# Periodic Review Report

7503 Niagara Falls Boulevard (BCP Site No. C932126) Niagara Falls, New York

July2013 0101-013-001

**Prepared For:** 

GLR Holdings, LLC

Prepared By:



# PERIODIC REVIEW REPORT

# 7503 NIAGARA FALLS BOULEVARD SITE (BCP SITE No. C932126)

#### NIAGARA FALLS, NEW YORK

July 2013 0101-013-001

Prepared for:

#### **GLR Holdings, LLC**

Prepared By:



Benchmark Environmental Engineering & Science, PLLC 2558 Hamburg Turnpike, Suite 300 Buffalo, NY 14218 (716)856-0599

#### PERIODIC REVIEW REPORT

# 7503 Niagara Falls Blvd Site

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#### PERIODIC REVIEW REPORT

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#### 1.0 Introduction

Benchmark Environmental Engineering and Science, PLLC (Benchmark) has prepared this Periodic Review Report (PRR), on behalf of GLR Holdings, LLC, to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C932126.

GLR Holdings, LLC redeveloped two adjoining parcels, 7503 and 7543-7555 Niagara Falls Blvd) as a fast food restaurant (see Figures 1 and 2). The 7503 Niagara Falls Boulevard parcel (Site) was investigated and subsequently deemed acceptable by the NYSDEC for admission into the BCP. The former 7543-7555 Niagara Falls Blvd parcel was not part of the BCP application, and is not subject to the Site Management Plan. The historic parcels were merged into one legal parcel addressed as 7515 Niagara Falls Blvd, but the BCP boundary remained the same (see Figure 3).

This PRR has been prepared for the 7503 Niagara Falls Boulevard Site in accordance with NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* The NYSDEC's auto-generated Institutional and Engineering Controls Certification Form has been completed for the Site (see Appendix A). This PRR and the associated inspections form has been completed for the May 16, 2012 to May 16, 2013 reporting period.

#### 1.1 Background

The 7503 Niagara Falls Boulevard Site encompasses approximately 0.89-acres of land which was redeveloped as part of a fast food restaurant (Wendy's) (see Figures 1, 2, and 3). Based on the historical use of the site, soil/fill and groundwater were impacted with volatile organic compounds (VOCs) requiring cleanup. Interim Remedial Measures (IRMs) including in-situ groundwater treatment and excavation followed by off-site disposal of contaminated soil/fill were completed at the site. An active sub-slab depressurization system (ASD) system was installed in the newly constructed building and long-term groundwater monitoring was initiated on-site as part of the Site Management Plan (SMP).



#### 1.2 Compliance and Recommendations

At the time of the site inspection, the site was fully compliant with the SMP. No modification to the current SMP is recommended at this time.



#### 2.0 SITE OVERVIEW

Beginning in the late 1960s and continuing through the mid-1990s, the Site was occupied by several commercial establishments. These included various restaurants, auto parts sales and auto repair facilities. The property was vacant since approximately 1998.

Prior to remediation, the Site was bounded by Niagara Falls Boulevard to the north, a vacant lot and former apartment buildings to the east (i.e., 7543-7555 Niagara Falls Blvd owned by GLR), private residences to the south, and a commercial (fast-food restaurant) property to the west (i.e., 7403 Niagara Falls Blvd.). A concrete slab remnant from a former building foundation was present across the majority of the western portion of the property. The remainder of the Site was generally covered by asphalt.

Environmental site investigations were conducted at the Site between July 2004 and October 2005, and revealed the presence of certain halogenated volatile organic compounds (VOCs), including tetrachloroethene (PCE); trichloroethene (TCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); vinyl chloride (VC); and 1,1,2-trichloroethane (1,1,2-TCA) in on-Site soil and groundwater.

In May 2006, a Brownfield Cleanup Agreement (BCA) was executed by GLR Holdings, LLC with the Department, and remedial efforts under the BCP began in June 2006 with the Remedial Investigation (RI).

Based on the findings of the RI, Interim Remedial Measures (IRM) were initiated in November 2006. Groundwater treatment utilizing in-situ enhanced bioremediation of impacted groundwater and saturated soils via direct injection of hydrogen releasing compounds (HRC®) into the impacted zones. HRC® is a specially formulated lactic acid-based compound developed by Regenesis Corporation for in-situ treatment of chlorinated VOC contamination in groundwater.

Excavation and off-site disposal of approximately 120-cubic yards (cy) of contaminated soil/fill, and backfilling of excavation with clean material was conducted during redevelopment activities. Remedial activities were completed in October 2007. The RI/AA/IRM report and SMP for the Site were approved by the Department in December 2007. The Certificate of Completion (COC) was issued for the Site in February 2008.



#### 3.0 SITE MANAGEMENT PLAN

A SMP was prepared for the Site, and approved by the Department in December 2007. The SMP includes an Operation, Monitoring and Maintenance Plan, a Soil/Fill Management Plan, and a copy of the Environmental Easements. A brief description of the components of the SMP is presented below.

#### 3.1 Operation, Monitoring and Maintenance Plan

The Operation, Monitoring and Maintenance (OM&M) Plan consists of three major components, including the Active Sub-slab Depressurization System (ASD); the Long-Term Groundwater Monitoring (LTGWM) Plan; and the Annual Inspection & Certification Program.

#### 3.1.1 Active Sub-slab Depressurization System

An ASD system was installed within the newly constructed fast food restaurant building. As required by the Department approved SMP, the ASD system must: (1) be operated continuously to provide a negative pressure field; (2) be visually inspected periodically to verify proper operation; and (3) annually inspected and certified that the system is performing properly and remains an effective engineering control (EC).

During the annual Site Inspection, the ASD system was inspected. A vacuum reading of 0.5 inches water column (WC) was noted on the magnehelic vacuum gauge at the time of the inspection.

