/14 06:53

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoal0\data\100314\A2614.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	85-122	10/4/14 06:53	
Toluene-d8	102	87-121	10/4/14 06:53	
Dibromofluoromethane	103	89-119	10/4/14 06:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1110
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 17:10

Sample Name: MW-10M-2014
Lab Code: R1407529-019

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY178.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1110
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 17:10

Sample Name: MW-10M-2014
Lab Code: R1407529-019

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY178.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 11:10
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 17:10

Sample Name: MW-10M-2014
Lab Code: R1407529-019

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\S973A\DATA\100114\CY178.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	101	28-157	10/1/14 17:10	
2-Fluorobiphenyl	85	39-119	10/1/14 17:10	
2-Fluorophenol	44	10-105	10/1/14 17:10	
Nitrobenzene-d5	85	37-117	10/1/14 17:10	
Phenol-d6	28	10-107	10/1/14 17:10	
p-Terphenyl-d14	88	40-133	10/1/14 17:10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-10D-2014
Lab Code: R1407529-021

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		4.7 U	mg/L	4.7	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: MW-10D-2014 Dissolved
Lab Code: R1407529-022

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10 U	µg/L	10	1	9/30/14	10/2/14 23:09	
Lead, Dissolved	6010C	50 U	µg/L	50	1	9/30/14	10/2/14 23:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: MW-10D-2014
Lab Code: R1407529-021

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14
Date Analyzed: 10/4/14 07:22

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2615.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14
Date Analyzed: 10/4/14 07:22

Sample Name: MW-10D-2014
Lab Code: R1407529-021

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2615.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	85-122	10/4/14 07:22	
Toluene-d8	102	87-121	10/4/14 07:22	
Dibromofluoromethane	107	89-119	10/4/14 07:22	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 17:36

Sample Name: MW-10D-2014
Lab Code: R1407529-021

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY179.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	9.4 U	9.4	
95-50-1	1,2-Dichlorobenzene	9.4 U	9.4	
541-73-1	1,3-Dichlorobenzene	9.4 U	9.4	
106-46-7	1,4-Dichlorobenzene	9.4 U	9.4	
95-95-4	2,4,5-Trichlorophenol	9.4 U	9.4	
88-06-2	2,4,6-Trichlorophenol	9.4 U	9.4	
120-83-2	2,4-Dichlorophenol	9.4 U	9.4	
105-67-9	2,4-Dimethylphenol	9.4 U	9.4	
51-28-5	2,4-Dinitrophenol	47 U	47	
121-14-2	2,4-Dinitrotoluene	9.4 U	9.4	
606-20-2	2,6-Dinitrotoluene	9.4 U	9.4	
91-58-7	2-Chloronaphthalene	9.4 U	9.4	
95-57-8	2-Chlorophenol	9.4 U	9.4	
91-57-6	2-Methylnaphthalene	9.4 U	9.4	
95-48-7	2-Methylphenol	9.4 U	9.4	
88-74-4	2-Nitroaniline	47 U	47	
88-75-5	2-Nitrophenol	9.4 U	9.4	
91-94-1	3,3'-Dichlorobenzidine	9.4 U	9.4	
	3- and 4-Methylphenol Coelution	9.4 U	9.4	
99-09-2	3-Nitroaniline	47 U	47	
534-52-1	4,6-Dinitro-2-methylphenol	47 U	47	
101-55-3	4-Bromophenyl Phenyl Ether	9.4 U	9.4	
59-50-7	4-Chloro-3-methylphenol	9.4 U	9.4	
106-47-8	4-Chloroaniline	9.4 U	9.4	
7005-72-3	4-Chlorophenyl Phenyl Ether	9.4 U	9.4	
100-01-6	4-Nitroaniline	47 U	47	
100-02-7	4-Nitrophenol	47 U	47	
83-32-9	Acenaphthene	9.4 U	9.4	
208-96-8	Acenaphthylene	9.4 U	9.4	
120-12-7	Anthracene	9.4 U	9.4	
56-55-3	Benz(a)anthracene	9.4 U	9.4	
50-32-8	Benzo(a)pyrene	9.4 U	9.4	
205-99-2	Benzo(b)fluoranthene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 17:36

