# SITE INVESTIGATION REPORT FOR BLACKSTONE VALLEY PREPARATORY SCHOOL 52 BROAD STREET A.P. 2, LOT 26 Cumberland, Rhode Island

Prepared for: Civic Broad Street Corporation 304 Hudson Street, 3<sup>rd</sup> Floor New York, NY 10013

Prepared by:
Pare Corporation
8 Blackstone Valley Place
Lincoln, RI 02865

#### **TABLE OF CONTENTS**

CERTIFICAT	FION	iii
EXECUTIVE	SUMMARY	iv
<u>SECTION</u>	<u>DESCRIPTION</u>	PAGE
1	Introduction	1
2	Site Investigation Scope (Section 7.03 of the RI DEM Hazardous Waste Regulat	tions)
	Section 7.03 A	2
	Section 7.03 B	2 7
	Section 7.03 C	7
	Section 7.03 D	8
	Section 7.03 E	9
	Section 7.03 F	9
	Section 7.03 G	9
	Section 7.03 H	9
	Section 7.03 I	10
	Section 7.03 J	11
	Section 7.03 K	14
	Section 7.03 L	15
	Section 7.03 M	18
	Section 7.03 N	19
	Section 7.03 O	20
	Section 7.03 P	21
	Section 7.03 Q	23
	Section 7.03 R	23
	Section 7.03 S	23
	Section 7.03 T	26
	Section 7.03 U	26
	Section 7.03 V	27
	Section 7.03 W	27
	Section 7.03 X	28
3	Recommended Remedial Measure	29



<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1 2	Total Metal Exceedances PAH Exceedances	16 18
3	Volatilization Properties	22
<u>APPENDICES</u>		
Appendix A	Locus Map	
Appendix B	Site Plan	
Appendix C	Analytical Data Summary Table	
Appendix D	Notification of Release (w/o attachments)	
Appendix E	Tax Assessor Field Card & Registry of Deeds	
Appendix F	Soil Boring Logs	
Appendix G	Test Pit Log	
Appendix H	Field Reports	
Appendix I	FEMA Map	
Appendix J	Laboratory Analytical Results	
Appendix K	Letter of Responsibility	
Appendix L	Proposed Remedial Option Plan	
Appendix M	SIR Checklist	
Appendix N	Limitations	



#### CERTIFICATION

In accordance with Section 7.05 of the Remediation Regulations, the following certifications are made:

I certify, to the best of my knowledge, this report is a complete and accurate representation of the contaminated Site and the information obtained during the course of the Site Investigation.

Date: 3/14/14

Timothy P. Thies, P.E.

Managing Engineer, Pare Corporation

I certify, to the best of my knowledge, this report is a complete and accurate representation of the contaminated Site and the information obtained during the course of the Site Investigation.

Lenny Dymond

Project Executive, Civic Broad Street Corporation





#### **EXECUTIVE SUMMARY**

The Site is defined as an approximately 1.3-acre parcel located at 52 Broad Street, which is identified as Lot 26 on Cumberland Tax Assessor's Plat Map 2. The property is currently under construction as part of the Blackstone Valley Preparatory School project. Up until construction of the new school, the Site had been a public park dating back to the late 1970s. Prior to that, it had been the site of a single family home with a detached residential automobile garage dating back to the 1850s.

On December 28, 2013, personnel from Pare Corporation (PARE) were on Site to observe the construction of the new Blackstone Valley Preparatory School. At that time, excavation for the construction of a continuous building footing was being performed approximately 55 feet north of the southern property line. At a depth of approximately 8 feet below existing grade, PARE personnel observed potentially contaminated soil, which appeared to be impacted by a black substance with a significant petroleum odor. The discovery of the potentially contaminated soil occurred in the vicinity of an old building foundation, which was encountered at this location and depth on that same day. Excavation was ceased until further investigation could be performed.

Between December 30, 2013 and January 6, 2014, PARE conducted a limited subsurface investigation at the Site, which included excavation, removal, stockpiling, sampling, and chemical analysis of the impacted soil. The initial investigation occurred on December 30, 2013 and included the excavation of approximately 50 cubic yards of soil. After PARE's initial investigation, one sidewall confirmatory sample and the bottom sample had contaminant concentrations in excess of the RI DEM Method 1 Industrial/Commercial Direct Exposure Criteria (I/C DEC). As a result, PARE returned to the Site on January 6, 2014 to remove additional soil from the offending sidewall and collect additional confirmatory samples. The investigation included the collection of eight (8) discrete confirmatory samples from the sidewalls and bottom of the excavation, as well as one (1) composite waste characterization sample from the stockpile of excavated contaminated material.

A supplemental subsurface investigation was completed by PARE to identify if the Site had been impacted by hazardous materials or petroleum products beyond the minor contamination identified on December 28, 2013 (designated as Area 1). The investigation, which was



performed by PARE personnel on February 4, 2014, consisted of eight (8) test pits, including two (2) test pits performed within the proposed school building footprint, and soil sampling and chemical analysis. As part of the investigation performed, PARE collected eighteen (18) discrete soil samples for chemical analysis. In general, the discrete samples consisted of one (1) shallow soil sample and one (1) deep soil sample collected from native material at each test pit. At some locations, a shallow sample could not be collected because the native material had already been removed and replaced with structural fill for the building. At other locations, additional samples were collected based on field screening.

Up until the discovery of the Release earthwork occurred at the Site that included stripping loam, removing asphalt and concrete, ledge removal beneath the building foundation, and some minor gravel excavation. To date, approximately 2,128 cubic yards of loam had been stripped from the Site and transported to J. Fisk Construction, Inc. in Seekonk, MA. In addition, approximately 435 cubic yards of concrete/asphalt and approximately 805 cubic yards of rock also went off-site to J. Fisk Construction. Approximately 182 cubic yards of gravel left the Site and were transported to Lonsdale Concrete Construction, Inc. in Cumberland, RI. In addition, approximately 1,400 cubic yards of processed gravel for structural fill were imported to the Site from J. Fisk Construction. PARE personnel were on-Site during the excavation and site work activities that occurred prior to the discovery of the Release. Up until the Release was discovered, none of the material that left the Site exhibited any obvious signs of contamination (e.g., odor, discoloration, etc.).

During excavation of the first test pit, designated as S-1, PARE personnel observed evidence of impacted soil at a depth of approximately 5 feet on the southeastern edge of the test pit. At that depth, PARE noted a strong petroleum odor and observed soil with a dark black color. The area of impacted soil was approximately 5 feet wide by 5 feet long, and had a thickness of approximately 1 foot. This area has been designated as Area 2 to differentiate it from the initial release discovered on December 28, 2013. The backhoe operator excavated this soil and additional soil around the sidewalls and bottom of the test pit until no further evidence of contaminated soil could be discerned. The dimensions of the excavation after soil removal were approximately 7 feet by 7 feet by 6 feet deep. Four (4) sidewalls and one (1) bottom confirmatory sample were collected from the excavation. Contaminated soil from the excavation was stockpiled on a polyethylene sheet on the south side of the Site with the existing contaminated soil stockpile from Area 1. Additional exploration was performed in the vicinity of



the contaminated soil to verify that no other contamination existed in this area of the Site, particularly between Areas 1 and 2 to identify if there was a discernible connection between the two releases. The additional exploration area, located approximately 40 feet southeast of Area 1, measured approximately 35 feet by 18 feet by 11 feet deep at its deepest point. In the remaining test pits, PARE personnel observed no other obvious signs of contamination (i.e., no discolored soil, no strong odors, and no signs of buried debris). While no obvious signs of contamination were identified, PARE collected soil samples for chemical analysis from each test pit.

During the course of the Site Investigation, PARE personnel observed no evidence of shallow groundwater in the vicinity of Area 1 or Area 2, or in any of the other test pits performed by PARE. In addition, no evidence of groundwater was identified in 11 out of 15 soil borings performed as part of the geotechnical program. Water was identified in 4 of the geotechnical borings; however, it is believed that the water identified was perched wash water introduced as part of the drilling process. Therefore, it appears as though there is not a significant groundwater presence beneath the Site and that it is unlikely that the contaminated soil discovered on Site has impacted groundwater. Based on a file review performed by PARE as part of the Phase I ESA for the Site, there is contaminated groundwater identified north of the Site associated with a release of naphthalene at concentrations above the GA groundwater objective. Although groundwater beneath the Site is classified as GB, naphthalene is included in the EPA's list of Chemicals of Potential Concern for Vapor Intrusion. That said, with the exception of the waste soil sample collected from the stockpiled material scheduled for off-Site removal, no soil samples collected as part of this Site Investigation were reported to contain concentrations of chemicals found in the EPA's list exceeding their respective R DEC. In addition, based on the lack of definitive evidence of shallow groundwater encountered during the geotechnical investigation performed at the Site, PARE believes that naphthalene-contaminated groundwater north of the Site does not pose a reasonable potential for migration of contaminated vapors or gases into the proposed school building. Therefore, vapor intrusion into the proposed school building does not appear to be a significant concern at the Site.

Based on the results of the Site Investigation, PARE believes that the most appropriate way to address soil contamination at the Site is selective soil removal and disposal as well as implementation of engineered and institutional controls (i.e., soil cap and Environmental Land Usage Restriction [ELUR]). This option requires that the Site owner selectively remove and dispose of soil from areas identified as contaminated during the investigation, as well as cap



contaminated soil located below the proposed school building and record an ELUR with the property deed restricting future soil disturbance in this portion of the Site. This remedial measure is more protective of human health and the environment than no action/natural attenuation and more cost-effective than the complete removal and disposal of all contaminated soil discovered on Site.

PARE proposes that areas of the Site outside of the school footprint with reported contaminant concentrations above their respective RI DEM regulatory thresholds be addressed through selective excavation of the contaminated soil and disposal at a licensed facility. The remedial action is proposed to be completed during construction activities that are proposed in the vicinity of Area 1 and Area 2, as well as the area around test pit S-2, which has elevated concentrations of PAHs. These construction activities include underground utility installation, underground infiltration system installation, and landscaping and paver installation. Confirmatory samples will be collected from each of these areas subsequent to soil removal to verify compliance with the Remediation Regulations. Confirmatory samples collected from Area 1 and Area 2 will be analyzed for SVOCs via EPA method 8270D and total Lead via EPA method 6010C, based on the results of confirmatory samples collected during the Site Investigation. Confirmatory samples collected from the area of contaminated soil in the vicinity of test pit S-2 will be analyzed for SVOCs via EPA method 8270D due to the elevated concentrations of PAHs, a subset of SVOCs, reported in this test pit during Site Investigation.

For exceedances reported below the proposed school building footprint, PARE proposes that these contaminants be addressed through capping soil in place utilizing the building foundation as an engineered control over the contaminated soil. The cap will prevent contact with the contaminated soil and limit contaminant mobility. In addition, a vapor barrier and passive subslab ventilation system will be installed beneath the building, as originally proposed; even though the risk for vapor intrusion at this Site appears to be insignificant.



#### **SECTION 1.0 – INTRODUCTION**

This Site Investigation (SI) was conducted by Pare Corporation (PARE) on behalf of Civic Broad Street Corporation of New York, NY. The investigation was conducted due to elevated concentrations of total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), and metals reported in soil at 52 Broad Street in Cumberland, RI. Provided herein is a summary of the events leading to the discovery of these contaminants, the results of PARE's SI, and PARE's recommended remedial measure.



# SECTION 2.0 – SITE INVESTIGATION SCOPE (SECTION 7.03 – RI DEM HAZARDOUS WASTE REGULATIONS)

The following section is an annotated summary of the SI scope, in response to items A through W of Section 7.03 of the Remediation Regulations. Cited sections of the Regulations are provided in **bold** text.

Section 7.03 A: A list of specific objectives of the Site Investigation identifying all data collected to completely characterize the Contaminated-Site, the Release, the impacts of the Release and to select a remedy;

The objective of the SI was to evaluate the nature and extent of contaminants in soil at the Site. The Site is defined as the property located at 52 Broad Street in Cumberland, RI (A.P. 2, Lot 26) and is the location of the Blackstone Valley Preparatory Charter School, as indicated on the attached Locus Map and Site Plan (refer to Appendices A and B, respectively). The objective of the SI was also to develop an appropriate remedial measure(s) for RI Department of Environmental Management (DEM) review and approval. The contaminants subject to evaluation consisted of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), and metals in soil at the Site. The data that was used to characterize the Site includes soil chemical analytical data collected during the course of the SI. Groundwater chemical analytical data was not obtained because there was no evidence of groundwater beneath the Site. A complete table of that analytical data is provided in Appendix C.

Section 7.03 B:

All information previously reported in a Notification of Release required by Rule 5.01 (Notification of Release) and an Emergency and Short-Term Response Report required by Rule 6.09 (Emergency and Short-Term Response Report), if applicable. The performing party may elaborate and expand on any and all information found in those reports. The performing party shall correct any incorrect information or interpretations contained in those reports prior to their incorporation into the Site Investigation Report;

A copy of the Notification of Release (NOR) is included as Appendix D for reference. It was submitted to the RI DEM on January 16, 2014. A summary of the NOR is provided below.

The property is an approximately 1.3-acre parcel located at 52 Broad Street, which is identified as Lot 26 on Cumberland Tax Assessor's Plat Map 2. The property is currently zoned commercial.



However, at the time of the writing of the Phase I Environmental Site Assessment (ESA), which was performed by PARE in July 2013, the property was zoned Open Space. Much of the development in the area appears to be dense and a mixture of residential and commercial uses. Industrial uses are also present in the area, particularly along the Blackstone River south and west of the Site.

Prior to construction, the Site was partially cleared, with the exception of a few mature trees along the northern, eastern, and western edges of the Site. The Site was used as a Town-owned public park with recreational facilities, including a basketball court, street hockey court, and a skate park. With the exception of the basketball courts, hockey area, and skate park, the Site was primarily lawn and landscaped areas. Based on data reviewed for the July 2013 Phase I ESA, it appears that a two story residence and a detached residential automobile garage were located on Site, possibly as late as 1977. The Town took ownership of the Site in 1968, and the 1977 aerial photograph is the first aerial photograph where these structures cannot be seen, suggesting that these structures were demolished sometime between 1968 and 1977.

On December 28, 2013, PARE was on Site to observe the construction of the new Blackstone Valley Preparatory School. At that time, excavation for the construction of a continuous building footing was being performed approximately 55 feet north of the southern property line. At a depth of approximately 8 feet below existing grade, PARE personnel observed potentially contaminated soil, which appeared to be impacted by a black oily substance with a significant petroleum odor. The discovery of the potentially contaminated soil occurred in the vicinity of an old building foundation, which was encountered at this location and depth on that same day. Excavation ceased until further investigation could be performed.

Between December 30, 2013 and January 6, 2014, PARE conducted a limited subsurface investigation at the Site, which included excavation, removal, stockpiling, and sampling of the impacted soil. The initial investigation occurred on December 30, 2013 and included the excavation of approximately 50 cubic yards of soil. After PARE's initial investigation, one sidewall confirmatory sample and the bottom sample had contaminant concentrations in excess of the RI DEM Method 1 Industrial/Commercial Direct Exposure Criteria (I/C DEC). As a result, PARE returned to the Site on January 6, 2014 to remove additional soil from the offending sidewall and collect additional confirmatory samples. In total, the limited subsurface investigation included the collection of eight (8) discrete confirmatory samples from the sidewalls



and bottom of the excavation and one (1) composite waste characterization sample collected from the stockpile of excavated contaminated material. These samples are shown on the attached Site Plan and are designated as CONF-1 through CONF-8 and "WASTE".

PARE sent the eight (8) confirmatory samples and one (1) waste characterization sample with chain-of-custody documentation to New England Testing Laboratory (NETLAB) of North Providence, Rhode Island for chemical analysis. The confirmatory samples were tested for:

- Volatile Organic Compounds (VOCs), EPA method 8260B;
- Semi-Volatile Organic Compounds (SVOCs), EPA method 8270D;
- Total Petroleum Hydrocarbons (TPH), EPA method 8100M;
- Total Arsenic, Lead, and Mercury, EPA method 6010C/7471B<sup>1</sup>; and
- Additional parameters from the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*, not included in the standard VOC and SVOC analysis.

The waste characterization sample was tested for:

- VOCs, EPA method 8260B;
- SVOCs, EPA method 8270D;
- TPH, EPA method 8100M (including TPH fingerprint analysis);
- Polychlorinated Biphenyls (PCBs), EPA method 8082A;
- Pesticides, EPA method 8081B;
- Total Metals, EPA method 6010C/7471B;
- TCLP Metals, EPA method 6010C/7470A;
- Free Liquids, EPA method 9095B;
- Percent Organics, ASTM method D2974;
- Cyanide, EPA method 9014; and
- Additional parameters from the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*, not included in the standard VOC and SVOC analysis.

PARE collected CONF-1 through CONF-4 and the waste characterization sample on December 30, 2013. Elevated concentrations of TPH, chrysene, and metals were reported in the waste



<sup>&</sup>lt;sup>1</sup> CONF-2 not tested for arsenic or mercury due to excavation and stockpiling of side wall.

characterization sample. Specifically, the reported concentrations for TPH (2,320 mg/kg), chrysene (0.43 mg/kg), and mercury (38.4 mg/kg) exceeded their respective RI DEM Method 1 Residential Direct Exposure Criteria (R DEC) thresholds (500 mg/kg, 0.40 mg/kg, and 23 mg/kg, respectively). Furthermore, arsenic (12.3 mg/kg) and lead (1,710 mg/kg) exceeded their respective I/C DEC thresholds (7 mg/kg and 500 mg/kg, respectively). Based on a hydrocarbon fingerprint analysis, the petroleum type in the waste characterization sample was reported by the laboratory to be a mix of No.2 heating oil/diesel and No.6 fuel oil or motor oil/lubricant.

In addition, elevated concentrations of some SVOCs, specifically polycyclic aromatic hydrocarbons (PAHs) at CONF-2, were reported. Given the elevated concentration of arsenic, mercury, and lead reported in the waste characterization sample, PARE had the sidewall samples and bottom sample reanalyzed for the aforementioned constituents. As with the PAH sample results, lead was reported to be elevated at sample location CONF-2. The elevated concentration of lead and most of the elevated PAH concentrations exceeded their R DEC, while one PAH, benzo(a)pyrene, exceeded its I/C DEC. The elevated concentrations of the constituents found in CONF-2 were not reported in the other sidewall samples (i.e., CONF-1, CONF-3, and CONF-4). However, the bottom sample, designated as CONF-5, was reported to contain arsenic (7.41 mg/kg) at a concentration slightly exceeding its I/C DEC (7 mg/kg).

Due to the elevated concentrations of PAHs and total lead at CONF-2, PARE coordinated further excavation of the contaminated soil and collected additional confirmatory samples on January 6, 2014. Material was removed on the side of the excavation where CONF-2 was located, which was excavated eastward approximately three (3) feet. New confirmatory samples were collected from this sidewall and analyzed for VOCs, SVOCs, TPH, and select total metals (i.e., arsenic, lead, and mercury). Slightly elevated concentrations of lead and two (2) PAHs – benzo(a)pyrene and chrysene – were reported in the sample, designated as CONF-7, which was collected near the bottom of the 11-foot deep excavation. These constituents were reported slightly above their respective R DECs.

It should be noted that approximately 3 to 6 feet of soil below the original grade was excavated for the construction of the continuous footing prior to encountering any suspect contaminated soil. As a result, much of the Site had already been lowered by 3 to 6 feet prior to encountering any suspect contaminated soil. Only a small area along the southern and eastern property line remained at the original grade. The excavation performed as part of this investigation started at



the bottom of the southern and eastern sidewall embankment and went approximately 5 feet further below grade. This resulted in 11-foot sidewalls on the southern and eastern side of the excavation and 5-foot sidewalls on the northern and western sidewalls. RI DEM pre-approved confirmation sampling requires one (1) soil sample per 25 feet of sidewall length, one (1) soil sample for every 5 feet of sidewall depth, and one (1) bottom soil sample for every 625 square feet of area. Because none of the sidewalls were greater than 25 feet in length (i.e., 20 feet by 14 feet), sidewalls ranged from 5 to 11 feet bgs, and the release encompassed 280 square feet, PARE collected two (2) sidewall samples from each of the 11-foot sidewalls (CONF-1, CONF-6, CONF-7, and CONF-8), one (1) sample from each of the 5-foot sidewalls (CONF-3 and CONF-4), and one (1) bottom sample (CONF-5).

Visibly, the contaminated section of soil was encountered at a depth of 8 to 9 feet below original grade, approximately 5 feet west of a stone foundation associated with the former residence. The excavation of contaminated material was approximately 20 feet by 14 feet and 5 feet in depth (designated as Area 1). All contaminated material was stockpiled on Site on a layer of polyethylene sheeting and was also covered by polyethylene sheeting. Groundwater was not observed in the excavation.

Based on PARE's initial assessment, it appears as though the source of the Release (i.e., elevated concentrations of TPH, PAHs, and metals) is an isolated pocket of petroleum that was buried on Site. PARE believes that the buried waste encountered near the foundation of the former residence has been in place since, and possibly before, the former residence was demolished between 1968 and 1977. Based on the depth of the excavation and the elevated concentrations of contaminants at CONF-2, it is possible that the Release ranges in depth from 8 feet below original grade to approximately 11 feet below original grade. Based on the depth and the area in which the excavation was located, PARE's initial and preliminary estimate of contaminated soil is approximately 50 to 60 cubic yards. This estimate is approximate and will be verified by the hauler of the material upon disposal. It is likely that an additional 25 to 50 cubic yards of soil will be excavated to address some trace concentrations of contamination remaining at the Site.

At this time, all contaminated soil removed from the excavation has been stockpiled on a layer of polyethylene sheeting on the south end of the Site and has been covered by an additional layer of polyethylene sheeting (see attached Site Plan). Based on confirmatory sampling results, it appears that the contaminated soil has been substantially removed from this excavation, with



reported concentrations of VOCs, SVOCs, TPH, and total arsenic, lead, and mercury reported at trace or non-detect levels on three of the four sidewalls. In addition, only arsenic was found to contain contaminant concentrations in excess of its RI DEM regulatory threshold on the excavation bottom. However, the reported concentrations on the east wall of the excavation for lead (175 mg/kg), chrysene (0.47 mg/kg), and benzo(a)pyrene (0.50 mg/kg) slightly exceeded their respective R DEC thresholds (150 mg/kg, 0.40 mg/kg, and 0.40 mg/kg, respectively). It should be noted that these concentrations were reported in sample CONF-7 at a depth of approximately 11 feet below original grade. Sample CONF-6 was collected at a depth of approximately 3 feet below original grade on the same sidewall and had contaminant concentrations reported significantly below their respective R DEC criteria or below their laboratory method detection limits. As such, it appears that any residual contamination in the excavation is limited to the deepest part of the excavation.

The Release was discovered as part of an ongoing construction project, was excavated, and currently does not represent an imminent threat to human health or the environment. It is proposed that the Release be addressed by disposing of the contaminated soil at a licensed facility (e.g., the Rhode Island Resource Recovery Corporation's Central Landfill). As necessary for the installation of the continuous footing, the excavation shall be backfilled with clean suitable soil.

## <u>Section 7.03 C:</u> Documentation of any past incidents or releases (fires, spills, explosions, leaks, etc.);

PARE performed an environmental due diligence for the Site prior to construction. Specifically, PARE performed a Phase 1 ESA in accordance with ASTM E1527-05 to evaluate whether the Site could be considered potentially contaminated. The results of the ESA provided no direct evidence that the Site had ever been impacted by a release. The Site was not listed by the RI DEM as a State Hazardous Waste Site, LUST site, or in any other database that would indicate a past release at the property. In addition, the past use of the Site was as a public park and single family residence, which both represent relatively low risks of significant environmental concerns. The only potential risk identified during the Phase I ESA was the former presence of a gas station on the abutting parcel to the south of the Site. It is believed that groundwater in the vicinity of the Site flows in a southerly and westerly direction, which would make the former gas station downgradient from the Site. Nonetheless, given the proximity of the former gas station and the unknown disposition of the former USTs at the gas station, it was deemed prudent to perform an investigation of shallow groundwater beneath the southern edge of the Site. The



limited groundwater investigation was performed less as a result of a substantial concern about groundwater, but more because it could be done easily and without much expense when done as part of the project's geotechnical investigation. The limited groundwater investigation included the advancement of three geotechnical borings along the common property line between the Site and the former gas station property. At each location, bedrock was encountered at a depth ranging from 6 feet to 14 feet. Groundwater was not encountered in any of the three boring locations; although water was recorded in one boring; however, that water was thought to be perched wash water introduced as part of the drilling process. The results of the limited groundwater investigation effectively eliminated the possibility that shallow groundwater beneath the Site has been impacted by the adjacent former gas station facility.

# Section 7.03 D: A list of past Owners and Operators at the Contaminated-Site including their past uses of the property, a sequencing of property transfers and time periods of occupancy to the extent that this information is available;

Civic Broad Street Corporation recently purchased the Site from the Town of Cumberland. Information obtained from the Town of Cumberland's Tax Assessor Field Card and Registry of Deeds indicates that the property was granted to the Town of Cumberland from Carolyn C. Currier in 1968. No record of ownership was available prior to 1968. The Tax Assessor Field Card indicates that fencing, the basketball court, and tennis courts/skate park were built in 1990 and that the Site is approximately 1.3 acres. In addition, Lots 27 and 31 were added to Lot 26 in April 2002. Prior to this, it appears that the Site was comprised of the three individual residential lots. Tax Assessor Field Card and Registry of Deeds information are included as Appendix E.

Historical aerial photography and certified Sanborn maps reviewed by PARE as part of the Phase I ESA indicate that there was a dwelling and residential automobile garage at the Site at the time the Town took ownership of the property. These records suggest that the building structures were demolished sometime in the early to mid-1970s. It is unknown whether these buildings were served by any aboveground or underground storage tanks.



# <u>Section 7.03 E:</u> All previously existing environmental information which characterizes the Contaminated-Site and all information that led to the discovery of a Contaminated-Site;

Prior to the discovery of the Release, PARE performed a Phase I ESA on the Site to identify any historical incidents of known contaminant releases (see Appendix P). The results of the ESA provided no direct evidence that the Site had ever been impacted by a release. Potential contamination was first discovered by PARE personnel through olfactory and visual screening during excavation of a continuous building footing for the proposed school on December 28, 2013. Soil contamination was verified by laboratory analysis after confirmatory sampling was conducted by PARE personnel on December 30, 2013. Due to elevated concentrations of PAHs and total lead, PARE conducted additional confirmatory sampling on January 6, 2014. The nature and extent of contamination resulting from the Release is described in Section 7.03 K.

# Section 7.03 F: A description of the current uses and zoning of the Contaminated-Site including a brief statement on each active operation performed therewith, a description of the processes employed, a list of all wastes generated, a list of all Hazardous Materials handled, and a statement summarizing any Residential Activity on the Contaminated-Site;

The Site is currently owned by the Civic Broad Street Corporation and zoned as commercial space. The property is currently in the construction phase for the Blackstone Valley Preparatory School. Prior to commencement of construction, the Site was zoned Open Space and was used as a Town-owned public park with recreational facilities, including a basketball court, street hockey court, and skate park. Currently, there is no significant waste generation at the Site.

# Section 7.03 G: A locus map showing the location of the Contaminated-Site using the U.S. Geological Survey 7.5 minute quadrangle map or a copy of a section of that U.S.G.S. map;

A locus map of the Site and surrounding area, from the United States Geological Survey (USGS) Quadrangle map for Attleboro, Massachusetts – Rhode Island, has been included in Appendix A.

## <u>Section 7.03 H:</u> A site plan, drawn to scale, showing the locations of all buildings, activities and structures on the Contaminated-Site including, but not limited to:

- i. A North arrow:
- ii. Wells;
- iii. Underground injection control systems, septic tanks, underground storage tanks, piping and other underground structures;



- iv. Outdoor Hazardous Material storage and handling areas, and extent of paved areas;
- v. The location of all environmental samples previously taken at the Contaminated-Site;
- vi. All waste management and disposal areas, active and/or historical; and
- vii. Property lines;

The attached Site Plan (Appendix B) includes the information required in parts (i) through (vii) of Item H, as applicable.

## <u>Section 7.03 I:</u> A general characterization of the property surrounding the area affected by the Release including, but not limited to:

- The location and distance to any surface water bodies within five hundred (500) feet of the Contaminated-Site;
- ii. The location and distance to any Environmentally Sensitive Areas within five hundred (500) feet of the Contaminated-Site;
- iii. The actual sources of potable water for all properties immediately abutting the contaminated-site;
- iv. The location and distance to all public water supplies which have been active within the previous 2 years and within one (1) mile of the Contaminated-Site;
- v. A determination as to whether the Release impacts any off-site area utilized for residential or industrial/commercial property or both; and
- vi. A determination of the underlying groundwater classification and if the classification is GB, the distance to the nearest GA/GAA area;

PARE reviewed available Rhode Island Geographic Information System (RIGIS) information to characterize the Site area utilizing the RI DEM's interactive Environmental Resource Map. A general characterization of the property surrounding the area affected by the Release is provided below:

- i. There are no surface water bodies located within 500 feet of the Site.
- ii. A deciduous wetland exists approximately 475 feet southeast of the Site, which appears to be associated with the Blackstone River. It should be noted, however, that the Site is identified on the RI DEM Environmental Resource Map as conservation land owned by the Town of Cumberland due to its former use as a public park.
- iii. The area and the properties abutting the Site are served by the Pawtucket Water Supply Board (PWSB). Upon completion of the proposed school, the Site will be served by the PWSB, though the PWSB does not currently serve the Site.
- iv. Part of the Pawtucket Wellhead Protection Area is located approximately 1,500 feet to the east of the Site. According to the RI Source Water Assessment Program's <a href="Cumberland"><u>Cumberland</u></a>, Lincoln and Pawtucket Source Water Assessment, the PWSB owns and operates eight (8) community supply wells along the Happy Holly Reservoir. High-density residential development accounts for more than 50 percent of the protection area.



The Lincoln Lonsdale Wellhead Protection Area is located approximately 4,000 feet west of the Site. A mix of high-density residential development and agriculture accounts for the land use activity within the wellhead protection area.

- v. Based on sampling data, it does not appear as though the contaminants of concern have migrated to any off-Site area. Moreover, based on the subsurface investigation, it does not appear that groundwater has been impacted as a result of the Release. However, no sampling was performed on abutting properties.
- vi. Groundwater beneath the Site is classified as GB. The nearest GA/GAA groundwater classification areas are located approximately 1,100 feet to the east and west of the Site.

# Section 7.03 J: Classifications of surface water and groundwater at or surrounding the Contaminated-Site which could be potentially impacted by the Release of Hazardous Materials;

Groundwater beneath the Site is classified by the RI DEM as GB. Groundwater classified as GB consists of groundwater resources which may not be suitable for public or private drinking water use without treatment due to known or presumed degradation (RI DEM Groundwater Quality Rules, June 2010). According to RIGIS data reviewed by PARE, the Site is partially located within the Lower Blackstone Moshassuck groundwater reservoir and the Blackstone River Subbasin watershed. The Site is not located within a wellhead protection area or sole source aquifer. Therefore, based on the Site's location in a GB groundwater area and outside any known wellhead protection areas, it does not appear as though this Release poses a significant threat of contaminating a wellhead protection area or other drinking water source. Given that the contamination has been substantially removed and no groundwater was encountered in any areas excavated at the Site, the threat that this Release has impacted or will migrate to groundwater in the future is extremely low.

A total of fifteen (15) soil borings were completed as part of the project's geotechnical investigation. Based on observations taken during the investigation, water was reportedly encountered in four (4) borings at the Site. Three borings located on the northern section of the building footprint, identified as B13-9, B13-12, and B13-13, and one boring located south of the building footprint, identified as B13-6, had water reported at depths ranging from  $\approx$ 10-15 feet below ground surface (bgs). It is important to note that as part of the boring activities, water was introduced to each borehole as part of the drilling process and may not have dissipated at the time that the groundwater measurement was taken. As part of the geotechnical design basis for the



Site, the geotechnical engineers categorize this water as groundwater in order to introduce a factor of safety into the development of the geotechnical parameters used during the design of the foundations, buildings, and other Site improvements associated with the proposed project. That said, it is doubtful that the water reported in these 4 boreholes is groundwater, and is most likely perched wash water resulting from the geotechnical activities.

As part of the Phase I ESA, PARE reviewed RI DEM file information for select properties abutting or in close proximity to the Site. Based upon the review of available and selected regulatory agency records, known releases exist in the area around the Site, though none of the releases were found on abutting parcels. Many of the releases identified in the vicinity of the Site occurred at locations either along Broad Street or further to the east and west of the Site, near the Blackstone River or Happy Hallow Pond. With regard to groundwater contamination, two (2) releases, located at 94 Broad Street and 49 Abbott Street, appear to have impacted groundwater in the vicinity of the Site and are discussed in the following excerpts from the Phase I ESA.

#### 94 Broad Street, Cumberland, RI

The property located at 94 Broad Street is approximately 280 feet north of the Site. It was identified as a RIDEM LUST site (LUST project number: 0818-LS) on April 26, 1994 and Spill site (Spill report number: 3883) on November 16, 1989. RIDEM did not have any Spill report files available for this property, but PARE did review the LUST file.

On November 9, 1994 one 6,000 gallon gasoline tank, one 4,000 gallon gasoline tank, two 3,000 gallon gasoline tanks, one 2,000 gallon diesel tank, and one 1,000 gallon No. 2 fuel oil tank were all closed at the property. During tank closure, approximately 270 cubic yards of contaminated soil was removed from the property. No groundwater was reportedly encountered during tank removal.

A Limited Site Investigation Report (LSIR) was prepared by FJA Environmental Associates on November 6, 2001. As part of this LSIR, three groundwater monitoring wells were installed and groundwater sampling was conducted. Groundwater samples that were collected and analyzed did not result in an exceedance of regulatory limits for petroleum based contaminants. As such, a letter of **No Further Action** was issued by the RIDEM on November 13, 2001.

Based upon file information reviewed by PARE, it does not appear that groundwater in the vicinity of the Site has been impacted to a significant degree by this release. Also, groundwater measurements recorded during the LSIR indicated groundwater flow to be westerly toward the Blackstone River, making it potentially cross-gradient from the Site. Therefore, it appears unlikely that this release represents a significant threat of REC at the Site.

#### 49 Abbot Street, Cumberland, RI

The property located at 49 Abbot Street is approximately 1/4-mile northeast of the Site. It



was identified as a RIDEM LUST site (LUST project numbers: 0831-LS and 0831A-ST) on August 13, 1996 and again on July 18, 2006, respectively, due to petroleum releases.

Alliance Environmental Group (AEG) performed a UST tank closure on July 19 and 26, 2006 of three 10,000 gallon Number 2 fuel oil tanks. During the UST tank closure, AEG noticed that soil showed signs of coal ash and petroleum impacts. Four monitoring wells were installed on February 6, 2007, and sampled on May 25, 2007. Samples indicated that naphthalene was above the GA groundwater objective. As a result of this, the property is required by the RIDEM to perform quarterly groundwater monitoring. The last groundwater sampling data reviewed by PARE, dated May 2012, indicates that naphthalene remains above the GA groundwater objective in two of the wells. Groundwater flow direction at this property is reported to be to the southwest, toward the Site and eventually to the Blackstone River.

Based upon file information reviewed by PARE, groundwater in the vicinity of the Site may have been impacted as a result of this release. Therefore, this release represents a potential REC for the Site as it is presumed to be downgradient from this property.

As presented above, it appears unlikely that groundwater has been impacted at the Site as a result of the release at 94 Broad Street. However, the release located at 49 Abbott Street was reported to contain naphthalene at concentrations above the GA groundwater objective and flowing in a southwesterly direction toward the Site. Although groundwater beneath the Site is classified as GB, naphthalene is included in the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*. Based on results of the geotechnical investigation performed at the Site and the absence of groundwater in any of the test pits performed by PARE, PARE believes that naphthalene-contaminated groundwater that is present beneath 49 Abbot Street does not pose a reasonable potential for migration of contaminated vapors or gases into the proposed school building. For more information on EPA's list of *Chemicals of Potential Concern for Vapor Intrusion* as it relates to the Site, refer to Section 7.03 P.