During verification of the ASD system operation, it was noted that the indicator light on the system was sporadically malfunctioning. A replacement indicator light assembly has been ordered and will be installed upon receipt. It should be noted that it was recorded on the October inspection log that the indicator tubing had been dislodged and the indicator light had worked properly. NYSDEC will be notified upon installation. Copies of the ASD periodic visual inspection logs are included in Appendix C.



#### 3.1.2 Long-Term Groundwater Monitoring Plan

A Long-Term Groundwater Monitoring (LTGWM) Plan is required to monitor the effectiveness of the source area removals, treatment, and controls implemented in accordance with the Brownfield Cleanup Agreement.

Groundwater monitoring was conducted on June 12, 2013. The total chlorinated VOCs concentrations slightly increased, while the concentrations of trichloroethene, 1,2-dichloroethene, and tetrachloroethene have remained non-detect (ND) since June 2012. The increase in cVOC concentrations is reasonably attributable to the continued reductive dechlorination and attenuation. The annual groundwater monitoring report is included in Appendix D. Continued annual groundwater monitoring is recommended, with the next monitoring event to be conducted in spring 2013.

#### 3.1.3 Annual Inspection and Certification Program

The Annual Inspection and Certification Program outlines the requirements for the Site, to certify and attest that the institutional controls and/or engineering controls employed at the Site are unchanged from the previous certification. The Annual Certification will primarily consist of an annual Site Inspection to complete the auto-generated NYSDEC Institutional and Engineering Controls (IC/EC) Certification Form. The site inspection will verify that the IC/ECs:

- Are in place and effective.
- Are performing as designed.
- That nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- That nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls.
- Access is available to the Site to evaluate continued maintenance of such controls.

A Site Inspection of the property was conducted by a Benchmark Qualified Environmental Professional (QEP) on June 12, 2013. At the time of the inspection, the



property was being used as a fast food restaurant (Wendy's), with surface parking, paved walkways and landscaped areas. No observable indication of intrusive activities was noted during the Site Inspection. The restaurant is on municipal water supply, and no observable use of groundwater was noted during the site inspection.

The completed Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form is included in Appendix A. A photolog of the site inspection is included in Appendix B.

#### 3.2 Soil/Fill Management Plan

A Soil/Fill Management Plan (SFMP) was included in the approved-SMP for the Site. The SFMP provides guidelines for the management of soil and fill material during any future intrusive actives.

No intrusive activities requiring management of on-Site soil or fill material; or the placment of backfill materials occurred during the montoring period.

#### 3.3 Engineering and Institutional Control Requirements and Compliance

As detailed in the Environmental Easements, several Institutional and Engineering Controls (IC/ECs) need to be maintained as a requirement of the BCAs for the Site.

#### 3.3.1 Institutional Controls

- Groundwater-Use Restriction the use of groundwater for potable and non-potable purposes is prohibited; and
- Land-Use Restriction: The controlled property may be used for commercial and/or industrial use; and
- Implementation of the SMP including the Groundwater Monitoring Plan, Soil/Fill Management Plan, and Monitoring Plan.

#### 3.3.2 Engineering Controls

Vapor Mitigation – ASD System operated continuously and maintained. The ASD system is operational.



#### 4.0 CONCLUSIONS AND RECOMMENDATIONS

- At the time of the site inspection, the Site was in compliance with the Site Management Plan.
- ASD System indicator light to be replaced. Vacuum readings confirm system is operating properly.
- Long-term Groundwater Monitoring will be continued, with the next annual monitoring event to occur in spring 2014.



#### 5.0 DECLARATION/LIMITATION

Benchmark Environmental Engineering and Science, PLLC, personnel conducted the annual site inspections for Brownfield Cleanup Program Site No. C932126, Niagara Falls, New York, according to generally accepted practices. This report complied with the scope of work provided to GLR Holdings, LLC by Benchmark Environmental Engineering and Science, PLLC.

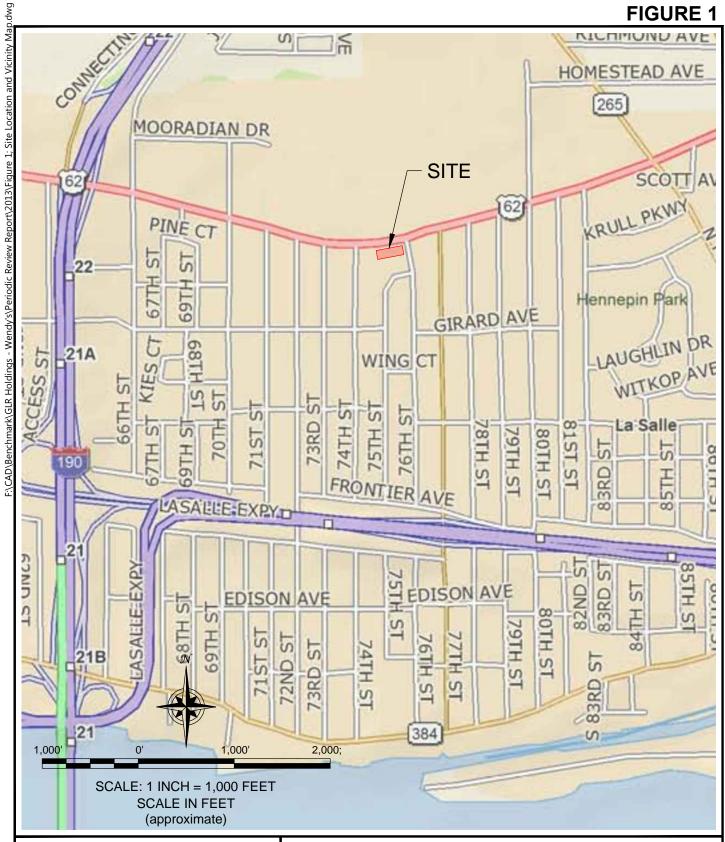
This report has been prepared for the exclusive use of GLR Holdings, LLC. The contents of this report are limited to information available at the time of the site inspection. The findings herein may be relied upon only at the discretion of GLR Holdings, LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering and Science, PLLC.