Sample Name: MW-10D-2014
Lab Code: R1407529-021

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY179.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	9.4 U	9.4	
207-08-9	Benzo(k)fluoranthene	9.4 U	9.4	
100-51-6	Benzyl Alcohol	9.4 U	9.4	
108-60-1	2,2'-Oxybis(1-chloropropane)	9.4 U	9.4	
111-91-1	Bis(2-chloroethoxy)methane	9.4 U	9.4	
111-44-4	Bis(2-chloroethyl) Ether	9.4 U	9.4	
117-81-7	Bis(2-ethylhexyl) Phthalate	9.4 U	9.4	
85-68-7	Butyl Benzyl Phthalate	9.4 U	9.4	
86-74-8	Carbazole	9.4 U	9.4	
218-01-9	Chrysene	9.4 U	9.4	
84-74-2	Di-n-butyl Phthalate	9.4 U	9.4	
117-84-0	Di-n-octyl Phthalate	9.4 U	9.4	
53-70-3	Dibenz(a,h)anthracene	9.4 U	9.4	
132-64-9	Dibenzofuran	9.4 U	9.4	
84-66-2	Diethyl Phthalate	9.4 U	9.4	
131-11-3	Dimethyl Phthalate	9.4 U	9.4	
206-44-0	Fluoranthene	9.4 U	9.4	
86-73-7	Fluorene	9.4 U	9.4	
118-74-1	Hexachlorobenzene	9.4 U	9.4	
87-68-3	Hexachlorobutadiene	9.4 U	9.4	
77-47-4	Hexachlorocyclopentadiene	9.4 U	9.4	
67-72-1	Hexachloroethane	9.4 U	9.4	
193-39-5	Indeno(1,2,3-cd)pyrene	9.4 U	9.4	
78-59-1	Isophorone	9.4 U	9.4	
621-64-7	N-Nitrosodi-n-propylamine	9.4 U	9.4	
62-75-9	N-Nitrosodimethylamine	9.4 U	9.4	
86-30-6	N-Nitrosodiphenylamine	9.4 U	9.4	
91-20-3	Naphthalene	9.4 U	9.4	
98-95-3	Nitrobenzene	9.4 U	9.4	
87-86-5	Pentachlorophenol (PCP)	47 U	47	
85-01-8	Phenanthrene	9.4 U	9.4	
108-95-2	Phenol	9.4 U	9.4	
129-00-0	Pyrene	9.4 U	9.4	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: 9/25/14 1125
Date Received: 9/25/14
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 17:36

Sample Name: MW-10D-2014
Lab Code: R1407529-021

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY179.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	106	28-157	10/1/14 17:36	
2-Fluorobiphenyl	90	39-119	10/1/14 17:36	
2-Fluorophenol	45	10-105	10/1/14 17:36	
Nitrobenzene-d5	83	37-117	10/1/14 17:36	
Phenol-d6	30	10-107	10/1/14 17:36	
p-Terphenyl-d14	101	40-133	10/1/14 17:36	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1407529-MB

Service Request: R1407529**Date Collected:** NA**Date Received:** NA**Basis:** NA**General Chemistry Parameters**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Oil and Grease, Nonpolar (SGT-HEM) 1664A		5.0 U	mg/L	5.0	1	NA	9/29/14 09:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1407529-MB1

Service Request: R1407529
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	9/30/14	10/2/14 21:33	
Lead, Dissolved	6010C	50	U	µg/L	50	1	9/30/14	10/2/14 21:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1407529-MB2

Service Request: R1407529**Date Collected:** NA**Date Received:** NA**Basis:** NA**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	9/30/14	10/2/14 21:46	
Lead, Dissolved	6010C	50	U	µg/L	50	1	9/30/14	10/2/14 21:46	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Analyzed: 10/4/14 01:55

Sample Name: Method Blank
Lab Code: RQ1412173-01

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2604.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
75-35-4	1,1-Dichloroethene	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
591-78-6	2-Hexanone	10 U	10	
75-09-2	Methylene Chloride	5.0 U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	10	
100-42-5	Styrene	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
127-18-4	Tetrachloroethene	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
79-01-6	Trichloroethene	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ1412173-01

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Analyzed: 10/4/14 01:55

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUADATA\msvoa10\data\100314\A2604.D\

Analysis Lot: 414548
Instrument Name: R-MS-10
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	85-122	10/4/14 01:55	
Toluene-d8	103	87-121	10/4/14 01:55	
Dibromofluoromethane	103	89-119	10/4/14 01:55	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 15:53