The closest surface water body to the Site is the Blackstone River, located approximately 750 feet to the south. The Blackstone River is classified by the RI DEM as Class B1. Class B1 waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, irrigation and other agricultural uses. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However, all Class B criteria must be met. (RI DEM Water Quality Regulations, July 2006, amended December 2010). Given the location of the Release (i.e., soil) and the considerable distance (i.e., 750 feet) between the Site and the Blackstone River, and the



absence of shallow groundwater at the Site, the threat that this Release has impacted or will migrate to the river in the future is extremely low.

## <u>Section 7.03 K:</u> A description of the contamination resulting from the Release including, but not limited to:

- i. Free liquids on the surface;
- ii. Concentrations of Hazardous Substances which can be shown to present an actual or potential threat to human health, including, but not limited to, any concentrations of Hazardous Substances in excess of any of the remedial objectives listed in Tables 1 or 2 of Rule 8.02.B (Method 1 Soil Objectives) or Tables 3 or 4 of Rule 8.03.B (Method 1 Groundwater Objectives); or Section 12 (Special Requirements for Managing Arsenic in Soil);
- iii. A determination/opinion as to whether the Release of Hazardous Material has the potential to adversely impact an Environmentally Sensitive Area;
- iv. Contamination of man-made structures;
- v. Odors or stained soil;
- vi. Stressed vegetation;
- vii. The presence of excavated or stockpiled material and an estimate of its total volume;
- viii. Environmental sampling locations, sampling procedures and copies of the results of any analytical testing undertaken at the Contaminated-Site; and
- ix. A list of the Hazardous Substances at the Contaminated-Site;
- i. To date, no free liquids have been observed on the ground surface. In addition, no separate phase product (i.e., LNAPL and DNAPL) was observed on the groundwater table given that no groundwater was observed in the vicinity of the Release.
- ii. Refer to Section 7.03 L.
- iii. Based on the sampling data and the Site's location, it does not appear that the contaminated soil will have any adverse impact to Environmentally Sensitive Areas. It is noted that the Site is classified by the RI DEM's Environmental Resource Map as conservation land owned by the Town of Cumberland due to its former use as a public park.
- iv. Prior to construction of the school, man-made structures present at the Site included bituminous surfaces for the three recreational courts and sidewalks, catch basins, and structures associated with the on-Site electrical system (i.e., light poles, underground conduits, and utility building). At the time of the discovery of the Release, these man-made structures were either removed and disposed of off Site or not encountered during excavation in the vicinity of the Release. Therefore, it is believed that man-made structures present on Site have not been adversely impacted by the contaminated soil. A 4-inch clay pipe was discovered approximately 2 feet bgs on the northern edge of test pit S-1 during excavation on February 4, 2014, though PARE identified no visual or olfactory indications that the pipe was contaminated.



- v. Apart from the excavated contaminated soil, there were no other incidents of odors or stained soil observed at the Site.
- vi. No stressed vegetation was observed at the Site during the course of PARE's Phase I ESA.
- vii. To date, all known exposed contaminated material has been excavated and stockpiled on Site and encapsulated in polyethylene sheeting. PARE's preliminary estimate of the total volume of stockpiled soil is approximately 50 to 60 cubic yards. The final volume will be verified by the material hauler at the waste disposal facility.
- viii. Refer to Appendix B for environmental sampling locations from this SI. Copies of the results of analytical testing undertaken at the Site are located in Appendix J.
- ix. There are no hazardous substances used or stored at the Site. Hazardous substances are limited to contaminated soil. Appendix C provides a summary of the Hazardous Substances identified at the Site.

Section 7.03 L: The concentration gradients of Hazardous Substances throughout the Contaminated-Site for each media impacted by the Release of Hazardous Materials;

#### Metals

PARE's initial investigation of Area 1 identified three (3) metals in the waste soil stockpile at concentrations above their respective R DEC or I/C DEC. These metals included arsenic, lead, and mercury. As part of the supplemental investigation, samples from each test pit were analyzed for RCRA 8 metals, which include arsenic, lead, and mercury, as well as five (5) other metals. Arsenic, lead, and mercury were reported in a number of the test pits in varying concentrations, some above the R DEC and some above the I/C DEC. The remaining five (5) metals were reported below their respective R DECs or below the laboratory method detection limit. The following Table 1 summarizes the exceedances of arsenic, lead, and mercury identified during the course of the SI.



Table 1: Total Metal Exceedances (mg/kg)													
	Sc	oil	Sampling Location										
Metal	Stand	dards	Confirmatory Sampling				Sup	Supplemental Investigation					
	R DEC	I/C DEC	CONF-2 (8 ft)	CONF-5 (11 ft)	CONF-7 (11 ft)	SC-1 (5 ft)	SC-2 (5 ft)	SC-3 (5 ft)	SC-4 (5 ft)	S-1 (2 ft)	S-1 (7 ft)	S-5 (2 ft)	S-5 (8 ft)
Arsenic	7	7	NT	7.41	2.2	3.44	3.49	4.87	2.75	5.19	6.74	7.03	10.8
Lead	150	500	287	43.5	175	330	157	468	315	193	194	16.3	8.21
Mercury	23	610	NT	0.211	ND	0.641	0.370	2.58	0.772	ND	0.309	ND	ND



= Soil with contaminant concentrations in excess of the R DEC but below the I/C DEC

= Soil with contaminant concentrations in excess of the I/C DEC

ND NT = Not Detected = Not Tested

#### <u>Arsenic</u>

The reported concentrations of arsenic in soil at the Site ranged from below laboratory method detection limits at S-2 (8 feet bgs) to 12.3 mg/kg from the stockpiled "WASTE" soil sample. The highest concentration of arsenic reported in situ was 10.8 mg/kg, located at S-5 (8 feet bgs). In total, four (4) samples were reported with concentrations of arsenic in excess of the I/C DEC. Although arsenic levels were reported at the Site above the I/C DEC, concentrations at the Site have been deemed consistent with state background levels based on the criteria set forth in Section 12 of the Remediation Regulations (see Section 7.03 M).

#### Lead

The reported concentrations of lead in soil at the Site ranged from 1.75 mg/kg at S-4 (2 feet bgs) to 1,710 mg/kg from the stockpiled "WASTE" soil sample. The highest concentration of lead reported in situ was 468 mg/kg, located at SC-3 (5 feet bgs). The stockpiled "WASTE" soil sample was the only reported concentration in excess of the I/C DEC, though eight (8) samples were reported with concentrations above the R DEC, ranging in depth from 2 feet bgs to 11 feet bgs. The exceedances of lead are associated with the confirmatory samples around Areas 1 and 2. None (0) of the remaining test pits had lead concentrations above the R DEC. PARE proposes that areas of the Site with reported concentrations of lead above its RI DEM regulatory threshold be addressed through *selective excavation of the lead-contaminated soil and disposal at a licensed facility*.



#### Mercury

The reported concentrations of mercury in soil at the Site ranged from below laboratory method detection limits at a number of locations across the Site to 38.4 mg/kg from the stockpiled "WASTE" soil sample. The highest concentration of mercury reported in situ was 0.772 mg/kg, located at SC-4 (5 feet bgs). The stockpiled "WASTE" soil sample was the only reported concentration of mercury that exceeded its R DEC. None (0) of the test pits had mercury concentrations above the R DEC. Therefore, *further investigation or remediation of mercury does not appear to be warranted at this Site*.

#### **Total Petroleum Hydrocarbons**

The reported concentrations of total petroleum hydrocarbons (TPH) in soil at the Site ranged from below laboratory method detection limits at a number of locations across the Site to 2,320 mg/kg from the stockpiled "WASTE" soil sample. The highest concentration of TPH reported in situ was 302 mg/kg, located at S-6 (8 feet bgs). The stockpiled "WASTE" soil sample was the only reported concentration of TPH which exceeded its R DEC. None (0) of the test pits had TPH concentrations above the R DEC. Therefore, *further investigation or remediation of TPH does not appear to be warranted at this Site*.

#### **Polycyclic Aromatic Hydrocarbons**

The SVOCs reported in soil above their respective R DEC or I/C DEC are all classified within a subset of SVOCs known as polycyclic aromatic hydrocarbons (PAHs). Soil sampling analytical results from across the Site included six (6) PAHs with concentrations in excess of their respective RI DEM regulatory limits, as summarized in the following Table 2. These exceedances were reported in test pits S-2, S-6, and S-7, as well as in two (2) confirmatory samples from Area 1, and one (1) confirmatory sample from Area 2.



Table 2: PAH Exceedances (mg/kg)												
	0.10	1 1	Sampling Location									
PAH	5011 51	andards	Confirmatory Sampling Supplemen				pplemental	Investigati	tion			
	R DEC	I/C DEC	CONF-2 (8 ft)	CONF-7 (11 ft)	SC-1 (5 ft)	S-2 (2 ft)	S-2 (8 ft)	S-6 (8 ft)	S-7 (6 ft)			
Benzo(a)anthracene	0.9	7.8	1.5	0.44	0.48	1.2	0.5	1.4	0.61			
Benzo(a)pyrene	0.4	0.8	1.8	0.5	0.42	1.1	0.46	1.3	0.59			
Benzo(b)fluoranthene	0.9	7.8	2.2	0.71	0.57	1.5	0.63	1.7	0.79			
Benzo(g,h,i)perylene	0.8	10,000	1.1	0.28	0.29	0.79	0.29	0.93	0.39			
Chrysene	0.4	780	1.6	0.47	0.55	1.2	0.52	1.5	0.65			
Indeno(1,2,3-cd)pyrene	0.9	7.8	1.4	0.36	0.32	0.91	0.32	1	0.44			



= Soil with contaminant concentrations in excess of the R DEC but below the I/C DEC

= Soil with contaminant concentrations in excess of the I/C DEC

In total, twenty-five (25) RI DEM regulatory exceedances were reported from six (6) PAHs during the course of the SI. Of these exceedances, twenty-two (22) were due to PAH concentrations exceeding their respective R DEC and three (3) were due to PAH concentrations in excess of their respective I/C DEC. Soil samples reported to contain PAHs in excess of their respective RI DEM regulatory thresholds ranged in depth from 2 feet bgs to 11 feet bgs. PARE proposes that areas of the Site outside of the school building footprint with reported concentrations of PAHs above their respective RI DEM regulatory thresholds be addressed through selective excavation of the PAH-contaminated soil and disposal at a licensed facility. For PAH-contaminated soil located below the proposed school building footprint, which are 6 to 8 feet below grade, PARE proposes that these exceedances be addressed through capping soil in place utilizing the building foundation as an engineered control over the contaminated soil and recording an Environmental Land Usage Restriction for the portion of the Site beneath the building foundation.

<u>Section 7.03 M:</u> The methodology and results of any investigation conducted to determine background concentrations of Hazardous Substances identified at the Contaminated-Site (for arsenic in soil - see Section 12);

Although arsenic levels were reported at the Site in excess of the I/C DEC, concentrations at the Site have been deemed consistent with state background levels based on the requirements of Section 12 of the Remediation Regulations.



The determination was based on the follow three criteria (results of our investigation are provided in parentheses).

- 1. No individual sample result from the data set shall be greater than 15 ppm (highest concentration reported on Site is 10.8 ppm, 12.3 ppm in the waste characterization sample);
- 2. No greater than 25% of sample results from the data set shall exceed 7.0 ppm (only 11.5% of sampling results exceeded 7.0 ppm); and
- 3. The average of all sample results shall be 7.0 ppm or less (the average concentration on Site is 4.3 ppm).

Based on our evaluation and the criteria set forth in Section 12 of the Remediation Regulations, the Site arsenic conditions appear to be non-jurisdictional.

<u>Section 7.03 N:</u> A listing and evaluation of the site-specific hydrogeological properties that could influence the migration of Hazardous Substances throughout and away from the Contaminated-Site, including but not limited to, where appropriate:

- i. The depth to groundwater;
- ii. The presence and effects of both the natural and man-made barriers to and conduits for contaminant migration;
- iii. A characterization of the bedrock; and
- iv. The groundwater contours, flow rates and gradients throughout the Contaminated-Site;
- i. PARE conducted a limited groundwater study as part of a geotechnical investigation at the Site. The limited groundwater investigation included the advancement of three geotechnical borings along the common property line between the Site and the former gas station property to the south of the Site. At each location, bedrock was encountered at a depth ranging from 6 feet to 14 feet. Groundwater was not encountered in any of the three boring locations.
- ii. Prior to the start of construction, the Site was served by electric through underground conduits that originated from a utility building on the northern portion of the Site. The underground electrical system served stadium lighting used for the sporting areas and also a security camera system. In addition, according to a Topographic & Property Line Survey developed by National Surveyors-Developers, Inc. of Woonsocket, RI, dated December 1991, public water was historically buried on Site via a connection from Chase



Street, which serviced two (2) water fountains located on the southern portion of the Site. Sewer lines are present throughout the area, but were not reported to be actively serving the Site prior to commencement of construction. The school building is proposed to include underground drainage, sewer, water, and gas lines. Though these man-made structures buried on Site could act as a barrier to, or conduit for, contaminant migration, the contaminants of concern at the Site are confined to soil. Moreover, during the course of the SI, no evidence of shallow groundwater in the vicinity of the Release was observed, thus eliminating groundwater as a conduit for contaminant migration.

- iii. Based on a review of the RI DEM Environmental Resource Map, the bedrock formation beneath the Site is Avalon and composed of Pennsylvanian aged Narragansett Bay Group Rhode Island Formation. According to U.S. Geological Survey (USGS) Mineral Resources Online Spatial Data, the Rhode Island Formation located in the vicinity of the Site is primarily arenite, which is chemically cemented sandstone. Shale, a laminated mudstone, is the second most abundant rock type. The USGS Ground Water Atlas of the United States indicates that most of the porosity in sandstone rocks consists of secondary openings (i.e., joints, fractures, and bedding planes). Groundwater movement is primarily along bedding planes, but joints and fractures which intersect the bedding plane provide a conduit for vertical migration between bedding planes. Shale has a low permeability, and, similar to sandstone, fluid flow is primarily along bedding planes. Consistent with the USGS data, two (2) rock cores collected as part of the project's geotechnical investigation indicate bedrock at the Site to consist of sandstone and mudstone.
- iv. A limited groundwater investigation was conducted as part of a geotechnical investigation. Groundwater was not encountered during this investigation. Therefore, groundwater contours have not been generated because no evidence of shallow groundwater was observed in the vicinity of the Release.

## <u>Section 7.03 O:</u> A characterization of the topography and surface water and run-off flow patterns, including the flooding potential, of the Contaminated-Site;

The topography of the Site, which is predominantly cleared due to construction activities, slopes from west to east toward Broad Street. According to a Topographic & Property Line Survey developed by National Surveyors-Developers, Inc. of Woonsocket, RI, dated December 1991, topography at the Site ranges from approximately 74 feet above Mean Sea Level (MSL) near Broad Street to approximately 84 feet above MSL at Chase Street. The surrounding area appears



to generally slope to the south toward the Blackstone River. The Blackstone River is located approximately 750 feet to the south of the Site at its nearest point. It approaches to within 900 feet of the Site to the west as well. The Blackstone River is a major water body in the area, which flows southerly and ultimately discharges to the Atlantic Ocean at Narragansett Bay.

Prior to construction of the school, surface water runoff on the northern portion of the Site flowed overland toward Broad Street, which contains catch basins and a closed drainage system. Stormwater runoff on the southern portion of the Site flowed overland to the south toward two catch basins located along the southern property line.

Based on PARE's review of the available Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (Town of Cumberland, Rhode Island, Providence County, Community Panel Number 440016 0194 G, effective date March 2, 2009), the Site is located in an area designated as Zone X. Zone X is defined as an area determined to be outside the 0.2% annual chance floodplain. The FEMA Flood Zone Map is included as Appendix I.

# <u>Section 7.03 P:</u> The potential for Hazardous Substances from the Contaminated-Site to volatilize and any and all potential impacts of the volatilization to structures within the Contaminated-Site;

Throughout the course of the SI, only the stockpiled "WASTE" soil sample was reported to contain a concentration of a contaminant included in the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion* above its respective RI DEM regulatory threshold. Specifically, mercury was reported in the "WASTE" sample above its R DEC, but below it's I/C DEC. However, soil samples collected as part of confirmatory sampling and the supplemental investigation had mercury concentrations below the laboratory method detection limit or below mercury's R DEC. Moreover, three (3) additional contaminants from EPA's list (i.e., naphthalene, 1,2,4-trimethylbenzene, and cyanide) were reported during the SI, though these concentrations were isolated to the "WASTE" soil sample and detected at levels substantially less than their respective RI DEM regulatory thresholds. As such, vapor intrusion into the proposed school building does not appear to be a significant concern at the Site.

It is important to note that while a number of PAHs were identified at the Site, no PAHs are included on the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*. PAHs are not readily volatile and therefore represent an insignificant risk of volatilization at the Site. The



potential for a contaminant to volatilize is highly dependent on its vapor pressure, molecular weight, and boiling point. The vapor pressure is the pressure exerted by a vapor in thermodynamic equilibrium with its condensed phases at a given temperature in a closed system. The higher the vapor pressure the more volatile the contaminant. Moreover, PAHs are classified as either low molecular weight (LMW) or high molecular weight (HMW) based on their chemical structure. As molecular weight increases, vapor pressure and consequently volatility decreases. The PAHs present on Site are all classified as HMW PAHs<sup>2</sup>. Another indication of volatility is boiling point – the higher the boiling point of a contaminant, the lower the volatility. As a means of comparison, Table 3 provides the vapor pressure, molecular weight, and boiling point of the PAHs identified at the Site, as well as select compounds from the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*.

Table 3: Volatilization Properties								
Compound	Vapor Pressure (Pa)	Molecular Weight (g/mole)	Boiling Point (°C)					
	On-Site Contaminants							
Benz(a)anthracene <sup>1,2</sup>	2.05E-05	228.3	437.8					
Benzo(a)pyrene <sup>1,2</sup>	6.52E-07	252.3	495.0					
Benzo(b)fluoranthene <sup>1,2</sup>	1.07E-05	252.3	481.1					
Benzo(g,h,i)perylene <sup>1,2</sup>	1.33E-08	276.3	500.0					
Chrysene <sup>1,2</sup>	1.04E-06	228.3	447.8					
Indeno(1,2,3-cd)pyrene <sup>1,2</sup>	1.87E-08	276.3	536.1					
	Select EPA Chemicals of Potential Concern for Vapor Intrusion							
Acetone <sup>3</sup>	2.40E+04	58.1	56.1					
Benzene <sup>3</sup>	1.00E+04	78.1	80.0					
Cumene <sup>3</sup>	1.07E+03	120.2	152.2					
Pentane <sup>3</sup>	5.60E+04	72.2	36.1					
Propylene <sup>3</sup>	1.49E+04	57.1	66.7					
Toluene <sup>3</sup>	2.80E+03	92.1	111.1					

#### Sources:

- 1 Bojes, H.K., and P.G. Pope. 2007. Characterization of EPA's 16 priority polycyclic aromatic hydrocarbons (PAHs) in tank bottom solids and associated contaminated soils at oil exploration and production sites in Texas. Reg. Toxicol. and Pharmacol. 47: 288-295.
- 2 Lundstedt, S. 2003. Analysis of PAHs and their transformation products in contaminated soil and remedial processes. PhD Dissertation, Umeå Universidad, Department of Chemistry.
- 3 CDC NIOSH. (2013, August 05). Niosh pocket guide to chemical hazards. Retrieved from http://www.cdc.gov/niosh/npg/default.html

As indicated in Table 3 above, the EPA list of *Chemicals of Potential Concern for Vapor Intrusion* have vapor pressures approximately 8 to 12 orders of magnitude greater than the on-



<sup>&</sup>lt;sup>2</sup> Wick, A.F., and W.L. Daniels. 2011. Remediation of PAH-Contaminated Soils and Sediments: A Literature Review. Virginia Polytechnic Institute and State University.

Site PAHs. Furthermore, the average molecular weight of the on-Site PAHs was  $\approx$ 252 g/mole versus  $\approx$ 80 g/mole for the select EPA chemicals and the average boiling point temperatures were  $\approx$ 483°C ( $\approx$ 901°F) for target PAHs versus  $\approx$ 84°C ( $\approx$ 183°F) for select EPA chemicals. Consequently, the potential risk for any of these PAHs to volatilize and impact structures within the contaminated Site is extremely low. What little risk exists at the Site would be well managed with the proposed passive sub-slab ventilation system and vapor barrier proposed beneath the new school building. Based on the volatilization properties of the PAHs identified on Site, as well as the absence of any other volatile compounds above the R DEC, and the vapor mitigation measures already proposed at the Site, *it is the opinion of PARE that the potential for hazardous substances from the contaminated Site to volatilize and impact on-Site structures is insignificant.* 

## <u>Section 7.03 Q</u>: The potential for entrainment of Hazardous Substances from the Contaminated-Site by wind or erosion actions;

Currently, the contaminants of concern (i.e., above R DEC) are in soil ranging from 2 feet bgs to 11 feet bgs at the Site, making the potential for entrainment by wind or erosion of the majority of the contaminants unlikely. However, shallow soil (i.e., 2 feet bgs) was reported to contain SVOCs and metals above their respective RI DEM regulatory limits. Specifically, benzo(a)pyrene was reported in shallow soil southwest of the proposed school footprint at a concentration above the I/C DEC. As the Site is under construction, the soil currently has no established vegetation, making entrainment by wind or erosion actions of the contaminant possible. However, it is noted that given the time of year that the SI was performed, the Site is generally frozen and covered in snow, making wind entrainment and erosion unlikely.

## <u>Section 7.03 R:</u> Detailed protocols for all fate and transport models used in the Site Investigation;

No fate and transport modeling was conducted as part of this SI.

## <u>Section 7.03 S:</u> A complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation;

A detailed plan showing sample locations, depths, and contaminant concentrations in excess of the RI DEM regulatory thresholds is provided in the attached Site Plan (see Appendix B). In addition, an Analytical Data Summary Table is attached as Appendix C.



#### Soil Sampling

Throughout the course of the SI, PARE collected a total of twenty-seven (27) soil samples from the Site. All samples were transported in laboratory-provided glassware with chain-of-custody documentation to NETLAB for laboratory chemical analysis.

As part of the initial subsurface investigation performed between December 30, 2013 and January 6, 2014, PARE collected eight (8) confirmatory samples and one (1) waste characterization sample for chemical analysis (see Section 7.03 B).

The confirmatory samples were tested for:

- Volatile Organic Compounds (VOCs), EPA method 8260B;
- Semi-Volatile Organic Compounds (SVOCs), EPA method 8270D;
- Total Petroleum Hydrocarbons (TPH), EPA method 8100M;
- Total Arsenic, Lead, and Mercury, EPA method 6010C/7471B<sup>3</sup>; and
- Additional parameters from the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*, not included in the standard VOC and SVOC analysis.

The waste characterization sample was tested for:

- VOCs, EPA method 8260B;
- SVOCs, EPA method 8270D:
- TPH, EPA method 8100M (including TPH fingerprint analysis);
- Polychlorinated Biphenyls (PCBs), EPA method 8082A;
- Pesticides, EPA method 8081B;
- Total Metals, EPA method 6010C/7471B;
- TCLP Metals, EPA method 6010C/7470A;
- Free Liquids, EPA method 9095B;
- Percent Organics, ASTM method D2974;
- Cyanide, EPA method 9014; and
- Additional parameters from the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*, not included in the standard VOC and SVOC analysis.

A supplemental subsurface investigation was completed by PARE to identify if the site has been impacted by hazardous materials or petroleum products beyond the minor contamination identified on December 28, 2013 at Area 1. The investigation, which was performed by PARE personnel on February 4, 2014, consisted of eight (8) test pits, including two (2) test pits performed within the proposed school building footprint, and soil sampling and chemical analysis. As part of the investigation performed, PARE collected eighteen (18) discrete soil samples for chemical analysis. In general, the discrete samples consisted of one (1) shallow soil



<sup>&</sup>lt;sup>3</sup> CONF-2 not tested for arsenic or mercury due to excavation and stockpiling of side wall.

sample and one (1) deep soil sample collected from native material at each test pit. At some locations, a shallow sample could not be collected because the native material had already been removed and replaced with structural fill for the building. At other locations, additional samples were collected based on field screening. Each sample was collected in laboratory-provided glassware and transported to New England Testing Laboratory of North Providence, RI for chemical analysis. Analysis included:

- VOCs, EPA method 8260B;
- SVOCs, EPA method 8270D;
- TPH, EPA method 8100M;
- RCRA 8 Metals, EPA method 6010C/7471A; and
- Additional parameter from the EPA's list of *Chemicals of Potential Concern for Vapor Intrusion*, not included in the standard VOC and SVOC analysis.

Soil sampling results are summarized in Appendix C. Laboratory analytical results are provided in Appendix J.

Up until the discovery of the Release earthwork occurred at the Site that included stripping loam, removing asphalt and concrete, ledge removal beneath the building foundation, and some minor gravel excavation. To date, approximately 2,128 cubic yards of loam had been stripped from the Site and transported to J. Fisk Construction, Inc. in Seekonk, MA. In addition, approximately 435 cubic yards of concrete/asphalt and approximately 805 cubic yards of rock also went off-site to J. Fisk Construction. Approximately 182 cubic yards of gravel left the Site and were transported to Lonsdale Concrete Construction, Inc. in Cumberland, RI. In addition, approximately 1,400 cubic yards of processed gravel for structural fill were imported to the Site from J. Fisk Construction. PARE personnel were on-Site during the excavation and site work activities that occurred prior to the discovery of the Release. Up until the Release was discovered, none of the material that left the Site exhibited any obvious signs of contamination (e.g., odor, discoloration, etc.).

During excavation of the first test pit, designated as S-1, PARE personnel observed evidence of impacted soil at a depth of 5 to 6 feet on the southeastern edge of the test pit. At that depth, PARE noted a strong petroleum odor and observed soil with a dark black color. The area of impacted soil was approximately 5 feet wide by 5 feet long with a thickness of approximately 1 foot. This area has been designated as Area 2 to differentiate it from the initial release discovered on December 28, 2013 (see Site Plan). The backhoe operator excavated this soil and additional



soil around the sidewalls and bottom of the test pit until no further evidence of contaminated soil could be discerned. The dimensions of the excavation after soil removal were approximately 7 feet by 7 feet by 6 feet deep. Four (4) sidewalls and one (1) bottom confirmatory sample were collected from the excavation. Contaminated soil from the excavation was stockpiled on a polyethylene sheet on the south side of the Site with the existing contaminated soil stockpile from Area 1. Additional exploration was performed in the vicinity of the contaminated soil to verify that no other contamination existed in this area of the Site, particularly between Areas 1 and 2 to identify if there was a discernible connection between the two releases. The additional exploration area, located approximately 40 feet southeast of Area 1, measured approximately 35 feet by 18 feet by 11 feet deep at its deepest point. Contaminated soil from the excavation was stockpiled on a polyethylene sheet on the south side of the Site with the existing contaminated soil stockpile from Area 1.

In the remaining test pits, PARE personnel observed no other obvious signs of contamination (i.e., no discolored soil, no strong odors, and no signs of buried debris). While no obvious signs of contamination were identified, PARE collected soil samples for chemical analysis from each test pit. A summary of the analytical results is provided in Section 7.03 L.

Section 7.03 T: Construction plans and development procedures for all monitoring wells.

Well construction shall be consistent with the requirements of Appendix 1 of the Groundwater Quality Rules;

No monitoring wells were installed as part of this SI.

Section 7.03 U: Procedures for the handling, storage and disposal of wastes derived from and during the investigation if such procedures deviate from the Department's Guidelines for the Management of Investigation Derived Waste (Policy Memo 95-01);

Investigation-derived wastes consisting of nitrile gloves and paper towels were placed in plastic bags and disposed of as solid waste off Site. Soil excavated as part of the SI was either placed back in the corresponding test pit or stockpiled on plastic sheet for future off-Site disposal.



# <u>Section 7.03 V:</u> A quality assurance and quality control evaluation summary report for sample handling and analytical procedures, including, but not necessarily limited to, chain-of-custody procedures and sample preservation techniques;

Samples were collected in laboratory-provided glassware using disposable nitrile gloves and transported with chain-of-custody documentation to NETLAB in an appropriately cooled container or stored in a refrigerator at PARE's office prior to delivery to the laboratory. Chain-of-custody documentation and laboratory quality control information is provided with each analytical report in Appendix J.

All samples provided to NETLAB were extracted (where applicable) and analyzed within method specified holding times and according to NETLAB's documented Standard Operating Procedures. In addition, the results for the associated calibration, method blank, and laboratory control sample were within method specified quality control criteria for all samples tested, though it should be noted that the profile for "WASTE" prevented the quantification of the associated TPH surrogate. As a result, the surrogate recovery was reported by the laboratory as "obscured".

## <u>Section 7.03 W</u>: A detailed explanation of how the Public Involvement requirements set forth in Rule 7.07 were met.

A public meeting with respect to the contamination discovered at the Site was completed on February 24, 2014 at the Blackstone Valley Prep Elementary School, located at 291 Broad Street in Cumberland, RI. The purpose of the meeting was to gather information about potential environmental contamination at the Site not previously identified as part of the environmental investigations performed at the Site. The public meeting was advertised in the Providence Journal on February 11, 2014. The Notice of a Public Meeting was provided per RIGL Chapter 23-19.14 (*The Industrial Property Remediation and Reuse Act*) and more specifically Section 23-19.14-5 (*Environmental Equity and Public Participation*).

The record of the public meeting was open for ten (10) business days after the meeting for the receipt of public comment and closed at 4:00 PM on March 10, 2014. Public comments relative to the environmental investigation of the proposed project were submitted in writing to: Ms. Ashley Blauvelt, RI Department of Environmental Management - Office of Waste Management, 235 Promenade Street, Providence, RI 02908 or by telephone at (401) 222-2797 ext. 7026. The results of the public meeting, including the comment period, have been documented in a separate



written report submitted to the RI DEM.

<u>Section 7.03 X</u>: Any other site-specific factor that the Director has reason to believe is necessary to make an accurate decision as to the appropriate Remedial Action to be taken at the contaminated-site.

PARE identified no significant Site-specific factors that are not addressed in other sections of this report.



### SECTION 3.0 – RECOMMENDED REMEDIAL MEASURE

In accordance with Section 7.04 of the Remediation Regulations, this SIR includes a discussion of the preferred remedial alternatives to address the Site Release. This section includes three remedial alternatives, including no action/natural attenuation.

 No Action/Natural Attenuation – No action/natural attenuation consists of leaving the discovered contaminated soil on Site in its current condition.

This remedial measure is not preferred due to the elevated concentrations of TPH, SVOCs, and metals reported in soil at the Site. Leaving the soil in place in its current condition poses an unacceptable risk to human health and the environment.

2. Complete Soil Removal and Disposal – This option involves excavating all the contaminated soil reported above the RI DEM R DEC at the Site and disposing of it at a licensed facility. For this option, the owner shall remove all the contaminated soil until contaminant concentrations are below the R DEC or until bedrock is encountered. Compliance sampling shall be conducted to confirm that contaminated soil has been satisfactorily excavated and removed. Once the soil is removed and disposed, the owner shall backfill soil with clean fill.

This option is sufficiently protective of human health and the environment because contaminant concentrations are reduced to below the R DEC. In addition, unlike a soil or geosynthetic cap and an Environmental Land Use Restriction (ELUR), this option does not limit future soil disturbance at the Site. The disadvantage of this option is that the cost to dispose of all the soil, as well as the cost to bring in clean fill, is anticipated to be prohibitive. Therefore, complete soil removal and disposal is not the preferred remedial option for the Site.

3. Selective Soil Removal and Disposal & Engineered and Institutional Controls (i.e., Soil Cap and ELUR) – This option requires that the Site owner selectively remove and dispose of soil from areas identified as contaminated during the SI, as well as cap contaminated soil located below the proposed school building and record an ELUR with



the property deed restricting future soil disturbance in this portion of the Site. This remedial measure is more protective of human health and the environment than no action/natural attenuation and more cost-effective than the complete removal and disposal of all contaminated soil discovered on Site. Therefore, selective soil removal and disposal supplemented with engineered and institutional controls on the proposed school building footprint is the preferred remedial option for the Site.

PARE proposes that areas of the Site outside of the school footprint with reported contaminant concentrations above their respective RI DEM regulatory thresholds be addressed through selective excavation of the contaminated soil and disposal at a licensed facility. The remedial action is proposed to be completed during construction activities, which are proposed in the vicinity of Area 1 and Area 2, as well as the area around test pit S-2, which has elevated concentrations of PAHs. These construction activities include underground utility installation, underground infiltration system installation, and landscaping and paver installation. Confirmatory samples will be collected from each of these areas subsequent to soil removal to verify compliance with the Remediation Regulations.

Confirmatory samples collected from Area 1 and Area 2 will be analyzed for SVOCs via EPA method 8270D and total Lead via EPA method 6010C based on the results of confirmatory samples collected as part of this SI. Confirmatory samples collected from the area of contaminated soil in the vicinity of S-2 will be analyzed for SVOCs via EPA method 8270D due to the elevated concentrations of PAHs, a subset of SVOCs, reported in this test pit during SI activities.

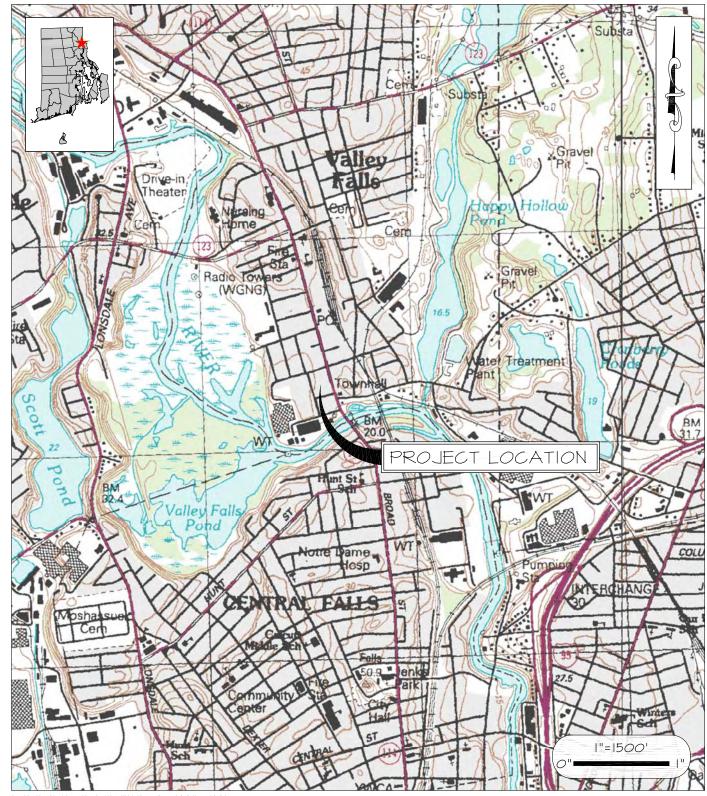
For exceedances reported below the proposed school building footprint, PARE proposes that these contaminants be addressed through capping soil in place utilizing the building foundation as an engineered control over the contaminated soil. The cap will prevent contact with the contaminated soil and limit contaminant mobility. In addition, a vapor barrier and passive sub-slab ventilation system will be installed beneath the building, as originally proposed; even though the risk for vapor intrusion at this Site appears to be low. A Proposed Remedial Option Plan is provided in Appendix L.