# **FIGURES**



#### FIGURE 1





2558 HAMBURG TURNPIKE SUITE 300 BUFFALO, NY 14218 (716) 856-0599

PROJECT NO.: 0101-013-001

DATE: JUNE 2013 DRAFTED BY: JGT

#### SITE LOCATION AND VICINITY MAP

PERIODIC REVIEW REPORT 7503 NIAGARA FALLS BOULEVARD SITE

> NIAGARA FALLS, NEW YORK PREPARED FOR GLR HOLDINGS, LLC







2558 HAMBURG TURNPIKE SUITE 300 BUFFALO, NY 14218 (716) 856-0599

PROJECT NO.: 0101-013-001

DATE: MAY 2010

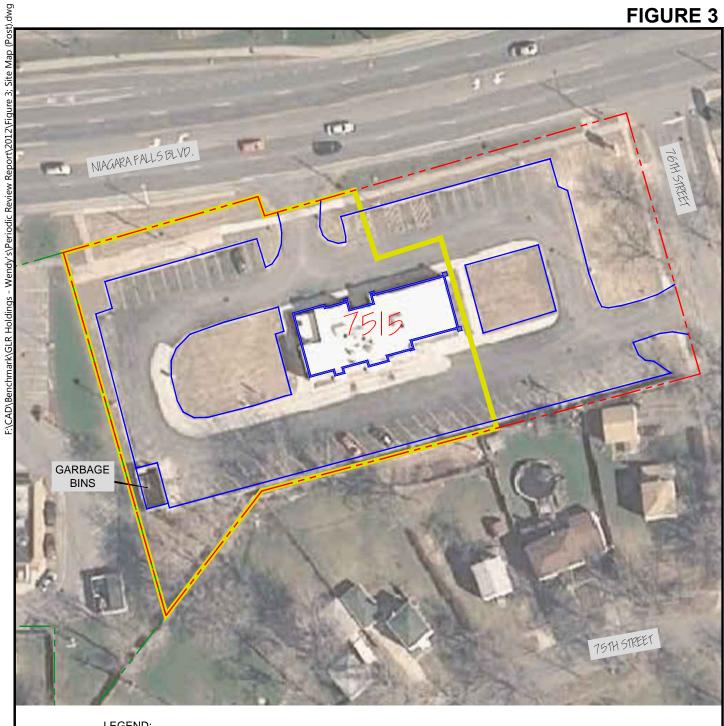
DRAFTED BY: AJZ/NTM

# **SITE MAP (PRE-REMEDIATION)**

PERIODIC REVIEW REPORT 7503 NIAGARA FALLS BOULEVARD SITE

> NIAGARA FALLS, NEW YORK PREPARED FOR GLR HOLDINGS, LLC

FIGURE 3





**REVISED PARCEL BOUNDARY** 

**BCP PROPERTY BOUNDARY** 

PARCEL BOUNDARY

WENDY'S STORE & PAVEMENT

60' 60' 120'

SCALE: 1 INCH = 60 FEET SCALE IN FEET (approximate)





2558 HAMBURG TURNPIKE SUITE 300 BUFFALO, NY 14218 (716) 856-0599

PROJECT NO.: 0101-013-001

DATE: MAY 2010

DRAFTED BY: BCH/NTM

### SITE PLAN (POST-REMEDIATION)

PERIODIC REVIEW REPORT 7503 NIAGARA FALLS BOULEVARD SITE

> NIAGARA FALLS, NEW YORK PREPARED FOR GLR HOLDINGS, LLC

# **APPENDIX A**

**INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORM** 





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



Site N	Site Details lo. C932126	Box '	1
Site N	ame 7503 Niagara Falls Blvd.		
City/To County	ddress: 7515 Niagara Falls Blvd Zip Code: 14302 own: Niagara Falls y: Niagara creage: 0.9		
Report	ting Period: May 16, 2012 to May 16, 2013		
		YES	NO
1. Is t	the information above correct?	X	
lf N	NO, include handwritten above or on a separate sheet.		
2. Ha tax	as some or all of the site property been sold, subdivided, merged, or undergone at map amendment during this Reporting Period?	a □	X
3. Ha	is there been any change of use at the site during this Reporting Period ee 6NYCRR 375-1.11(d))?		X
4. Hav	ive any federal, state, and/or local permits (e.g., building, discharge) been issued or at the property during this Reporting Period?	d 🗆	K
if y	ou answered YES to questions 2 thru 4, include documentation or evidence		
tha	at documentation has been previously submitted with this certification for	ce m.	
tha	at documentation has been previously submitted with this certification for the site currently undergoing development?	ce m.	8
tha	at documentation has been previously submitted with this certification for	m.	8
tha	at documentation has been previously submitted with this certification for	m.	NO NO
tha 5. Is ti	at documentation has been previously submitted with this certification for	m.    Box 2	•
5. Is the	at documentation has been previously submitted with this certification for the site currently undergoing development?  The current site use consistent with the use(s) listed below?	m.    Box 2	NO
5. Is the	at documentation has been previously submitted with this certification for the site currently undergoing development?  The current site use consistent with the use(s) listed below?  The current and Industrial	Box 2 YES	NO
6. Is the Cor	the site currently undergoing development?  The current site use consistent with the use(s) listed below?  The mmercial and Industrial  The all ICs/ECs in place and functioning as designed?  IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below	Box 2 YES	NO
6. Is the Corre	the site currently undergoing development?  the current site use consistent with the use(s) listed below?  mmercial and Industrial  all ICs/ECs in place and functioning as designed?  IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.	Box 2 YES	NO