Sample Name: Method Blank
Lab Code: RQ1411577-01

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY237.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	10 U	10	
95-50-1	1,2-Dichlorobenzene	10 U	10	
541-73-1	1,3-Dichlorobenzene	10 U	10	
106-46-7	1,4-Dichlorobenzene	10 U	10	
95-95-4	2,4,5-Trichlorophenol	10 U	10	
88-06-2	2,4,6-Trichlorophenol	10 U	10	
120-83-2	2,4-Dichlorophenol	10 U	10	
105-67-9	2,4-Dimethylphenol	10 U	10	
51-28-5	2,4-Dinitrophenol	50 U	50	
121-14-2	2,4-Dinitrotoluene	10 U	10	
606-20-2	2,6-Dinitrotoluene	10 U	10	
91-58-7	2-Chloronaphthalene	10 U	10	
95-57-8	2-Chlorophenol	10 U	10	
91-57-6	2-Methylnaphthalene	10 U	10	
95-48-7	2-Methylphenol	10 U	10	
88-74-4	2-Nitroaniline	50 U	50	
88-75-5	2-Nitrophenol	10 U	10	
91-94-1	3,3'-Dichlorobenzidine	10 U	10	
	3- and 4-Methylphenol Coelution	10 U	10	
99-09-2	3-Nitroaniline	50 U	50	
534-52-1	4,6-Dinitro-2-methylphenol	50 U	50	
101-55-3	4-Bromophenyl Phenyl Ether	10 U	10	
59-50-7	4-Chloro-3-methylphenol	10 U	10	
106-47-8	4-Chloroaniline	10 U	10	
7005-72-3	4-Chlorophenyl Phenyl Ether	10 U	10	
100-01-6	4-Nitroaniline	50 U	50	
100-02-7	4-Nitrophenol	50 U	50	
83-32-9	Acenaphthene	10 U	10	
208-96-8	Acenaphthylene	10 U	10	
120-12-7	Anthracene	10 U	10	
56-55-3	Benz(a)anthracene	10 U	10	
50-32-8	Benzo(a)pyrene	10 U	10	
205-99-2	Benzo(b)fluoranthene	10 U	10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 15:53

Sample Name: Method Blank
Lab Code: RQ1411577-01

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY237.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	10 U	10	
207-08-9	Benzo(k)fluoranthene	10 U	10	
100-51-6	Benzyl Alcohol	10 U	10	
108-60-1	2,2'-Oxybis(1-chloropropane)	10 U	10	
111-91-1	Bis(2-chloroethoxy)methane	10 U	10	
111-44-4	Bis(2-chloroethyl) Ether	10 U	10	
117-81-7	Bis(2-ethylhexyl) Phthalate	10 U	10	
85-68-7	Butyl Benzyl Phthalate	10 U	10	
86-74-8	Carbazole	10 U	10	
218-01-9	Chrysene	10 U	10	
84-74-2	Di-n-butyl Phthalate	10 U	10	
117-84-0	Di-n-octyl Phthalate	10 U	10	
53-70-3	Dibenz(a,h)anthracene	10 U	10	
132-64-9	Dibenzofuran	10 U	10	
84-66-2	Diethyl Phthalate	10 U	10	
131-11-3	Dimethyl Phthalate	10 U	10	
206-44-0	Fluoranthene	10 U	10	
86-73-7	Fluorene	10 U	10	
118-74-1	Hexachlorobenzene	10 U	10	
87-68-3	Hexachlorobutadiene	10 U	10	
77-47-4	Hexachlorocyclopentadiene	10 U	10	
67-72-1	Hexachloroethane	10 U	10	
193-39-5	Indeno(1,2,3-cd)pyrene	10 U	10	
78-59-1	Isophorone	10 U	10	
621-64-7	N-Nitrosodi-n-propylamine	10 U	10	
62-75-9	N-Nitrosodimethylamine	10 U	10	
86-30-6	N-Nitrosodiphenylamine	10 U	10	
91-20-3	Naphthalene	10 U	10	
98-95-3	Nitrobenzene	10 U	10	
87-86-5	Pentachlorophenol (PCP)	50 U	50	
85-01-8	Phenanthrene	10 U	10	
108-95-2	Phenol	10 U	10	
129-00-0	Pyrene	10 U	10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Extracted: 9/29/14
Date Analyzed: 9/30/14 15:53

Sample Name: Method Blank
Lab Code: RQ1411577-01

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\093014\AY237.D\

Analysis Lot: 414127
Extraction Lot: 219226
Instrument Name: R-MS-54
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	99	28-157	9/30/14 15:53	
2-Fluorobiphenyl	72	39-119	9/30/14 15:53	
2-Fluorophenol	52	10-105	9/30/14 15:53	
Nitrobenzene-d5	76	37-117	9/30/14 15:53	
Phenol-d6	35	10-107	9/30/14 15:53	
p-Terphenyl-d14	115	40-133	9/30/14 15:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 16:13