# **APPENDIX A**

Locus Map





SOURCE: RIGIS - USGS 7.5 MINUTE TOPOGRAPHIC MAPS



PARE CORPORATION ENGINEERS - SCIENTISTS - PLANNERS 8 BLACKSTONE VALLEY PLACE LINCOLN, RI 02865 401-334-4100 PROJECT NO. 13062.09

DATE: MARCH 2014

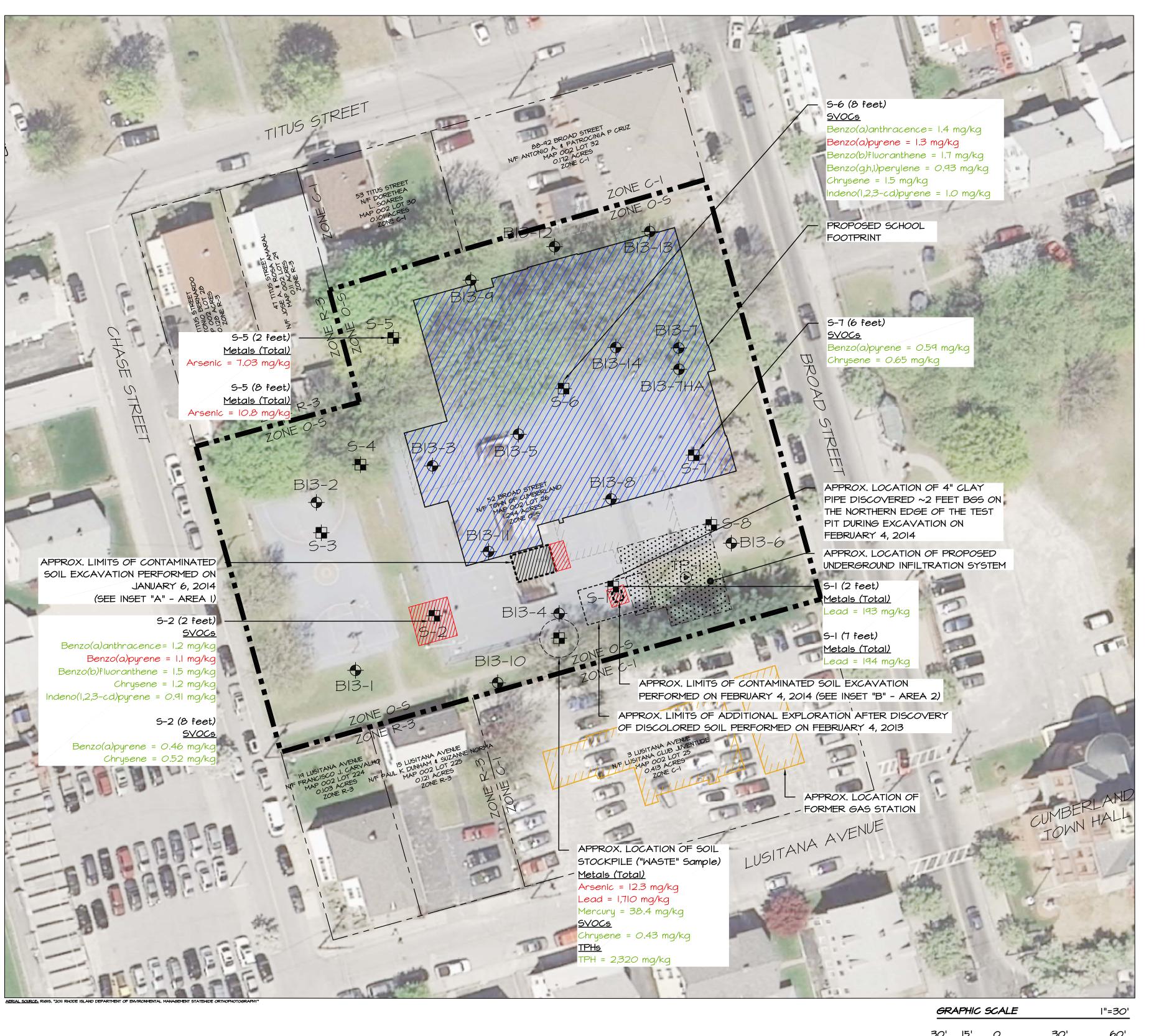
Blackstone Valley Preparatory School 52 Broad Street A.P. 2, Lot 26 LOCUS MAP

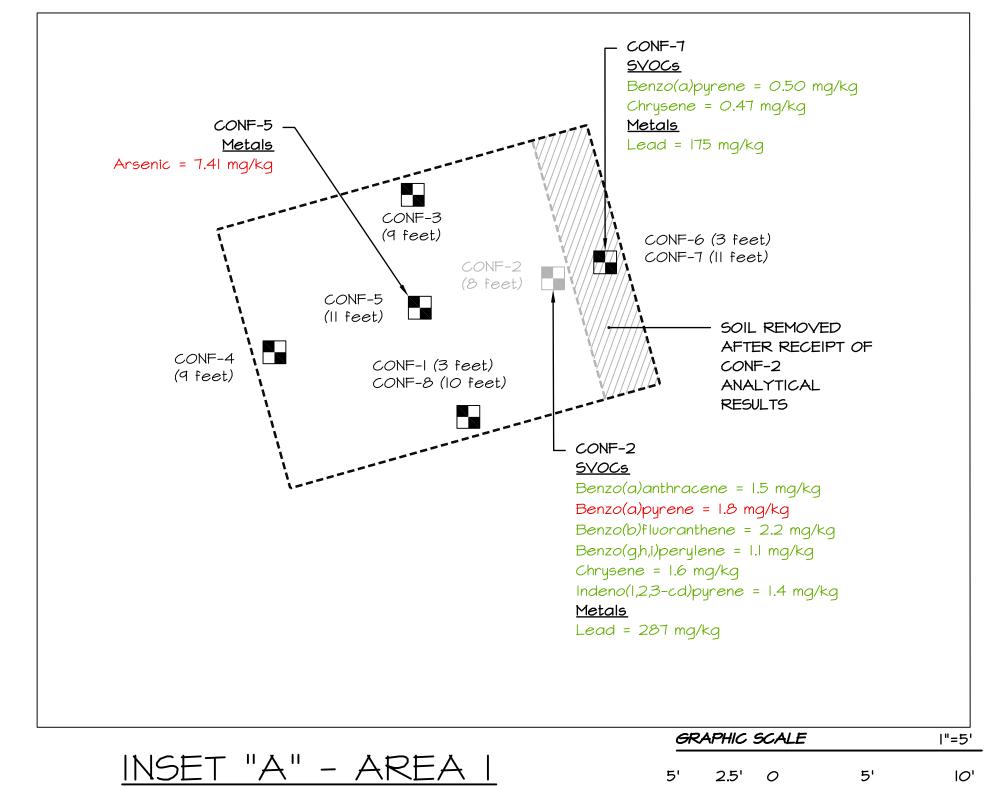
Cumberland, Rhode Island

# **APPENDIX B**

Site Plan

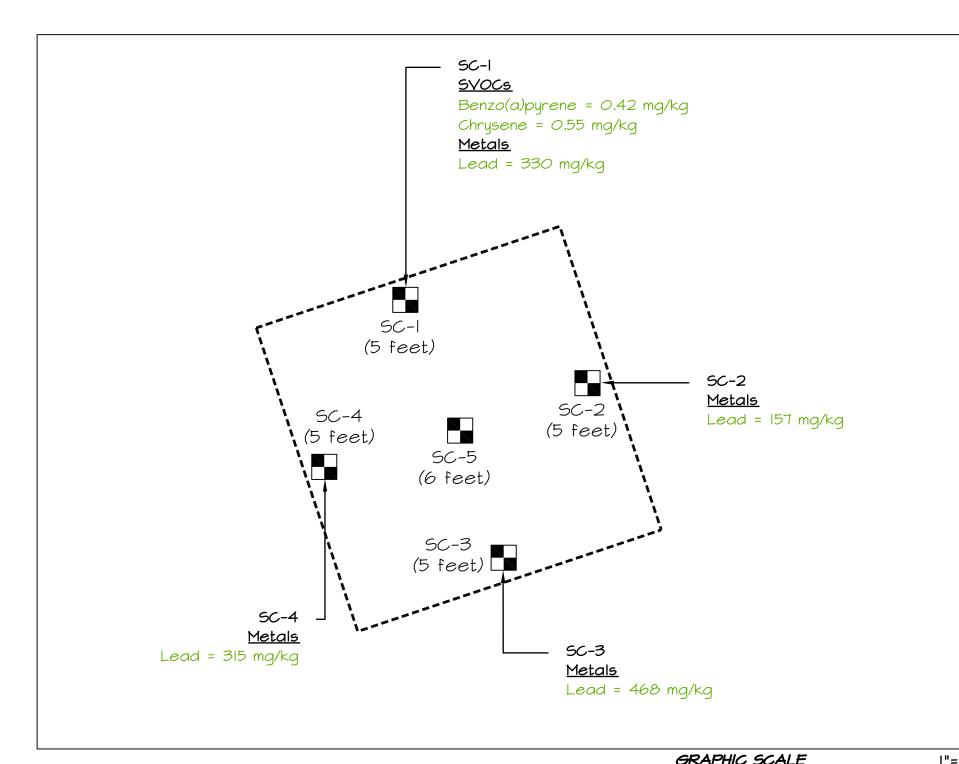




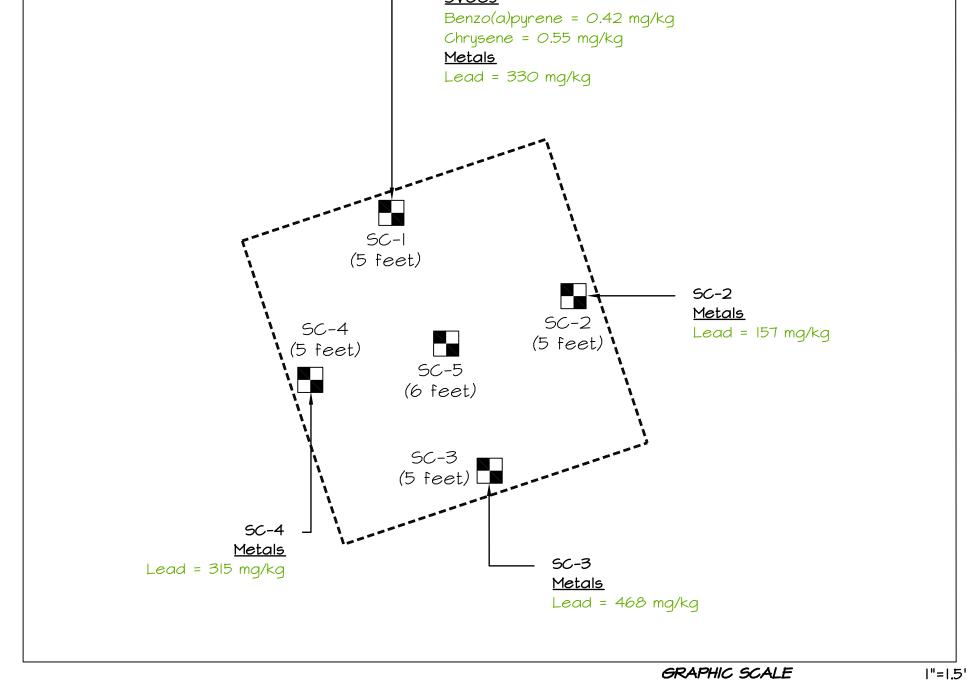


5' 2.5' *O* 

1.5' 0.75' 0



INSET "B" - AREA 2



LEGEND

BI3-2

BORING LOCATION (BORINGS COMPLETED BY NEW HAMPSHIRE BORING JULY 9, 2013 TO JULY II, 2013 AND JULY 23, 2013. BORINGS OBSERVED BY PARE PERSONNEL.)

TP-I

5-1

ENVIRONMENTAL SAMPLING LOCATION (TEST PITS COMPLETED BY W.A. EXCAVATING ON FEBRUARY 4, 2014. SOIL SAMPLING PERFORMED BY PARE PERSONNEL.)

PROPERTY LINE 201122112

HISTORIC BUILDING (SOURCE: 1965 SANBORN MAP)

ENGINEERED & INSTITUTIONAL CONTROL (CAP & ELUR)

SELECTIVE SOIL REMOVAL & DISPOSAL

NOTE: CONCENTRATIONS SHOWN IN RED EXCEED RIDEM I/C DEC CONCENTRATIONS SHOWN IN GREEN EXCEED RIDEM R DEC

0.5" BAR SCALE REVISIONS: PROJECT NO.: 13062.09 **MARCH 2014** SCALE: AS NOTED DESIGNED BY: SPD TPT CHECKED BY: SPD DRAWN BY: TPT APPROVED BY: DRAWING TITLE:

SITE PLAN

SHEET NO. 1 OF 2

DRAWING NO.:

PARE

PARE CORPORATION ENGINEERS - SCIENTISTS - PLANNERS 8 BLACKSTONE VALLEY PLACE LINCOLN, RI 02865 401-334-4100

School

Prepartory

BlackstoneValley

# **APPENDIX C**

Analytical Data Summary Table



Parameter   Method   RIDEM   Method 1   Residential   Residential   Method 1   Residential   Residential   Residential	CONF-7   CONF-8   SC-1   SC-2   SC-3   SC-4   SC-5	2-4-14   2
Parameter   Method   RIDEM   Method 1   Residential   Ind./Comm.   Policy   Units   CONF-1   (3 feet)   (3 feet)   (2-30-13   12-3	CONF-7 CONF-8 SC-1 SC-2 SC-3 SC-4 SC-5 (11 feet) (10 feet) (5 feet) (5 feet) (5 feet) (5 feet) (5 feet) (5 feet) (6 feet) (-1-6-14 1-6-	Supplemental investigation   Char.   S-1
Parameter   Method   Method 1   Residential   Ind./Comm.   Policy   Units   CONF-1   CONF-2   CONF-3   CONF-4   (9 feet)   (9 feet)   (9 feet)   (11 feet)   (3 feet)   (2-30-13   12-30-	(11 feet) (10 feet) (5 feet) (5 feet) (5 feet) (5 feet) (6 feet) (2-4-14 2-4-14	(2 feet)   (7 feet)   (2 feet)   (8 feet)   (2 feet)   (8 feet)   (2 feet)
Lead         6010C         5.0         mg/L         NT	2.20     2.63     3.44     3.49     4.87     2.75     1.77       NT     NT     34.8     20.4     44.1     30.9     19.0       NT     NT     ND     ND     ND     ND       NT     NT     5.52     5.90     4.86     5.28     3.73       175     5.81     330     157     468     315     101	5.19 6.74 2.11 ND 2.53 1.43 2.40 5.53 7.03 10.8 3.28 5.27 3.40 12.3 27.1 21.1 12.2 19.7 13.3 6.69 5.90 14.8 20.5 25.1 19.0 24.2 11.0 91.5 ND
Metals (Total)         Arsenic         6010C         7         7         7         mg/kg         5.12         NT         6.87         6.20         7.41         0.89	NT         NT         34.8         20.4         44.1         30.9         19.0           NT         NT         ND         ND         ND         ND         ND           NT         NT         5.52         5.90         4.86         5.28         3.73           175         5.81         330         157         468         315         101	5.19 6.74 2.11 ND 2.53 1.43 2.40 5.53 7.03 10.8 3.28 5.27 3.40 12.3 27.1 21.1 12.2 19.7 13.3 6.69 5.90 14.8 20.5 25.1 19.0 24.2 11.0 91.5 ND
Arsenic 6010C 7 7 7 mg/kg 5.12 NT 6.87 6.20 7.41 0.89	NT         NT         34.8         20.4         44.1         30.9         19.0           NT         NT         ND         ND         ND         ND         ND           NT         NT         5.52         5.90         4.86         5.28         3.73           175         5.81         330         157         468         315         101	27.1         21.1         12.2         19.7         13.3         6.69         5.90         14.8         20.5         25.1         19.0         24.2         11.0         91.5           ND         3.42
Barium	NT         NT         ND         ND         ND         ND         ND           NT         NT         5.52         5.90         4.86         5.28         3.73           175         5.81         330         157         468         315         101	ND N
Barium         6010C         5,500         10,000         10,000         mg/kg         NT	175         5.81         330         157         468         315         101	
Chromium (Total)*         6010C         390         10,000         10,000         mg/kg         NT		6.54 7.09 4.43 2.73 3.92 3.20 2.84 3.59 9.06 8.46 5.69 7.15 3.79 16.7 193 194 6.73 43.3 10.3 2.11 1.75 9.03 16.3 8.21 36.8 53.9 7.78 1,710
Mercury 7470A 23 610 610 mg/kg 0.256 NT ND ND 0.211 ND	ND ND 0.641 0.370 2.58 0.772 ND	ND 0.309 ND
Selenium   6010C   390   10,000   10,000   mg/kg   NT   NT   NT   NT   NT   NT   NT   N	NT         NT         2.80         ND         2.44         ND         1.54           NT         NT         ND         ND         1.34         ND         ND	3.06   ND   3.17   ND   ND   4.07   3.30   ND   ND   ND   ND   ND   ND   ND   N
Silver 6010C 200 10,000 10,000 mg/kg NT NT NT NT NT NT NT	INI INI INI UNI II-OH INU INU	1.04 און טאו טאו טאו טאו טאו טאו טאו טאו אין טאו אין טאו אין טאו אין טאו אין טאו טאו
VOCs         sec-Butylbenzene         8260B         NS         NS         NS         mg/kg         ND         N		ND N
sec-Butylbenzene         8260B         NS         NS         NS         mg/kg         ND         ND<	ND ND ND ND ND ND	ND   ND   ND   ND   ND   ND   ND   ND
Naphthalene         8260B         NS         NS         NS         mg/kg         ND         ND         ND         ND         ND	ND ND ND ND ND ND	ND N
1,2,4-Trimethylbenzene         8260B         NS         NS         NS         mg/kg         ND         <	ND ND ND ND ND ND ND	ND         ND<
SVOCs         Acenaphthene         8270D         43         10,000         10,000         mg/kg         ND         ND         ND         ND         ND         ND	ND ND ND ND ND ND	ND 0.48
Acenaphthylene 8270D 23 10,000 10,000 mg/kg ND 0.14 ND ND ND ND	ND ND ND ND ND	ND N
Anthracene         8270D         35         10,000         10,000         mg/kg         ND         0.28         ND         ND         ND         ND           Benzo(a)anthracene         8270D         0.9         7.8         7.8         mg/kg         ND         1.5         ND         ND         ND         ND	ND         ND         ND         ND         ND         ND         ND           0.44         ND         0.48         0.2         0.15         ND         ND	ND         ND         0.23         ND         ND         ND         ND         ND         ND         ND         0.41         0.16         ND         0.31           0.16         ND         1.2         0.5         ND         ND         ND         ND         ND         ND         1.4         0.61         ND         0.32
Benzo(a)pyrene 8270D 0.4 0.8 0.8 mg/kg ND 1.8 ND ND ND ND	0.50 ND 0.42 0.19 0.15 ND ND	0.17 ND 1.1 0.46 ND ND ND 0.13 ND ND 1.3 0.59 ND 0.34
Benzo(b)fluoranthene   8270D   0.9   7.8   7.8   mg/kg   ND   2.2   ND   ND   ND   ND	0.71 ND 0.57 0.25 0.21 ND	0.22 ND 1.5 0.63 ND ND ND 0.17 ND ND 1.7 0.79 ND 0.51
Benzo(g,h,i)perylene	0.28         ND         0.29         0.14         ND         ND         ND           0.25         ND         0.21         ND         ND         ND         ND	ND         ND         0.79         0.29         ND         ND         ND         ND         ND         ND         0.93         0.39         ND         0.25           ND         ND         ND         ND         ND         ND         ND         ND         0.56         0.28         ND         ND
Chrysene 8270D 0.4 780 780 mg/kg ND 1.6 ND ND ND ND	0.47 ND 0.55 0.21 0.17 ND ND	0.19 ND 1.2 0.52 ND ND ND 0.14 ND ND 1.5 0.65 ND 0.43
Dibenzo(a,h)anthracene   8270D   0.4   0.8   0.8   mg/kg   ND   0.32   ND   ND   ND   ND   ND   ND   ND   N	ND N	ND   ND   0.19   ND   ND   ND   ND   ND   ND   ND   N
Fluoranthene 8270D 20 10,000 10,000 mg/kg ND 2.7 ND ND ND ND	0.89 ND 1.2 ND 0.33 ND ND	ND ND ND 1.2 ND ND ND 0.23 ND ND ND ND 0.89
Fluorene 8270D 28 10,000 10,000 mg/kg ND	ND         ND         ND         ND         ND         ND           0.36         ND         0.32         0.15         ND         ND         ND	ND         ND<
Indeno(1,2,3-cd)pyrene	0.36         ND         0.32         0.15         ND         ND         ND           ND         ND         ND         ND         ND         ND	ND   ND   0.91   0.32   ND   ND   ND   ND   ND   ND   ND   N
Naphthalene 8270D 54 10,000 10,000 mg/kg ND ND ND ND ND ND ND	ND ND ND ND ND ND	ND N
Phenanthrene   8270D   40   10,000   10,000   mg/kg   ND   1.1   ND   ND   ND   ND   ND   ND   ND   N	0.17 ND 0.72 0.17 ND ND ND ND 0.79 ND 1 0.36 0.27 ND ND	ND         ND         1.3         0.72         ND         ND         ND         ND         ND         2.3         0.74         ND         1.3           0.28         ND         2         1         ND         ND         ND         0.21         ND         ND         2.7         1.1         ND         0.74
	ATT ATT AND AND AND AND AND	AID
	NI NI ND ND ND ND ND	ND N
Pesticides 8081B mg/kg NT NT NT NT NT NT NT	NT NT NT NT NT NT NT	NT N
TPHs         8100M         500         2,500         2,500         mg/kg         ND         163         ND         56         ND         ND	52 ND 77 184 232 ND ND	72 ND 126 ND ND ND ND ND ND ND 302 173 ND 2,320
Free Liquids         9095A         NS         0         NT	NT NT NT NT NT NT	NT ND
Total Organic Matter	NT NT NT NT NT NT	NT 1.71
Total Cyanide         SM4500CN-E         200         10,000         10,000         mg/kg         NT         NT         NT         NT         NT	NT NT ND ND ND ND ND	ND N
PID Screening ppm ND ND ND ND ND ND ND	ND ND 0.1 0.1 0.1 ND ND	0.2

= Soil with contaminant concentrations in excess of the R DEC but below the I/C DEC = Soil with contaminant concentrations in excess of the I/C DEC

= Not Detected = No Standard = Not Tested

R DEC and I/C DEC based on Chromium VI(Hexavalent).

Chromium III(Trivalent) R DEC = 1,400 mg/kg, I/C DEC = 10,000 mg/kg

# **APPENDIX D**

Notification of Release (w/o attachments)





PARECORP.COM



January 16, 2014

Mr. Leo Hellested, P.E. - Chief Rhode Island Department of Environmental Management Office of Waste Management, Division of Site Remediation 235 Promenade Street Providence, Rhode Island 02908-5767

Attn: Kelly Owens

Re: Notification of Release

**Blackstone Valley Preparatory School** 

AP 2, Lot 26

52 Broad Street, Cumberland, RI

PARE Project No. 13062.09

Dear Ms. Owens:

On behalf of Civic Builders, and in accordance with Section 5.00 of the Rhode Island Department of Environmental Management (RIDEM) Remediation Regulations (Regulations), Pare Corporation (PARE) has prepared this Notification of Release (NOR) for the above referenced project. The following sections of this letter provide the required information to address Items A through J of Section 5.02 of the Regulations, Contents of Notification.

The Site is the located at 52 Broad Street in Cumberland, RI and is the location of the future Blackstone Valley Preparatory Charter School. Up until construction of the new school, the Site had been a public park dating back to the late 1970s. Prior to that, it had been the site of a single family home with a detached garage. PARE performed a Phase I Environmental Site Assessment (ESA) in July 2013 for the proposed school site in accordance with ASTM E-1527-05. Based on the findings of the Phase I ESA, the Site was never known to be contaminated or ever suspected of being contaminated. The Release reported herein was discovered during the construction of a new school building and consisted of oil-impacted soil discovered approximately 8 feet below grade. As discussed in subsequent sections of this report, the Release was relatively limited in size (confined to an area less than 12 feet by 14 feet), and has, in PARE's opinion, been substantially addressed through excavation of contaminated soil.

5.02(A) – The Notifier and Owner of the Site is Civic Builders, 304 Hudson Street, New York, NY, 10013. The contact phone number is (212) 571-7260 (extension 316), and the contact person is Ms. Janelle Bosek.

5.02(B) – The property is an approximately 1.3-acre parcel located at 52 Broad Street, which is identified as Lot 26 on Cumberland Tax Assessor's Plat Map 2. At this time, the property is zoned commercial. At the time of the writing of the Phase I ESA; however, the property was zoned open space. Much of the development in the area appears to be dense and a mixture of residential and commercial uses. Industrial uses are also present in the area, particularly along the Blackstone River south and west of the site.



Prior to construction, the Site was partially cleared, with the exception of a few mature trees along the north, east, and western edges of the Site. The Site was used as a Town-owned public park with recreational facilities, including a basketball court, street hockey court, and a skate park. With the exception of the basketball courts, hockey area, and skate part, the Site was primarily lawn and landscaped areas.

Based on data reviewed for the July 2013 Phase I ESA, it appears that a two story residence and a detached automobile garage were located on Site, possibly as late as 1977. The Town took ownership of the Site in 1968, and the 1977 aerial photograph is the first aerial photograph where these structures cannot be seen, suggesting that these structures were demolished sometime between 1968 and 1977.

5.02(C) – On Saturday December 28, 2013, PARE was on-Site to observe the construction of the new Blackstone Valley Preparatory School. At that time, excavation for the construction of a continuous building footing was being performed approximately 55 feet north of the southern property line. At a depth of approximately 8 feet below existing grade, PARE personnel observed potentially contaminated soil, which appeared to be impacted by a black substance with a significant petroleum odor. The discovery of the potentially contaminated soil occurred in the vicinity of an old building foundation, which was encountered at this location and depth on that same day. Excavation was ceased until further investigation could be performed.

5.02(D) – Between Monday December 30, 2013 and Monday January 6, 2014, PARE conducted a limited subsurface investigation at the Site, which included excavation, removal, stockpiling, and sampling of the impacted soil. The initial investigation occurred on December 30, 2013 and included the excavation of approximately 40 to 45 cubic yards of soil. After PARE's initial investigation, one sidewall confirmatory sample had contaminant concentrations in excess of the RI DEM Method 1 Industrial/Commercial Direct Exposure Criteria (I/C DEC). As a result, PARE returned to the Site on January 6, 2014 to remove additional soil from the offending sidewall and collect additional confirmatory samples. The investigation included the collection of eight (8) discrete confirmatory samples from the sidewalls and bottom of the excavation, as well as one (1) composite waste characterization sample from the stockpile of excavated contaminated material. These samples are shown on the attached Sample Location Plan and are designated as Conf-1 through Conf-8.

PARE sent the 8 confirmatory samples and waste characterization sample with chain-of-custody documentation to New England Testing Laboratory, LLC of North Providence, Rhode Island for chemical analysis. The confirmatory samples were tested for:

- Total Lead, EPA method (6010C),
- Volatile Organic Compounds (VOCs), EPA method 8260B,
- Semi-Volatile Organic Compounds (SVOCs), EPA method 8270D, and
- Total Petroleum Hydrocarbons (TPH), method 8100M.

In addition to the above analyses, the waste characterization sample was also tested for:

- Polychlorinated Biphenyls (PCBs), EPA method 8082A,
- Pesticides, EPA method 8081B,
- Total Metals, EPA method (6010C),
- TCLP Metals, EPA method (6010C),





- Free Liquids, EPA method (9095B),
- · Percent Organics, ASTM method D2974, and
- Cyanide, method 9014.

The analytical results are provided in the attached analytical summary table.

PARE collected Conf-1 through Conf-4 and the waste characterization sample (identified as "Waste" on the chain-of-custody) on December 30, 2013. Elevated concentrations of total petroleum hydrocarbon (TPH), toxicity characteristic leaching procedure (TCLP) lead and total lead were reported in the waste characterization sample. Based on a hydrocarbon fingerprint analysis, the petroleum type in the waste characterization sample was reported by the laboratory to be a mix of No.2 heating oil/diesel and No.6 fuel oil or motor oil/lubricant. In addition, elevated concentrations of some semi-volatile organic compounds (SVOCs), specifically poly-nuclear aromatic hydrocarbons (PAHs) at Conf-2 were reported. Given the elevated concentration of lead reported in the waste characterization sample, PARE had the sidewall and bottom samples re-analyzed for total lead. As with the PAH sample results, lead was reported to be elevated at sample location Conf-2. The elevated concentration of lead and most of the elevated PAH concentrations exceeded their RIDEM Method 1 Residential Direct Exposure Criteria (RDEC), while one PAH exceeded its I/C DEC. The elevated concentrations of the constituents found in Conf-2 were not reported in the other sidewall samples; Conf-1, Conf-3, or Conf-4 or the bottom sample, Conf-5.

Due to the elevated concentrations of SVOCs and total lead at Conf-2, PARE coordinated further excavation of the contaminated soil and collected additional confirmatory samples on January 6, 2014. Material was removed on the side of the excavation where Conf-2 was located, which was excavated eastward approximately three (3) feet. New confirmatory samples were collected from this sidewall and analyzed for SVOCs and total lead. Slightly elevated concentrations of lead and two SVOCs were reported in sample Conf-7, which was located near the bottom of the 11-foot deep eastern side. These constituents were reported slightly above their respective RDEC thresholds.

It should be noted that approximately 6 feet of soil below the original grade was excavated for the construction of the continuous footing prior to encountering any suspect contaminated soil. As result, much of the Site had already been lowered by 6 feet prior to encountering any suspect contaminated soil. Only a small area along the southern and eastern property line remained at the original grade. The excavation performed as part of this investigation started at the bottom of the southern and eastern sidewall embankment and went approximately 5 feet further below grade. This resulted in 11-foot sidewalls on the southern and eastern side of the excavation and 5-foot sidewalls on the northern and western sidewalls. According to the RIDEM "Guidelines for Expedited Excavation and Disposal Response Actions" Policy Memorandum (2012-01), pre-approved confirmation sampling requires that excavations with sidewalls deeper than 5 feet be sampled every 5 feet of wall height. Because none of the side walls were greater than 25 feet in length, PARE collected two side wall samples from each of the 11-foot side walls (Conf-1, Conf-6, Conf-7, and Conf-8), one sample from each of the 5-foot side walls (Conf-4), and one bottom sample (Conf-5).

Visibly, the contaminated section of soil was encountered at a depth of 8 to 9 feet below original grade, approximately 5 feet west of a stone foundation associated with the former residence. The excavation of contaminated material was approximately 20 feet by 14 feet and 5 feet in depth. All contaminated



material was stockpiled on-Site on a layer of polyethylene sheeting and was also covered by polyethylene sheeting. Groundwater was not observed in the excavation.

5.02(E) – Based on PARE's initial assessment, it appears as though the source of the Release (i.e., elevated concentrations of lead, SVOCs, and TPH) is an isolated pocket of petroleum that was buried on-Site. PARE believes that the buried waste encountered near the foundation of the former residence has been in place since, and possibly before, the former residence was demolished between 1968 and 1977. Based on the depth of the excavation, and the elevated concentrations of contaminants at Conf-2 as discussed above, it is possible that the Release ranges in depth from 8 feet below original grade to approximately 11 feet below original grade. Based on the depth and the area in which the excavation was located, PARE's initial and preliminary estimate of contaminated soil is approximately 50 to 60 cubic yards, or approximately 75 to 110 tons. This estimate is approximate and will be verified by the hauler of the material upon disposal.

5.02(F) – At this time, all contaminated soil removed from the excavation has been stockpiled on a layer of polyethylene sheeting on the south end of the Site and has been covered by an additional layer of polyethylene sheeting (the location of this stockpile is shown on the attached Sample Location Plan). Based on confirmatory sampling results, it appears that the contaminated soil has been substantially removed from the excavation, with reported concentrations of TPH, total lead, SVOCs and VOCs, reported at trace or non-detect levels on three of the four sidewalls and excavation bottom. However, the reported concentrations on the east wall of the excavation for lead (175 mg/kg), chrysene (0.47 mg/kg), and benzo(a)pyrene (0.50 mg/kg), slightly exceeded their respective RDEC thresholds (150 mg/kg, 0.40 mg/kg, and 0.40 mg/kg, respectively). It should be noted that these concentrations were reported at a depth of approximately 11 feet below original grade. Sample Conf-6 was collected at a depth of approximately 3 feet below original grade on the same sidewall and had lead and PAH concentrations reported significantly below their respective RDEC criteria or below their laboratory method detection limits. As such, it appears that any residual contamination in the excavation is limited to the deepest part of the excavation and will eventually be covered with several feet of clean soil.

The Release was discovered as part of an ongoing construction project, was excavated, and currently does not represent an imminent threat to human health or the environment. It is proposed that the Release be addressed by disposing of the contaminated soil at a licensed facility (e.g., the Rhode Island Resource Recovery Corporation). As necessary for the installation of the continuous footing, the excavation shall be backfilled with clean suitable soil.

5.02(G) – An initial assessment was made as to whether or not the Release presents an Imminent Hazard as defined in Section 3.36 of the Regulations. PARE's assessment was made with respect to the future use of the property (i.e., a school), the action that has been taken to date, and the likelihood of exposure from the contaminants of concern. Based on the information obtained to date, the Release does not appear to:

- 1. Pose an immediate and substantial threat or risk of acute or chronic adverse effect on human health;
- 2. Pose a threat or risk of harm, which could cause immediate destruction or significant adverse impact on an Environmentally Sensitive Area or the contamination of a wellhead protection area or other drinking water source; or
- 3. Pose an immediate threat of fire or explosion.



PARE performed an environmental due diligence for the Site prior to construction. Specifically, PARE performed a Phase 1 ESA in accordance with ASTM E1527-05 to evaluate whether the Site could be considered potentially contaminated. The results of the ESA provided no direct evidence that the Site had ever been impacted by a release. The Site was not listed by the RIDEM as a State Hazardous Waste Site, LUST site, or in any other database that would indicate a past release at the property. In addition, the past use of the Site was as a public park and single family residence, which both represent relatively low risks of significant environmental concerns. The only potential risk identified during the Phase I ESA was the former presence of a gas station on the abutting parcel to the south of the Site. It is believed that groundwater in the vicinity of the Site flows in a southerly and westerly direction, which would make the former gas station downgradient from the Site. Given the proximity of the former gas station and the unknown disposition of the former USTs at the gas station, it was deemed prudent to perform an investigation of shallow groundwater beneath the southern edge of the Site.

The limited groundwater investigation was performed less as a result of a substantial concern about groundwater, but more because it could be done easily and without much expense when done as part of the project's geotechnical investigation. The limited groundwater investigation included the advancement of three geotechnical borings along the common property line between the Site and the former gas station property. At each location, bedrock was encountered at a depth ranging from 6 feet to 14 feet. Groundwater was not encountered in any of the three boring locations. The results of the limited groundwater investigation eliminated the possibility that shallow groundwater beneath the Site has been impacted by the adjacent former gas station facility.

Groundwater information reviewed by PARE indicates that the Site is located within a GB groundwater area. Groundwater that is classified by the RIDEM as GB is considered unsuitable for drinking water without treatment due to known or presumed degradation. According to Rhode Island Geographical Information System (RIGIS) data reviewed by PARE, the Site is partially located within the Lower Blackstone Moshassuck ground water reservoir and the Blackstone River Sub-basin watershed. According to RIGIS data, the Site is not located within a wellhead protection area or sole source aquifer. Therefore, based on the Site being located in a GB groundwater area and not being located within a wellhead protection area, it does not appear as though this release poses a significant threat of contaminating a wellhead protection area or other drinking water source. Given that the contamination has been substantially removed and no groundwater was encountered in the excavation, the threat that this Release will migrate to groundwater in the future is extremely low.

With regard to potential vapor intrusion, as part of the Phase I ESA performed in July 2013, PARE concluded that the potential for vapor intrusion at the Site was very low. At this time, given that the Release has been substantially addressed, the risk for vapor intrusion continues to be very low. It is noted, however, that a passive radon collection system is planned as part of this construction project. This system is planned for the sole reason that is far more cost-effective to install a passive collection system during construction than to retrofit a building after construction. At this time, there is no direct evidence that radon is going to be an issue at this Site. Should a vapor intrusion issue be discovered in the future, the passive collection system being installed for radon could be utilized to address vapor intrusion.

**5.02(H)** – The Release has impacted a site that is currently being developed for the future use as a school. At the time of this writing, the Site is zoned commercial. At the time of the writing of the Phase I ESA; however, the property was zoned open space.



5.02(I) - As stated above, the underlying groundwater classification at the Site is GB.

5.02(J) – At this time, it is anticipated that the aerial and vertical extent of contaminated soil was relatively discrete and limited to the excavation described in earlier sections of this letter, and that a Background Determination per Section 8.06 of the Regulations will not be required for the Site.

It is PARE's opinion that the Release is limited to the isolated pocket of petroleum-impacted soil found in an area approximately 20 feet by 14 feet. Based on the limited subsurface investigation, it does not appear that groundwater was impacted as a result of this Release. Although TPH, lead, and SVOCs were reported at relatively high concentrations in the stockpiled material (i.e., the waste characterization sample), it appears that the actual extents of contamination were limited to an isolated pocket of petroleum-impacted soil. PARE believes that this Release has been substantially addressed in the removal and the stockpiling of the impacted material on-Site. As stated above, this Release was discovered as part of an ongoing construction project. Because construction is ongoing, an expeditious review of this NOR would be appreciated.