	Box 2	2A	
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	YE\$	NO	
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.	,		
<ol> <li>Are the assumptions in the Qualitative Exposure Assessment still valid?</li> <li>(The Qualitative Exposure Assessment must be certified every five years)</li> </ol>	V		
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.			
SITE NO. C932126	Во	x 3	=
Description of Institutional Controls			
			-

Parcel	-
160.12-2-5	

Owner GLR Holdings, LLC Institutional Control

Site Management Plan Monitoring Plan O&M Plan Ground Water Use Restriction Landuse Restriction

- 2. Institutional Controls. The following controls apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees, and any person using the Controlled Property:
- A. The Controlled Property may be used for commercial or industrial use as long as the following long-term engineering controls are employed:
- 1. Excavations below site cover materials must be performed in accordance with applicable provisions of the Soil Fill Management section(s) of the 7503 Niagara Falls Blvd. Site Management Plan, dated October 2007 ("SMP") (or subsequent revisions thereof). Soil and fill below the cover materials must be handled and disposed in accordance with the SIVIP. Soil and fill material from off-site sources which is proposed for use as backfill must meet applicable provisions of the SMP.
- 2. Site groundwater quality will be periodically monitored according to the provisions of the Groundwater Monitoring Program section(s) of the SMP. The groundwater monitoring well(s) will be maintained and sampled, and the data reported in accordance with the provisions of the SMP.

The Grantor hereby acknowledges receipt of a copy of the NYSDEC-approved SMP dated October 2007. The SMP describes obligations that Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system on the Controlled Property, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. Upon notice of not less than thirty (30) days the Department in exercise of its discretion and consistent with applicable law may revise the SMP. This notice shall be a final agency determination. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Regional Remediation Engineer Region 9 NYSDEC 270 Michigan Avenue Buffalo, NY 14203-2999

or

Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, NY 12233

- B. The Controlled Property may not be used for a higher level of use such as unrestricted, residential, or restricted residential use and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.
- C. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

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

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

E. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

Box 4

#### **Description of Engineering Controls**

Parcel 160,12-2-5

**Engineering Control** 

Vapor Mitigation

- 1. Site surfaces will be constructed and maintained appropriately to prevent contact with potentially contaminated soils or groundwater. Various site cover materials (stone, concrete, asphalt pavement, vegetated soil, landscaping, etc) may function as a barrier to prevent human contact with contaminated site soils or groundwater.
- 2. An active sub-slab depressurization (ASD) system under the building floor controls potential releases of contaminated soil vapors into the building indoor air. This ASD system will be tested, and as long as the building is occupied (or as otherwise directed by the New York State Departments of Environmental Conservation and Health), will be continuously operated and maintained in accordance with the provisions of the SMP.

As required by the Department approved SMP, the ASD system must: (1) be operated continuously to provide a negative pressure field; (2) be visually inspected periodically to verify proper operation; (3) annually inspected and certified that the system is performing properly and remains an effective engineering control(EC).

Box	5
-----	---

#### Periodic Review Report (PRR) Certification Statements

	reflection Review Report (FRR) Certification Statements		
1.	I certify by checking "YES" below that:		
	<ul> <li>a) the Periodic Review report and all attachments were prepared under the direct reviewed by, the party making the certification;</li> </ul>	ction of	, and
	b) to the best of my knowledge and belief, the work and conclusions described in are in accordance with the requirements of the site remedial program, and gener engineering practices; and the information presented is accurate and compete.	n this c	ertification cepted
	o o, , , , , , , , , , , , , , , , , ,	YES	NO
		X	
2.	If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that following statements are true:	each Ir t all of t	nstitutional he
-	(a) the Institutional Control and/or Engineering Control(s) employed at this site is the date that the Control was put in-place, or was last approved by the Departme	uncha nt;	nged since
	(b) nothing has occurred that would impair the ability of such Control, to protect the environment;	oublic h	ealth and
	(c) access to the site will continue to be provided to the Department, to evaluate including access to evaluate the continued maintenance of this Control;	the ren	nedy,
	(d) nothing has occurred that would constitute a violation or failure to comply with Management Plan for this Control; and	n the S	ite
	(e) if a financial assurance mechanism is required by the oversight document for mechanism remains valid and sufficient for its intended purpose established in the	the sit	e, the ment.
		YES	NO
		À	
	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 th	ese iss	ues.
-	Signature of Owner, Remedial Party or Designated Representative Date		

#### IC CERTIFICATIONS SITE NO. C932126

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.

print name at 2 N Onion ST R	
am certifying as Account a conver	(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	0 21 13 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.

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

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

Stamp (Required for PE) Date

# **APPENDIX B**

SITE PHOTLOG



#### **SITE PHOTOGRAPHS**

Photo 1:



Photo 3:



Photo 2:



Photo 4:



Photo 1: North face of building (Looking Southwest)

Photo 2: East side of property (Looking North)

Photo 3: South West corner of building (Looking Northeast)

Photo 4: West side of property (Looking South)

0101-013-001



#### **SITE PHOTOGRAPHS**

Photo 5:



Photo 7:



Photo 6:



Photo 8:



Photo 5: West face of building (Looking Southwest)

Photo 6: North side of property (Looking West)