Sample Name: Method Blank
Lab Code: RQ1411577-01 **Units:** µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D **Analysis Lot:** 414483
Prep Method: EPA 3510C **Extraction Lot:** 219226
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY176.D\ **Instrument Name:** R-MS-51
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	10 U	10	
95-50-1	1,2-Dichlorobenzene	10 U	10	
541-73-1	1,3-Dichlorobenzene	10 U	10	
106-46-7	1,4-Dichlorobenzene	10 U	10	
95-95-4	2,4,5-Trichlorophenol	10 U	10	
88-06-2	2,4,6-Trichlorophenol	10 U	10	
120-83-2	2,4-Dichlorophenol	10 U	10	
105-67-9	2,4-Dimethylphenol	10 U	10	
51-28-5	2,4-Dinitrophenol	50 U	50	
121-14-2	2,4-Dinitrotoluene	10 U	10	
606-20-2	2,6-Dinitrotoluene	10 U	10	
91-58-7	2-Choronaphthalene	10 U	10	
95-57-8	2-Chlorophenol	10 U	10	
91-57-6	2-Methylnaphthalene	10 U	10	
95-48-7	2-Methylphenol	10 U	10	
88-74-4	2-Nitroaniline	50 U	50	
88-75-5	2-Nitrophenol	10 U	10	
91-94-1	3,3'-Dichlorobenzidine	10 U	10	
	3- and 4-Methylphenol Coelution	10 U	10	
99-09-2	3-Nitroaniline	50 U	50	
534-52-1	4,6-Dinitro-2-methylphenol	50 U	50	
101-55-3	4-Bromophenyl Phenyl Ether	10 U	10	
59-50-7	4-Chloro-3-methylphenol	10 U	10	
106-47-8	4-Chloroaniline	10 U	10	
7005-72-3	4-Chlorophenyl Phenyl Ether	10 U	10	
100-01-6	4-Nitroaniline	50 U	50	
100-02-7	4-Nitrophenol	50 U	50	
83-32-9	Acenaphthene	10 U	10	
208-96-8	Acenaphthylene	10 U	10	
120-12-7	Anthracene	10 U	10	
56-55-3	Benz(a)anthracene	10 U	10	
50-32-8	Benzo(a)pyrene	10 U	10	
205-99-2	Benzo(b)fluoranthene	10 U	10	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 16:13

Sample Name: Method Blank
Lab Code: RQ1411577-01

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY176.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
191-24-2	Benzo(g,h,i)perylene	10 U	10	
207-08-9	Benzo(k)fluoranthene	10 U	10	
100-51-6	Benzyl Alcohol	10 U	10	
108-60-1	2,2'-Oxybis(1-chloropropane)	10 U	10	
111-91-1	Bis(2-chloroethoxy)methane	10 U	10	
111-44-4	Bis(2-chloroethyl) Ether	10 U	10	
117-81-7	Bis(2-ethylhexyl) Phthalate	10 U	10	
85-68-7	Butyl Benzyl Phthalate	10 U	10	
86-74-8	Carbazole	10 U	10	
218-01-9	Chrysene	10 U	10	
84-74-2	Di-n-butyl Phthalate	10 U	10	
117-84-0	Di-n-octyl Phthalate	10 U	10	
53-70-3	Dibenz(a,h)anthracene	10 U	10	
132-64-9	Dibenzofuran	10 U	10	
84-66-2	Diethyl Phthalate	10 U	10	
131-11-3	Dimethyl Phthalate	10 U	10	
206-44-0	Fluoranthene	10 U	10	
86-73-7	Fluorene	10 U	10	
118-74-1	Hexachlorobenzene	10 U	10	
87-68-3	Hexachlorobutadiene	10 U	10	
77-47-4	Hexachlorocyclopentadiene	10 U	10	
67-72-1	Hexachloroethane	10 U	10	
193-39-5	Indeno(1,2,3-cd)pyrene	10 U	10	
78-59-1	Isophorone	10 U	10	
621-64-7	N-Nitrosodi-n-propylamine	10 U	10	
62-75-9	N-Nitrosodimethylamine	10 U	10	
86-30-6	N-Nitrosodiphenylamine	10 U	10	
91-20-3	Naphthalene	10 U	10	
98-95-3	Nitrobenzene	10 U	10	
87-86-5	Pentachlorophenol (PCP)	50 U	50	
85-01-8	Phenanthrene	10 U	10	
108-95-2	Phenol	10 U	10	
129-00-0	Pyrene	10 U	10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Collected: NA
Date Received: NA
Date Extracted: 9/29/14
Date Analyzed: 10/1/14 16:13