While not part of a typical Notification of Release, PARE also reviewed Section 7.07 of the Remediation Regulations because the Site is being developed into a school. Section 7.07 was reviewed for the purposes of Public Involvement. and Part A(iii) of this section specifically states, "Whenever a site that is known to be contaminated or is suspected of being contaminated based upon its past use is considered for possible reuse as the location of a School, Child-Care Facility, or as a Recreational Facility for Public Use that supports existing or proposed Active Recreation...", and goes on to describe the requirements for public involvement. PARE does not believe that this particular Public Involvement criterion is applicable to this Site because the Site was never known or suspected to be contaminated. However, even though this public involvement requirement does not appear to be applicable to this Site, there was substantial public comment opportunity prior to construction. There were several public meetings for this project, including:

- Planning board meetings held on May 30, 2013, July 31, 2013, September 5, 2013, and September 25, 2013,
- Town council meetings held on August 31, 2013, September 4, 2013, and September 18, 2013, and
- A community meeting held on September 9, 2013 at the Lusitania Club.

Meeting minutes from these public meetings are attached.

PARE believes that the degree of Public Involvement that occurred prior to the start of construction would have generated comments pertaining to environmental issues, had any environmental concerns existed for the Site.

We anticipate that RIDEM will issue a Letter of Responsibility for this Site and we will provide additional information as requested. As stated above, because construction is ongoing at the Site, an expeditious review of this letter by RIDEM would help the project to move forward in a timely manner. In the meantime, should you have any questions regarding the Notification of Release, please contact us at your earliest convenience.

Sincerely,

Timothy P. Thies, P.E.

Managing Engineer

TPT/MLD/abv

Cc: Ms. Janelle Bosek - Civic Builders

Mr. Andrew Chagnon, P.E. (PARE)

Mr. George G. Palmisciano, P.E. (PARE) w/o attachments

Attachments:

(1) Sample Location Plan

(2) Analytical Data Summary Table

(3) Certificates of Analysis and Chain-of-Custody Documentation

(4) Public Meeting Minutes

(5) Notification of Release Form

G:\\13062.00 - Ai3 - Blackstone Valley Prep School - RI\Contaminated Soil\Notification of Release\Notification of Release.doc

# **APPENDIX E**

Tax Assessor Field Card & Registry of Deeds



# **Certified Revaluation Company**

# Town of Cumberland, RI Real Estate Data

Search Results | New Search | ☑ Site Data | Buildings | Photo & Sketch | Chain of Title

Property In	formation		C	)wnei	rship		1	Valuation
Parcel ID: <b>002-002</b>	6-000	0	wner: CUMBE	ERLA	ND TOW	N OF	Land	<i>l:</i> \$161,800
Card: N/A, Vacant		A	ddress: 45 BRO	DAD	ST		Buile	ding: \$29,000
Location: 52 BROA	AD ST	C	UMBERLANI	o, RI	02864			
Zone: O-S							Tota	d: \$190,800
Census: 112		A	ccount #: 78-00	0-00	4			
State Code: Munici	pal	1						
Total Acres: 1.294	1	$L_{\ell}$	ast Sale: 02/15	/1968				
		B	ook/Page: 0212	2/012	3			
		G	rantor: CURR	IER C	CAROLYN	N C		
		Sa	ale Price: \$0					
		·	Ownership Hi	story	,			
Previo	is Owner		Book/Page		Sale	Price		Sale Date
CURRIER CAROL	YN C		0212/0123	+	\$	0	(	)2/15/1968
C-Andrian (Inc.)		Misc	ellaneous Imp	rover	nents			
Outb	uilding		Year Built	Di	mensions	Area		RCNLD
Fencing			1990	Irr	egular	500sqf	t	\$3,600
Basketball Ct.			1990	100	0 x 120	12000sc	γft	\$9,600
Tennis Ct.			1990	110	0 x 120	13200sc	ıft	\$15,800
	2444							
			Permit Da	ta				
Permit Number	Issue Date		<del></del>	escript				Amount
E08-1258	12/02/2008	LL POWER FOR CAMERA SYSTE CUMBE						\$1,500
<b>*************************************</b>					erida Wildericka Maleya indina jingilagi ayay ilgay mpaleyang in		<b></b>	
S CALLED TO THE		<u> </u>		*** And Sale Same Advantage of American				<u> </u>

Copyright © 2013 Certified Revaluation Company. All rights reserved.

	<del></del>					
	٠.		. •	٠.		. · ′.
·						
	BROAD ST	RECORDED LOT NO.	A, P. LOT NO.	OUT OF LOT	DEED	
	DATE		2 26		воок	PAGE
		CURRIER, CAROL	YN C.,	<del>-11</del>		
	2/15/68	CUMBERLAND, TO			21.2	123
	4-10-02 1	INCREASED BY LOT	7.00	·	1008	140
		-				
		7	,	-		
				:		
					<u> </u>	

## **APPENDIX F**

Soil Boring Logs



				LINCOLN NEERS			RPORATION 3, FOXBORO, MASS NERS ***	SACHUS CONSU		rs		BORING NO. <b>B1</b> 3	_
	PRO	DJEC <sup>-</sup>	Γ <u>Blacks</u>	stone Valley erland, RI	Prep School					PROJECT CHKI		13062.08 SJM	
	FOF INS	REMA	OR A. Jud	okes ge S OTHERWIS	SE NOTED, S		BORING LOCATIO GROUND SURFAC DATE START	7/10/2	ATION 1013 G	DATE EN	DATUM ID VATER R	MSL 7/10/2013 EADINGS	
	CAS	SING:	UNLES		SE NOTED, O		MMER FALLING 30 in. EN USING 300 lb.	DATE	TIME	WATER AT	CASING AT	STABILIZATION TI	ME
	CAS	SING	SIZE:	4"		OTHER:	Safety Hammer						
				SAMPL	.E		SAMPLE	DESCRI	PTION			STRATUM DESCRI	IPTION
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister		CLA	SSIFICATION	REMARKS		
		S-1	24/10	0-2	4 6		Moist, medium dense, b	rown, fine t	o coarse	SAND and	fine	4" TOPSOIL	
					13 13		GRAVEL, little silt.						
5		S-2	24/6	4-6	29 49 55 52		Moist, very dense, browi GRAVEL, little silt, trace		arse SA	ND and fine	1.	FILL	
												BEDROCK	
10							END OF	EXPLORA	TION @	9'.			
15							1						
15							1						
							1						
							1						
20													
							-						
							1						
25													
							]						
20							-						
30							1						
							1						
	GRA	NULAF	SOILS	COHESI	VE SOILS	REMAR	(S:				1		
	BLOW		DENSITY		DENSITY	1	ed shale at bottom 1" of sa	ample.				BURMISTER CLASSIFIC	
	0 - 4		V. LOOSE	<2	V.SOFT	2. Bedrock	a @ 7.5 feet.						10%
	4 - 10		LOOSE	2 - 4	SOFT								- 20% - 35%
	10 - 30 30 - 50		M.DENSE DENSE	4 - 8 8 - 15	M.STIFF STIFF								- 35% - 50%
	>50		V.DENSE	15 - 30	V.STIFF							PERCENT BY WEIG	
	-		-	>30	HARD								
			NOTES:	1) THE STRAT	TIFICATION LIN	IES REPRESEN	T THE APPROXIMATE BOUNDAI	RY BETWEEN	SOIL TYPE	S, TRANSITION	S MAY BE GRA	DUAL.	
							MADE IN THE DRILL HOLES AT T						
				THE BORII	NG LOGS. FLU	ICTUATIONS IN	THE LEVEL OF GROUNDWATER	R MAY OCCUR	DUE TO C	OTHER FACTOR		DINO NO	
				THOSE PR	RESENT AT TH	E TIME MEASU	REMENTS WERE MADE.				BO	RING NO. B13	3-1

				LINCOLN NEERS			RPORATION  3, FOXBORO, MASS NERS ***	SACHUS CONSU		-s			BORING N SHEET <u>1</u>	
	PRC	)JEC	Γ Blacks	stone Valley	Prep School		NEIKO	CONSC		PROJEC	T NO.		13062.08 SJM	
	FOF	REMA	CO. New H	lampshire B	oring	- - -	BORING LOCATIO GROUND SURFAC DATE START		ATION	PLORATIO	N LOCA			L
	SAN	1PLEI	R: UNLES	S OTHERWIS	SE NOTED, S	AMPLER CO	NSISTS OF A 2" SPLIT		G	ROUND	WATE	R RE	ADINGS	
	CAS	ING:	UNLES	S OTHERWIS	SE NOTED, C		MMER FALLING 30 in. EN USING 300 lb.	DATE	TIME	WATER A	T CASIN	IG AT	STABILIZAT	ION TIME
	$C\Delta$	ING 9	SIZE:	IER FALLING 4"	24 IIN.	OTHER:	Safety Hammer							
	0/10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	JIZL.	SAMPL	F	OTTILIN.	SAMPLE	DESCRI	PTION				STRATUM DE	SCRIPTION
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister	<i>5</i> 200111		SSIFICATIO	N	REMARKS	011011011122	
	-	S-1	24/6	0-2	13 12		Medium dense, gray, me	edium to co	arse SAI	ND, trace s	silt.		3" ASPI	HALT
		0.	2.70	0.2	12 10									
5		S-2	24/12	4-6	5 5 6 8		2A: Moist, medium dens fine gravel, trace silt.	, ,		,			FILI	
10		S-3	24/10	9-11	39 12 10 14		Tine gravel, trace silt.  2B: Moist, medium dense, beige, fine to medium SAND, trac silt.  Medium dense, tan, fine to coarse SAND, little fine gravel, trace silt.						SAN	D
15		S-4	24/14	15-17	29 22 19 12		Dense, brown, fine to me gravel.	edium SAN	ID and S	ILT, some	fine	1.	GLACIAL DI	EPOSITS
20		S-5 C-1	4/4	19-19'4"	100/4"		Very weak to hard, dark weathered MUDSTONE Dark gray, highly to mod moderately fractured SA TCR = 88%, RQD = 0%	lerately wea	athered,	J	•	3.	HIGHLY WE, MUDST MUDSTONE AND	ONE SANDSTONE
25		C-2	40/0	25.20	11 min/ft		TOD 500/ DOD 00/						(BEDRO	JCK)
30		U-2	12/6	25-26	11 min/ft		TCR = 50%, RQD = 0% END OF	EXPLORA	TION @	25'.				
0 - 4 V. LOOSE <2 V.SOFT 2. Wash 4 - 10 LOOSE 2 - 4 SOFT 3. Bedro							aterial encountered @ 14 nanged to dark gray @ 17	7'.	roller bit	to 15'.			BURMISTER CLA TRACE LITTLE SOME AND PERCENT B	0 - 10% 10 - 20% 20 - 35% 35 - 50%
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN													RING NO.	B13-2

				LINCOLN NEERS			RPORATION  3, FOXBORO, MASS  NERS ***	SACHUS CONSU		-s				NO. <u><b>B13-3</b></u>
	PRC	)JEC	Γ Blacks	stone Valley erland, RI	Prep School		TENO .	001100		PROJECT CHKI			13062.08 SJM	
	FOF INSI	REMA PECT	OR A. Jud	okes	oring	- - -	BORING LOCATIO GROUND SURFAC DATE START		ATION	PLORATION 73.5 DATE EN	DATU		I PLAN M: 7/10/2013	SL
	SAN	1PLEI			,		NSISTS OF A 2" SPLIT MMER FALLING 30 in.	DATE	G TIME	ROUNDV WATER AT	1		ADINGS STABILIZA	TION TIME
	CAS	ING:	UNLES		SE NOTED, C		EN USING 300 lb.	DATE	TIVIL	WATERAT	CASIN	GAI	STABILIZA	TION TIME
	CAS	ING :	SIZE:	4"		OTHER:	Safety Hammer							
				SAMPL	E		SAMPLE	DESCRI	PTION			S	STRATUM D	ESCRIPTION
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister		CLAS	SSIFICATION		REMARKS		
		S-1	24/0	0-2	10 25		Moist, dense, brown, fine	e to mediur	m SAND,	some fine g	ravel,		3" ASF	PHALT
5		S-2	24/12	4-6	24 14 15 9		some silt. Moist, medium dense, b	rown, fine t	o mediur	m SAND, so	me		FI	LL
					8 37		silt, little gravel.					1.		
							FND OF	EXPLORA	TION @	7'		2.	BEDF	ROCK
10 15 20 25 30														
			SOILS	COHESI		REMARK	_				•			
	BLOWS		V. LOOSE	BLOWS/FT	DENSITY V.SOFT	1	ed shale at tip of spoon. edrock at 6.5' by drilling a	action Ad-	ancod *	ller hit to 7'	to		BURMISTER CI	ASSIFICATION 0 - 10%
	0 - 4 4 - 10		LOOSE	<2 2 - 4	SOFT	-	bedrock at 6.5 by drilling a	action. Au\	ano <del>c</del> u ((	יייפו אונ נט ז	.0		LITTLE	10 - 10%
	10 - 30		M.DENSE	4 - 8	M.STIFF								SOME	20 - 35%
	30 - 50		DENSE	8 - 15	STIFF								AND	35 - 50%
	>50		V.DENSE	15 - 30 >30	V.STIFF HARD								PERCENT I	BY WEIGHT
			NOTES:			IES REPRESEN	T THE APPROXIMATE BOUNDAI	RY BETWEEN	SOIL TYPE	S, TRANSITION	IS MAY BE	E GRAI	DUAL.	
							IADE IN THE DRILL HOLES AT T							
							THE LEVEL OF GROUNDWATER	R MAY OCCUP	R DUE TO C	THER FACTOR	_	D.C.	OINO NO	
				THOSE PR	ESENT AT TH	E TIME MEASUR	REMENTS WERE MADE.					RO	RING NO.	B13-3

	PARE CORPORATION  10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS ENGINEERS *** PLANNERS *** CONSULTANTS												BORING NO. <u><b>B13-4</b></u> SHEET <u>1</u> OF <u>1</u>
	PRO	DJEC <sup>-</sup>	Γ <u>Blacks</u>	stone Valley erland, RI	Prep School		NEIKO	CONSO		PROJEC <sup>*</sup>	Γ NO. D. BY		13062.08 SJM
	FOF	REMA	CO. New H N Jay St OR A. Jud	okes	oring	- - -	BORING LOCATIO GROUND SURFAC DATE START	_	ATION	PLORATION 75.5 DATE EN	DATU		PLAN MSL 7/10/2013
	SAN	/IPLEI			,		NSISTS OF A 2" SPLIT MMER FALLING 30 in.						ADINGS
	CAS	SING:	UNLES	S OTHERWIS	SE NOTED, O		EN USING 300 lb.	DATE	TIME	WATER AT	CASIN	G AT	STABILIZATION TIME
	$C\Delta$	SING		ER FALLING 4"	24 IIV.	OTHER:	Safety Hammer						
	OAC	JII VO	JIZL.	SAMPL	F	OTTILIN.	SAMPLE	DESCRI	PTION		1		STRATUM DESCRIPTION
EPTH t)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister			SSIFICATION	1	REMARKS	
	OB	S-1	24/12	0-2	7 18		Medium dense to dense	. brown. fin				ш	3" ASPHALT
		3-1	24/12	0-2	12 11		fine gravel, little silt, trac		0 10 11100				0 7.01 117.21
5		S-2	24/6	4-6	5 4		Loose, brown, fine to me	edium SANI	D, some	silt, little fin	e		FILL
					3 7		gravel, trace brick.					1.	
													BEDROCK
							END OF I	EXPLORAT	TION @	8.5'.			
10													
							-						
15						1	1						
10													
20							-						
20						1	1						
25						1	1						
							1						
							]						
30							-						
							1						
	GRA	NULAF	SOILS	COHESI	/E SOILS	REMARK	KS:						
	BLOW	S/FT	DENSITY	BLOWS/FT	DENSITY	1. Bedrock	@ 7', advanced roller bit	to compete	ent rock	@ 8.5'.			BURMISTER CLASSIFICATION
	0 - 4		V. LOOSE	<2	V.SOFT								TRACE 0 - 10%
	4 - 10 10 - 30		LOOSE M.DENSE	2 - 4 4 - 8	SOFT M.STIFF								LITTLE 10 - 20% SOME 20 - 35%
	30 - 50		DENSE	8 - 15	STIFF								AND 35 - 50%
	>50		V.DENSE	15 - 30	V.STIFF								PERCENT BY WEIGHT
				>30	HARD								
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIO												E GRAI	DUAL.
							NADE IN THE DRILL HOLES AT T THE LEVEL OF GROUNDWATER						
							REMENTS WERE MADE.	. W. C. COCOR	. 202 10 (	J.HERTAGIO	_	BOF	RING NO. B13-4

PROJECT   Blackstone Valley Preg School   PROJECT NO.   10062 08							SUITE 10	RPORATION 3, FOXBORO, MASS						BORING NO. <u>B13-5</u>
BORING CO.   New Hampshire Buring   BORING LOCATION   SEE EXPLORATION LOCATION   LANGE   FOREMAN   July Stakes   SAMPLES   CONSISTION   SEE EXPLORATION   Total DATUM   MISI.   MISI		DDC	) IF ()					NERS ***	CONSU			T NO		SHEET <u>1</u> OF <u>1</u>
FOREMAN   Jusy Stokes   STADULAR SOLLS   SAMPLER:   INLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 7 SPLIT   7/1/20/13   DATE ERED		PRC	JJEC			Prep School	Ol .				i e			
NAMPLER: UNLESS OTHERWISE NOTE, SAMPLER CONSISTS OF A 7 SPUTE   SAMPLER: UNLESS OTHERWISE NOTE, SAMPLER CONSISTS OF A 7 SPUTE   CASINS: UNLESS OTHERWISE NOTE, CASINS BRIVEN USING A 149 to SETEN 1904MER PALLANG SUIL.   CASINS: UNLESS OTHERWISE NOTE, CASINS BRIVEN USING X 149 to SETEN 1904MER PALLANG SUIL.   CASINS: UNLESS OTHERWISE NOTE, CASINS BRIVEN USING X 101 to THE TIME WATEAT TO ASSIST AT THE WATEAT TO A		BOF	RING	CO. New H	lampshire B	oring	_	BORING LOCATIO	N	SEE EX	PLORATIO	N LOCAT	TION	PLAN
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPUT SPCON PRICE USING A 160 6. SAFETY HAMMER PLAING 3 on DATE TIME WATER AT DASSING AT STABILIZATION TIME    CASING   SIZE: 4" OTHER: Salety Hammor   NULLSS OTHERWISE NOTED, CASING PRICE LANGE (PLANCE & PLANCE &		_		,			- -					_	JM .	
SPOOD RIVEN USING A 19 (B. SAFTY HAMMER FALLING 30 In. LINESS OFFICINESS MOTERORS MOTERO. CASING SIDE: 4		INS	PECT	OR A. Jud	lge		_	DATE START	7/10/2		1	_		
CASING: INALES OTHERWISE NOTED, CASING DRIVEN USING 20 IB. HAMMER PALLING 21 IN. CASING SIZE: 4' OTHER: Safety Hammer  SAMPLE  SAMPLE  SAMPLE  SAMPLE  SAMPLE DESCRIPTION  Burmister  CLASSIFICATION  STRATUM DESCRIPTION  Burmister  CLASSIFICATION  STRATUM DESCRIPTION  Burmister  CLASSIFICATION  STRATUM DESCRIPTION  STRATUM DESCRIPTION  Burmister  CLASSIFICATION  3' ASPHALT  FILL  SEDROCK  FILL  SEDROCK  FILL  SEDROCK  BEDROCK  BEDROC		SAN	/IPLEI			,								
HAMMER FACILITY 24   No.   SAMPLE   S		$C \wedge C$	SINIC.						DATE	TIME		CASING	3 AT	STABILIZATION TIME
SAMPLE   SAMPLE   SAMPLE   SAMPLE   SAMPLE   SAMPLE   SAMPLE DESCRIPTION   STRATUM DES		CAS	SING:				CASING DRIV	EN USING 300 lb.			NE			
S		CAS	SING	SIZE:	4"		OTHER:	Safety Hammer						
S-1   24/12   0-2   12   22   Moist, medium dense, brown, fine to coarse GRAVEL and fine to medium SAND, little slit.					SAMPL	.E		SAMPLE	DESCRI	PTION			"	STRATUM DESCRIPTION
S-1   24/12   0-2   12   22	ЭЕРТН ft)	SASING ol/ft)	NO.		DEPTH (FT)	BLOWS/6"		Burmister		CLA	SSIFICATION		REMARKS	
		0 0		24/12	0-2				rown, fine t				_	3" ASPHALT
S-2   24/8   4-6   11 9			<u> </u>		0.2			to medium SAND, little s	silt.					
S-2   24/8   4-6   11 9														
1	_		0.0	0.4/0	4.0	44.0		Modium donos, fino to o	ooroo CAN	D como	fine group!	little		FILL
1.	5		S-2	24/8	4-6				oaise sain	D, Suille	ilile glavel,	iittie		
END OF EXPLORATION @ 9:						3 10		1					1.	
END OF EXPLORATION @ 9:														
								END OF	EVDI ODA	TION @	0'			BEDROCK
	10							END OF	EXPLORA	TION @	9.			
								1						
	15													
								-						
								1						
	20													
								1						
								1						
GRANULAR SOILS COHESITY BLOWS/FT DENSITY  BLOWS/FT DENSITY BLOWS/FT DENSITY  1. Bedrock @ 8.5', advanced roller bit to 9'.  BEDITY DENSITY DENSITY  1. Bedrock @ 8.5', advanced roller bit to 9'.  BURMISTER CLASSIFICATION  TRACE 0 - 10%  LITTLE 10 - 20%  SOME 20 - 35%  AND 35 - 50%  PERCENT BY WEIGHT  NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.  2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN	25													
GRANULAR SOILS COHESIVE SOILS BLOWS/FT DENSITY BLOWS/FT DENSITY 10 - 4 V. LOOSE								-						
GRANULAR SOILS COHESIVE SOILS BLOWS/FT DENSITY BLOWS/FT DENSITY 10 - 4 V. LOOSE								†						
GRANULAR SOILS COHESIVE SOILS BLOWS/FT DENSITY BLOWS/FT DENSITY 10 - 4 V. LOOSE					<u> </u>		<u> </u>	]						
BLOWS/FT DENSITY BLOWS/FT DENSITY  0 - 4	30													
BLOWS/FT DENSITY BLOWS/FT DENSITY  0 - 4					-		-	-						
BLOWS/FT DENSITY BLOWS/FT DENSITY  0 - 4		GRA	NULAF	SOILS	COHESI	/E SOILS	REMARK	(S:						
4 - 10 LOOSE 2 - 4 SOFT 10 - 30 M.DENSE 4 - 8 M.STIFF 30 - 50 DENSE 8 - 15 STIFF >50 V.DENSE 15 - 30 V.STIFF >30 HARD  NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.  2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN					1		-	_	oit to 9'.					BURMISTER CLASSIFICATION
10 - 30 M.DENSE 4 - 8 M.STIFF 30 - 50 DENSE 8 - 15 STIFF >50 V.DENSE 15 - 30 V.STIFF >30 HARD  NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.  2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN		0 - 4		V. LOOSE	<2	V.SOFT								
30 - 50 DENSE 8 - 15 STIFF  >50 V.DENSE 15 - 30 V.STIFF  >30 HARD  NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.  2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN														
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.  2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN														
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.  2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN														
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN					>30	HARD								
THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN				NOTES:	1) THE STRAT	TIFICATION LIN	IES REPRESEN	T THE APPROXIMATE BOUNDAI	RY BETWEEN	SOIL TYPE	S, TRANSITION	NS MAY BE	GRAI	DUAL.
					,									
									K MAY OCCUR	DOF 10 C	THER FACTOR		BOF	RING NO. B13-5

							RPORATION 3, FOXBORO, MASS			re			BORING N	NO. <u><b>B13-6</b></u> OF1_
	PRC	)JEC	Γ <u>Blacks</u>	Stone Valley			NEKS	CONSU		PROJECT CHKI			13062.08	
	FOF	REMA	CO. New H	okes	oring	- -	BORING LOCATIO	E ELEV	ATION	PLORATION 74.2	N LOCAT		MS	SL
	INSI	PECT	OR A. Jud	lge		•	DATE START	7/8/2		DATE EN	_		7/8/2013	
	SAN	1PLEI			,		NSISTS OF A 2" SPLIT MMER FALLING 30 in.			ROUNDY				
	CAS	ING:	UNLES		SE NOTED, C		EN USING 300 lb.	DATE	TIME	WATER AT	CASING	3 AT	STABILIZA	TION TIME
	CAS	ING :	SIZE:	4"		OTHER:	Safety Hammer							
				SAMPL	E		SAMPLE	DESCRI	PTION				STRATUM DE	SCRIPTION
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister		CLA	SSIFICATION	ı	REMARKS		
		S-1	24/12	0-2	4 6	PID=3.7	Moist, medium dense, b	rown, fine t	o mediur	m SAND, so	me		4" TOF	PSOIL
					13 22		fine gravel, little silt.							
5		S-2	24/10	4-6	21 26 32 39	PID=21.9	Moist to wet, very dense	, brown, fin	ne GRAV	EL and SAN	ID.		FIL	L
					32 39							1.		
													GLAC	CIAL
10		S-3	24/8	9-11	15 23 PID=5.2 Very dense, gray, fine to medium SAND, some silt, some fine gravel.							2.	DEPO	SITS
						giatoli							BEDR	оск
15							END OF	EXPLORA <sup>®</sup>	TION @	14'.				
20														
25														
00														
30														
	GRAI	NULAF	SOILS	COHESI	/E SOILS	REMARK	KS:							
	BLOW		DENSITY		DENSITY	1	g stratum @ 8'.						BURMISTER CL	
	0 - 4		V. LOOSE		V.SOFT	2. Weathe	red bedrock at 11', advan	ced roller b	oit to 14'.				TRACE	0 - 10%
	4 - 10		LOOSE	2 - 4	SOFT								LITTLE	10 - 20% 20 - 35%
	10 - 30		M.DENSE	4 - 8	M.STIFF								SOME AND	20 - 35% 35 - 50%
	30 - 50 >50		DENSE V.DENSE	8 - 15 15 - 30	STIFF V.STIFF								PERCENT B	
				>30	HARD									
			NOTES:	1) THE STRAT	TIFICATION LIN	ES REPRESEN	T THE APPROXIMATE BOUNDAI	RY BETWEEN	SOIL TYPE	S, TRANSITION	NS MAY BE	GRA	DUAL.	
				•			ADE IN THE DRILL HOLES AT T							
							THE LEVEL OF GROUNDWATER	R MAY OCCUP	R DUE TO C	THER FACTOR	_	BOL	RING NO.	B13-6
				THOSE PR	ESENTAL THE	I TIME MEASUR	REMENTS WERE MADE.						TING NO.	D13-0

			10		BORII	NG NO. <u><b>B13-7</b></u>							
				NEERS	***	PLAN	3, FOXBORO, MASS NERS ***	CONSU		ΓS		SHEE	T <u>1</u> OF <u>1</u>
	PRO	DJEC.	T Blacks	stone Valley	Prep School	ol				PROJECT		1306	2.08
			Cumb	erland, RI						CHKD	). BY	SJ	M
	BOF	RING	CO. New H	lampshire B	oring		BORING LOCATIO	N	SEE EX	PLORATION	LOCATIO	N PLAN	
	FOF	REMA	N Jay St	okes		-	GROUND SURFAC	E ELEV	ATION		DATUM		MSL
	INS	PECT	OR A. Jud	lge		-	DATE START	7/11/2	.013	DATE EN	D	7/11/20	13
	SAN	/IPLE			- , -		NSISTS OF A 2" SPLIT			ROUNDW			
	$C \wedge S$	SING:					MMER FALLING 30 in. EN USING 300 lb.	DATE	TIME	WATER AT	CASING AT	STABIL	IZATION TIME
	CAC	JING.		IER FALLING	,	ASING DRIVI	EN USING 300 lb.						
	CAS	SING	SIZE:	4"		OTHER:	Safety Hammer						
				SAMPL	E	1	SAMPLE	DESCRI	PTION		S	STRATUM	DESCRIPTION
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister		CLA	SSIFICATION	REMARKS		
		S-1	24/8	0-2	4 7		Moist, medium dense, ta		oarse S/	AND and fine	to	6"	TOPSOIL
		<u> </u>	0.44-		10 18		medium GRAVEL, trace Dry, very dense, gray, fra		ים ורס	and cases	1.		SAND
		S-2	24/12	2-4	28 60 76 100/3"		GRAVEL.	actured CC	DDLES	and coarse		WE	ATHERED
5		S-3	24/19	4-6	25 43		Wet to moist, very dense						ROCK
					11 50		fine to coarse sand, som	e fine to co	oarse gra	avel, trace silt	:-		
							END OF	EXPLORA	TION @	7'	2.		
							LIND OF	LAFLONA	TION @				
10													
15													
20													
25													
				<del>                                     </del>		<del>                                     </del>							
							]						
30													
							-						
	GRA	NULAF	SOILS	COHESIN	/E SOILS	REMARK	(S:						
	BLOW	S/FT	DENSITY	BLOWS/FT	DENSITY	1. Changir	g stratum @ 2'.						R CLASSIFICATION
	0 - 4		V. LOOSE		V.SOFT	2. Advance	ed roller bit to 7' to compe	tent bedro	ck.			TRACE	0 - 10%
	4 - 10 10 - 30		LOOSE M.DENSE		SOFT M.STIFF							LITTLE SOME	10 - 20% 20 - 35%
	30 - 50		DENSE		STIFF							AND	35 - 50%
	>50		V.DENSE	15 - 30	V.STIFF							PERCEI	NT BY WEIGHT
>30 HARD  NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADI													
			NOTES:				T THE APPROXIMATE BOUNDAR IADE IN THE DRILL HOLES AT T					DUAL.	
							THE LEVEL OF GROUNDWATER						
				THOSE PR	ESENT AT TH	E TIME MEASUR	REMENTS WERE MADE.				ВО	RING NO.	B13-7

	PARE CORPORATION  10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS												BORING NO. <u><b>B13-8</b></u>
			ENGI	NEERS	***	PLANI	NERS ***	CONSU	LTAN	ΓS			SHEET <u>1</u> OF <u>1</u>
ļ	PRC	)JEC		stone Valley erland, RI	Prep Schoo	ol				PROJECT CHKI		•	13062.08 SJM
	BOF	RING	CO. New H	lampshire B	oring		BORING LOCATIO	N	SEE EX	PLORATION	LOCAT	ION	PLAN
ı	FOR	REMA	N Jay St	okes			GROUND SURFAC			76.0	DATU		MSL
ı	INSI	PECT	OR J. Cos	ta		•	DATE START	7/9/20	)13	DATE EN	ID _		7/9/2013
- ;	SAN	1PLEI	R: UNLES	S OTHERWIS	SE NOTED, S	AMPLER CO	NSISTS OF A 2" SPLIT		G	ROUNDV	/ATER	RE	ADINGS
			SPOO	N DRIVEN US	3ING A 140 lb	. SAFETY HA	MMER FALLING 30 in.	DATE	TIME	WATER AT	CASING	АТ	STABILIZATION TIME
(	CAS	ING:				ASING DRIVE	EN USING 300 lb.						
(	$\cap \Lambda \subseteq$	ING 9	HAMM SIZE:	ER FALLING	24 IN.	OTHED:	Cafaty Hammar						
$\dashv$	CAS	SING (	SIZE.	4" SAMPL		OTHER.	Safety Hammer SAMPLE	DESCDI	DTION				STRATUM DESCRIPTION
	c)			JAMI L			SAIVII LL	DESCIN	IIIOIN			RKS	STRATOM DESCRIPTION
(ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister			SSIFICATION		REMARKS	
4	S-1 24/7 0-2 7 16 Wet, dense, black to tan, fine to coarse SAND, some coardse gravel.												3" ASPHALT
$\dashv$	S-2 24/7 2-4 16 14 Moist, medium dense, tan, fine to coarse GRAVEL and fine to												
		S-2	24/7	4-4.8	50 100/4	***	coarse sand, trace silt.	iii, iiiic to c	00130 01	TO TV EL and		1.	FILL
5	5												
	S-4A 12/3 6-7 9 7 4A: Medium dense, gray to tan, fine to coarse SAND, trace silt. 4B: Dense, fine to coarse GRAVEL, little fine to medium SAND, trace												
	S-4B 12/14 7-8 5 30 silt, trace brick fragments, trace soft white fine material.												
	Slightly weathered to fresh, hard to very hard, extremely												
_		C-1	60/60	8.5-13.5 11 min/ft fractured to slightly fractured, medium grained, jointed, very								2.	
10					9 min/ft		TCR = 100%	INE. NORIZO	ntai dip.				SANDSTONE
					10 min/ft 11 min/ft		RQD= 67%						SANDSTONE
					10 min/ft		NQD= 01 /0						
I													
15							END OF E	XPLORAT	ION @ 1	13.5'.			
-													
$\dashv$					<del>                                     </del>								
$\dashv$													
20													
-					<u> </u>								
$\dashv$					<del>                                     </del>								
25													
_													
20					<u> </u>								
30							1						
十													
(	GRAI	NULAR	SOILS	COHESI	VE SOILS	REMARK	(S:				•		
	BLOWS		DENSITY	BLOWS/FT	DENSITY		y dense, gray/tan, fine to	coarse GR	AVEL, lit	ttle fine to			BURMISTER CLASSIFICATION
	1 40		V. LOOSE	<2	V.SOFT	medium	sand.						TRACE 0 - 10% LITTLE 10 - 20%
	4 - 10 10 - 30		LOOSE M.DENSE	2 - 4 4 - 8	SOFT M.STIFF	1 Hit obstr	uction, moved boring 3' +	·/- south/so	uthwest	of original w	ashed		SOME 20 - 35%
	30 - 50		DENSE	8 - 15	STIFF		6' and resumed sampling			onginal, v			AND 35 - 50%
>	>50		V.DENSE	15 - 30	V.STIFF		ock core @ 8.5' +/						PERCENT BY WEIGHT
>30 HARD  NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GI													
			NOTES:									GRAI	DUAL.
							IADE IN THE DRILL HOLES AT TI THE LEVEL OF GROUNDWATER						

THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO.