Photo 7: ASD System Inspection

Photo 8: ASD System gauge Inspection

0101-013-001



# **APPENDIX C**

**ASD PERIODIC VISUAL INSPECTION LOGS** 





Project Name:	GLR Holdings	Project No.: 0101-002-601
Project Location:	7515 Niagara Falls Blvd.	Client: GLR Holdings
Preparer's Name:	561/WAGBIR	Date/Time: 6-28-17
Notes:		
	~	
Monthly Operatir	ng Status:	
System(s) currentl	ly running? yes	□ no
Has the system be	een off-line in the past month	? ☐ yes ☐ no
		why (i.e. maintenance, part replacement, etc.):
	·	
What is the current	t Vacuum reading?	5
Visual Inspection:	:	
any piping disconnec	•	yes no
any cracks visible in	piping?	☐ yesno
ny new cracks visib	le in slab floor?	☐ yes ☐ no
lagnehelic guage re	ading 0?	yesno
yes to any question	above, please provide more	information below.
÷	<u>-</u>	



Change in Occupancy / Use of Space:
Please indicate general use of floor space?   Vineuum, WET Floom 51605
Has this general use changed in the past month?
If yes, please explain:
m yes, piedoc explairi.
System Modifications:
Have any modifications been made to the Cut, of the
If so please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:



Project Name: GLR Holdings	Project No.: 0101-002-601
Project Location: 7515 Niagara Falls Blvd	. Client: GLR Holdings
Preparer's Name: 500 WALTS	Date/Time: 7-/0-/2-
Notes:	
Monthly Operating Status:	
System(s) currently running? yes	□ no
Has the system been off-line in the past mo	
If yes, please list the dates and brief descrip	otion why (i.e. maintenance, part replacement, etc.):
•	
	-
What is the current Vacuum reading?	<i>-5</i>
Visual Inspection:	
ny piping disconnected?	□ yes
ny cracks visible in piping?	☐ yes ☐ no
ny new cracks visible in slab floor?	□ yes     no
agnehelic guage reading 0?	☐ yes → no
	☐ 300 /☐ 110
yes to any question above, please provide m	
	nore information below.
·	nore information below.
<u> </u>	nore information below.
	nore information below.
	nore information below.
	nore information below.



Change in Occupancy / Use of Space:
Please indicate general use of floor space? <u>Voccom</u> , <u>WET Flood SIGUS</u> Has this general use changed in the past month?   If yes, please explain:
System Modifications:
Have any modifications been made to the Outs OLL D
Have any modifications been made to the Sub-Slab Depressurization System?  yes If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:
If so, please list with date:



Project Name: GLR Holdings	Project No.: 0101-002-601
Project Location: 7515 Niagara Falls Blv	/d. Client: GLR Holdings ( /
Preparer's Name: Sent Warth	(om) Date/Time: 11:00 Am \$ 020
Notes:	
·	
Monthly Operating Status:	
System(s) currently running?	
Has the system been off-line in the past m	The state of the s
if yes, please list the dates and prief descr	ription why (i.e. maintenance, part replacement, etc.):
What is the current Vacuum reading?	15"
Visual Inspection:	
Any piping disconnected?	[] yes      no
ny cracks visible in piping?	☐ yes ☐ no
ny new cracks visible in slab floor?	☐ yes      no
lagnehelic guage reading 0?	yes no
yes to any question above, please provide	more information below.



Change in Occupancy / Use of Space:
Please indicate general use of floor space?
Please indicate general use of floor space? Wacuum, wes Thorn 51615
Has this general use changed in the past month? ☐ yes ☐ no
If yes, please explain:
System Modifications:
Have any modifications been made to the Sub-Slab Depressurization System?
If so, please list with date:



Project Name: GLR Holdings		Proj	Project No.: 0101-002-601			
Project Location:	7515 Niagara Falls Blvd.	Clier	Client: GLR Holdings			
Preparer's Name:	Muriotta Singl	eoh Date	e/Time:	a 10/2	07	
Notes:				10-10		
- 1700						
· · · · · · · · · · · · · · · · · · ·						
		· · · · · · · · · · · · · · · · · · ·				
	·		****			
					•	
Monthly Operatir	ng Status:					
System(s) current	ly running?		no			
· · · · · · · · · · · · · · · · · · ·	een off-line in the past month	7.00	<sup>2</sup> 110	no		
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Project Name:	GLR Holdings	Proje	ect No.: 0101-002-601
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## **APPENDIX D**

GROUNDWATER MONITORING REPORT





July 1, 2013

Mr. Brian Sadowski NYSDEC Region 9 270 Michigan Ave. Buffalo, New York 14203-2999

Re: Annual Groundwater Monitoring Results

7503 Niagara Falls Blvd. Site

BCP Site No: C932126

Dear Mr. Sadowski:

On behalf of our client, GLR Holdings, LLC, Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this correspondence related to long term groundwater monitoring of MW-14R. Groundwater sampling was performed on June 13, 2013 at the Wendy's Restaurant at 7503 Niagara Falls Boulevard, Niagara Falls, NY (see Figures 1 & 2).

Sampling was performed by Benchmark personnel using a 1.5-inch polyethylene disposable bailer. After three well volumes were purged, MW-14R was then sampled for Target Compound List (TCL) volatile organic compounds (VOCs) via USEPA Method 8260. Samples were then shipped under chain of custody command to TestAmerica Laboratories in Amherst, NY.

Analytical results are summarized on Table 1 (attached), the laboratory analytical report is attached in Attachment #1. The total chlorinated VOCs concentrations slightly increased, while the concentrations of trichloroethene, 1,2-dichlorethene, and tetrachlorethene has remained non-detect (ND) since June 2012. The increase in cVOC concentrations is reasonably attributable to the continued reductive dechlorination and attenuation of source material. Continued annual monitoring is recommended with the next groundwater monitoring event to be conducted during spring 2014.

Please contact us with any questions.