Sample Name: Method Blank
Lab Code: RQ1411577-01

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973A\DATA\100114\CY176.D\

Analysis Lot: 414483
Extraction Lot: 219226
Instrument Name: R-MS-51
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	98	28-157	10/1/14 16:13	
2-Fluorobiphenyl	73	39-119	10/1/14 16:13	
2-Fluorophenol	49	10-105	10/1/14 16:13	
Nitrobenzene-d5	75	37-117	10/1/14 16:13	
Phenol-d6	34	10-107	10/1/14 16:13	
p-Terphenyl-d14	99	40-133	10/1/14 16:13	



ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Analyzed: 9/29/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit			
		R1407529-LCS			R1407529-DLCS								
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec						
Oil and Grease, Nonpolar (SGT-HEM)	1664A	18.4	20.6	90	19.0	20.6	92	64 - 132	3	34			

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Analyzed: 10/2/14

**Lab Control Sample Summary
Inorganic Parameters**

Units: $\mu\text{g/L}$
Basis: NA

**Lab Control Sample
R1407529-LCS**

Analyte Name	Method	Result	Spike		% Rec Limits
			Amount	% Rec	
Arsenic, Dissolved	6010C	37.3	40	93	80 - 120
Lead, Dissolved	6010C	551	500	110	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Analyzed: 10/4/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: $\mu\text{g/L}$
Basis: NA

Analysis Lot: 414548

Analyte Name	Lab Control Sample RQ1412173-02			Duplicate Lab Control Sample RQ1412173-03			% Rec	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Acetone	20.7	20.0	104	20.4	20.0	102	51 - 146	2	30
Benzene	19.9	20.0	100	20.8	20.0	104	76 - 118	5	30
Bromodichloromethane	22.6	20.0	113	24.0	20.0	120	79 - 122	6	30
Bromoform	25.1	20.0	126	26.5	20.0	133	65 - 138	6	30
Bromomethane	15.9	20.0	80	15.1	20.0	76	41 - 159	5	30
2-Butanone (MEK)	21.0	20.0	105	20.4	20.0	102	66 - 129	3	30
Carbon Disulfide	19.3	20.0	96	17.2	20.0	86	63 - 141	12	30
Carbon Tetrachloride	20.0	20.0	100	22.0	20.0	110	66 - 128	10	30
Chlorobenzene	20.0	20.0	100	20.9	20.0	104	80 - 121	4	30
Chloroethane	18.8	20.0	94	21.0	20.0	105	71 - 128	11	30
Chloroform	19.8	20.0	99	20.5	20.0	102	76 - 120	3	30
Chloromethane	18.2	20.0	91	18.3	20.0	91	64 - 140	<1	30
Dibromochloromethane	23.4	20.0	117	24.4	20.0	122	79 - 125	4	30
1,1-Dichloroethane	18.6	20.0	93	19.4	20.0	97	76 - 128	5	30
1,2-Dichloroethane	22.7	20.0	114	23.9	20.0	120	72 - 130	5	30
1,1-Dichloroethene	21.2	20.0	106	21.7	20.0	109	74 - 135	3	30
cis-1,2-Dichloroethene	19.2	20.0	96	19.7	20.0	99	80 - 121	3	30
trans-1,2-Dichloroethene	18.7	20.0	93	19.5	20.0	98	78 - 124	4	30
1,2-Dichloropropane	21.4	20.0	107	21.6	20.0	108	80 - 119	1	30
cis-1,3-Dichloropropene	23.0	20.0	115	23.9	20.0	120	77 - 125	4	30
trans-1,3-Dichloropropene	24.4	20.0	122	25.3	20.0	127 *	72 - 123	4	30
Ethylbenzene	18.4	20.0	92	18.9	20.0	94	76 - 120	2	30
2-Hexanone	23.5	20.0	117	23.3	20.0	116	61 - 131	<1	30
Methylene Chloride	20.2	20.0	101	20.9	20.0	104	73 - 122	3	30
4-Methyl-2-pentanone (MIBK)	24.0	20.0	120	23.7	20.0	118	68 - 129	1	30
Styrene	21.6	20.0	108	22.2	20.0	111	81 - 122	3	30
1,1,2,2-Tetrachloroethane	18.8	20.0	94	19.1	20.0	95	74 - 127	1	30
Tetrachloroethene	21.1	20.0	105	21.2	20.0	106	69 - 124	<1	30
Toluene	20.3	20.0	101	20.9	20.0	104	77 - 120	3	30
1,1,1-Trichloroethane	20.2	20.0	101	20.4	20.0	102	71 - 123	1	30
1,1,2-Trichloroethane	22.1	20.0	110	24.3	20.0	122 *	79 - 117	10	30
Trichloroethene	23.1	20.0	116	23.8	20.0	119	76 - 123	3	30
Vinyl Chloride	17.1	20.0	85	17.5	20.0	87	69 - 136	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Analyzed: 10/4/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: $\mu\text{g/L}$
Basis: NA