B13-8

			10 ENGIN		BORING NO. <u><b>B13-9</b></u> SHEET <u>1</u> OF <u>1</u>								
	PRO	DJEC.	Γ <u>Blacks</u>	stone Valley erland, RI	Prep Scho	PLAN ol		CONSU		PROJECT CHKI		13062.08 SJM	
	FOF INS	REMA PECT	OR A. Jud	tokes	oring	- - -	BORING LOCATIO GROUND SURFAC DATE START		ATION 2013	PLORATION 74.8 DATE EN	DATUN ID	M MSL 7/11/2013	
	SAN	/IPLE			,		NSISTS OF A 2" SPLIT					READINGS	
	CAS	SING:	UNLES		SE NOTED, (		MMER FALLING 30 in. EN USING 300 lb.	7/11/13	11:00	WATER AT 12.1'	CASING /	AT STABILIZATION TIME  1 Hr.	
	CAS	SING	SIZE:	4"	24 IIV.	OTHER:	Safety Hammer						
	O/ (C	1110	JIZL.	SAMPL	F	OTTILIT.	SAMPLE	DESCRI	PTION			STRATUM DESCRIPTION	N
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister			SSIFICATION	DEMANDE	KEMAKKU KAN	
		S-1	24/8	0-2	6 9		Medium dense, brown, f	ine to medi	um SAN	D and SILT,	little	4" TOPSOIL	_
					6 13		fine gravel.					FILL	
5		S-2	24/6	4-6	11 10		Medium dense, brown, f	ine to coars	se SAND	, some fine		'-	
	5 S-2 24/6 4-6 11 10 Medium dense, brown, line to coarse SAND, some line gravel, trace silt.											SAND WITH GRAVEL	
10		S-3	24/9	9-11	20 18 35 35		Wet to moist, very denso sand, little silt.	e, tan, fine		2.			
									GLACIAL DEPOSITS				
15		S-4	24/5	14-16	21 16 17 22		Moist, dense, dark gray,	highly wea	ithered S	ANDSTONE		WEATHERED ROCK	
							END OF	EXPLORA	TION @	17'.			
							1						
20													
							-						
							1						
25													
						1	1						
				<del> </del>			1						
30							]						
	CD 4	NII II ^ =	2011 0	COLIECT	/E 80" 0	REMAR	<u> </u> /8:						
	BLOW		DENSITY	BLOWS/FT	VE SOILS DENSITY	4	NS. ng stratum @ 3' +/					BURMISTER CLASSIFICATION	N
	0 - 4		V. LOOSE	<2	V.SOFT		ng stratum @ 7' +/					TRACE 0 - 10%	_
	4 - 10		LOOSE	2 - 4	SOFT		ng stratum @ 14' advance	ed roller bit	to compe	etent rock @	17.	LITTLE 10 - 20%	
	10 - 30		M.DENSE	4 - 8	M.STIFF							SOME 20 - 35%	
	30 - 50		DENSE	8 - 15	STIFF							AND 35 - 50%	
	>50		V.DENSE	15 - 30	V.STIFF							PERCENT BY WEIGHT	
			NOTES:	>30	HARD	JES REDDESEN	T THE APPROXIMATE BOUNDA	RY RETWICEN	SOIL TYPE	S TRANSITION	S MAV PE O	SRADIJAI	
			.,0120.				MADE IN THE DRILL HOLES AT T					ON LOCAL.	
							THE LEVEL OF GROUNDWATER						
				THOSE PR	В	ORING NO. B13-9							

PARE CORPORATION  10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS ENGINEERS *** PLANNERS *** CONSULTANTS												BORING NO. <u><b>B13-10</b></u>			
			ENGI	NEERS	***	PLAN	NERS ***	CONSU	ILTAN	ΓS		SHEET <u>1</u> OF <u>1</u>			
PROJECT Blackstone Valley Prep School Cumberland, RI										PROJECT CHKI		13062.08 SJM			
	BOF	RING	CO. New H	Hampshire B	orina		BORING LOCATIO	N	SEE EX	PLORATION	LOCATION	N PLAN			
	FOF	REMA	N Jay St	tokes	g	-	GROUND SURFAC			75.5	DATUM	MSL			
	INS	PECT	OR A. Jud	dge		- -	DATE START	7/11/2	2013	DATE EN	iD	7/11/2013			
	SAN	/IPLEI			,		NSISTS OF A 2" SPLIT		G	ROUNDV	/ATER RI	EADINGS			
	0.4.6						MMER FALLING 30 in.	DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME			
	CAS	SING:		SS OTHERWIS MER FALLING		CASING DRIVI	EN USING 300 lb.								
	CAS	SING		4 1/4" HSA		OTHER:	Safety Hammer								
				SAMPL			SAMPLE	DESCRI	PTION			STRATUM DESCRIPTION			
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister		CLA	SSIFICATION	REMARKS				
	0 0	S-1	24/8	0-2	4 3	PID=40.2	Topsoil.					4" TOPSOIL			
					4 4		]								
												SAND WITH			
5		S-2	24/6	4-6	24.25	PID=7.2	Dry, very dense, gray, fr	GRAVEL							
5		3-2	24/6	4-0	24 25 30 52	PID=1.2	gravel.	actured oc	, DDLLO,	Joine coars					
							END OF	EXPLORA	TION @	6'.					
40															
10							1								
							1								
							]								
15							•								
							]								
20							•								
							]								
25							•								
30							-								
							1								
	GRA	NULAF	SOILS	COHESI	/E SOILS	REMARK	KS:				ı				
	BLOW	S/FT	DENSITY	BLOWS/FT	DENSITY	1	ng stratum @ 6'.					BURMISTER CLASSIFICATION			
	0 - 4		V. LOOSE LOOSE	<2 2 - 4	V.SOFT	2. Auger re	efusal @ 6'. Possible bed	Irock.				TRACE 0 - 10% LITTLE 10 - 20%			
	4 - 10 10 - 30	)	M.DENSE	4 - 8	SOFT M.STIFF							SOME 20 - 35%			
	30 - 50		DENSE	8 - 15	STIFF							AND 35 - 50%			
	>50		V.DENSE	15 - 30	V.STIFF							PERCENT BY WEIGHT			
			NOTES:	>30	HARD	<u> </u>						<u></u>			
			MOTES:				T THE APPROXIMATE BOUNDAI NADE IN THE DRILL HOLES AT T					JUAL.			
				•											
				THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS  THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.							BOI	BORING NO. B13-10			

PARE CORPORATION  10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS												BORING NO. B13-11			
				LINCOLN NEERS	I ROAD,	SUITE 103 PLANI		SACHUS CONSU		гs			SHEET <u>1</u> OF <u>1</u>		
PROJECT Blackstone Valley Prep School										PROJECT	NO.		13062.08		
Cumberland, RI										CHKI	D. BY		SJM		
			CO. New H	lampshire B	oring	_	BORING LOCATIO			PLORATION			I PLAN		
	_	REMA	N <u>Todd I</u> OR M. Du	Pentacost		-	GROUND SURFAC	E ELEV. 7/23/2		75.8 DATE EN	DATU	JM	MSL 7/23/2013		
		1PLEI	-		SE NOTED (	- CAMPIED COL		112312		ROUNDV	-	) DI			
	SAIV	II LLI			,		NSISTS OF A 2" SPLIT MMER FALLING 30 in.	DATE	TIME	WATER AT			STABILIZATION TIME		
	CAS	SING:				CASING DRIVI	EN USING 300 lb.	23-Jul		None					
	CAS	SING		IER FALLING 2 1/4" H S		OTHER:	Safety Hammer								
				SAMPL			SAMPLE	DESCRI	PTION			"	STRATUM DESCRIPTION		
Ŧ	CASING (bl/ft)		PEN. (in.)/			TONS/FT <sup>2</sup> OR						REMARKS			
OEP (ft)	CAS (bl/ft	NO.	REC.	DEPTH (FT)	BLOWS/6"	KG/CM <sup>2</sup>	Burmister			SSIFICATION		REN			
		S-1	24/6	0-2	5 7	<u> </u>	Moist, medium dense, b to medium GRAVEL, tra	,	o mediu	m SAND and	d fine	1	3" ASPHALT		
		S-2	24/4	2-4	18 11 9 9		Moist, dense, brown, find	e GRAVEL	and fine	to medium			FILL		
					23 14		SAND, trace silt.		_						
5		S-3	24/12	4-6	8 9 9 8	<u> </u>	Moist, medium dense, lighter for medium GRAVEL		fine to co	oarse SAND	and				
		S-4	24/20	6-8	8 7		Moist, medium dense, li	ght brown,	fine to co	oarse SAND	little				
			2.1/2.2		14 38		gravel, trace silt.	roun fine t	o modiu	~ CDAVEL*		2	OLAGIAL DEDOGITO		
10		S-5	24/20	8-10	27 25 72 18		5A: Moist, very dense, b 5B: Dry, very dense, ligh					3	GLACIAL DEPOSITS		
		S-6	16/10	10-11'4"	15 41		SANDSTONE						WEATHERED BEDROCK		
					100/4"	<u> </u>	Moist, very dense, dark	gray, highly EXPLORA			E	4			
							ENDOF	EXPLORA	TION II	4.					
15							]								
						<u> </u>	-								
							j								
-							]								
20							1								
							]								
						<del>                                     </del>	-								
25															
							]								
				<u> </u>		<del>                                     </del>	-								
30	<b> </b>					<del> </del>									
							1								
			SOILS		/E SOILS	REMARK	S: *and fine to	medium S	AND, tra	ce silt.	-		DUDANOTED OF A COLETO ATION		
	0 - 4		V. LOOSE		V.SOFT	1. Track M	ounted ATV.						BURMISTER CLASSIFICATION TRACE 0 - 10%		
4 - 10 LOOSE			2 - 4	SOFT		ng stratum at 8'.						LITTLE 10 - 20%			
10 - 30 M.DENSE					M.STIFF	_	ng stratum at 9.5'.	"					SOME 20 - 35%		
30 - 50 DENSE 8 - 15 >50 V.DENSE 15 - 30					STIFF V.STIFF	4. Spoon a	and Auger Refusal at 11'4						AND 35 - 50% PERCENT BY WEIGHT		
				>30	HARD										
			NOTES:				T THE APPROXIMATE BOUNDAI					GRA	DUAL.		
							IADE IN THE DRILL HOLES AT T THE LEVEL OF GROUNDWATER								
				THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.							BOF	RING NO. B13-11			

					P	ARE CO	RPORATION					BORING NO. <u><b>B13-12</b></u>		
				LINCOLN NEERS	ROAD,	SUITE 103 PLAN	3, FOXBORO, MASS NERS ***	SACHUS CONSL		TS		SHEET <u>1</u> OF <u>1</u>		
	PRC	)JEC		stone Valley erland, RI	Prep Scho	ol		13062.08 SJM						
BORING CO. New Hampshire Boring FOREMAN Todd Pentacost INSPECTOR M. Dunn							BORING LOCATION  SEE EXPLORATION LOCATION  GROUND SURFACE ELEVATION 75.1 DATUM  DATE START 7/23/2013 DATE END					MSL 7/23/2013		
		1PLEI			SE NOTED 9	SAMDLED COL	NSISTS OF A 2" SPLIT			ROUNDV	-			
	O/ (II				,		MMER FALLING 30 in.	DATE	TIME	WATER AT				
	CAS	SING:				CASING DRIV	EN USING 300 lb.	7/23	11:30am	10'	N/A	0		
	$C \wedge S$	SINIC	HAMN SIZE:	IER FALLING		OTHED:	Cafaty Hammar							
	CAS	SING .	SIZE.	2 1/4" H S A		OTHER.	Safety Hammer SAMPLE	DESCRI	PTION			STRATUM DESCRIPTION		
_	9				. <u> </u>		OAWII EE	DEGOIN	11011		RKS S	OTTATOM BESSELL HOL		
DEPTH (ft)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister		CLAS	SSIFICATION	REMARKS	# TODOO!		
		S-1	24/3	0-2	11 15 16 10		Topsoil. No recovery.				1.	4" TOPSOIL		
		S-2	24/0	2-4	7 9		No recovery.					FILL		
					28 27		]							
5		S-3	24/12	4-6	14 14		Dry, m.dense, tan, fine to gravel.	o coarse S	AND, little	e silt, little fir				
		S-4	24/20	6.0	11 13 11 11		Moist, medium dense, ta	n fine to n	nedium S	SAND little s	2.			
		3-4	24/20	6-8	12 13		trace fine gravel.	111, 11110 10 11	nodiain C	7 (1 <b>1</b> D, 11 til C C	,	SAND		
		S-5	24/12	8-10	50 61		5A: Moist, very dense, li	•	fine to co	arse SAND	and			
10					54 55		fine to medium GRAVEL	•		05.11.5	3.			
							5B: Moist, very dense, b fine to coarse sand, trac		to coarse	GRAVEL, S	ome			
		S-6	24/13	14-16	75 46		Wet, very dense, dark b		o coarse	GRAVEL, s	ome	GLACIAL		
15					33 39		fine to coarse sand, trac					DEPOSITS		
		S-7	25/10	16-17'3"	46 52		Wet, very dense, dark be fine to coarse sand, trac		o coarse	GRAVEL, li	ttle			
				1	100/3"		- Into to course sand, trae	o ont.			4.			
							END OF E	XPLORAT	ION @ 1	7'3".				
20							]							
				1			-							
25														
							-							
							1							
30														
	CDA	NI II A E	SOILS	COHESI	/E SOILS	REMARK	(S·							
	BLOW		DENSITY	1	DENSITY	-	to medium sand and fine	to mediun	n gravel 1	10-4; based	on	BURMISTER CLASSIFICATION		
	0 - 4		V. LOOSE	<2	V.SOFT	auger sp	ooil.					TRACE 0 - 10%		
	4 - 10		LOOSE	2 - 4	SOFT	_	ng stratum @ 6'.					LITTLE 10 - 20%		
	10 - 30		M.DENSE		M.STIFF	_	ng stratum @ 8'.					SOME 20 - 35%		
	30 - 50 >50		DENSE V.DENSE		STIFF V.STIFF	4. Auger re	efusal @ 17'3".					AND 35 - 50% PERCENT BY WEIGHT		
				>30	HARD							. 2		
			NOTES:	1) THE STRAT	TIFICATION LIN	NES REPRESEN	T THE APPROXIMATE BOUNDAI	RY BETWEEN	SOIL TYPE	S, TRANSITION	S MAY BE GRA	ADUAL.		
							MADE IN THE DRILL HOLES AT T							
							THE LEVEL OF GROUNDWATER	R MAY OCCUP	R DUE TO C	THER FACTOR		RING NO P12 12		
				THUSE PR	ESENTAL IH	L TIIVIE MEASUL	REMENTS WERE MADE.			BORING NO. B13-12				

PARE CORPORATION  10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS												BORING NO. <u><b>B13-13</b></u>			
				LINCOLN NEERS	I ROAD, S	SUITE 103 PLANI		SACHUS CONSU		s			SHEET <u>1</u> OF <u>1</u>		
	PRC	)JEC		stone Valley erland, RI	Prep School	ol			l	PROJECT CHKI	_		13062.08 SJM		
	BOF	RING	CO. New H	lampshire B	oring	_	BORING LOCATIO			PLORATION			I PLAN		
		REMA PECT	N <u>Todd</u> OR M. Du	Pentacost nn		_	GROUND SURFAC	7/23/2		DATE EN	DATI	JM	7/23/2013		
		1PLEI			SE NOTED S	AMDLED COL	NSISTS OF A 2" SPLIT	172072		Ţ		R RF	EADINGS		
	SAIV	'II LLI			, -		MMER FALLING 30 in.	DATE	TIME	WATER AT	_		STABILIZATION TIME		
	CAS	ING:				CASING DRIVI	EN USING 300 lb.	7/23/13		15'	N/	A	0		
	$C\Delta$	SING	HAMIV SIZE:	IER FALLING 2 1/4" H S		OTHER:	Safety Hammer								
	OAC	JIIVO .	JIZL.	SAMPL		OTTILIN.	SAMPLE	DESCRI	PTION				STRATUM DESCRIPTION		
ЕРТН t)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT <sup>2</sup> OR KG/CM <sup>2</sup>	Burmister			SSIFICATION		REMARKS			
<u>□</u> #	0 8	S-1	24/10	0-2	9 12		Moist, medium dense, d	ark brown,				Œ	6" TOPSOIL		
		0 1	21710	0.2	7 4		and fine to coarse SAND								
		S-2	24/8	2-4	13 200		Dry, very dense, tan, fine GRAVEL, trace silt.	e to coarse	SAND a	nd fine to m	edium				
5		S-3	24/12	4-6	20 23 31 44		Moist, very dense, tan, f	ine to coars	se SAND	and fine to			FILL		
<u> </u>		3-3	24/12	4-0	30 52		medium GRAVEL, trace		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	a			1 122		
		S-4	22/18	6-7.5	51 67		Moist, very dense, light l to medium GRAVEL, tra	,	to coars	e SAND and	l fine				
		S-5	5/5	8-8.5	68 81/4" 100/5"		Moist, very dense, light I		to coars	e SAND and	l fine	1			
10		3-3	5/5	0-0.5	100/3		to medium GRAVEL, tra		to oodio	0 07 11 1D and		'			
													COBBLES & BOULDERS		
												•			
		S-6	24/18	14-16	35 31		6A: Wet, very dense, da	rk brown, fi	ne to coa	arse SAND a	and	2			
15					35 39		fine to coarse GRAVEL, trace silt. 6B: Wet, very dense, dark brown to reddish, fine to medium GRAVEL*  7A: Wet, very dense, dark brown to reddish, fine to medium						GLACIAL		
			0.1/1.0	10.10								•	DEPOSITS		
		S-7	24/18	16-18			GRAVEL, some fine to o				iuiii	3			
		S-8	24/10	18-20	53 31		Very dense, dark gray, the	hinly bedde	d, highly	fractured			WEATHERED BEDROCK		
20					44 100/6"		MUDSTONE.	EXPLORA <sup>-</sup>	TION @	20'					
							LIND OF	LAFLONA	IION @	20.					
0.5															
25															
30					<del> </del>										
00															
			DENSITY		VE SOILS DENSITY	REMARK				ce silt. own, fine to r	nedium		BURMISTER CLASSIFICATION		
BLOWS/FT 0 - 4			V. LOOSE	<2	V.SOFT	-	SAND and	-	iigiit bic	wii, iiile to i	nealani	ı	TRACE 0 - 10%		
4 - 10			LOOSE	2 - 4	SOFT	1. Changing stratum @ 8.5 ft.							LITTLE 10 - 20%		
		M.DENSE		M.STIFF		2. Changing stratum @ 14.5 ft.						SOME 20 - 35%			
	30 - 50 >50		DENSE V.DENSE	8 - 15 15 - 30	STIFF V.STIFF	3. Changing	g stratum @ 18 ft.						AND 35 - 50% PERCENT BY WEIGHT		
				>30	HARD	<u> </u>							- LIGERT DI WEIGHT		
			NOTES:	1) THE STRAT	FIFICATION LIN	IES REPRESEN	T THE APPROXIMATE BOUNDAI	RY BETWEEN	SOIL TYPE	S, TRANSITION	IS MAY B	E GRAI	DUAL.		
							ADE IN THE DRILL HOLES AT T								
THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTI THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.											_	BOF	RING NO. B13-13		

PARE CORPORATION  10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS											BORING NO	D. <u><b>B13-1</b></u> 4			
				NEERS	***	PLANI		CONSU		s			SHEET 1	OF <u>1</u>	
	PRO	JEC <sup>-</sup>		stone Valley	Prep School	ol			ı	PROJEC		į	13062.08		
Cumberland, RI  BORING CO. New Hampshire Boring  BORING LOCATION  SEE EXPLORATION LOCATION												SJM			
			—		oring	-	BORING LOCATIO			PLORATIO					
	_	REMA PECT	OR M. Du	Pentacost		-	GROUND SURFAC	7/23/2		75.7 DATE E	_DATU	ועונ	7/23/2013	<u> </u>	
								172072				ם חר	EADINGS		
	SAIN	1PLEI			,		NSISTS OF A 2" SPLIT MMER FALLING 30 in.	DATE	TIME	WATER AT			STABILIZATI	ON TIME	
	CAS	SING:		S OTHERWIS		CASING DRIVE	EN USING 300 lb.	7/23/13		NE	C/ tot		0	•·····	
	CAS	SING	SIZE:	2 1/4" H S		OTHER:	Safety Hammer								
				SAMPL			SAMPLE	DESCRI	PTION				STRATUM DES	SCRIPTION	
Ξ	NG		DEN (in )/			TONS/FT <sup>2</sup> OR						REMARKS			
DEP)	CASING (bl/ft)	NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	KG/CM <sup>2</sup>	Burmister			SSIFICATION		REM			
		S-1	24/10	0-2	15 13		Dry, medium dense, bro	wn, fine to	medium	SAND, little	e silt,		4" TOPS	SOIL	
		S-2	24/8	2-4	13 14 5 4		Dry, loose, light brown, f	ine to medi	um SAN	D, little silt,	little				
			_ ,, 0		4 10		gravel, trace roots.			,					
5		S-3	24/15	4-6	10 20		Dry, dense, tan, fine to n SAND, little silt.	nedium GR	AVEL ar	nd fine to co	oarse		FILL		
		C 4	0.4/4.0	0.0	19 22		Moist, very dense, tan, fi	ine to medi	um SANI	D some fin	e to				
		S-4	24/18	6-8	41 61 50 59		medium gravel, little silt.		um 0/ m	D, Some in	10 10				
		S-5	24/20	8-10	22 35		Moist, very dense, grayis			dium GRA	VEL	1			
10					39 39		and fine to coarse SAND	), trace silt.					GLACI		
												•	DEPOS	ITS	
							END OF E	XPLORAT	ION @ 1	2.5'.		2			
							-		_						
15															
20															
25						-									
30															
	GRA	NULAF	SOILS	COHESI	/E SOILS	REMARK	(S:								
	BLOW	S/FT	DENSITY		DENSITY	1	change @ 8'.6".	9.40 = 1		a day 1			BURMISTER CLA		
		V. LOOSE LOOSE		V.SOFT SOFT	2. Hard at	11'-12.5', auger refusal (	ய 12.5′. Po	ossible b	earock.			TRACE LITTLE	0 - 10% 10 - 20%		
		M.DENSE		M.STIFF								SOME	20 - 35%		
	30 - 50		DENSE		STIFF								AND	35 - 50%	
	>50		V.DENSE		V.STIFF								PERCENT BY	WEIGHT	
			NOTES:	>30	HARD	IEC DEDDECE:	T THE APPROXIMATE BOUNDAR	OV DETWEEN	COIL TYPE	C TRANSITIO	NO MAY 5	- 004	DUAL		
			NOTES.				I THE APPROXIMATE BOUNDAR IADE IN THE DRILL HOLES AT T					- GRAI	DUAL.		
											RS THAN				
	THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN  THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.  BOR											RING NO.	B13-14		

# **APPENDIX G**

Test Pit Log



#### PARE CORPORATION TEST HOLE NO TP-1 8 BLACKSTONE VALLEY PLACE, LINCOLN, RHODE ISLAND **CONSULTANTS** SHEET 1 OF 1 **ENGINEERS PLANNERS** Property Owner: Civic Builders Project: 13062.00 - Blackstone Valley Prep Contractor: William Anthony Excavation Property Location: 52 Broad Street, Cumberland, RI Excavator: **CAT 325B** Date of Test Hole: November 21, 2013 Soil Evaluator: Andrew Chagnon State/ PE #: RI / PE# 7858 Weather: Sunny 45F Shaded: Yes 🗸 No SAMPLE DESCRIPTION Horizon Boundaries Soil Colors Re-Dox Description Percent Gravel Horizon Depth Texture Structure Consistence Re-Dox Cobbles Stone Matrix Торо Con. Features 0-5" 10YR 3/2 Top Soil Α **FILL** 5"-1'9" 10YR 3/2 loamy sand 15-35% Gravel 15-35% Gravel В 1'9"-3' 10YR 4/6 15-35% Cobbles loamy sand 0-10% Bolders 15-35% Stones C1 3'-10' 10YR 6/4 15-35% Cobbles medium sand CR 10'-11' weathered bedrock Soil Class: N/A Total Depth of Test Hole: 11' Depth to Groundwater Depth to Impervious or Seepage: None Observed or Limiting Layer: N/A Estimated Seasonal High No watertable or evidence of water Water Table: table was observed. COMMENTS: TEST HOLE NO. TP-1

# **APPENDIX H**

Field Reports





**PROJECT TITLE:** CB-Blackstone Valley Prep **DATE:** 12-30-13 Monday

**LOCATION:** Cumberland, Rhode Island **TEMP:** 50s

PARE JOB NO.: 13062.09 WEATHER: Overcast

**CONTRACTOR:** William Anthony Excavating (WAE)

PARE OBSERVER: Mark Dowdell

**PERSONNEL ON SITE:** One (1) Superintendent, Three (3) Operators, Five (5) Laborers, H.V. Collins

VISITORS TO SITE: Michael Dalio, David (H.V. Collins), Jeff Costa, Andrew Chagnon and Kevin

Champagne (PARE)

**DISCUSSIONS AND COMMENTS: (NOTE INJURIES IF ANY)** 

Mark Dowdell (MLD) arrived on site at 0930.

- MLD was called to investigate possible petroleum contamination on-site. Upon arrival, MLD met with Michael Dalio and David from HV Collins to discuss plan for removal of contaminated soil and sampling procedure. It was agreed that excavation of soil that appeared to be contaminated would be performed until no further evidence of contaminated soil was found, and four confirmatory samples of the sidewalls and one waste characterization sample of the stockpile would be performed.
- Excavation of soil began at 1100. Soil that contained evidence of contamination (through olfactory and visual screening) was stockpiled upon a polyethylene sheet on the south side of the site. Evidence of contamination included heavy petroleum odors and dark black, "spongy" soil. Excavation was performed until no evidence of contamination was observed.
- Four (4) confirmatory samples were collected from the four side walls in the excavation. One (1) waste characterization sample was collected from the stockpiled material on-site. Based on preliminary measurements of the excavation, it appears that between 40 and 60 cubic yards of contaminated material will be disposed of.

#### INFORMATION OR ACTION REQUIRED:

• Receive sampling results from New England Testing Lab

**ATTACHMENTS: See Photos** 

The undersigned left the site at 1245.

Mark Dowdell, Senior Engineer













Page 4 of 8







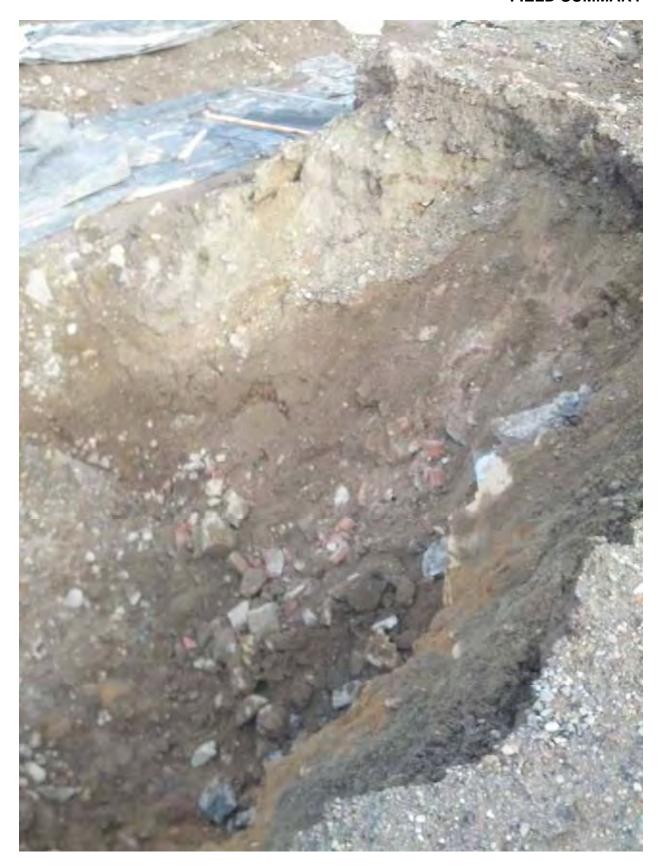






Page 7 of 8





Page 8 of 8



**PROJECT TITLE:** CB-Blackstone Valley Prep **DATE:** 1-6-14 Monday

**LOCATION:** Cumberland, Rhode Island **TEMP:** 50s

PARE JOB NO.: 13062.09 WEATHER: Overcast

**CONTRACTOR:** William Anthony Excavating (WAE)

PARE OBSERVER: Mark Dowdell

**PERSONNEL ON SITE:** One (1) operator, one (1) laborer

**VISITORS TO SITE:** Andrew Chagnon (PARE)

**DISCUSSIONS AND COMMENTS: (NOTE INJURIES IF ANY)** 

Mark Dowdell (MLD) arrived on site at 1430.

• MLD arrived to coordinate further excavation of contaminated material based on laboratory results for excavation performed on 12-30-13. Reported concentrations of SVOCs on the east wall of the excavation (sample Conf-2) were elevated and further excavation and sampling was needed.

- Excavation of soil began at 1445 in the bottom of the excavation for the collection of a bottom sample. Approximately 1 foot of soil was excavated to remove any potentially contaminated material that had fallen into the excavation since 12-30-13. The excavation was increased in length by approximately 3 feet eastward by excavating the east wall. MLD collected two soil samples from the east wall (one in the top 5 feet, one in the bottom 5 feet) after it appeared that no more contamination was present. MLD also collected one additional sample from the south wall. A total of four (4) additional confirmatory samples were collected. PARE utilized a photoionization detector (PID) to screen for total volatile organic compound (TVOC) concentrations. All excavated material was stockpiled in the waste stockpile on the south end of the site.
- It should be noted that not all debris from the former building foundation was removed from the excavation. This was due to the continuation of the former building foundation away from, and perpendicular to, the source of contamination. As the excavation was expanded, more of the former building foundation fell into the excavation. The foundation did not appear to be a source of contamination for this area; therefore, some pieces of the stone foundation and bricks are visible in the attached photos.

#### INFORMATION OR ACTION REQUIRED:

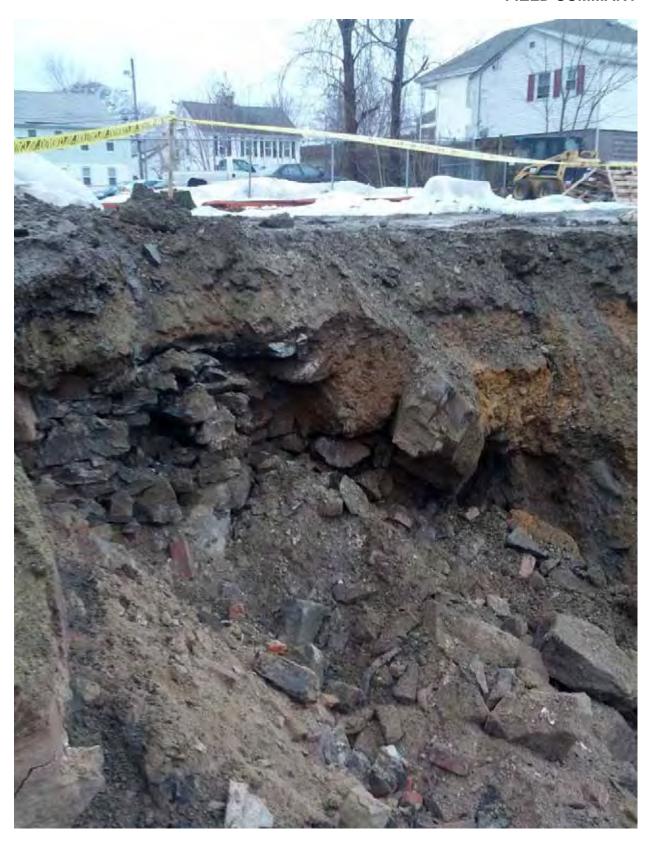
• Receive sampling results from New England Testing Lab

**ATTACHMENTS: See Photos** 

The undersigned left the site at 1530.

Mark Dowdell, Senior Engineer









Page 3 of 3



**PROJECT TITLE:** CB-Blackstone Valley Prep **DATE: 2-4-14 Tuesday** 

**LOCATION:** Cumberland, Rhode Island **TEMP:** 20s °F AM 30s °F PM

PARE JOB NO.: 13062.09 WEATHER: Mostly Sunny

**CONTRACTOR:** William Anthony Excavating (WAE), H.V. Collins

**PARE OBSERVER:** Shane P. Driscoll

**EQUIPMENT ON SITE:** One (1) Caterpillar 325B Excavator, One (1) Caterpillar 315C Excavator

PERSONNEL ON SITE: One (1) Operator,

**VISITORS TO SITE:** Timothy Thies (PARE), Mark Dowdell (PARE), David Martel (H.V. Collins)

**DISCUSSIONS AND COMMENTS: (NOTE INJURIES IF ANY)** 

Shane Driscoll (SPD) arrived on site at 0805.

- SPD arrived to coordinate additional test pits and perform soil sampling on the site to ensure that
  contamination at the site has been thoroughly identified and remediated prior to completion of the
  school project.
- During excavation of the first test pit, designated as S-1, soil that contained evidence of contamination (through olfactory and visual screening) was observed on the southeastern edge of the test pit at approximately 5 to 6 feet below ground surface (bgs). Evidence of contamination included heavy petroleum odors and dark black, "spongy" soil. Excavation of soil that appeared to be contaminated was performed until no further evidence of contaminated soil was found. In addition, the excavation was advanced in the vicinity of the contaminated soil to verify that no other contamination exists in this area of the site. In total, the test pit excavation was measured at approximately 35 feet x 18 feet x 11 feet bgs. The contaminated soil was measured at approximately 5 feet x 5 feet and located 5 to 6 feet bgs. Soil that contained evidence of contamination was stockpiled on a polyethylene sheet on the south side of the site with the existing contaminated soil stockpile. SPD collected five (5) confirmatory samples from the four sidewalls and bottom of the contaminated soil excavation. PARE utilized a photoionization detector (PID) to screen the excavation for total volatile organic compound (TVOC) concentrations with results in parts per million (ppm). No TVOC readings were detected in the test pit. Including the excavation of additional soil which may have been tainted by the contaminated soil discovered at the site, approximately 5 to 10 cubic yards of contaminated material was stockpiled on-site. It should be noted that during excavation of S-1, a 4-inch clay pipe was encountered on the northern edge of the test pit approximately 2 feet bgs.
- In total, eight (8) test pits were performed throughout the site, with two (2) test pits performed within the proposed school building footprint. Each test pit included two (2) samples collected for chemical analysis, with the exception of S-6, S-7, and S-8, where only one (1) sample was collected due to fill material encountered at these locations as a result of construction activities performed as part of the development of the proposed school.



- PARE sent the five (8) confirmatory samples and thirteen (13) test pit soil samples with chain-of-custody documentation to New England Testing Laboratory (NETLAB) of North Providence, Rhode Island for the following chemical analyses:
  - o Volatile Organic Compounds (VOCs), EPA method 8260B;
  - o Semi-Volatile Organic Compounds (SVOCs), EPA method 8270D;
  - o Total Petroleum Hydrocarbons (TPH), EPA method 8100M;
  - o RCRA 8 Metals, EPA method 6010C/7471B; and
  - o RIDEM Chemicals of Potential Concern for Vapor Intrusion.
- Jar headspace analytical screening of each soil sample was also performed using a PID to screen for TVOCs. Sample results indicated insignificant levels of TVOC in all soil samples (i.e., 0.2 ppm or less)

#### INFORMATION OR ACTION REQUIRED:

Receive sampling results from NETLAB

**ATTACHMENTS: See Photos** 

Than P. Dunols

The undersigned left the site at 1415.

Shane P. Driscoll, Senior Engineer



<u>Description</u>: The contaminated soil is located approximately 5 to 6 feet bgs and found on the bottom right portion of the photograph. A 4-inch clay pipe is located approximately 2 feet bgs and found on the top left portion of the photograph.





<u>Description:</u> The photograph depicts the excavation of contaminated soil and the advancement of the soil excavation in the vicinity of the contaminated soil to verify that no other contamination exists in this area of the site.



<u>Description</u>: Soil that contained evidence of contamination was stockpiled on a polyethylene sheet on the south side of the site with the existing contaminated soil stockpile.



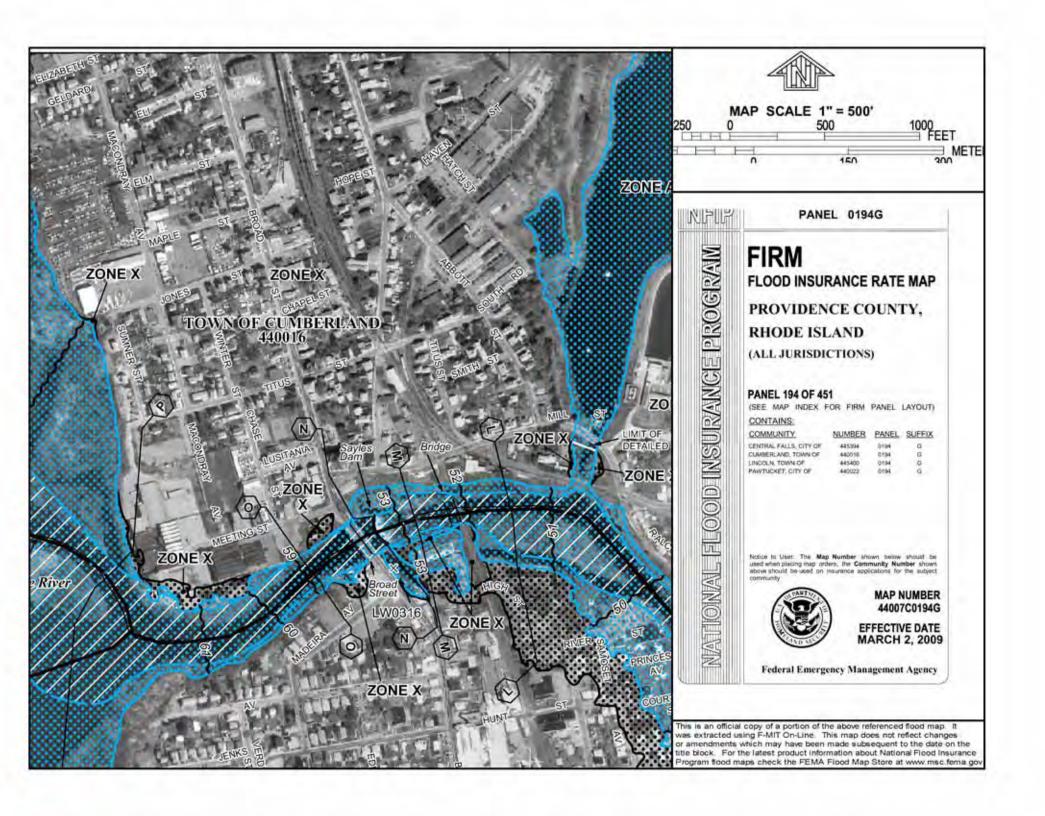


<u>Description:</u> Contaminated soil stockpiled and encapsulated in polyethylene sheeting on the south side of the site.