Sincerely,

Benchmark Environmental Engineering & Science, PLLC

Michael Lesakowski Project Manager

c. Greg Barkstrom, GLR Holdings, LLC File: 0101-013-001

## **TABLE**





#### TABLE 1

#### SUMMARY OF CHLORINATED VOCs GROUNDWATER ANALYTICAL DATA

## Long Term Groundwater Monitoring 7503 Niagara Falls Boulevard Site

			MW-14 / MW-14R									
Parameter <sup>1</sup>	GWQS/GV <sup>3</sup>	Baseline <sup>2</sup> (MW-14)	DEC 06 (MW-14)	JAN 07 (MW-14)	MAR 07 (MW-14)	JUN 07 (MW-14)	APR 08 (MW-14R)	MAY 09 (MW-14R)	APR 10 (MW-14R)	APR 11 (MW-14R)	JUN 12 (MW-14R)	JUN 13 (MW-14R)
Vinyl chloride	2	910 D	380	150	320	540	150 D	ND	1600 D	1600 D	3800	3900
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	1.4	1.1	ND	ND
1,1-Dichloroethene	5	85 D	140	21 J	21 J	60 J	3.9 J	ND	22	11	26 J	30 J
Trichloroethene	5	540 D	1500	300	150	330	10	ND	3.4	3.2	ND	ND
Tetrachloroethene	5	640	480	120	98	35	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	1300 D	520	240	500	1500	30	ND	110 D	44	100	120 J
cis-1,2-Dichloroethene	5	1100 D	570	220	370	850	310 D	ND	1200 D	930 D	2500	2700
Total cVOCs	NA	4575	3590	1051	1459	3315	504	ND	2937	2589	6426	6750

#### Notes:

- 1. Only chlorinated volatile organic compounds (cVOCs) are shown.
- 2. Baseline concentrations were collected in June 2006. Hydrogen Release Compound (HRC) injection was completed in November 2006.
- 3. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV), 6 NYCRR Part 703.
- 4. Concentrations are in micrograms per liter (ug/L).

#### Definitions:

- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
- D = Diluted sample result.
- ND = parameter not detected above laboratory detection limit.
- NA = Not Applicable

## **FIGURES**







2558 HAMBURG TURNPIKE SUITE 300 BUFFALO, NY 14218 (716) 856-0599

PROJECT NO.: 0101-012-001

DATE: JULY 2012

DRAFTED BY: JGT

### SITE PLAN

LONG-TERM GROUNDWATER MONITORING PLAN 7503 NIAGARA FALLS BOULEVARD SITE

NIAGARA FALLS, NEW YORK
PREPARED FOR
GLR HOLDINGS, LLC

### FIGURE 1





2558 HAMBURG TURNPIKE SUITE 300 BUFFALO, NY 14218 (716) 856-0599

PROJECT NO.: 0101-012-001

DATE: JULY 2012 DRAFTED BY: JGT

### SITE LOCATION AND VICINITY MAP

LONG-TERM GROUNDWATER MONITORING PLAN 7503 NIAGARA FALLS BOULEVARD SITE

> NIAGARA FALLS, NEW YORK PREPARED FOR GLR HOLDINGS, LLC

## **ATTACHMENT #1**

Laboratory Analytical Report





#### ANALYTICAL REPORT

Lab Number: L1310884

Client: Benchmark & Turnkey Companies

2558 Hamburg Turnpike

Suite 300

Buffalo, NY 14218

ATTN: Mike Lesakowski
Phone: (716) 856-0599

Project Name: GLR

Project Number: 0101-013-001

Report Date: 06/17/13

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



L1310884

**Project Name:** Lab Number: GLR

**Project Number:** Report Date: 06/17/13 0101-013-001

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1310884-01	MW-14R	NIAGARA FALLS	06/13/13 14:45
L1310884-02	TRIP BLANK	NIAGARA FALLS	06/13/13 00:00

Project Name:GLRLab Number:L1310884Project Number:0101-013-001Report Date:06/17/13

#### **Case Narrative**

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.



Project Name: GLR Lab Number: L1310884
Project Number: 0101-013-001 Report Date: 06/17/13

### **Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Title: Technical Director/Representative Date: 06/17/13

Cypthia fin Che. Cynthia McQueen

ANALYTICAL

## **ORGANICS**



## **VOLATILES**



Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

**SAMPLE RESULTS** 

Lab ID: L1310884-01 D

Client ID: MW-14R

Sample Location: NIAGARA FALLS

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/17/13 12:16

Analyst: MM

Date Collected: 06/13/13 14:45
Date Received: 06/13/13

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westb	orough Lab					
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	16.	100
1,2-Dichloropropane	ND		ug/l	100	30.	100
Dibromochloromethane	ND		ug/l	50	19.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	16.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	19.	100
Benzene	ND		ug/l	50	19.	100
Toluene	ND		ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	3900		ug/l	100	33.	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	30	J	ug/l	50	18.	100
trans-1,2-Dichloroethene	120	J	ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	17.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100



Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

**SAMPLE RESULTS** 

Lab ID: L1310884-01 D Date Collected: 06/13/13 14:45

Client ID: MW-14R Date Received: 06/13/13
Sample Location: NIAGARA FALLS Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westbore	ough Lab					
p/m-Xylene	ND		ug/l	250	70.	100
o-Xylene	ND		ug/l	250	70.	100
cis-1,2-Dichloroethene	2700		ug/l	250	70.	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	ND		ug/l	500	100	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	100	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Isopropylbenzene	ND		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
Methyl Acetate	ND		ug/l	200	38.	100
Cyclohexane	ND		ug/l	1000	54.	100
1,4-Dioxane	ND		ug/l	25000	7600	100
Freon-113	ND		ug/l	250	70.	100
Methyl cyclohexane	ND		ug/l	1000	63.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	97		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	105		70-130	
Dibromofluoromethane	97		70-130	



Not Specified

Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

**SAMPLE RESULTS** 

 Lab ID:
 L1310884-02
 Date Collected:
 06/13/13 00:00

 Client ID:
 TRIP BLANK
 Date Received:
 06/13/13

Client ID: TRIP BLANK Date Received: Sample Location: NIAGARA FALLS Field Prep:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/17/13 09:45

Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westbo	orough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.16	1
1,2-Dichloropropane	ND		ug/l	1.0	0.30	1
Dibromochloromethane	ND		ug/l	0.50	0.19	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.16	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.19	1
Benzene	ND		ug/l	0.50	0.19	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.18	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.17	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1



Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

**SAMPLE RESULTS** 

Lab ID: Date Collected: 06/13/13 00:00

Client ID: TRIP BLANK Date Received: 06/13/13
Sample Location: NIAGARA FALLS Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westbo	rough Lab					
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.0	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.38	1
Cyclohexane	ND		ug/l	10	0.54	1
1,4-Dioxane	ND		ug/l	250	76.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.63	1

	Acceptance				
Surrogate	% Recovery	Qualifier			
1,2-Dichloroethane-d4	98		70-130		
Toluene-d8	98		70-130		
4-Bromofluorobenzene	105		70-130		
Dibromofluoromethane	96		70-130		



Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 06/17/13 08:54

Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS	- Westborough Lab	for sample(s):	01-02	Batch: WG61	15466-3
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.16
1,2-Dichloropropane	ND		ug/l	1.0	0.30
Dibromochloromethane	ND		ug/l	0.50	0.19
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.16
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.19
Benzene	ND		ug/l	0.50	0.19
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.18
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.17
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70



Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 06/17/13 08:54

Analyst: MM

arameter	Result	Qualifier	Units	RL	MDL
olatile Organics by GC/MS - W	estborough Lab	for sample(s)	01-02	Batch: WG61	5466-3
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.0
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.38
Cyclohexane	ND		ug/l	10	0.54
1,4-Dioxane	ND		ug/l	250	76.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.63

		Acceptance			
Surrogate	%Recovery	Qualifier	Criteria		
1,2-Dichloroethane-d4	96		70-130		
Toluene-d8	98		70-130		
4-Bromofluorobenzene	105		70-130		
Dibromofluoromethane	96		70-130		



Project Name: GLR

**Project Number:** 0101-013-001

Lab Number: L1310884

arameter	LCS %Recovery	Qual		CSD covery	% Qual	Recovery Limits	RPD	Qual	RPD Limits
olatile Organics by GC/MS - Westborough L	ab Associated	sample(s):	01-02	Batch:	WG615466-1	WG615466-2			
Methylene chloride	107			106		70-130	1		20
1,1-Dichloroethane	107			108		70-130	1		20
Chloroform	101			103		70-130	2		20
2-Chloroethylvinyl ether	103			97		70-130	6		20
Carbon tetrachloride	94			95		63-132	1		20
1,2-Dichloropropane	108			108		70-130	0		20
Dibromochloromethane	92			92		63-130	0		20
1,1,2-Trichloroethane	101			102		70-130	1		20
Tetrachloroethene	92			94		70-130	2		20
Chlorobenzene	97			99		75-130	2		20
Trichlorofluoromethane	92			94		62-150	2		20
1,2-Dichloroethane	102			102		70-130	0		20
1,1,1-Trichloroethane	98			99		67-130	1		20
Bromodichloromethane	99			99		67-130	0		20
trans-1,3-Dichloropropene	96			97		70-130	1		20
cis-1,3-Dichloropropene	101			102		70-130	1		20
1,1-Dichloropropene	106			106		70-130	0		20
Bromoform	87			90		54-136	3		20
1,1,2,2-Tetrachloroethane	101			104		67-130	3		20
Benzene	108			108		70-130	0		20
Toluene	100			102		70-130	2		20



Project Name: GLR

**Project Number:** 

0101-013-001

Lab Number: L1310884

arameter	LCS %Recovery	Qual		CSD covery	% Qual	Recovery Limits	RPD	Qual	RPD Limits
platile Organics by GC/MS - Westborough L	ab Associated	sample(s):	01-02	Batch:	WG615466-1	WG615466-2			
Ethylbenzene	99			100		70-130	1		20
Chloromethane	120			122		64-130	2		20
Bromomethane	99			112		39-139	12		20
Vinyl chloride	110			112		55-140	2		20
Chloroethane	118			121		55-138	3		20
1,1-Dichloroethene	103			104		61-145	1		20
trans-1,2-Dichloroethene	103			104		70-130	1		20
Trichloroethene	101			101		70-130	0		20
1,2-Dichlorobenzene	93			97		70-130	4		20
1,3-Dichlorobenzene	94			95		70-130	1		20
1,4-Dichlorobenzene	94			96		70-130	2		20
Methyl tert butyl ether	97			98		63-130	1		20
p/m-Xylene	98			99		70-130	1		20
o-Xylene	98			100		70-130	2		20
cis-1,2-Dichloroethene	102			104		70-130	2		20
Dibromomethane	100			100		70-130	0		20
1,2,3-Trichloropropane	101			104		64-130	3		20
Acrylonitrile	103			104		70-130	1		20
Isopropyl Ether	104			105		70-130	1		20
tert-Butyl Alcohol	89			89		70-130	0		20
Styrene	97			99		70-130	2		20