Analysis Lot: 414548

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample					RPD Limit	
	RQ1412173-02			RQ1412173-03						
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD		
o-Xylene	20.5	20.0	103	21.5	20.0	107	77 - 131	4	30	
m,p-Xylenes	41.1	40.0	103	41.0	40.0	103	78 - 123	<1	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Analyzed: 9/30/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 219226

Analyte Name	Lab Control Sample RQ1411577-02				Duplicate Lab Control Sample RQ1411577-03				RPD	Limit		
	Result	Spike			Result	Spike						
		Amount	% Rec	Amount		% Rec	Limits					
1,2,4-Trichlorobenzene	61.1	100	61		67.8	100	68	10 - 127	11	30		
1,2-Dichlorobenzene	56.4	100	56		63.8	100	64	23 - 130	13	30		
1,3-Dichlorobenzene	57.1	100	57		61.4	100	61	21 - 90	7	30		
1,4-Dichlorobenzene	56.8	100	57		63.2	100	63	10 - 124	10	30		
2,4,5-Trichlorophenol	97.8	100	98		110	100	110	62 - 117	12	30		
2,4,6-Trichlorophenol	94.1	100	94		99.1	100	99	62 - 115	5	30		
2,4-Dichlorophenol	89.7	100	90		96.6	100	97	62 - 109	7	30		
2,4-Dimethylphenol	87.8	100	88		90.7	100	91	28 - 100	3	30		
2,4-Dinitrophenol	82.6	100	83		97.7	100	98	40 - 156	17	30		
2,4-Dinitrotoluene	102	100	102		106	100	106	69 - 122	4	30		
2,6-Dinitrotoluene	100	100	100		109	100	109	48 - 125	9	30		
2-Chloronaphthalene	78.9	100	79		87.9	100	88	47 - 98	11	30		
2-Chlorophenol	78.1	100	78		85.1	100	85	42 - 112	9	30		
2-Methylnaphthalene	66.8	100	67		76.1	100	76	34 - 102	13	30		
2-Methylphenol	75.5	100	76		80.2	100	80	51 - 95	5	30		
2-Nitroaniline	101	100	101		103	100	103	60 - 119	2	30		
2-Nitrophenol	87.6	100	88		96.5	100	96	60 - 113	9	30		
3,3'-Dichlorobenzidine	81.3	100	81		88.4	100	88	44 - 114	8	30		
3- and 4-Methylphenol Coelution	147	200	74		159	200	79	49 - 89	7	30		
3-Nitroaniline	82.8	100	83		82.8	100	83	49 - 110	<1	30		
4,6-Dinitro-2-methylphenol	95.6	100	96		102	100	102	65 - 141	6	30		
4-Bromophenyl Phenyl Ether	94.5	100	95		98.0	100	98	63 - 124	3	30		
4-Chloro-3-methylphenol	95.2	100	95		101	100	101	42 - 124	6	30		
4-Chloroaniline	82.9	100	83		84.0	100	84	40 - 111	1	30		
4-Chlorophenyl Phenyl Ether	89.3	100	89		99.5	100	99	59 - 112	11	30		
4-Nitroaniline	88.7	100	89		90.6	100	91	61 - 122	2	30		
4-Nitrophenol	45.1	100	45		51.3	100	51	10 - 126	12	30		
Acenaphthene	85.1	100	85		88.8	100	89	54 - 125	5	30		
Acenaphthylene	88.9	100	89		93.9	100	94	69 - 111	5	30		
Anthracene	94.1	100	94		99.0	100	99	55 - 116	5	30		
Benz(a)anthracene	91.6	100	92		98.3	100	98	66 - 110	6	30		
Benzo(a)pyrene	93.8	100	94		101	100	101	44 - 114	7	30		
Benzo(b)fluoranthene	93.2	100	93		97.8	100	98	64 - 122	5	30		