## **APPENDIX I**

FEMA Map





# **APPENDIX J**

Laboratory Analytical Results





### REPORT OF ANALYTICAL RESULTS

### **NETLAB Case Number Z1230-23**

Prepared for:

Attn: M. Dowdell Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: January 3, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on December 30, 2013. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is Z1230-23

Custody records are included in this report.

**Site: CB-BVP-Contaminated Soil** 

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis Requested
Conf-1	12/30/13	Soil	Table II
Conf-2	12/30/13	Soil	Table II
Conf-3	12/30/13	Soil	Table II
Conf-4	12/30/13	Soil	Table II
Waste	12/30/13	Soil	Table III

TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Total Petroleum Hydrocarbons	3550C	8100M
Semi-volatile Organic Compounds	3550C	8270D
Volatile Organic Compounds	5035	8260B

TABLE III, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Cyanide	NA	9014
Free Liquids	NA	9095B
Total Organic Matter	NA	ASTM D2974
Total Petroleum Hydrocarbons	3550C	8100M
PCB	3541	8082A
Pesticides	3541	8081B
Semi-volatile Organic Compounds	3550C	8270D
Volatile Organic Compounds	5035	8260B
Total Metals		
Arsenic	3050B	6010C
Barium	3050B	6010C
Cadmium	3050B	6010C
Chromium	3050B	6010C
Lead	3050B	6010C
Mercury	NA	7471B
Selenium	3050B	6010C
Silver	3050B	6010C
TCLP Extraction	1311	NA
Arsenic	3010A	6010C
Barium	3010A	6010C
Cadmium	3010A	6010C
Chromium	3010A	6010C
Lead	3010A	6010C
Mercury	NA	7470A
Selenium	3010A	6010C
Silver	7760	6010C

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

#### **CASE NARRATIVE:**

#### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

#### Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

#### **PCBs**

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

#### Pesticides

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

#### Total Petroleum Hydrocarbons

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

The profile for sample "Waste" prevented the quantification of the associated surrogate. As a result, the surrogate recovery was reported as "obscured".

#### Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

#### Volatile Organic Compounds:

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria. The compounds listed in Table 1 were screened by method 8260B utilizing ion reconstruction and NIST library search parameters. There were no detections of Table 1 compounds to an estimated detection limit of 100 ug/Kg.

#### Semi-volatile Compounds

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria. The compounds listed in Table 2 were screened by method 8270D utilizing ion reconstruction and NIST library search parameters. There were no detections of Table 2 compounds to an estimated detection limit of 500 ug/Kg.

#### Table 1

Acetaldehyde Nitroso-di-N-butylamine, N

Acetonitrile Nonane, nAcrolein Pentane, nAcrylonitrile Propyl benzene

Allyl Chloride Tetrafluoroethane, 1,1,1,2-

Bromo-2-chloroethane, 1- Tetrahydrofuran

Bromobenzene Trichloro-1,2,2-trifluoroethane, 1,1,2-

Butadiene, 1,3- Trichloropropene, 1,2,3- Chloro-1,1-difluoroethane, 1- Trimethylbenzene, 1,2,3- Chloro-1,3-butadiene, 2- Trimethylbenzene, 1,2,4-

Chlorodifluoromethane Vinyl Bromide

Cumene(isopropylbenzene) Acetone Cyanohydrin Cyclohexane Chlorobenzotrifluoride, 4-

Cyclohexene Chloropicrin Difluoroethane, 1,1-Dihydrosafrole Dimethylvinylchloride Epoxybutane, 1,2-Epichlorohydrin Triethylamine Ethyl Methacrylate Ethyleneimine Ethylene Oxide Methyl Isocyanate Hexane, N-Nitromethane Methacrylonitrile Propionaldehyde

Methyl Acrylate Propylene

Methyl Methacrylate

Methyl Styrene (Mixed Isomers)

Nitropropane, 2-

#### Table 2

Biphenyl, 1,1' Hexamethylene Diisocyanate, 1,6-

Bis(2-chloro-1-methylethyl) ether Dicyclopentadiene

Chloromethyl Methyl Ether

New England Testing Laboratory, Inc.

### Waste

Parameter	Result	Reporting Limit	Date Analyzed
	2.20.0.20		1 22202 j 2 0 0
Cyanide, mg/kg*	4.07	0.20	12/31/13
Free Liquids	No Free Liquids	NA	12/31/13
Total Organic Matter, %	1.71	NA	1/2/14

ND = Not Detected NA = Not Applicable

\*Dry Weight Basis

Sample: Waste Case No. Z1230-23

Date TCLP Extracted: 12/31/13

Date Analyzed\*: 1/2/14

TCLP Extractable Metals	Result, mg/L	Regulatory <u>Limit, mg/L</u>
Arsenic	<0.02	5.0
Barium	<0.5	100.0
Cadmium	<0.01	1.0
Chromium	<0.02	5.0
Lead	3.102	5.0
Mercury	< 0.002	0.2
Selenium	< 0.05	1.0
Silver	< 0.02	5.0

<sup>\*</sup> Date Completed

Sample: Conf-1		Analyst's Initials: BJ
Case No. Z1230-23		·
Date Collected: 12/30/13		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	12/30/13	12/31/13
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	21
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	83	62-151

Sample: Conf-2		Analyst's Initials: BJ
Case No. Z1230-23		
Date Collected: 12/30/13		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	12/30/13	12/31/13
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	163	22
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	75	62-151

ND = Not Detected \*Dry Weight Basis

Sample: Conf-3		Analyst's Initials: BJ
Case No. Z1230-23		
Date Collected: 12/30/13		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	12/30/13	12/31/13
Compound	Concentration,	Reporting Limit
_	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	20
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	95	62-151

Sample: Conf-4		Analyst's Initials: BJ
Case No. Z1230-23		
Date Collected: 12/30/13		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	12/30/13	12/31/13
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	56	22
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	101	62-151

ND = Not Detected \*Dry Weight Basis

Sample: Waste		Analyst's Initials: BJ
Case No. Z1230-23		
Date Collected: 12/30/13		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	12/30/13	12/31/13
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	2,320	33
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	Obscured	62-151

ND = Not Detected \*Dry Weight Basis



# **METALS RESULTS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.

#### **METALS RESULTS**



Case Number: Z1230-23

Sample ID: WASTE

Date collected: 12/30/13

Matrix SOIL

Solids, % 60.27 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	12.3	1.11	mg/kg	12/31/13	1/2/14
Barium	7440-39-3	3050B	6010C	91.5	0.55	mg/kg	12/31/13	1/2/14
Cadmium	7440-43-9	3050B	6010C	3.42	0.55	mg/kg	12/31/13	1/2/14
Chromium	7440-47-3	3050B	6010C	16.7	0.55	mg/kg	12/31/13	1/2/14
Lead	7439-92-1	3050B	6010C	1710	0.55	mg/kg	12/31/13	1/2/14
Mercury	7439-97-6	NA	7471B	38.40	5.139	mg/kg	1/2/14	1/2/14
Selenium	7782-49-2	3050B	6010C	ND	1.11	mg/kg	12/31/13	1/2/14
Silver	7440-22-4	3050B	6010C	7.64	0.55	mg/kg	12/31/13	1/2/14

ND indicates Not Detected.

All results are reported on a dry weight basis.

#### **METALS RESULTS**



Sample ID: Preparation Blank

Matrix SOIL

Solids, % 100 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	ND	0.67	mg/kg	12/31/13	1/2/14
Barium	7440-39-3	3050B	6010C	ND	0.33	mg/kg	12/31/13	1/2/14
Cadmium	7440-43-9	3050B	6010C	ND	0.33	mg/kg	12/31/13	1/2/14
Chromium	7440-47-3	3050B	6010C	ND	0.33	mg/kg	12/31/13	1/2/14
Lead	7439-92-1	3050B	6010C	ND	0.33	mg/kg	12/31/13	1/2/14
Mercury	7439-97-6	NA	7471B	ND	0.067	mg/kg	1/2/14	1/2/14
Selenium	7782-49-2	3050B	6010C	ND	0.67	mg/kg	12/31/13	1/2/14
Silver	7440-22-4	3050B	6010C	ND	0.33	mg/kg	12/31/13	1/2/14

ND indicates Not Detected.

All results are reported on a dry weight basis.



# LABORATORY CONTROL SAMPLE RECOVERY

				Internal			
Parameter	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	<b>Date Analyzed</b>
Arsenic	13.3	13.5	mg/kg	101	80	120	1/2/14
Barium	66.7	63.3	mg/kg	95	80	115	1/2/14
Cadmium	66.7	62.6	mg/kg	94	80	113	1/2/14
Chromium	66.7	61.3	mg/kg	92	80	115	1/2/14
Lead	66.7	62.7	mg/kg	94	80	114	1/2/14
Mercury	0.133	0.135	mg/kg	101	80	120	1/2/14
Selenium	13.3	14.0	mg/kg	105	80	120	1/2/14
Silver	33.3	32.6	mg/kg	98	80	120	1/2/14

New England Testing Laboratory, Inc.



**RESULTS: PCBs** 

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.



Sample: Waste		Analyst's Initials: BJ	
Case No.: Z1230-23			
Date Collected: 12/30/13			
Sample Matrix: Soil			
Subject: PCBs	Date Extracted	Date Analyzed	
Prep Method: EPA 3541	12/31/13	12/31/13	
Analytical Method: EPA 8082A			
Compound	Concentration	Reporting Limit	
	ug/kg* (ppb)	ug/kg* (ppb)	
Aroclor-1221	N.D.	100	
Aroclor-1232	N.D.	100	
Aroclor-1016	N.D.	100	
Aroclor-1242	N.D.	100	
Aroclor-1248	N.D.	100	
Aroclor-1254	N.D.	100	
Aroclor-1260	N.D.	100	
Aroclor-1262	N.D.	100	
Aroclor-1268	N.D.	100	
Surrogates:			
Compound	% Recovery	Limits	
TCMX	80	45-109	
DCBP	73	53-127	

\*Dry Weight Basis N.D. = Not Detected

New England Testing Laboratory, Inc.



Sample: Method Blank		Analyst's Initials: BJ
Case No.: Z1230-23		
Date Collected: NA		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3541	12/31/13	12/31/13
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg (ppb)	ug/kg (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	92	45-109
DCBP	99	53-127

N.D. = Not Detected



## **PCB Laboratory Control Spike**

Subject: PCB	Date Extracted			Date Analyzed
Prep Method: EPA 3541	12/31/13			12/231/13
Analytical Method: EPA 8082A				
Compound	Amount Spiked	Result	Recovery	Recovery
	mg/kg	mg/kg	%	Limits
Aroclor 1016	0.500	0.467	93	53-140
Aroclor 1260	0.500	0.514	103	60-126
Surrogates:				
Compound	% Recovery	Limits		
TCMX	87	45-109		
DCBP	93	53-127		





## **RESULTS: PESTICIDES**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.



Sample: Waste		Analyst's Initials: BJ
Case No.: Z1230-23		-
Date Collected: 12/30/13		
Sample Matrix: Soil		
Subject: Pesticides	Date Extracted	Date Analyzed
Prep Method: EPA 3541	12/31/13	1/2/14
Analytical Method: EPA 8081B		
Compound	Concentration ug/kg* (ppb)	Reporting Limit ug/kg* (ppb)
Aldrin	N.D.	5
alpha-BHC	N.D.	5
beta-BHC	N.D.	5
delta-BHC	N.D.	5
gamma-BHC	N.D.	5
alpha-Chlordane	N.D.	5
gamma-Chlordane	N.D.	5
Chlordane	N.D.	50
4,4'-DDD	N.D.	5
4,4'-DDE	N.D.	5
4,4'-DDT	N.D.	5
Dieldrin	N.D.	5
Endosulfan I	N.D.	5
Endosulfan II	N.D.	5
Endosulfan sulfate	N.D.	5
Endrin	N.D.	5
Endrin aldehyde	N.D.	5
Endrin Ketone	N.D.	5
Heptachlor	N.D.	5
Heptachlor epoxide	N.D.	5
Methoxychlor	N.D.	5
Toxaphene	N.D.	50
Surrogates:		
Compound	% Recovery	Limits
TCMX	68	51-109
DCBP	76	42-112

\*Dry Weight Basis N.D. = Not Detected





Sample: Method Blank		Analyst's Initials: BJ
Case No.: Z1230-23		
Date Collected: N.A.		
Sample Matrix: Soil		
Subject: Pesticides	Date Extracted	Date Analyzed
Prep Method: EPA 3541	12/31/13	1/2/14
Analytical Method: EPA 8081B		
Compound	Concentration ug/kg (ppb)	Reporting Limit ug/kg (ppb)
Aldrin	N.D.	5
alpha-BHC	N.D.	5
beta-BHC	N.D.	5
delta-BHC	N.D.	5
gamma-BHC	N.D.	5
alpha-Chlordane	N.D.	5
gamma-Chlordane	N.D.	5
Chlordane	N.D.	50
4,4'-DDD	N.D.	5
4,4'-DDE	N.D.	5
4,4'-DDT	N.D.	5
Dieldrin	N.D.	5
Endosulfan I	N.D.	5
Endosulfan II	N.D.	5
Endosulfan sulfate	N.D.	5
Endrin	N.D.	5
Endrin aldehyde	N.D.	5
Endrin Ketone	N.D.	5
Heptachlor	N.D.	5
Heptachlor epoxide	N.D.	5
Methoxychlor	N.D.	5
Toxaphene	N.D.	50
Surrogates:		
Compound	% Recovery	Limits
TCMX	95	51-109
DCBP	88	42-112

\*Dry Weight Basis N.D. = Not Detected





Date Collected: NA				
Sample Matrix: SOIL				
Subject: Pesticides	Date Extracted			Date Analyzed
Prep Method: EPA 3541	12/31/2013			1/2/2014
Analytical Method:EPA				
8081A				
Compound	Spike Amount	Recovery	Recovery	Recovery
	ng/mL (ppb)	ng/mL (ppb)	%	Limits
alpha-BHC	40	31.5	79	54-110
gamma-BHC	40	32.2	81	57-107
beta-BHC	40	32.7	82	58-114
delta-BHC	40	21.1	53	40-111
Heptachlor	40	32.4	81	55-113
Aldrin	40	31.0	77	53-114
Heptachlor epoxide	40	34.5	86	53-112
gamma-Chlordane	40	34.1	85	55-111
alpha-Chlordane	40	33.6	84	54-114
4,4'-DDE	40	37.4	94	54-117
Endosulfan I	40	33.6	84	52-113
Dieldrin	40	31.7	79	55-113
Endrin	40	30.1	75	50-127
4,4'-DDD	40	38.4	96	57-123
Endosulfan II	40	30.4	76	53-111
4,4'-DDT	40	33.9	85	52-126
Endrin aldehyde	40	41.5	104	40-136
Methoxychlor	40	31.9	80	67-128
Endosulfan sulfate	40	28.6	71	57-106
Endrin Ketone	40	34.9	87	51-119
Surrogates:				
Compound	% Recovery	Limits		
TCMX	92	51-109		
DCBP	83	42-112		



# **RESULTS: SEMIVOLATILE ORGANIC COMPOUNDS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-1

Matrix: (soil/water/air) SOIL Lab File ID: B123106.D

Sample wt/vol: 20.434 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: \_\_\_10.65 \_\_\_ Date Analyzed: \_\_12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		160	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		270	U
105-67-9	2,4-Dimethylphenol		550	U
65-85-0	Benzoic acid		820	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		270	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		270	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		110	U
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

# NELLCLAB

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-1

Matrix: (soil/water/air) SOIL Lab File ID: B123106.D

Sample wt/vol: 20.434 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: \_\_\_\_10.65 \_\_\_\_ Date Analyzed: \_\_\_12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		270	U
100-02-7	4-Nitrophenol		270	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		270	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		270	U
85-01-8	Phenanthrene		110	U
120-12-7	Anthracene		110	U
84-74-2	Di-n-butylphthalate		160	U
206-44-0	Fluoranthene		110	U
92-87-5	Benzidine		3300	U
129-00-0	Pyrene		110	U
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		270	U
56-55-3	Benzo(a)anthracene		110	U
218-01-9	Chrysene		110	U
117-81-7	bis(2-Ethylhexyl)phthalate		160	U
117-84-0	Di-n-octyl phthalate		160	U
205-99-2	Benzo(b)fluoranthene		110	U
207-08-9	Benzo(k)fluoranthene		110	U
50-32-8	Benzo(a)pyrene		110	U
53-70-3	Dibenz(a,h)anthracene		110	U
193-39-5	Indeno(1,2,3-cd)pyrene		110	U
191-24-2	Benzo(g,h,i)perylene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-2

Matrix: (soil/water/air) SOIL Lab File ID: B123109.D

 Sample wt/vol:
 20.187
 (g/ml)
 G
 Date Sampled:
 12/30/2013

 Level:
 (low/med)
 LOW
 Date Extracted:
 12/30/2013

% Moisture: 8.51 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		160	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		270	U
105-67-9	2,4-Dimethylphenol		540	U
65-85-0	Benzoic acid		820	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		270	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		270	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		140	
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

# NELLAB

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-2

Matrix: (soil/water/air) SOIL Lab File ID: B123109.D

Sample wt/vol: 20.187 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: 8.51 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		270	U
100-02-7	4-Nitrophenol		270	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		270	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		270	U
85-01-8	Phenanthrene		1100	
120-12-7	Anthracene		280	
84-74-2	Di-n-butylphthalate		160	U
206-44-0	Fluoranthene		2700	
92-87-5	Benzidine		3300	U
129-00-0	Pyrene		2700	
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		270	U
56-55-3	Benzo(a)anthracene		1500	
218-01-9	Chrysene		1600	
117-81-7	bis(2-Ethylhexyl)phthalate		160	U
117-84-0	Di-n-octyl phthalate		160	U
205-99-2	Benzo(b)fluoranthene		2200	
207-08-9	Benzo(k)fluoranthene		740	
50-32-8	Benzo(a)pyrene		1800	
53-70-3	Dibenz(a,h)anthracene		320	
193-39-5	Indeno(1,2,3-cd)pyrene		1400	
191-24-2	Benzo(g,h,i)perylene		1100	

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-3

Matrix: (soil/water/air) SOIL Lab File ID: B123107.D

Sample wt/vol: 20.58 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: 4.14 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		150	U
110-86-1	Pyridine		100	U
108-95-2	Phenol		100	U
62-53-3	Aniline		100	U
111-44-4	bis(2-Chloroethyl)ether		100	U
95-57-8	2-Chlorophenol		100	U
541-73-1	1,3-Dichlorobenzene		100	U
106-46-7	1,4-Dichlorobenzene		100	U
95-50-1	1,2-Dichlorobenzene		100	U
95-48-7	2-Methylphenol		100	U
108-60-1	bis(2-chloroisopropyl)ether		100	U
106-44-5	3- & 4-Methylphenol		200	U
621-64-7	n-Nitroso-di-n-propylamine		100	U
67-72-1	Hexachloroethane		100	U
98-95-3	Nitrobenzene		100	U
78-59-1	Isophorone		100	U
88-75-5	2-Nitrophenol		250	U
105-67-9	2,4-Dimethylphenol		510	U
65-85-0	Benzoic acid		760	U
111-91-1	bis(2-Chloroethoxy)methane		100	U
120-83-2	2,4-Dichlorophenol		250	U
120-82-1	1,2,4-Trichlorobenzene		100	U
91-20-3	Naphthalene		100	U
106-47-8	4-Chloroaniline		100	U
87-68-3	Hexachlorobutadiene		100	U
59-50-7	4-Chloro-3-methylphenol		250	U
91-57-6	2-Methylnaphthalene		100	U
77-47-4	Hexachlorocyclopentadiene		100	U
88-06-2	2,4,6-Trichlorophenol		100	U
95-95-4	2,4,5-Trichlorophenol		100	U
91-58-7	2-Chloronaphthalene		100	U
88-74-4	2-Nitroaniline		100	U
131-11-3	Dimethyl phthalate		100	U
208-96-8	Acenaphthylene		100	U
606-20-2	2,6-Dinitrotoluene		100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.



Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-3

Matrix: (soil/water/air) SOIL Lab File ID: B123107.D

Sample wt/vol: 20.58 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: 4.14 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1. Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		100	U
83-32-9	Acenaphthene		100	U
51-28-5	2,4-Dinitrophenol		250	U
100-02-7	4-Nitrophenol		250	U
132-64-9	Dibenzofuran		100	U
121-14-2	2,4-Dinitrotoluene		100	U
84-66-2	Diethyl phthalate		100	U
86-73-7	Fluorene		100	U
7005-72-3	4-Chlorophenyl phenyl ether		100	U
100-01-6	4-Nitroaniline		100	U
534-52-1	4,6-Dinitro-2-methylphenol		250	U
86-30-6	n-Nitrosodiphenylamine		100	U
101-55-3	4-Bromophenyl phenyl ether		100	U
118-74-1	Hexachlorobenzene		100	U
87-86-5	Pentachlorophenol		250	U
85-01-8	Phenanthrene		100	U
120-12-7	Anthracene		100	U
84-74-2	Di-n-butylphthalate		150	U
206-44-0	Fluoranthene		100	U
92-87-5	Benzidine		3000	U
129-00-0	Pyrene		100	U
85-68-7	Butyl benzyl phthalate		100	U
91-94-1	3,3'-Dichlorobenzidine		250	U
56-55-3	Benzo(a)anthracene		100	U
218-01-9	Chrysene		100	U
117-81-7	bis(2-Ethylhexyl)phthalate		150	U
117-84-0	Di-n-octyl phthalate		150	U
205-99-2	Benzo(b)fluoranthene		100	U
207-08-9	Benzo(k)fluoranthene		100	U
50-32-8	Benzo(a)pyrene		100	U
53-70-3	Dibenz(a,h)anthracene		100	U
193-39-5	Indeno(1,2,3-cd)pyrene		100	U
191-24-2	Benzo(g,h,i)perylene		100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-4

Matrix: (soil/water/air) SOIL Lab File ID: B123108.D

Sample wt/vol: <u>20.089</u> (g/ml) <u>G</u> Date Sampled: <u>12/30/2013</u>

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: 8.22 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)
Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		160	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		270	U
105-67-9	2,4-Dimethylphenol		540	U
65-85-0	Benzoic acid		810	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		270	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		270	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		110	U
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

# NELLCLAB

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Conf-4

Matrix: (soil/water/air) SOIL Lab File ID: B123108.D

Sample wt/vol: 20.089 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: \_\_\_\_8.22 \_\_\_ Date Analyzed: \_\_\_12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: <u>JD</u>

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		270	U
100-02-7	4-Nitrophenol		270	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		270	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		270	U
85-01-8	Phenanthrene		110	U
120-12-7	Anthracene		110	U
84-74-2	Di-n-butylphthalate		160	U
206-44-0	Fluoranthene		110	U
92-87-5	Benzidine		3200	U
129-00-0	Pyrene		110	U
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		270	U
56-55-3	Benzo(a)anthracene		110	U
218-01-9	Chrysene		110	U
117-81-7	bis(2-Ethylhexyl)phthalate		160	U
117-84-0	Di-n-octyl phthalate		160	U
205-99-2	Benzo(b)fluoranthene		110	U
207-08-9	Benzo(k)fluoranthene		110	U
50-32-8	Benzo(a)pyrene		110	U
53-70-3	Dibenz(a,h)anthracene		110	U
193-39-5	Indeno(1,2,3-cd)pyrene		110	U
191-24-2	Benzo(g,h,i)perylene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Waste

Matrix: (soil/water/air) SOIL Lab File ID: B123110.D

Sample wt/vol: 20.916 (g/ml) G Date Sampled: 12/30/2013

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: 39.73 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0 Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		240	U
110-86-1	Pyridine		160	U
108-95-2	Phenol		160	U
62-53-3	Aniline		160	U
111-44-4	bis(2-Chloroethyl)ether		160	U
95-57-8	2-Chlorophenol		160	U
541-73-1	1,3-Dichlorobenzene		160	U
106-46-7	1,4-Dichlorobenzene		160	U
95-50-1	1,2-Dichlorobenzene		160	U
95-48-7	2-Methylphenol		160	U
108-60-1	bis(2-chloroisopropyl)ether		160	U
106-44-5	3- & 4-Methylphenol		320	U
621-64-7	n-Nitroso-di-n-propylamine		160	U
67-72-1	Hexachloroethane		160	U
98-95-3	Nitrobenzene		160	U
78-59-1	Isophorone		160	U
88-75-5	2-Nitrophenol		400	U
105-67-9	2,4-Dimethylphenol		800	U
65-85-0	Benzoic acid		1200	U
111-91-1	bis(2-Chloroethoxy)methane		160	U
120-83-2	2,4-Dichlorophenol		400	U
120-82-1	1,2,4-Trichlorobenzene		160	U
91-20-3	Naphthalene		510	
106-47-8	4-Chloroaniline		160	U
87-68-3	Hexachlorobutadiene		160	U
59-50-7	4-Chloro-3-methylphenol		400	U
91-57-6	2-Methylnaphthalene		1700	
77-47-4	Hexachlorocyclopentadiene		160	U
88-06-2	2,4,6-Trichlorophenol		160	U
95-95-4	2,4,5-Trichlorophenol		160	U
91-58-7	2-Chloronaphthalene		160	U
88-74-4	2-Nitroaniline		160	U
131-11-3	Dimethyl phthalate		160	U
208-96-8	Acenaphthylene		160	U
606-20-2	2,6-Dinitrotoluene		160	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

# NELLAB

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z1230-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: Waste

Matrix: (soil/water/air) SOIL Lab File ID: B123110.D

Sample wt/vol: <u>20.916</u> (g/ml) <u>G</u> Date Sampled: <u>12/30/2013</u>

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: 39.73 Date Analyzed: 12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0 Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		160	U
83-32-9	Acenaphthene		480	
51-28-5	2,4-Dinitrophenol		400	U
100-02-7	4-Nitrophenol		400	U
132-64-9	Dibenzofuran		360	
121-14-2	2,4-Dinitrotoluene		160	U
84-66-2	Diethyl phthalate		160	U
86-73-7	Fluorene		580	
7005-72-3	4-Chlorophenyl phenyl ether		160	U
100-01-6	4-Nitroaniline		160	U
534-52-1	4,6-Dinitro-2-methylphenol		400	U
86-30-6	n-Nitrosodiphenylamine		160	U
101-55-3	4-Bromophenyl phenyl ether		160	U
118-74-1	Hexachlorobenzene		160	U
87-86-5	Pentachlorophenol		400	U
85-01-8	Phenanthrene		1300	
120-12-7	Anthracene		310	
84-74-2	Di-n-butylphthalate		240	U
206-44-0	Fluoranthene		890	
92-87-5	Benzidine		4800	U
129-00-0	Pyrene		740	
85-68-7	Butyl benzyl phthalate		160	U
91-94-1	3,3'-Dichlorobenzidine		400	U
56-55-3	Benzo(a)anthracene		320	
218-01-9	Chrysene		430	
117-81-7	bis(2-Ethylhexyl)phthalate		240	U
117-84-0	Di-n-octyl phthalate		240	U
205-99-2	Benzo(b)fluoranthene		510	
207-08-9	Benzo(k)fluoranthene		160	U
50-32-8	Benzo(a)pyrene		340	
53-70-3	Dibenz(a,h)anthracene		160	U
193-39-5	Indeno(1,2,3-cd)pyrene		310	
191-24-2	Benzo(g,h,i)perylene		250	

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.



 Method:
 8270
 Lab Sample ID:
 BSS123013-2

 Matrix:
 (soil/water/air)
 SOIL
 Lab File ID:
 B123103.D

 Sample wt/vol:
 20
 (g/ml)
 G
 Date Sampled:
 12/30/2013

Client Name: Pare Corporation

Level: (low/med) LOW Date Extracted: 12/30/2013

% Moisture: \_\_\_\_0 Date Analyzed: \_\_\_\_12/31/2013 Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

Case No.: Z1230-23

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		150	U
110-86-1	Pyridine		100	U
108-95-2	Phenol		100	U
62-53-3	Aniline		100	U
111-44-4	bis(2-Chloroethyl)ether		100	U
95-57-8	2-Chlorophenol		100	U
541-73-1	1,3-Dichlorobenzene		100	U
106-46-7	1,4-Dichlorobenzene		100	U
95-50-1	1,2-Dichlorobenzene		100	U
95-48-7	2-Methylphenol		100	U
108-60-1	bis(2-chloroisopropyl)ether		100	U
106-44-5	3- & 4-Methylphenol		200	U
621-64-7	n-Nitroso-di-n-propylamine		100	U
67-72-1	Hexachloroethane		100	U
98-95-3	Nitrobenzene		100	U
78-59-1	Isophorone		100	U
88-75-5	2-Nitrophenol		250	U
105-67-9	2,4-Dimethylphenol		500	U
65-85-0	Benzoic acid		750	U
111-91-1	bis(2-Chloroethoxy)methane		100	U
120-83-2	2,4-Dichlorophenol		250	U
120-82-1	1,2,4-Trichlorobenzene		100	U
91-20-3	Naphthalene		100	U
106-47-8	4-Chloroaniline		100	U
87-68-3	Hexachlorobutadiene		100	U
59-50-7	4-Chloro-3-methylphenol		250	U
91-57-6	2-Methylnaphthalene		100	U
77-47-4	Hexachlorocyclopentadiene		100	U
88-06-2	2,4,6-Trichlorophenol		100	U
95-95-4	2,4,5-Trichlorophenol		100	U
91-58-7	2-Chloronaphthalene		100	U
88-74-4	2-Nitroaniline		100	U
131-11-3	Dimethyl phthalate		100	U
208-96-8	Acenaphthylene		100	U
606-20-2	2,6-Dinitrotoluene		100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.



 Case No.: Z1230-23
 Client Name: Pare Corporation

 Method: 8270
 Lab Sample ID: BSS123013-2

Matrix: (soil/water/air) SOIL Lab File ID: B123103.D

Sample wt/vol: 20 (g/ml) G Date Sampled: 12/30/2013

 Sample wt/vol:
 20
 (g/ml)
 G
 Date Sampled:
 12/30/2013

 Level:
 (low/med)
 LOW
 Date Extracted:
 12/30/2013

% Moisture: \_\_\_\_0 \_\_\_ Date Analyzed: \_\_\_12/31/2013

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0 Injection Volume: 1.0 (uL)

Injection Volume: 1.0 (
Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		100	U
83-32-9	Acenaphthene		100	U
51-28-5	2,4-Dinitrophenol		250	U
100-02-7	4-Nitrophenol		250	U
132-64-9	Dibenzofuran		100	U
121-14-2	2,4-Dinitrotoluene		100	U
84-66-2	Diethyl phthalate		100	U
86-73-7	Fluorene		100	U
7005-72-3	4-Chlorophenyl phenyl ether		100	U
100-01-6	4-Nitroaniline		100	U
534-52-1	4,6-Dinitro-2-methylphenol		250	U
86-30-6	n-Nitrosodiphenylamine		100	U
101-55-3	4-Bromophenyl phenyl ether		100	U
118-74-1	Hexachlorobenzene		100	U
87-86-5	Pentachlorophenol		250	U
85-01-8	Phenanthrene		100	U
120-12-7	Anthracene		100	U
84-74-2	Di-n-butylphthalate		150	U
206-44-0	Fluoranthene		100	U
92-87-5	Benzidine		3000	U
129-00-0	Pyrene		100	U
85-68-7	Butyl benzyl phthalate		100	U
91-94-1	3,3'-Dichlorobenzidine		250	U
56-55-3	Benzo(a)anthracene		100	U
218-01-9	Chrysene		100	U
117-81-7	bis(2-Ethylhexyl)phthalate		150	U
117-84-0	Di-n-octyl phthalate		150	U
205-99-2	Benzo(b)fluoranthene		100	U
207-08-9	Benzo(k)fluoranthene		100	U
50-32-8	Benzo(a)pyrene		100	U
53-70-3	Dibenz(a,h)anthracene		100	U
193-39-5	Indeno(1,2,3-cd)pyrene		100	U
191-24-2	Benzo(g,h,i)perylene		100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.



## SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: New England Testing Laboratory Case No.: Z1230-23

Lab Code: RI010 Client Name: Pare Corporation

Level: (low/med) LOW

		S1	S2	S3	S4	S5	S6	TOT
	Sample ID	#	#	#	#	#	#	OUT
01	BSS123013-2	66	71	68	72	77	74	0
02	LSS123013-2	120	124	124	116	115	130	0
03	CONF-1	72	77	75	80	68	83	0
04	CONF-3	79	85	82	87	97	88	0
05	CONF-4	91	98	95	100	114	101	0
06	CONF-2	80	86	84	90	97	97	0
07	WASTE	82	86	99	94	117	87	0

QC	L	IM	ΙT	S

S1	=	2-Fluorophenol	(27-130)
S2	=	Phenol-d6	(30-130)
S3	=	Nitrobenzene-d5	(35-130)
S4	=	2-Fluorobiphenyl	(36-130)
S5	=	2,4,6-Tribromophenol	(43-130)
S6	=	Terphenyl-d14	(30-130)

<sup>#</sup> Column to be used to flag recovery values

<sup>\*</sup> Values outside of contract required QC limits

D Surrogate diluted out



## Semivolatile Soil Laboratory Control Spike

Date Extracted: 12/30/2013 Date Analyzed: 12/31/2013

	Amount Spiked		-	Lower Recovery	
	ug/Kg	ug/Kg	%	Limit	Limit
n-Nitrosodimethylamine	2500	1680	67	40	130
Phenol	2500	1845	74	40	130
Aniline	2500	1181	47	40	130
bis(2-Chloroethyl)ether	2500	1834	73	40	130
2-Chlorophenol	2500	1928	77	40	130
1,3-Dichlorobenzene	2500	1733	69	40	130
1,4-Dichlorobenzene	2500	1778	71	40	130
1,2-Dichlorobenzene	2500	1791	72	40	130
2-Methylphenol	2500	1902	76	40	130
3- & 4-Methylphenol	2500	1994	80	40	130
n-Nitroso-di-n-propylamine	2500	1897	76	40	130
Hexachloroethane	2500	1750	70	40	130
Nitrobenzene	2500	1778	71	40	130
Isophorone	2500	2040	82	40	130
2-Nitrophenol	2500	2039	82	40	130
2,4-Dimethylphenol	2500	1951	78	40	130
bis(2-Chloroethoxy)methane	2500	1965	79	40	130
2,4-Dichlorophenol	2500	2083	83	40	130
1,2,4-Trichlorobenzene	2500	1853	74	40	130
Naphthalene	2500	1690	68	40	130
Hexachlorobutadiene	2500	1886	75	40	130
4-Chloro-3-methylphenol	2500	2151	86	40	130
2-Methylnaphthalene	2500	1827	73	40	130
2,4,6-Trichlorophenol	2500	2168	87	40	130
2,4,5-Trichlorophenol	2500	2173	87	40	130
2-Chloronaphthalene	2500	1828	73	40	130
2-Nitroaniline	2500	2165	87	40	130
Dimethyl phthalate	2500	1904	76	40	130
Acenaphthylene	2500	1807	72	40	130
2,6-Dinitrotoluene	2500	2191	88	40	130
Acenaphthene	2500	1684	67	40	130
4-Nitrophenol	2500	2151	86	40	130
Dibenzofuran	2500	1836	73	40	130
2,4-Dinitrotoluene	2500	2099	84	40	130
Diethyl phthalate	2500	1867	75	40	130
Fluorene	2500	1693	68	40	130



## Semivolatile Soil Laboratory Control Spike

Date Extracted: 12/30/2013 Date Analyzed: 12/31/2013

	Amount Spiked	-	•	Lower Recovery	
	ug/Kg	ug/Kg	%	Limit	Limit
4-Chlorophenyl phenyl ether	2500	1815	73	40	130
n-Nitrosodiphenylamine	2500	2263	91	40	130
4-Bromophenyl phenyl ether	2500	1924	77	40	130
Hexachlorobenzene	2500	1914	77	40	130
Pentachlorophenol	2500	2914	117	40	130
Phenanthrene	2500	1703	68	40	130
Anthracene	2500	1754	70	40	130
Di-n-butylphthalate	2500	2036	81	40	130
Fluoranthene	2500	1834	73	40	130
Pyrene	2500	1839	74	40	130
Butyl benzyl phthalate	2500	2287	91	40	130
Benzo(a)anthracene	2500	1676	67	40	130
Chrysene	2500	1816	73	40	130
bis(2-Ethylhexyl)phthalate	2500	2260	90	40	130
Di-n-octyl phthalate	2500	2384	95	40	130
Benzo(b)fluoranthene	2500	2208	88	40	130
Benzo(k)fluoranthene	2500	2066	83	40	130
Benzo(a)pyrene	2500	2133	85	40	130
Indeno(1,2,3-cd)pyrene	2500	2237	89	40	130
Dibenz(a,h)anthracene	2500	2345	94	40	130
Benzo(g,h,i)perylene	2500	2078	83	40	130



## **RESULTS: VOLATILE ORGANIC COMPOUNDS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-1 Matrix: (soil/water) SOIL Lab File ID: C123048.D Sample wt/vol: 20.4 (g/ml) G Date Sampled: 12/30/2013 % Moisture 10.65 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		28	U
74-83-9	Bromomethane		28	U
75-00-3	Chloroethane		28	U
67-64-1	Acetone		140	U
75-35-4	1,1-Dichloroethene		28	U
75-15-0	Carbon Disulfide		28	U
75-09-2	Methylene Chloride		28	U
1634-04-4	tert-Butyl methyl ether		28	U
156-60-5	trans-1,2 Dichloroethene		28	U
75-34-3	1,1-Dichloroethane		28	U
78-93-3	2-Butanone		140	U
594-20-7	2,2-Dichloropropane		28	U
156-59-2	cis-1,2-Dichloroethene		28	U
67-66-3	Chloroform		28	U
74-97-5	Bromochloromethane		28	U
71-55-6	1,1,1-Trichloroethane		28	U
563-58-6	1,1-Dichloropropene		28	U
56-23-5	Carbon Tetrachloride		28	U
71-43-2	Benzene		28	U
107-06-2	1,2-Dichloroethane		28	U
79-01-6	Trichloroethene		28	U
78-87-5	1,2-Dichloropropane		28	U
75-27-4	Bromodichloromethane		28	U
74-95-3	Dibromomethane		28	U
108-10-1	4-Methyl-2-pentanone		140	U
106-93-4	Ethylene Dibromide		28	U
10061-01-5	cis-1,3-Dichloropropene		28	U
108-88-3	Toluene		28	U
10061-02-6	Trans-1,3-Dichloropropene		28	U
79-00-5	1,1,2-Trichloroethane		28	U
591-78-6	2-Hexanone		140	U
127-18-4	Tetrachloroethene		28	U
124-48-1	Chlorodibromomethane		28	U
108-90-7	Chlorobenzene		28	U
630-20-6	1,1,1,2-Tetrachloroethane		28	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-1 Matrix: (soil/water) SOIL Lab File ID: C123048.D Sample wt/vol: 20.4 (g/ml) G Date Sampled: 12/30/2013 % Moisture 10.65 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		28	U
1330-20-7	m & p-Xylene		55	U
95-47-6	o-Xylene		28	U
100-42-5	Styrene		28	U
75-25-2	Bromoform		28	U
98-82-8	Isopropylbenzene		28	U
79-34-5	1,1,2,2-Tetrachloroethane		28	U
108-86-1	Bromobenzene		28	U
96-18-4	1,2,3-Trichloropropane		28	U
95-49-8	2-Chlorotoluene		28	U
103-65-1	n-Propylbenzene		28	U
108-67-8	1,3,5-Trimethylbenzene		28	U
106-43-4	4-Chlorotoluene		28	U
98-06-6	tert-Butylbenzene		28	U
95-63-6	1,2,4-Trimethylbenzene		28	U
135-98-8	sec-Butylbenzene		28	U
99-87-6	p-Isopropyltoluene		28	U
75-87-3	Chloromethane		28	U
75-65-0	tert butyl alcohol		28	U
541-73-1	1,3-Dichlorobenzene		28	U
109-99-9	Tetrahydrofuran		28	U
106-46-7	1,4-Dichlorobenzene		28	U
60-29-7	Diethyl Ether		28	U
104-51-8	n-Butylbenzene		28	U
95-50-1	1,2-Dichlorobenzene		28	U
96-12-8	1,2-Dibromo-3-chloropropane		28	U
120-82-1	1,2,4-Trichlorobenzene		28	U
87-68-3	Hexachlorobutadiene		28	U
91-20-3	Naphthalene		28	U
87-61-6	1,2,3-Trichlorobenzene		28	U
994-05-8	Tert-amyl Methyl Ether		28	U
75-71-8	Dichlorodifluoromethane		28	U
142-28-9	1,3-Dichloropropane		28	U
75-69-4	Trichlorofluoromethane		28	U
637-92-3	Ethyl Tert-butyl ether		28	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.



Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-1 Matrix: (soil/water) SOIL Lab File ID: C123048.D Sample wt/vol: 20.4 (g/ml) G Date Sampled: 12/30/2013 % Moisture 10.65 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		28	U
123-91-1	1,4-Dioxane		14000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-2 Matrix: (soil/water) SOIL Lab File ID: C123049.D Sample wt/vol: 18.7 (g/ml) G Date Sampled: 12/30/2013 % Moisture 8.51 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		29	U
74-83-9	Bromomethane		29	U
75-00-3	Chloroethane		29	U
67-64-1	Acetone		150	U
75-35-4	1,1-Dichloroethene		29	U
75-15-0	Carbon Disulfide		29	U
75-09-2	Methylene Chloride		29	U
1634-04-4	tert-Butyl methyl ether		29	U
156-60-5	trans-1,2 Dichloroethene		29	U
75-34-3	1,1-Dichloroethane		29	U
78-93-3	2-Butanone		150	U
594-20-7	2,2-Dichloropropane		29	U
156-59-2	cis-1,2-Dichloroethene		29	U
67-66-3	Chloroform		29	U
74-97-5	Bromochloromethane		29	U
71-55-6	1,1,1-Trichloroethane		29	U
563-58-6	1,1-Dichloropropene		29	U
56-23-5	Carbon Tetrachloride		29	U
71-43-2	Benzene		29	U
107-06-2	1,2-Dichloroethane		29	U
79-01-6	Trichloroethene		29	U
78-87-5	1,2-Dichloropropane		29	U
75-27-4	Bromodichloromethane		29	U
74-95-3	Dibromomethane		29	U
108-10-1	4-Methyl-2-pentanone		150	U
106-93-4	Ethylene Dibromide		29	U
10061-01-5	cis-1,3-Dichloropropene		29	U
108-88-3	Toluene		29	U
10061-02-6	Trans-1,3-Dichloropropene		29	U
79-00-5	1,1,2-Trichloroethane		29	U
591-78-6	2-Hexanone		150	U
127-18-4	Tetrachloroethene		29	U
124-48-1	Chlorodibromomethane		29	U
108-90-7	Chlorobenzene		29	U
630-20-6	1,1,1,2-Tetrachloroethane		29	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-2 Matrix: (soil/water) SOIL Lab File ID: C123049.D Sample wt/vol: 18.7 (g/ml) G Date Sampled: 12/30/2013 % Moisture 8.51 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		29	U
1330-20-7	m & p-Xylene		59	U
95-47-6	o-Xylene		29	U
100-42-5	Styrene		29	U
75-25-2	Bromoform		29	U
98-82-8	Isopropylbenzene		29	U
79-34-5	1,1,2,2-Tetrachloroethane		29	U
108-86-1	Bromobenzene		29	U
96-18-4	1,2,3-Trichloropropane		29	U
95-49-8	2-Chlorotoluene		29	U
103-65-1	n-Propylbenzene		29	U
108-67-8	1,3,5-Trimethylbenzene		29	U
106-43-4	4-Chlorotoluene		29	U
98-06-6	tert-Butylbenzene		29	U
95-63-6	1,2,4-Trimethylbenzene		29	U
135-98-8	sec-Butylbenzene		29	U
99-87-6	p-Isopropyltoluene		29	U
75-87-3	Chloromethane		29	U
75-65-0	tert butyl alcohol		29	U
541-73-1	1,3-Dichlorobenzene		29	U
109-99-9	Tetrahydrofuran		29	U
106-46-7	1,4-Dichlorobenzene		29	U
60-29-7	Diethyl Ether		29	U
104-51-8	n-Butylbenzene		29	U
95-50-1	1,2-Dichlorobenzene		29	U
96-12-8	1,2-Dibromo-3-chloropropane		29	U
120-82-1	1,2,4-Trichlorobenzene		29	U
87-68-3	Hexachlorobutadiene		29	U
91-20-3	Naphthalene		29	U
87-61-6	1,2,3-Trichlorobenzene		29	U
994-05-8	Tert-amyl Methyl Ether		29	U
75-71-8	Dichlorodifluoromethane		29	U
142-28-9	1,3-Dichloropropane		29	U
75-69-4	Trichlorofluoromethane		29	U
637-92-3	Ethyl Tert-butyl ether		29	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank



Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-2 Matrix: (soil/water) SOIL Lab File ID: C123049.D Sample wt/vol: 18.7 (g/ml) G Date Sampled: 12/30/2013 % Moisture 8.51 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		29	U
123-91-1	1,4-Dioxane		15000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-3 Matrix: (soil/water) SOIL Lab File ID: C123050.D Sample wt/vol: 16.7 (g/ml) G Date Sampled: 12/30/2013 % Moisture 4.14 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		31	U
74-83-9	Bromomethane		31	U
75-00-3	Chloroethane		31	U
67-64-1	Acetone		160	U
75-35-4	1,1-Dichloroethene		31	U
75-15-0	Carbon Disulfide		31	U
75-09-2	Methylene Chloride		31	U
1634-04-4	tert-Butyl methyl ether		31	U
156-60-5	trans-1,2 Dichloroethene		31	U
75-34-3	1,1-Dichloroethane		31	U
78-93-3	2-Butanone		160	U
594-20-7	2,2-Dichloropropane		31	U
156-59-2	cis-1,2-Dichloroethene		31	U
67-66-3	Chloroform		31	U
74-97-5	Bromochloromethane		31	U
71-55-6	1,1,1-Trichloroethane		31	U
563-58-6	1,1-Dichloropropene		31	U
56-23-5	Carbon Tetrachloride		31	U
71-43-2	Benzene		31	U
107-06-2	1,2-Dichloroethane		31	U
79-01-6	Trichloroethene		31	U
78-87-5	1,2-Dichloropropane		31	U
75-27-4	Bromodichloromethane		31	U
74-95-3	Dibromomethane		31	U
108-10-1	4-Methyl-2-pentanone		160	U
106-93-4	Ethylene Dibromide		31	U
10061-01-5	cis-1,3-Dichloropropene		31	U
108-88-3	Toluene		31	U
10061-02-6	Trans-1,3-Dichloropropene		31	U
79-00-5	1,1,2-Trichloroethane		31	U
591-78-6	2-Hexanone		160	U
127-18-4	Tetrachloroethene		31	U
124-48-1	Chlorodibromomethane		31	U
108-90-7	Chlorobenzene		31	U
630-20-6	1,1,1,2-Tetrachloroethane		31	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-3 Matrix: (soil/water) SOIL Lab File ID: C123050.D Sample wt/vol: 16.7 (g/ml) G Date Sampled: 12/30/2013 % Moisture 4.14 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		31	U
1330-20-7	m & p-Xylene		62	U
95-47-6	o-Xylene		31	U
100-42-5	Styrene		31	U
75-25-2	Bromoform		31	U
98-82-8	Isopropylbenzene		31	U
79-34-5	1,1,2,2-Tetrachloroethane		31	U
108-86-1	Bromobenzene		31	U
96-18-4	1,2,3-Trichloropropane		31	U
95-49-8	2-Chlorotoluene		31	U
103-65-1	n-Propylbenzene		31	U
108-67-8	1,3,5-Trimethylbenzene		31	U
106-43-4	4-Chlorotoluene		31	U
98-06-6	tert-Butylbenzene		31	U
95-63-6	1,2,4-Trimethylbenzene		31	U
135-98-8	sec-Butylbenzene		31	U
99-87-6	p-Isopropyltoluene		31	U
75-87-3	Chloromethane		31	U
75-65-0	tert butyl alcohol		31	U
541-73-1	1,3-Dichlorobenzene		31	U
109-99-9	Tetrahydrofuran		31	U
106-46-7	1,4-Dichlorobenzene		31	U
60-29-7	Diethyl Ether		31	U
104-51-8	n-Butylbenzene		31	U
95-50-1	1,2-Dichlorobenzene		31	U
96-12-8	1,2-Dibromo-3-chloropropane		31	U
120-82-1	1,2,4-Trichlorobenzene		31	U
87-68-3	Hexachlorobutadiene		31	U
91-20-3	Naphthalene		31	U
87-61-6	1,2,3-Trichlorobenzene		31	U
994-05-8	Tert-amyl Methyl Ether		31	U
75-71-8	Dichlorodifluoromethane		31	U
142-28-9	1,3-Dichloropropane		31	U
75-69-4	Trichlorofluoromethane		31	U
637-92-3	Ethyl Tert-butyl ether		31	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank



Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-3 Matrix: (soil/water) SOIL Lab File ID: C123050.D Sample wt/vol: 16.7 (g/ml) G Date Sampled: 12/30/2013 % Moisture 4.14 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		31	U
123-91-1	1,4-Dioxane		16000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-4 Matrix: (soil/water) SOIL Lab File ID: C123051.D Sample wt/vol: 19.2 (g/ml) G Date Sampled: 12/30/2013 % Moisture 8.22 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		28	U
74-83-9	Bromomethane		28	U
75-00-3	Chloroethane		28	U
67-64-1	Acetone		140	U
75-35-4	1,1-Dichloroethene		28	U
75-15-0	Carbon Disulfide		28	U
75-09-2	Methylene Chloride		28	U
1634-04-4	tert-Butyl methyl ether		28	U
156-60-5	trans-1,2 Dichloroethene		28	U
75-34-3	1,1-Dichloroethane		28	U
78-93-3	2-Butanone		140	U
594-20-7	2,2-Dichloropropane		28	U
156-59-2	cis-1,2-Dichloroethene		28	U
67-66-3	Chloroform		28	U
74-97-5	Bromochloromethane		28	U
71-55-6	1,1,1-Trichloroethane		28	U
563-58-6	1,1-Dichloropropene		28	U
56-23-5	Carbon Tetrachloride		28	U
71-43-2	Benzene		28	U
107-06-2	1,2-Dichloroethane		28	U
79-01-6	Trichloroethene		28	U
78-87-5	1,2-Dichloropropane		28	U
75-27-4	Bromodichloromethane		28	U
74-95-3	Dibromomethane		28	U
108-10-1	4-Methyl-2-pentanone		140	U
106-93-4	Ethylene Dibromide		28	U
10061-01-5	cis-1,3-Dichloropropene		28	U
108-88-3	Toluene		28	U
10061-02-6	Trans-1,3-Dichloropropene		28	U
79-00-5	1,1,2-Trichloroethane		28	U
591-78-6	2-Hexanone		140	U
127-18-4	Tetrachloroethene		28	U
124-48-1	Chlorodibromomethane		28	U
108-90-7	Chlorobenzene		28	U
630-20-6	1,1,1,2-Tetrachloroethane		28	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-4 Matrix: (soil/water) SOIL Lab File ID: C123051.D Sample wt/vol: 19.2 (g/ml) G Date Sampled: 12/30/2013 % Moisture 8.22 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		28	U
1330-20-7	m & p-Xylene		57	U
95-47-6	o-Xylene		28	U
100-42-5	Styrene		28	U
75-25-2	Bromoform		28	U
98-82-8	Isopropylbenzene		28	U
79-34-5	1,1,2,2-Tetrachloroethane		28	U
108-86-1	Bromobenzene		28	U
96-18-4	1,2,3-Trichloropropane		28	U
95-49-8	2-Chlorotoluene		28	U
103-65-1	n-Propylbenzene		28	U
108-67-8	1,3,5-Trimethylbenzene		28	U
106-43-4	4-Chlorotoluene		28	U
98-06-6	tert-Butylbenzene		28	U
95-63-6	1,2,4-Trimethylbenzene		28	U
135-98-8	sec-Butylbenzene		28	U
99-87-6	p-Isopropyltoluene		28	U
75-87-3	Chloromethane		28	U
75-65-0	tert butyl alcohol		28	U
541-73-1	1,3-Dichlorobenzene		28	U
109-99-9	Tetrahydrofuran		28	U
106-46-7	1,4-Dichlorobenzene		28	U
60-29-7	Diethyl Ether		28	U
104-51-8	n-Butylbenzene		28	U
95-50-1	1,2-Dichlorobenzene		28	U
96-12-8	1,2-Dibromo-3-chloropropane		28	U
120-82-1	1,2,4-Trichlorobenzene		28	U
87-68-3	Hexachlorobutadiene		28	U
91-20-3	Naphthalene		28	U
87-61-6	1,2,3-Trichlorobenzene		28	U
994-05-8	Tert-amyl Methyl Ether		28	U
75-71-8	Dichlorodifluoromethane		28	U
142-28-9	1,3-Dichloropropane		28	U
75-69-4	Trichlorofluoromethane		28	U
637-92-3	Ethyl Tert-butyl ether		28	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank



Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: CONF-4 Matrix: (soil/water) SOIL Lab File ID: C123051.D Sample wt/vol: 19.2 (g/ml) G Date Sampled: 12/30/2013 % Moisture 8.22 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		28	U
123-91-1	1,4-Dioxane		14000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: WASTE Matrix: (soil/water) SOIL Lab File ID: C123052.D Sample wt/vol: 15.1 (g/ml) G Date Sampled: 12/30/2013 % Moisture 39.73 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		55	U
74-83-9	Bromomethane		55	U
75-00-3	Chloroethane		55	U
67-64-1	Acetone		280	U
75-35-4	1,1-Dichloroethene		55	U
75-15-0	Carbon Disulfide		55	U
75-09-2	Methylene Chloride		55	U
1634-04-4	tert-Butyl methyl ether		55	U
156-60-5	trans-1,2 Dichloroethene		55	U
75-34-3	1,1-Dichloroethane		55	U
78-93-3	2-Butanone		280	U
594-20-7	2,2-Dichloropropane		55	U
156-59-2	cis-1,2-Dichloroethene		55	U
67-66-3	Chloroform		55	U
74-97-5	Bromochloromethane		55	U
71-55-6	1,1,1-Trichloroethane		55	U
563-58-6	1,1-Dichloropropene		55	U
56-23-5	Carbon Tetrachloride		55	U
71-43-2	Benzene		55	U
107-06-2	1,2-Dichloroethane		55	U
79-01-6	Trichloroethene		55	U
78-87-5	1,2-Dichloropropane		55	U
75-27-4	Bromodichloromethane		55	U
74-95-3	Dibromomethane		55	U
108-10-1	4-Methyl-2-pentanone		280	U
106-93-4	Ethylene Dibromide		55	U
10061-01-5	cis-1,3-Dichloropropene		55	U
108-88-3	Toluene		55	U
10061-02-6	Trans-1,3-Dichloropropene		55	U
79-00-5	1,1,2-Trichloroethane		55	U
591-78-6	2-Hexanone		280	U
127-18-4	Tetrachloroethene		55	U
124-48-1	Chlorodibromomethane		55	U
108-90-7	Chlorobenzene		55	U
630-20-6	1,1,1,2-Tetrachloroethane		55	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: WASTE Matrix: (soil/water) SOIL Lab File ID: C123052.D Sample wt/vol: 15.1 (g/ml) G Date Sampled: 12/30/2013 % Moisture 39.73 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q		
100-41-4	Ethylbenzene		55	U		
1330-20-7	m & p-Xylene	7				
95-47-6	o-Xylene		55	U		
100-42-5	Styrene		55	U		
75-25-2	Bromoform		55	U		
98-82-8	Isopropylbenzene					
79-34-5	1,1,2,2-Tetrachloroethane					
108-86-1	Bromobenzene					
96-18-4	1,2,3-Trichloropropane					
95-49-8	2-Chlorotoluene	• •				
103-65-1	n-Propylbenzene	ppylbenzene 55				
108-67-8	1,3,5-Trimethylbenzene		190			
106-43-4	4-Chlorotoluene					
98-06-6	tert-Butylbenzene		55	U		
95-63-6	1,2,4-Trimethylbenzene		330			
135-98-8	sec-Butylbenzene					
99-87-6	p-Isopropyltoluene		250			
75-87-3	Chloromethane		55	U		
75-65-0	tert butyl alcohol		55	U		
541-73-1	1,3-Dichlorobenzene		55	U		
109-99-9	Tetrahydrofuran		55	U		
106-46-7	1,4-Dichlorobenzene		55	U		
60-29-7	Diethyl Ether		55	U		
104-51-8	n-Butylbenzene		55	U		
95-50-1	1,2-Dichlorobenzene		55	U		
96-12-8	1,2-Dibromo-3-chloropropane		55	U		
120-82-1	1,2,4-Trichlorobenzene		55	U		
87-68-3	Hexachlorobutadiene		55	U		
91-20-3	Naphthalene		480			
87-61-6	1,2,3-Trichlorobenzene		55	U		
994-05-8	Tert-amyl Methyl Ether		55	U		
75-71-8	Dichlorodifluoromethane		55	U		
142-28-9	1,3-Dichloropropane		55	U		
75-69-4	Trichlorofluoromethane		55	U		
637-92-3	Ethyl Tert-butyl ether		55	U		

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.



Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: WASTE Matrix: (soil/water) SOIL Lab File ID: C123052.D Sample wt/vol: 15.1 (g/ml) G Date Sampled: 12/30/2013 % Moisture 39.73 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		55	U
123-91-1	1,4-Dioxane		28000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: VBLK123013-2 Matrix: (soil/water) SOIL Lab File ID: C123039.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 12/30/2013 % Moisture 0 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q	
75-01-4	Vinyl Chloride		U		
74-83-9	Bromomethane		U		
75-00-3	Chloroethane		50	U	
67-64-1	Acetone		250	U	
75-35-4	1,1-Dichloroethene		50	U	
75-15-0	Carbon Disulfide		U		
75-09-2	Methylene Chloride		50	U	
1634-04-4	tert-Butyl methyl ether		50	U	
156-60-5	trans-1,2 Dichloroethene		U		
75-34-3	1,1-Dichloroethane		U		
78-93-3	2-Butanone		U		
594-20-7	2,2-Dichloropropane		50	U	
156-59-2	cis-1,2-Dichloroethene		50	U	
67-66-3	Chloroform		50		
74-97-5	Bromochloromethane		U		
71-55-6	1,1,1-Trichloroethane		50 50		
563-58-6	1,1-Dichloropropene		U		
56-23-5	Carbon Tetrachloride		U		
71-43-2	Benzene		50 50		
107-06-2	1,2-Dichloroethane		50	U	
79-01-6	Trichloroethene		50	U	
78-87-5	1,2-Dichloropropane		50	U	
75-27-4	Bromodichloromethane		50	U	
74-95-3	Dibromomethane		50	U	
108-10-1	4-Methyl-2-pentanone		250	U	
106-93-4	Ethylene Dibromide		50	U	
10061-01-5	cis-1,3-Dichloropropene		50	U	
108-88-3	Toluene		50	U	
10061-02-6	Trans-1,3-Dichloropropene		50	U	
79-00-5	1,1,2-Trichloroethane		50	U	
591-78-6	2-Hexanone		250	U	
127-18-4	Tetrachloroethene		50	U	
124-48-1	Chlorodibromomethane		50	U	
108-90-7	Chlorobenzene		50	U	
630-20-6	1,1,1,2-Tetrachloroethane		50	U	

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.



NETTLAB

Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: VBLK123013-2 Matrix: (soil/water) SOIL Lab File ID: C123039.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 12/30/2013 % Moisture 0 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q	
100-41-4	Ethylbenzene		50	U	
1330-20-7	m & p-Xylene	100			
95-47-6	o-Xylene		50	U	
100-42-5	Styrene		50	U	
75-25-2	Bromoform		50	U	
98-82-8	Isopropylbenzene		50	U	
79-34-5	1,1,2,2-Tetrachloroethane		50	U	
108-86-1	Bromobenzene		50	U	
96-18-4	1,2,3-Trichloropropane	nne 50			
95-49-8	2-Chlorotoluene		50	U	
103-65-1	n-Propylbenzene	50 50			
108-67-8	1,3,5-Trimethylbenzene		U		
106-43-4	4-Chlorotoluene		U		
98-06-6	tert-Butylbenzene		U		
95-63-6	1,2,4-Trimethylbenzene	ylbenzene 50			
135-98-8	sec-Butylbenzene	50			
99-87-6	p-Isopropyltoluene				
75-87-3	Chloromethane	50			
75-65-0	tert butyl alcohol		U		
541-73-1	1,3-Dichlorobenzene		50	U	
109-99-9	Tetrahydrofuran		50	U	
106-46-7	1,4-Dichlorobenzene		50	U	
60-29-7	Diethyl Ether		50	U	
104-51-8	n-Butylbenzene		50	U	
95-50-1	1,2-Dichlorobenzene		50	U	
96-12-8	1,2-Dibromo-3-chloropropane		50	U	
120-82-1	1,2,4-Trichlorobenzene		50	U	
87-68-3	Hexachlorobutadiene		50	U	
91-20-3	Naphthalene		50	U	
87-61-6	1,2,3-Trichlorobenzene		50	U	
994-05-8	Tert-amyl Methyl Ether		50	U	
75-71-8	Dichlorodifluoromethane		50	U	
142-28-9	1,3-Dichloropropane		50	U	
75-69-4	Trichlorofluoromethane		50	U	
637-92-3	Ethyl Tert-butyl ether		50	U	

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.



Client Name: PARE Case No.: Z1230-23 Method: 8260 Lab Sample ID: VBLK123013-2 Matrix: (soil/water) SOIL Lab File ID: C123039.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 12/30/2013 % Moisture 0 Date Analyzed: 12/31/2013 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		50	U
123-91-1	1,4-Dioxane		25000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

2B



### SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: NEW ENGLAND TESTING LAB Contract: 13062.09

Level: (low/med) MED

	EPA	SMC1	SMC2	SMC3	TOT
	SAMPLE NO.	#	#	#	OUT
01	VLCS123013-2	105	101	96	0
02	VBLK123013-2	96	96	92	0
03	CONF-1	98	96	92	0
04	CONF-2	91	96	92	0
05	CONF-3	93	94	93	0
06	CONF-4	90	96	90	0
07	WASTE	89	102	94	0

#### QC LIMITS

SMC1	=	4-Bromofluorobenzene	(70-130)
SMC2	=	Toluene-D8	(70-130)
SMC3	=	1,2-Dichloroethane-D4	(70-130)

# Column to be used to flag recovery values

New England Testing Laboratory, Inc.

page 1 of 1

FORM II VOA-2

<sup>\*</sup> Values outside of contract required QC limits

D System Monitoring Compound diluted out



## **Volatile Organics Laboratory Control Spike**

Date Analyzed: 12/30/2013 Sample ID: VLCS123013

	Spike	Spike	Recovery,	<b>Lower Control</b>	<b>Upper Control</b>
Compound	Added	Result	%	Limit, %	Limit, %
1,1-Dichloroethene	50.0	50.3	101	70	129
Benzene	50.0	52.9	106	73	129
Trichloroethene	50.0	57.8	116	77	122
Toluene	50.0	52.3	105	75	123
Chlorobenzene	50.0	52.0	104	73	125

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue

North Providence, RI 02904 1-888-863-8522

**CHAIN OF CUSTODY RECORD** 

PROJ. NO. PROJECT NAMELOCATION   3062,09 CB - BVP - CONTAMINATED SOIL			وهر			\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*	25/2	STINA,
PARE CORPORATION REPORTS MODUDELL @ PARECORP. COM INVOICETO: ACCOUNTING	4GDMOD4	O NO. H OF E CONTAINERS	mwmæ>4⊢->r	5	273	TAM JOHN	DI TONSO	A SOLID ON STATE OF S
DATE TIME O R . SAMPLE 1.D.	n		ш	12/2/2019	30	721		
12/20   11:00 X CONF-1	X	7	NON HEOM	× ×				
1 X CONF-Z	X	4		x x x				
X CONT-3	乂	7		X X				
h. 1000 x	X	7		× × ×				
J X X WASTE	×	2	<b>&gt;</b>	х х х	×	入 × X	×	
Sampled by: (Signature)  Date/Time Received by: (Signature)  Relinquished by: (Signature)  Date/Time Received by: (Signature)  Date/Time Received by: (Signature)	rigerator	Date/Time Date/Time Date/Time	2	Laboratory Remarks: c. Temp. received:		Special Instructions: List Specific Detection Limit Requirements:		PLEASE EXPEDITE TURNARAND TIME TO 48 MS
Relinquished by: (Signature)  Date/Time Received for Laboratory by: (Signature)	by: (Signature)	Date/Time	Time 13.55			Turnaround (Business Days).	siness Days	(579 BH)Z"
**Netlab Subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates	ARs, Perchlorate, Bron	nate, Bromide	, Sieve, Sal	nonella, Carbamate	Š			

Netlab Subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates

- QULL 12-30-13 16:05 (B



## REPORT OF ANALYTICAL RESULTS

## **NETLAB Case Number Z1230-23A**

Prepared for:

Attn: M. Dowdell Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: January 6, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on December 30, 2013. Additional analyses were added per client request on January 3,2014. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is Z1230-23A.

Custody records are included in this report.

**Site: CB-BVP-Contaminated Soil** 

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis Requested
Conf-1	12/30/13	Soil	Table II
Conf-2	12/30/13	Soil	Table II
Conf-3	12/30/13	Soil	Table II
Conf-4	12/30/13	Soil	Table II

#### TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Total Metals		
Lead	3050B	6010C

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.



#### **CASE NARRATIVE:**

#### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

#### **Metals**

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.



The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.



Case Number: Z1230-23

Sample ID: Conf-1

Date collected: 12/27/13

Matrix SOIL

Solids, % 89.35 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	57.0	0.37	mg/kg	1/6/14	1/6/14

ND indicates Not Detected.



Case Number: Z1230-23

Sample ID: Conf-2

Date collected: 12/27/13

Matrix SOIL

Solids, % 91.49 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	287	0.35	mg/kg	1/6/14	1/6/14

ND indicates Not Detected.



Case Number: Z1230-23

Sample ID: Conf-3

Date collected: 12/27/13

Matrix SOIL

Solids, % 95.86 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	7.47	0.34	mg/kg	1/6/14	1/6/14

ND indicates Not Detected.



Case Number: Z1230-23

Sample ID: Conf-4

Date collected: 12/27/13

Matrix SOIL

Solids, % 91.78 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	111	0.36	mg/kg	1/6/14	1/6/14

ND indicates Not Detected.



Sample ID: Preparation Blank

Matrix SOIL

Solids, % 100 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	ND	0.33	mg/kg	1/6/14	1/6/14

ND indicates Not Detected.



## LABORATORY CONTROL SAMPLE RECOVERY

				Internal				
Parameter	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	Date Analyzed	
Lead	66.7	65.3	mg/kg	98	80	114	1/6/14	

New England Testing Laboratory, Inc.

71250-23H

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue

North Providence, RI 02904 1-888-863-8522

CHAIN OF CUSTODY RECORD

TIME TO YOUNG Turnaround (Business Days) Z ( 48 675) TURNAROUND EXPEDITE PLEASE X List Specific Detection Limit Requirements: X Special Instructions: XXXXXX ر.' Laboratory Remarks: X X X  $\frac{x}{x}$ X X  $\frac{\times}{\times}$ Temp. received:  $\frac{\times}{\times}$ Ad. × Cooled 3 Non How 02:1 80/ 13821 82002 CONTAINERS 4 4 4 N ОНІШС X X X 乂 × 80-J 1/30 | 12:00 | PARE (Refrigerator) Received for Laboratory by: (Signature) Received by: (Signature) SOIL ALCOUNTING 3062,09 CB-BVP-CONTAMINATED M2/11:550 SAMPLE 1.D. Date/Time H- HNOO CONF-3 C-ANOU WASTE CONF PARA CORPORATION PROJECT NAMEA OCATION X **⊕** # # # × X × Reinquished by: (Signature) × 00**∑**• Sampled by: (Signature) 8: TIME REPORT TO: (12/21) PROJ. NO. DATE

"Netlab Subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamales T. 11 16:05 1.51

Page 11 of 11



## REPORT OF ANALYTICAL RESULTS

## **NETLAB Case Number A0106-23**

Prepared for:

Attn: M. Dowdell Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: January 8, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on January 6, 2013. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is Z1230-23

Custody records are included in this report.

**Site: CB-BVP-Contaminated Soil** 

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis Requested
CONF-5	1/6/14	Soil	Table II
CONF-6	1/6/14	Soil	Table II
CONF-7	1/6/14	Soil	Table II
CONF-8	1/6/14	Soil	Table II

TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Total Petroleum Hydrocarbons	3550C	8100M
Semi-volatile Organic Compounds	3550C	8270D
Volatile Organic Compounds	5035	8260B
Total Lead	3050B	6010C

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

#### **CASE NARRATIVE:**

#### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

#### Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

#### Total Petroleum Hydrocarbons

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

#### **Volatile Organic Compounds:**

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria. The compounds listed in Table 1 were screened by method 8260B utilizing ion reconstruction and NIST library search parameters. There were no detections of Table 1 compounds to an estimated detection limit of 100 ug/Kg.

#### Semi-volatile Compounds

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria. The compounds listed in Table 2 were screened by method 8270D utilizing ion reconstruction and NIST library search parameters. There were no detections of Table 2 compounds to an estimated detection limit of 500 ug/Kg.

#### Table 1

Acetaldehyde Nitroso-di-N-butylamine, N

Acetonitrile Nonane, nAcrolein Pentane, nAcrylonitrile Propyl benzene

Allyl Chloride Tetrafluoroethane, 1,1,1,2-

Bromo-2-chloroethane, 1- Tetrahydrofuran

Bromobenzene Trichloro-1,2,2-trifluoroethane, 1,1,2-

Butadiene, 1,3
Chloro-l,1-difluoroethane, 1
Chloro-1,3-butadiene, 2
Trichloropropene, 1,2,3
Trimethylbenzene, 1,2,3
Trimethylbenzene, 1,2,4-

Chlorodifluoromethane Vinyl Bromide

Cumene(isopropylbenzene) Acetone Cyanohydrin Cyclohexane Chlorobenzotrifluoride, 4-

Cyclohexene Chloropicrin Difluoroethane, 1,1-Dihydrosafrole Dimethylvinylchloride Epoxybutane, 1,2-Epichlorohydrin Triethylamine Ethyl Methacrylate Ethyleneimine Ethylene Oxide Methyl Isocyanate Hexane, N-Nitromethane Methacrylonitrile Propionaldehyde

Methyl Acrylate Propylene

Methyl Methacrylate

Methyl Styrene (Mixed Isomers)

Nitropropane, 2-

#### Table 2

Biphenyl, 1,1' Hexamethylene Diisocyanate, 1,6-

Bis(2-chloro-1-methylethyl) ether Dicyclopentadiene

Chloromethyl Methyl Ether

New England Testing Laboratory, Inc.

Sample: CONF-5		Analyst's Initials: BJ
Case No. A0106-23		·
Date Collected: 1/6/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	1/7/14	1/7/14
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	23
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	88	62-151

Sample: CONF-6		Analyst's Initials: BJ
Case No. A0106-23		
Date Collected: 1/6/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	1/7/14	1/7/14
Compound	Concentration,	Reporting Limit
_	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	22
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	70	62-151

ND = Not Detected \*Dry Weight Basis

Sample: CONF-7		Analyst's Initials: BJ
Case No. A0106-23		
Date Collected: 1/6/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	1/7/14	1/7/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	52	22
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	90	62-151

Sample: CONF-8		Analyst's Initials: BJ
Case No. A0106-23		
Date Collected: 1/6/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3550C	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	1/7/14	1/7/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	22
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	85	62-151

ND = Not Detected \*Dry Weight Basis



The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.