Project Name: GLR

**Project Number:** 0101-013-001

Lab Number: L1310884

arameter	LCS %Recovery	Qual		SD covery	% Qual	Recovery Limits	RPD	Qual	RPD Limits
olatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-02	Batch:	WG615466-1	WG615466-2			
Dichlorodifluoromethane	95			95		36-147	0		20
Acetone	98			110		58-148	12		20
Carbon disulfide	106			107		51-130	1		20
2-Butanone	110			112		63-138	2		20
Vinyl acetate	103			101		70-130	2		20
4-Methyl-2-pentanone	91			95		59-130	4		20
2-Hexanone	94			94		57-130	0		20
Bromochloromethane	100			100		70-130	0		20
2,2-Dichloropropane	101			102		63-133	1		20
1,2-Dibromoethane	95			98		70-130	3		20
1,3-Dichloropropane	102			103		70-130	1		20
1,1,1,2-Tetrachloroethane	92			93		64-130	1		20
Bromobenzene	93			94		70-130	1		20
n-Butylbenzene	101			104		53-136	3		20
sec-Butylbenzene	99			102		70-130	3		20
tert-Butylbenzene	96			97		70-130	1		20
o-Chlorotoluene	126			94		70-130	29	Q	20
p-Chlorotoluene	100			102		70-130	2		20
1,2-Dibromo-3-chloropropane	95			98		41-144	3		20
Hexachlorobutadiene	91			96		63-130	5		20
Isopropylbenzene	98			100		70-130	2		20



Project Name: GLR

**Project Number:** 0101-013-001

Lab Number: L1310884

rameter	LCS %Recovery	Qual		CSD covery	% Qual	Recovery Limits	RPD	Qual	RPD Limits
platile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-02	Batch:	WG615466-1	WG615466-2			
p-Isopropyltoluene	96			98		70-130	2		20
Naphthalene	88			95		70-130	8		20
n-Propylbenzene	101			103		69-130	2		20
1,2,3-Trichlorobenzene	87			95		70-130	9		20
1,2,4-Trichlorobenzene	91			96		70-130	5		20
1,3,5-Trimethylbenzene	98			100		64-130	2		20
1,2,4-Trimethylbenzene	98			100		70-130	2		20
Methyl Acetate	105			104		70-130	1		20
Ethyl Acetate	95			98		70-130	3		20
Cyclohexane	108			108		70-130	0		20
Ethyl-Tert-Butyl-Ether	100			100		70-130	0		20
Tertiary-Amyl Methyl Ether	97			99		66-130	2		20
1,4-Dioxane	87			95		56-162	9		20
Freon-113	100			102		70-130	2		20
1,4-Diethylbenzene	97			99		70-130	2		20
4-Ethyltoluene	99			100		70-130	1		20
1,2,4,5-Tetramethylbenzene	95			98		70-130	3		20
Ethyl ether	104			104		59-134	0		20
trans-1,4-Dichloro-2-butene	94			97		70-130	3		20
Methyl cyclohexane	102			104		70-130	2		20



# **Lab Control Sample Analysis**

**Project Name:** GLR

**Project Number:** 

0101-013-001

Batch Quality Control

Lab Number: L1310884

Report Date:

06/17/13

Parameter

LCS %Recovery

Qual

**LCSD** %Recovery

Qual

%Recovery Limits

**RPD** 

Qual

**RPD Limits** 

Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG615466-1 WG615466-2

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	
1,2-Dichloroethane-d4	99		98		70-130	
Toluene-d8	99		99		70-130	
4-Bromofluorobenzene	104		104		70-130	
Dibromofluoromethane	100		100		70-130	

Serial\_No:06171313:32

Project Name: GLR Lab Number: L1310884

**Project Number:** 0101-013-001 **Report Date:** 06/17/13

# **Sample Receipt and Container Information**

Were project specific reporting limits specified?

Reagent H2O Preserved Vials Frozen on: NA

**Cooler Information Custody Seal** 

Cooler

A Absent

Container Info	Temp						
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1310884-01A	Vial HCI preserved	Α	N/A	5.8	Υ	Absent	NYTCL-8260(14)
L1310884-01B	Vial HCl preserved	Α	N/A	5.8	Υ	Absent	NYTCL-8260(14)
L1310884-01C	Vial HCl preserved	Α	N/A	5.8	Υ	Absent	NYTCL-8260(14)
L1310884-02A	Vial HCl preserved	Α	N/A	5.8	Υ	Absent	NYTCL-8260(14)



 Project Name:
 GLR
 Lab Number:
 L1310884

 Project Number:
 0101-013-001
 Report Date:
 06/17/13

#### **GLOSSARY**

#### **Acronyms**

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

 Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

#### **Footnotes**

 The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

## Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

#### Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: DU Report with "J" Qualifiers



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#### **Data Qualifiers**

due to obvious interference.

- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- J Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with "J" Qualifiers



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 Report Date:
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#### REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

### **LIMITATION OF LIABILITIES**

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



# **Certificate/Approval Program Summary**

Last revised December 19, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate, Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform - Colilert (SM9223, Enumeration and P/A), E. Coli. - Colilert (SM9223, Enumeration and P/A), HPC - Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform - MF m-FC (SM9222D), Fecal Coliform - A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity, Organic Parameters; PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

## Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 6010C, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8330, 8151A, 8260B, 8260C, 8270C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9030B, 9040B, 9045C, 6010B, 6010C, 6020, 6020A, 7471A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8270D, 8330, 8151A, 8081A, 8081B, 8082, 8082A, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

### Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1.2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; Page 22 of 26 Page 22 of 26 Page 22 of 26 Page 22 of 26 Page 25 of 26 Page 22 of 26 Page 25 of 26 Pa

Non-Potable Water (Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

#### New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

*Drinking Water* (<u>Inorganic Parameters</u>: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. <u>Organic Parameters</u>: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010C, 9030B. Organic Parameters: EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012B, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260B, Page 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C,

3546, 3580A, 5030B, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID: 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. *NELAP Accredited. Drinking Water* (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A, 3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NJ-DEP*. Refer to MA-DEP Certificate for Potable and Non-Potable Water. Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

**Texas Commisson on Environmental Quality** <u>Certificate/Lab ID</u>: T104704476. **NELAP Accredited.** *Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2<sup>-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. NELAP Accredited. Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, )

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 355B0, 3580A, 3630C, 6020A, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

**EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.