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Unicorn Management Consultants
Project: Union Rd #2011-100 9/25/14/ 2011-100
Sample Matrix: Water

Service Request: R1407529
Date Analyzed: 9/30/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 219226

Analyte Name	Lab Control Sample RQ1411577-02			Duplicate Lab Control Sample RQ1411577-03					RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits			
Benzo(g,h,i)perylene	92.5	100	92	98.2	100	98	60 - 127	6	30	
Benzo(k)fluoranthene	87.8	100	88	89.3	100	89	49 - 133	1	30	
Benzyl Alcohol	78.9	100	79	87.4	100	87	31 - 109	10	30	
2,2'-Oxybis(1-chloropropane)	101	100	101	108	100	108	44 - 112	7	30	
Bis(2-chloroethoxy)methane	90.8	100	91	97.0	100	97	53 - 142	6	30	
Bis(2-chloroethyl) Ether	81.5	100	81	86.9	100	87	56 - 106	7	30	
Bis(2-ethylhexyl) Phthalate	113	100	113	124	100	124	62 - 124	9	30	
Butyl Benzyl Phthalate	99.9	100	100	108	100	108	41 - 148	8	30	
Carbazole	98.7	100	99	99.5	100	99	66 - 117	<1	30	
Chrysene	88.0	100	88	96.7	100	97	57 - 118	10	30	
Di-n-butyl Phthalate	110	100	110	114	100	114	57 - 139	4	30	
Di-n-octyl Phthalate	118	100	118	126	100	126 *	77 - 120	7	30	
Dibenz(a,h)anthracene	98.5	100	98	104	100	104	58 - 132	6	30	
Dibenzofuran	83.0	100	83	87.1	100	87	58 - 105	5	30	
Diethyl Phthalate	97.1	100	97	106	100	106	65 - 122	9	30	
Dimethyl Phthalate	92.3	100	92	96.1	100	96	69 - 115	4	30	
Fluoranthene	101	100	101	105	100	105	62 - 123	4	30	
Fluorene	85.5	100	86	92.6	100	93	60 - 112	8	30	
Hexachlorobenzene	95.9	100	96	96.7	100	97	76 - 119	1	30	
Hexachlorobutadiene	59.3	100	59	62.8	100	63	16 - 95	7	30	
Hexachlorocyclopentadiene	48.1	100	48	55.2	100	55	10 - 99	14	30	
Hexachloroethane	54.4	100	54	59.3	100	59	15 - 92	9	30	
Indeno(1,2,3-cd)pyrene	97.0	100	97	101	100	101	64 - 126	4	30	
Isophorone	93.4	100	93	102	100	102	61 - 128	9	30	
N-Nitrosodi-n-propylamine	91.4	100	91	95.9	100	96	51 - 119	5	30	
N-Nitrosodimethylamine	58.6	100	59	65.6	100	66	37 - 67	11	30	
N-Nitrosodiphenylamine	99.5	100	100	102	100	102	45 - 123	2	30	
Naphthalene	65.2	100	65	74.4	100	74	36 - 95	13	30	
Nitrobenzene	82.0	100	82	90.2	100	90	51 - 113	9	30	
Pentachlorophenol (PCP)	74.1	100	74	77.7	100	78	56 - 146	5	30	
Phenanthrene	95.5	100	96	102	100	102	58 - 118	6	30	
Phenol	38.7	100	39	44.4	100	44	10 - 113	12	30	
Pyrene	101	100	101	108	100	108	67 - 118	7	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

18560

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE _____ OF _____

Project Name Union Road		Project Number 2011-100		ANALYSIS REQUESTED (Include Method Number and Container Preservative)												
Project Manager Mike Persico		Report CC Ftrejo@unicornmgt.com		PRESERVATIVE	1	0				0	3	2				
Company/Address Unicorn Management Consultants 52 Federal Road, Suite 2C Danbury, CT 06810				NUMBER OF CONTAINERS	GC/AS VO4S 6220P 624 • CLS GC/AS SVODAS 6227D 835 GC VO4S 832 • 891/892 PESTICIDES 8881 • 888 PCBs 8882 • 888 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below)											
Phone # (203)205-9000		Email MPersico@unicornmgt.com			A5, P6 1664A / 06-SGT 601QC / AST, P7											
Sampler's Signature Gary Bohan		Sampler's Printed Name Gary Bohan			Preservative Key 0. NONE 1. HCl 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other _____											
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	REMARKS/ ALTERNATE DESCRIPTION											
MW-14S-2014	-001,002	9/25/14	0830	GW	7	X	X			X	X	X				
MW-13M-2014	-C03,014	9/25/14	0850	GW	7	X	X			X	X	X				
MW-13S-2014	005,006	9/25/14	0910	GW	7	X	X			X	X	X				
MW-12S-2014	007,008	9/25/14	0930	GW	7	X	X			X	X	X				
MW-12M-2014	-C01,010	9/25/14	0945	GW	7	X	X			X	X	X				
MW-12D-2014	-011,012	9/25/14	1000	GW	7	X	X			X	X	X				
MW-11S-2014	013,014	9/25/14	1020	GW	7	X	X			X	X	X				
MW-11M-2014	015,016	9/25/14	1030	GW	7	X	X			X	X	X				
MW-10S-2014	017,018	9/25/14	1050	GW	7	X	X			X	X	X				
MW-10M-2014	019,020	9/25/14	1110	GW	7	X	X			X	X	X				
MW-10D-2014	021,022	9/25/14	1125	GW	7	X	X			X	X	X				
SPECIAL INSTRUCTIONS/COMMENTS Metals Dissolved Metals - Arsenic, Lead Total Metals - Arsenic, Lead					TURNAROUND REQUIREMENTS				REPORT REQUIREMENTS				INVOICE INFORMATION			
					RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day				I. Results Only II. Results + OC Summaries (LCS, DUP, MS/MSD as required) III. Results + OC and Calibration Summaries IV. Data Validation Report with Raw Data				PO # 2011-100 BILL TO: imiller@unicornmgt.com Isabel Miller			
					Standard REQUESTED REPORT DATE _____				Edata <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				RECEIVED BY R1407529			
See QAPP <input type="checkbox"/>																
STATE WHERE SAMPLES WERE COLLECTED NY																
RELINQUISHED BY	RECEIVED BY	REUNQUALIFIED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY								
<i>Gary Bohan</i> Printed Name Gary Bohan	<i>Gary Bohan</i> Printed Name Gary Bohan	Signature <i>Gary Bohan</i>		Signature <i>Gary Bohan</i>		Signature <i>Gary Bohan</i>		Signature <i>Gary Bohan</i>								
Firm UMC	Firm UMC	Printed Name <i>Gary Bohan</i>		Printed Name <i>Gary Bohan</i>		Printed Name <i>Gary Bohan</i>		Printed Name <i>Gary Bohan</i>								
Date/Time 9/25/14 1350	Date/Time 9/25/14 1350	Date/Time 9/25/14 1350		Date/Time 9/25/14 1350		Date/Time 9/25/14 1350		Date/Time 9/25/14 1350								

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 Unicorn Management Consultants
 Union Rd #2011-100 9/25/14



Cooler Receipt and Preserva

R1407529
Unicorn Management Consultants
Union Rd #2011-100 9/26/14

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Project/Client Unicorn

Folder Numbr

Cooler received on 9/25/14 by: dm

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
4	Circle: Wet Ice Dry Ice Gel packs present?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

5a	Perchlorate samples have required headspace?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA
5b	Did VOA vials, Alk,or Sulfide have sig* bubbles?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA
6	Where did the bottles originate?	ALS/ROC CLIENT
7	Soil VOA received as:	Bulk Encore 5035set <input type="checkbox"/> NA

8. Temperature Readings Date: 9/25/14 Time: 1440ID: IR#3 IR#4From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>5.0°</u>	<u>3.1°</u>	<u>-1.7°</u>				
Correction Factor (°C)	<u>-0.2°</u>	<u>-0.2°</u>	<u>-0.2°</u>				
Corrected Temp (°C)	<u>4.8°</u>	<u>2.9°</u>	<u>-2.5°</u>				
Within 0-6°C?	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: Ice melted Poorly Packed Same Day Rule& Client Approval to Run Samples: Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location:	<u>R-coz</u>	by <u>dm</u>	on <u>9/25/14</u>	at <u>1440</u>
5035 samples placed in storage location:		by _____	on _____	at _____

PC Secondary Review: KB 9/25/14Cooler Breakdown: Date: 9/26/14 Time: 1225 by: Q

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO ₃								
≤2	H ₂ SO ₄			<u>WC126101D</u>	<u>4/15</u>				
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	ZnAcetate	-	-						
	HCl	**	**	<u>4/13070</u>	<u>8/5</u>				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust:

Bottle lot numbers: 4-086-003, 070714-2AAA, 011314-1BLT

Other Comments:

PC Secondary Review: KB 10/13/14

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

R1407529
Unicorn Management Consultants
Union Rd #2011-100 9/26/14



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