Case Number: A0106-23

Sample ID: CONF-5

Date collected: 1/6/14

Matrix SOIL

Solids, % 87.46 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	43.5	0.38	mg/kg	1/7/14	1/8/14

ND indicates Not Detected.



Case Number: A0106-23

Sample ID: CONF-6

Date collected: 1/6/14

Matrix SOIL

Solids, % 92.07 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	1.92	0.32	mg/kg	1/7/14	1/8/14

ND indicates Not Detected.



Case Number: A0106-23

Sample ID: CONF-7

Date collected: 1/6/14

Matrix SOIL

Solids, % 90.08 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	175	0.35	mg/kg	1/7/14	1/8/14

ND indicates Not Detected.



Case Number: A0106-23

Sample ID: CONF-8

Date collected: 1/6/14

Matrix SOIL

Solids, % 90.36 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	5.81	0.36	mg/kg	1/7/14	1/8/14

ND indicates Not Detected.



Sample ID: Preparation Blank

Matrix SOIL

Solids, % 100 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Lead	7439-92-1	3050B	6010C	ND	0.33	mg/kg	1/7/14	1/7/14

ND indicates Not Detected.



## LABORATORY CONTROL SAMPLE RECOVERY

				Internal				
Parameter	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	Date Analyzed	
Lead	66.7	63.7	mg/kg	95	80	114	1/7/14	

New England Testing Laboratory, Inc.



# **RESULTS: SEMIVOLATILE ORGANIC COMPOUNDS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

1B

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z0106-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: CONF-5

Matrix: (soil/water/air) SOIL Lab File ID: B010706.D

 Sample wt/vol:
 20.62
 (g/ml)
 G
 Date Sampled:
 1/6/2014

 Level:
 (low/med)
 LOW
 Date Extracted:
 1/7/2014

% Moisture: 12.54 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		170	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		280	U
105-67-9	2,4-Dimethylphenol		560	U
65-85-0	Benzoic acid		840	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		280	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		280	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		110	U
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

FORM I SV-1

# NELLAB

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0106-23 Client Name: Pare Corpoation

Method: 8270 Lab Sample ID: CONF-5

Matrix: (soil/water/air) SOIL Lab File ID: B010706.D

Sample wt/vol: 20.62 (g/ml) G Date Sampled: 1/6/2014

Level: (low/med) LOW Date Extracted: 1/7/2014

% Moisture: 12.54 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		280	U
100-02-7	4-Nitrophenol		280	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		280	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		280	U
85-01-8	Phenanthrene		110	U
120-12-7	Anthracene		110	U
84-74-2	Di-n-butylphthalate		170	U
206-44-0	Fluoranthene		110	U
92-87-5	Benzidine		3300	U
129-00-0	Pyrene		110	U
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		280	U
56-55-3	Benzo(a)anthracene		110	U
218-01-9	Chrysene		110	U
117-81-7	bis(2-Ethylhexyl)phthalate		170	U
117-84-0	Di-n-octyl phthalate		170	U
205-99-2	Benzo(b)fluoranthene		110	U
207-08-9	Benzo(k)fluoranthene		110	U
50-32-8	Benzo(a)pyrene		110	U
53-70-3	Dibenz(a,h)anthracene		110	U
193-39-5	Indeno(1,2,3-cd)pyrene		110	U
191-24-2	Benzo(g,h,i)perylene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z0106-23 Client Name: Pare Corpoation

Method: 8270 Lab Sample ID: CONF-6

Matrix: (soil/water/air) SOIL Lab File ID: B010707.D

 Sample wt/vol:
 20.142
 (g/ml)
 G
 Date Sampled:
 1/6/2014

 Level:
 (low/med)
 LOW
 Date Extracted:
 1/7/2014

% Moisture: 7.93 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		160	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		270	U
105-67-9	2,4-Dimethylphenol		540	U
65-85-0	Benzoic acid		810	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		270	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		270	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		110	U
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

FORM I SV-1

# NELLLAB

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0106-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: CONF-6

Matrix: (soil/water/air) SOIL Lab File ID: B010707.D

 Sample wt/vol:
 20.142
 (g/ml)
 G
 Date Sampled:
 1/6/2014

 Level:
 (low/med)
 LOW
 Date Extracted:
 1/7/2014

% Moisture: 7.93 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		270	U
100-02-7	4-Nitrophenol		270	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		270	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		270	U
85-01-8	Phenanthrene		110	U
120-12-7	Anthracene		110	U
84-74-2	Di-n-butylphthalate		160	U
206-44-0	Fluoranthene		110	U
92-87-5	Benzidine		3200	U
129-00-0	Pyrene		110	U
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		270	U
56-55-3	Benzo(a)anthracene		110	U
218-01-9	Chrysene		110	U
117-81-7	bis(2-Ethylhexyl)phthalate		160	U
117-84-0	Di-n-octyl phthalate		160	U
205-99-2	Benzo(b)fluoranthene		110	U
207-08-9	Benzo(k)fluoranthene		110	U
50-32-8	Benzo(a)pyrene		110	U
53-70-3	Dibenz(a,h)anthracene		110	U
193-39-5	Indeno(1,2,3-cd)pyrene		110	U
191-24-2	Benzo(g,h,i)perylene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z0106-23 Client Name: Pare Corpoation

Method: 8270 Lab Sample ID: CONF-7

Matrix: (soil/water/air) SOIL Lab File ID: B010708.D

Sample wt/vol: <u>20.244</u> (g/ml) <u>G</u> Date Sampled: <u>1/6/2014</u>

 Level: (low/med)
 LOW
 Date Extracted: 1/7/2014

 % Moisture:
 9.92
 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		160	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		270	U
105-67-9	2,4-Dimethylphenol		550	U
65-85-0	Benzoic acid		820	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		270	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		270	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		110	U
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

# NETCLAB

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0106-23 Client Name: Pare Corpoation

Method: 8270 Lab Sample ID: CONF-7

Matrix: (soil/water/air) SOIL Lab File ID: B010708.D

Sample wt/vol: 20.244 (g/ml) G Date Sampled: 1/6/2014

Level: (low/med) LOW Date Extracted: 1/7/2014

% Moisture: 9.92 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		270	U
100-02-7	4-Nitrophenol		270	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		270	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		270	U
85-01-8	Phenanthrene		170	
120-12-7	Anthracene		110	U
84-74-2	Di-n-butylphthalate		160	U
206-44-0	Fluoranthene		890	
92-87-5	Benzidine		3300	U
129-00-0	Pyrene		790	
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		270	U
56-55-3	Benzo(a)anthracene		440	
218-01-9	Chrysene		470	
117-81-7	bis(2-Ethylhexyl)phthalate		160	U
117-84-0	Di-n-octyl phthalate		160	U
205-99-2	Benzo(b)fluoranthene		710	
207-08-9	Benzo(k)fluoranthene		250	
50-32-8	Benzo(a)pyrene		500	
53-70-3	Dibenz(a,h)anthracene		110	U
193-39-5	Indeno(1,2,3-cd)pyrene		360	
191-24-2	Benzo(g,h,i)perylene		280	

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.

1B

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Case No.: Z0106-23 Client Name: Pare Corpoation

Method: 8270 Lab Sample ID: CONF-8

Matrix: (soil/water/air) SOIL Lab File ID: B010709.D

 Sample wt/vol:
 20.144
 (g/ml)
 G
 Date Sampled:
 1/6/2014

 Level:
 (low/med)
 LOW
 Date Extracted:
 1/7/2014

% Moisture: 9.64 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		170	U
110-86-1	Pyridine		110	U
108-95-2	Phenol		110	U
62-53-3	Aniline		110	U
111-44-4	bis(2-Chloroethyl)ether		110	U
95-57-8	2-Chlorophenol		110	U
541-73-1	1,3-Dichlorobenzene		110	U
106-46-7	1,4-Dichlorobenzene		110	U
95-50-1	1,2-Dichlorobenzene		110	U
95-48-7	2-Methylphenol		110	U
108-60-1	bis(2-chloroisopropyl)ether		110	U
106-44-5	3- & 4-Methylphenol		220	U
621-64-7	n-Nitroso-di-n-propylamine		110	U
67-72-1	Hexachloroethane		110	U
98-95-3	Nitrobenzene		110	U
78-59-1	Isophorone		110	U
88-75-5	2-Nitrophenol		280	U
105-67-9	2,4-Dimethylphenol		550	U
65-85-0	Benzoic acid		830	U
111-91-1	bis(2-Chloroethoxy)methane		110	U
120-83-2	2,4-Dichlorophenol		280	U
120-82-1	1,2,4-Trichlorobenzene		110	U
91-20-3	Naphthalene		110	U
106-47-8	4-Chloroaniline		110	U
87-68-3	Hexachlorobutadiene		110	U
59-50-7	4-Chloro-3-methylphenol		280	U
91-57-6	2-Methylnaphthalene		110	U
77-47-4	Hexachlorocyclopentadiene		110	U
88-06-2	2,4,6-Trichlorophenol		110	U
95-95-4	2,4,5-Trichlorophenol		110	U
91-58-7	2-Chloronaphthalene		110	U
88-74-4	2-Nitroaniline		110	U
131-11-3	Dimethyl phthalate		110	U
208-96-8	Acenaphthylene		110	U
606-20-2	2,6-Dinitrotoluene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.





Case No.: Z0106-23 Client Name: Pare Corporation

Method: 8270 Lab Sample ID: CONF-8

Matrix: (soil/water/air) SOIL Lab File ID: B010709.D

Sample wt/vol: 20.144 (g/ml) G Date Sampled: 1/6/2014

Level: (low/med) LOW Date Extracted: 1/7/2014

% Moisture: 9.64 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		110	U
83-32-9	Acenaphthene		110	U
51-28-5	2,4-Dinitrophenol		280	U
100-02-7	4-Nitrophenol		280	U
132-64-9	Dibenzofuran		110	U
121-14-2	2,4-Dinitrotoluene		110	U
84-66-2	Diethyl phthalate		110	U
86-73-7	Fluorene		110	U
7005-72-3	4-Chlorophenyl phenyl ether		110	U
100-01-6	4-Nitroaniline		110	U
534-52-1	4,6-Dinitro-2-methylphenol		280	U
86-30-6	n-Nitrosodiphenylamine		110	U
101-55-3	4-Bromophenyl phenyl ether		110	U
118-74-1	Hexachlorobenzene		110	U
87-86-5	Pentachlorophenol		280	U
85-01-8	Phenanthrene		110	U
120-12-7	Anthracene		110	U
84-74-2	Di-n-butylphthalate		170	U
206-44-0	Fluoranthene		110	U
92-87-5	Benzidine		3300	U
129-00-0	Pyrene		110	U
85-68-7	Butyl benzyl phthalate		110	U
91-94-1	3,3'-Dichlorobenzidine		280	U
56-55-3	Benzo(a)anthracene		110	U
218-01-9	Chrysene		110	U
117-81-7	bis(2-Ethylhexyl)phthalate		170	U
117-84-0	Di-n-octyl phthalate		170	U
205-99-2	Benzo(b)fluoranthene		110	U
207-08-9	Benzo(k)fluoranthene		110	U
50-32-8	Benzo(a)pyrene		110	U
53-70-3	Dibenz(a,h)anthracene		110	U
193-39-5	Indeno(1,2,3-cd)pyrene		110	U
191-24-2	Benzo(g,h,i)perylene		110	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.



 Method:
 8270
 Lab Sample ID:
 BSS010714

 Matrix:
 (soil/water/air)
 SOIL
 Lab File ID:
 B010703.D

 Sample wt/vol:
 20
 (g/ml)
 G
 Date Sampled:
 1/6/2014

Client Name: Pare Corpoation

Level: (low/med) LOW Date Extracted: 1/7/2014

% Moisture: 0 Date Analyzed: 1/7/2014

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

Case No.: Z0106-23

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		150	U
110-86-1	Pyridine		100	U
108-95-2	Phenol		100	U
62-53-3	Aniline		100	U
111-44-4	bis(2-Chloroethyl)ether		100	U
95-57-8	2-Chlorophenol		100	U
541-73-1	1,3-Dichlorobenzene		100	U
106-46-7	1,4-Dichlorobenzene		100	U
95-50-1	1,2-Dichlorobenzene		100	U
95-48-7	2-Methylphenol		100	U
108-60-1	bis(2-chloroisopropyl)ether		100	U
106-44-5	3- & 4-Methylphenol		200	U
621-64-7	n-Nitroso-di-n-propylamine		100	U
67-72-1	Hexachloroethane		100	U
98-95-3	Nitrobenzene		100	U
78-59-1	Isophorone		100	U
88-75-5	2-Nitrophenol		250	U
105-67-9	2,4-Dimethylphenol		500	U
65-85-0	Benzoic acid		750	U
111-91-1	bis(2-Chloroethoxy)methane		100	U
120-83-2	2,4-Dichlorophenol		250	U
120-82-1	1,2,4-Trichlorobenzene		100	U
91-20-3	Naphthalene		100	U
106-47-8	4-Chloroaniline		100	U
87-68-3	Hexachlorobutadiene		100	U
59-50-7	4-Chloro-3-methylphenol		250	U
91-57-6	2-Methylnaphthalene		100	U
77-47-4	Hexachlorocyclopentadiene		100	U
88-06-2	2,4,6-Trichlorophenol		100	U
95-95-4	2,4,5-Trichlorophenol		100	U
91-58-7	2-Chloronaphthalene		100	U
88-74-4	2-Nitroaniline		100	U
131-11-3	Dimethyl phthalate		100	U
208-96-8	Acenaphthylene		100	U
606-20-2	2,6-Dinitrotoluene		100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.



 Method:
 8270
 Lab Sample ID:
 BSS010714

 Matrix:
 (soil/water/air)
 SOIL
 Lab File ID:
 B010703.D

 Sample wt/vol:
 20
 (g/ml)
 G
 Date Sampled:
 1/6/2014

Client Name: Pare Corpoation

Level: (low/med) LOW Date Extracted: 1/7/2014

Injection Volume: 1.0 (uL)

Analyst's Initials: JD

Case No.: Z0106-23

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
99-09-2	3-Nitroaniline		100	U
83-32-9	Acenaphthene		100	U
51-28-5	2,4-Dinitrophenol		250	U
100-02-7	4-Nitrophenol		250	U
132-64-9	Dibenzofuran		100	U
121-14-2	2,4-Dinitrotoluene		100	U
84-66-2	Diethyl phthalate		100	U
86-73-7	Fluorene		100	U
7005-72-3	4-Chlorophenyl phenyl ether		100	U
100-01-6	4-Nitroaniline		100	U
534-52-1	4,6-Dinitro-2-methylphenol		250	U
86-30-6	n-Nitrosodiphenylamine		100	U
101-55-3	4-Bromophenyl phenyl ether		100	U
118-74-1	Hexachlorobenzene		100	U
87-86-5	Pentachlorophenol		250	U
85-01-8	Phenanthrene		100	U
120-12-7	Anthracene		100	U
84-74-2	Di-n-butylphthalate		150	U
206-44-0	Fluoranthene		100	U
92-87-5	Benzidine		3000	U
129-00-0	Pyrene		100	U
85-68-7	Butyl benzyl phthalate		100	U
91-94-1	3,3'-Dichlorobenzidine		250	U
56-55-3	Benzo(a)anthracene		100	U
218-01-9	Chrysene		100	U
117-81-7	bis(2-Ethylhexyl)phthalate		150	U
117-84-0	Di-n-octyl phthalate		150	U
205-99-2	Benzo(b)fluoranthene		100	U
207-08-9	Benzo(k)fluoranthene		100	U
50-32-8	Benzo(a)pyrene		100	U
53-70-3	Dibenz(a,h)anthracene		100	U
193-39-5	Indeno(1,2,3-cd)pyrene		100	U
191-24-2	Benzo(g,h,i)perylene		100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank New England Testing Laboratory, Inc.



### SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: New England Testing Laboratory Case No.: Z0106-23

Lab Code: RI010 Client Name: Pare Corpoation

Level: (low/med) LOW

		S1	S2	S3	S4	S5	S6	TOT
	Sample ID	#	#	#	#	#	#	OUT
01	BSS010714	90	97	91	93	106	107	0
02	LSS010714	90	96	90	90	119	114	0
03	CONF-5	101	108	100	101	127	120	0
04	CONF-6	85	91	85	85	98	108	0
05	CONF-7	77	83	78	82	94	97	0
06	CONF-8	87	94	88	87	111	130	0

#### QC LIMITS

S1	=	2-Fluorophenol	(27-130)
S2	=	Phenol-d6	(30-130)
S3	=	Nitrobenzene-d5	(35-130)
S4	=	2-Fluorobiphenyl	(36-130)
S5	=	2,4,6-Tribromophenol	(43-130)
S6	=	Terphenyl-d14	(30-130)

<sup>#</sup> Column to be used to flag recovery values

New England Testing Laboratory, Inc.

<sup>\*</sup> Values outside of contract required QC limits

D Surrogate diluted out



## Semivolatile Soil Laboratory Control Spike

Date Extracted: 1/7/2014 Date Analyzed: 1/7/2014

	Amount Spiked	Result,	Recovery	Lower Recovery	Upper Recovery
	ug/Kg	ug/Kg	%	Limit	Limit
n-Nitrosodimethylamine	2500	1500	60	40	130
Phenol	2500	1793	72	40	130
Aniline	2500	1938	78	40	130
bis(2-Chloroethyl)ether	2500	1671	67	40	130
2-Chlorophenol	2500	1801	72	40	130
1,3-Dichlorobenzene	2500	1557	62	40	130
1,4-Dichlorobenzene	2500	1583	63	40	130
1,2-Dichlorobenzene	2500	1626	65	40	130
2-Methylphenol	2500	1882	75	40	130
3- & 4-Methylphenol	2500	1935	77	40	130
n-Nitroso-di-n-propylamine	2500	1879	75	40	130
Hexachloroethane	2500	1550	62	40	130
Nitrobenzene	2500	1616	65	40	130
Isophorone	2500	1917	77	40	130
2-Nitrophenol	2500	1801	72	40	130
2,4-Dimethylphenol	2500	1843	74	40	130
bis(2-Chloroethoxy)methane	2500	1861	74	40	130
2,4-Dichlorophenol	2500	1925	77	40	130
1,2,4-Trichlorobenzene	2500	1673	67	40	130
Naphthalene	2500	1552	62	40	130
Hexachlorobutadiene	2500	1682	67	40	130
4-Chloro-3-methylphenol	2500	2039	82	40	130
2-Methylnaphthalene	2500	1724	69	40	130
2,4,6-Trichlorophenol	2500	2008	80	40	130
2,4,5-Trichlorophenol	2500	1933	77	40	130
2-Chloronaphthalene	2500	1677	67	40	130
2-Nitroaniline	2500	1954	78	40	130
Dimethyl phthalate	2500	1859	74	40	130
Acenaphthylene	2500	2077	83	40	130
2,6-Dinitrotoluene	2500	2114	85	40	130
Acenaphthene	2500	2051	82	40	130
4-Nitrophenol	2500	2177	87	40	130
Dibenzofuran	2500	1725	69	40	130
2,4-Dinitrotoluene	2500	2058	82	40	130
Diethyl phthalate	2500	1907	76	40	130
Fluorene	2500	2221	89	40	130



## Semivolatile Soil Laboratory Control Spike

Date Extracted: 1/7/2014 Date Analyzed: 1/7/2014

	Amount Spiked			Lower Recovery	
	ug/Kg	ug/Kg	%	Limit	Limit
4-Chlorophenyl phenyl ether	2500	1739	70	40	130
n-Nitrosodiphenylamine	2500	2154	86	40	130
4-Bromophenyl phenyl ether	2500	1853	74	40	130
Hexachlorobenzene	2500	1886	75	40	130
Pentachlorophenol	2500	2474	99	40	130
Phenanthrene	2500	2225	89	40	130
Anthracene	2500	2210	88	40	130
Di-n-butylphthalate	2500	2157	86	40	130
Fluoranthene	2500	2384	95	40	130
Pyrene	2500	2303	92	40	130
Butyl benzyl phthalate	2500	2514	101	40	130
Benzo(a)anthracene	2500	2199	88	40	130
Chrysene	2500	2213	89	40	130
bis(2-Ethylhexyl)phthalate	2500	2561	102	40	130
Di-n-octyl phthalate	2500	3146	126	40	130
Benzo(b)fluoranthene	2500	2353	94	40	130
Benzo(k)fluoranthene	2500	2202	88	40	130
Benzo(a)pyrene	2500	2196	88	40	130
Indeno(1,2,3-cd)pyrene	2500	2229	89	40	130
Dibenz(a,h)anthracene	2500	2307	92	40	130
Benzo(g,h,i)perylene	2500	2080	83	40	130



## **RESULTS: VOLATILE ORGANIC COMPOUNDS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-5 Matrix: (soil/water) SOIL Lab File ID: C010618.D Sample wt/vol: 17.5 (g/ml) G Date Sampled: 1/6/2014 % Moisture 12.54 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: _	UG/KG	Q
75-01-4	Vinyl Chloride		33	U
74-83-9	Bromomethane		33	U
75-00-3	Chloroethane		33	U
67-64-1	Acetone		160	U
75-35-4	1,1-Dichloroethene		33	U
75-15-0	Carbon Disulfide		33	U
75-09-2	Methylene Chloride		33	U
1634-04-4	tert-Butyl methyl ether		33	U
156-60-5	trans-1,2 Dichloroethene		33	U
75-34-3	1,1-Dichloroethane		33	U
78-93-3	2-Butanone		160	U
594-20-7	2,2-Dichloropropane		33	U
156-59-2	cis-1,2-Dichloroethene		33	U
67-66-3	Chloroform		33	U
74-97-5	Bromochloromethane		33	U
71-55-6	1,1,1-Trichloroethane		33	U
563-58-6	1,1-Dichloropropene		33	U
56-23-5	Carbon Tetrachloride		33	U
71-43-2	Benzene		33	U
107-06-2	1,2-Dichloroethane		33	U
79-01-6	Trichloroethene		33	U
78-87-5	1,2-Dichloropropane		33	U
75-27-4	Bromodichloromethane		33	U
74-95-3	Dibromomethane		33	U
108-10-1	4-Methyl-2-pentanone		160	U
106-93-4	Ethylene Dibromide		33	U
10061-01-5	cis-1,3-Dichloropropene		33	U
108-88-3	Toluene		33	U
10061-02-6	Trans-1,3-Dichloropropene		33	U
79-00-5	1,1,2-Trichloroethane		33	U
591-78-6	2-Hexanone		160	U
127-18-4	Tetrachloroethene		33	U
124-48-1	Chlorodibromomethane		33	U
108-90-7	Chlorobenzene		33	U
630-20-6	1,1,1,2-Tetrachloroethane		33	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-5 Matrix: (soil/water) SOIL Lab File ID: C010618.D Sample wt/vol: 17.5 (g/ml) G Date Sampled: 1/6/2014 % Moisture 12.54 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		33	U
1330-20-7	m & p-Xylene		66	U
95-47-6	o-Xylene		33	U
100-42-5	Styrene		33	U
75-25-2	Bromoform		33	U
98-82-8	Isopropylbenzene		33	U
79-34-5	1,1,2,2-Tetrachloroethane		33	U
108-86-1	Bromobenzene		33	U
96-18-4	1,2,3-Trichloropropane		33	U
95-49-8	2-Chlorotoluene		33	U
103-65-1	n-Propylbenzene		33	U
108-67-8	1,3,5-Trimethylbenzene		33	U
106-43-4	4-Chlorotoluene		33	U
98-06-6	tert-Butylbenzene		33	U
95-63-6	1,2,4-Trimethylbenzene		33	U
135-98-8	sec-Butylbenzene		33	U
99-87-6	p-Isopropyltoluene		33	U
74-87-3	Chloromethane		33	U
75-65-0	tert butyl alcohol		33	U
541-73-1	1,3-Dichlorobenzene		33	U
109-99-9	Tetrahydrofuran		33	U
106-46-7	1,4-Dichlorobenzene		33	U
60-29-7	Diethyl Ether		33	U
104-51-8	n-Butylbenzene		33	U
95-50-1	1,2-Dichlorobenzene		33	U
96-12-8	1,2-Dibromo-3-chloropropane		33	U
120-82-1	1,2,4-Trichlorobenzene		33	U
87-68-3	Hexachlorobutadiene		33	U
91-20-3	Naphthalene		33	U
87-61-6	1,2,3-Trichlorobenzene		33	U
994-05-8	Tert-amyl Methyl Ether		33	U
75-71-8	Dichlorodifluoromethane		33	U
142-28-9	1,3-Dichloropropane		33	U
75-69-4	Trichlorofluoromethane		33	U
637-92-3	Ethyl Tert-butyl ether		33	U



Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-5 Matrix: (soil/water) SOIL Lab File ID: C010618.D Sample wt/vol: 17.5 (g/ml) G Date Sampled: 1/6/2014 % Moisture 12.54 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		33	U
123-91-1	1,4-Dioxane		16000	U

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-6 Matrix: (soil/water) SOIL Lab File ID: C010619.D Sample wt/vol: 25.3 (g/ml) G Date Sampled: 1/6/2014 % Moisture 7.93 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		21	U
74-83-9	Bromomethane		21	U
75-00-3	Chloroethane		21	U
67-64-1	Acetone		110	U
75-35-4	1,1-Dichloroethene		21	U
75-15-0	Carbon Disulfide		21	U
75-09-2	Methylene Chloride		21	U
1634-04-4	tert-Butyl methyl ether		21	U
156-60-5	trans-1,2 Dichloroethene		21	U
75-34-3	1,1-Dichloroethane		21	U
78-93-3	2-Butanone		110	U
594-20-7	2,2-Dichloropropane		21	U
156-59-2	cis-1,2-Dichloroethene		21	U
67-66-3	Chloroform		21	U
74-97-5	Bromochloromethane		21	U
71-55-6	1,1,1-Trichloroethane		21	U
563-58-6	1,1-Dichloropropene		21	U
56-23-5	Carbon Tetrachloride		21	U
71-43-2	Benzene		21	U
107-06-2	1,2-Dichloroethane		21	U
79-01-6	Trichloroethene		21	U
78-87-5	1,2-Dichloropropane		21	U
75-27-4	Bromodichloromethane		21	U
74-95-3	Dibromomethane		21	U
108-10-1	4-Methyl-2-pentanone		110	U
106-93-4	Ethylene Dibromide		21	U
10061-01-5	cis-1,3-Dichloropropene		21	U
108-88-3	Toluene		21	U
10061-02-6	Trans-1,3-Dichloropropene		21	U
79-00-5	1,1,2-Trichloroethane		21	U
591-78-6	2-Hexanone		110	U
127-18-4	Tetrachloroethene		21	U
124-48-1	Chlorodibromomethane		21	U
108-90-7	Chlorobenzene		21	U
630-20-6	1,1,1,2-Tetrachloroethane		21	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-6 Matrix: (soil/water) SOIL Lab File ID: C010619.D Sample wt/vol: 25.3 (g/ml) G Date Sampled: 1/6/2014 % Moisture 7.93 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		21	U
1330-20-7	m & p-Xylene		43	U
95-47-6	o-Xylene		21	U
100-42-5	Styrene		21	U
75-25-2	Bromoform		21	U
98-82-8	Isopropylbenzene		21	U
79-34-5	1,1,2,2-Tetrachloroethane		21	U
108-86-1	Bromobenzene		21	U
96-18-4	1,2,3-Trichloropropane		21	U
95-49-8	2-Chlorotoluene		21	U
103-65-1	n-Propylbenzene		21	U
108-67-8	1,3,5-Trimethylbenzene		21	U
106-43-4	4-Chlorotoluene		21	U
98-06-6	tert-Butylbenzene		21	U
95-63-6	1,2,4-Trimethylbenzene		21	U
135-98-8	sec-Butylbenzene		21	U
99-87-6	p-Isopropyltoluene		21	U
74-87-3	Chloromethane		21	U
75-65-0	tert butyl alcohol		21	U
541-73-1	1,3-Dichlorobenzene		21	U
109-99-9	Tetrahydrofuran		21	U
106-46-7	1,4-Dichlorobenzene		21	U
60-29-7	Diethyl Ether		21	U
104-51-8	n-Butylbenzene		21	U
95-50-1	1,2-Dichlorobenzene		21	U
96-12-8	1,2-Dibromo-3-chloropropane		21	U
120-82-1	1,2,4-Trichlorobenzene		21	U
87-68-3	Hexachlorobutadiene		21	U
91-20-3	Naphthalene		21	U
87-61-6	1,2,3-Trichlorobenzene		21	U
994-05-8	Tert-amyl Methyl Ether		21	U
75-71-8	Dichlorodifluoromethane		21	U
142-28-9	1,3-Dichloropropane		21	U
75-69-4	Trichlorofluoromethane		21	U
637-92-3	Ethyl Tert-butyl ether		21	U



Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-6 Matrix: (soil/water) SOIL Lab File ID: C010619.D Sample wt/vol: 25.3 (g/ml) G Date Sampled: 1/6/2014 % Moisture 7.93 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		21	U
123-91-1	1,4-Dioxane		11000	U

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-7 Matrix: (soil/water) SOIL Lab File ID: C010620.D Sample wt/vol: 24.9 (g/ml) G Date Sampled: 1/6/2014 % Moisture 9.92 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		22	U
74-83-9	Bromomethane		22	U
75-00-3	Chloroethane		22	U
67-64-1	Acetone		110	U
75-35-4	1,1-Dichloroethene		22	U
75-15-0	Carbon Disulfide		22	U
75-09-2	Methylene Chloride		22	U
1634-04-4	tert-Butyl methyl ether		22	U
156-60-5	trans-1,2 Dichloroethene		22	U
75-34-3	1,1-Dichloroethane		22	U
78-93-3	2-Butanone		110	U
594-20-7	2,2-Dichloropropane		22	U
156-59-2	cis-1,2-Dichloroethene		22	U
67-66-3	Chloroform		22	U
74-97-5	Bromochloromethane		22	U
71-55-6	1,1,1-Trichloroethane		22	U
563-58-6	1,1-Dichloropropene		22	U
56-23-5	Carbon Tetrachloride		22	U
71-43-2	Benzene		22	U
107-06-2	1,2-Dichloroethane		22	U
79-01-6	Trichloroethene		22	U
78-87-5	1,2-Dichloropropane		22	U
75-27-4	Bromodichloromethane		22	U
74-95-3	Dibromomethane		22	U
108-10-1	4-Methyl-2-pentanone		110	U
106-93-4	Ethylene Dibromide		22	U
10061-01-5	cis-1,3-Dichloropropene		22	U
108-88-3	Toluene		22	U
10061-02-6	Trans-1,3-Dichloropropene		22	U
79-00-5	1,1,2-Trichloroethane		22	U
591-78-6	2-Hexanone		110	U
127-18-4	Tetrachloroethene		22	U
124-48-1	Chlorodibromomethane		22	U
108-90-7	Chlorobenzene		22	U
630-20-6	1,1,1,2-Tetrachloroethane		22	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-7 Matrix: (soil/water) SOIL Lab File ID: C010620.D Sample wt/vol: 24.9 (g/ml) G Date Sampled: 1/6/2014 % Moisture 9.92 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		22	U
1330-20-7	m & p-Xylene		45	U
95-47-6	o-Xylene		22	C
100-42-5	Styrene		22	C
75-25-2	Bromoform		22	C
98-82-8	Isopropylbenzene		22	C
79-34-5	1,1,2,2-Tetrachloroethane		22	C
108-86-1	Bromobenzene		22	C
96-18-4	1,2,3-Trichloropropane		22	U
95-49-8	2-Chlorotoluene		22	C
103-65-1	n-Propylbenzene		22	C
108-67-8	1,3,5-Trimethylbenzene		22	C
106-43-4	4-Chlorotoluene		22	C
98-06-6	tert-Butylbenzene		22	C
95-63-6	1,2,4-Trimethylbenzene		22	C
135-98-8	sec-Butylbenzene		22	C
99-87-6	p-Isopropyltoluene		22	C
74-87-3	Chloromethane		22	C
75-65-0	tert butyl alcohol		22	C
541-73-1	1,3-Dichlorobenzene		22	C
109-99-9	Tetrahydrofuran		22	C
106-46-7	1,4-Dichlorobenzene		22	C
60-29-7	Diethyl Ether		22	C
104-51-8	n-Butylbenzene		22	C
95-50-1	1,2-Dichlorobenzene		22	C
96-12-8	1,2-Dibromo-3-chloropropane		22	C
120-82-1	1,2,4-Trichlorobenzene		22	C
87-68-3	Hexachlorobutadiene		22	C
91-20-3	Naphthalene		22	C
87-61-6	1,2,3-Trichlorobenzene		22	C
994-05-8	Tert-amyl Methyl Ether		22	U
75-71-8	Dichlorodifluoromethane		22	U
142-28-9	1,3-Dichloropropane		22	U
75-69-4	Trichlorofluoromethane		22	U
637-92-3	Ethyl Tert-butyl ether		22	U



Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-7 Matrix: (soil/water) SOIL Lab File ID: C010620.D Sample wt/vol: 24.9 (g/ml) G Date Sampled: 1/6/2014 % Moisture 9.92 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		22	U
123-91-1	1,4-Dioxane		11000	U

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-8 Matrix: (soil/water) SOIL Lab File ID: C010621.D Sample wt/vol: 20.5 (g/ml) G Date Sampled: 1/6/2014 % Moisture 9.64 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		27	U
74-83-9	Bromomethane		27	U
75-00-3	Chloroethane		27	U
67-64-1	Acetone		140	U
75-35-4	1,1-Dichloroethene		27	U
75-15-0	Carbon Disulfide		27	U
75-09-2	Methylene Chloride		27	U
1634-04-4	tert-Butyl methyl ether		27	U
156-60-5	trans-1,2 Dichloroethene		27	U
75-34-3	1,1-Dichloroethane		27	U
78-93-3	2-Butanone		140	U
594-20-7	2,2-Dichloropropane		27	U
156-59-2	cis-1,2-Dichloroethene		27	U
67-66-3	Chloroform		27	U
74-97-5	Bromochloromethane		27	U
71-55-6	1,1,1-Trichloroethane		27	U
563-58-6	1,1-Dichloropropene		27	U
56-23-5	Carbon Tetrachloride		27	U
71-43-2	Benzene		27	U
107-06-2	1,2-Dichloroethane		27	U
79-01-6	Trichloroethene		27	U
78-87-5	1,2-Dichloropropane		27	U
75-27-4	Bromodichloromethane		27	U
74-95-3	Dibromomethane		27	U
108-10-1	4-Methyl-2-pentanone		140	U
106-93-4	Ethylene Dibromide		27	U
10061-01-5	cis-1,3-Dichloropropene		27	U
108-88-3	Toluene		27	U
10061-02-6	Trans-1,3-Dichloropropene		27	U
79-00-5	1,1,2-Trichloroethane		27	U
591-78-6	2-Hexanone		140	U
127-18-4	Tetrachloroethene		27	U
124-48-1	Chlorodibromomethane		27	U
108-90-7	Chlorobenzene		27	U
630-20-6	1,1,1,2-Tetrachloroethane		27	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-8 Matrix: (soil/water) SOIL Lab File ID: C010621.D Sample wt/vol: 20.5 (g/ml) G Date Sampled: 1/6/2014 % Moisture 9.64 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		27	U
1330-20-7	m & p-Xylene		54	U
95-47-6	o-Xylene		27	U
100-42-5	Styrene		27	U
75-25-2	Bromoform		27	U
98-82-8	Isopropylbenzene		27	U
79-34-5	1,1,2,2-Tetrachloroethane		27	U
108-86-1	Bromobenzene		27	U
96-18-4	1,2,3-Trichloropropane		27	U
95-49-8	2-Chlorotoluene		27	U
103-65-1	n-Propylbenzene		27	U
108-67-8	1,3,5-Trimethylbenzene		27	U
106-43-4	4-Chlorotoluene		27	U
98-06-6	tert-Butylbenzene		27	U
95-63-6	1,2,4-Trimethylbenzene		27	U
135-98-8	sec-Butylbenzene		27	U
99-87-6	p-Isopropyltoluene		27	U
74-87-3	Chloromethane		27	U
75-65-0	tert butyl alcohol		27	U
541-73-1	1,3-Dichlorobenzene		27	U
109-99-9	Tetrahydrofuran		27	U
106-46-7	1,4-Dichlorobenzene		27	U
60-29-7	Diethyl Ether		27	U
104-51-8	n-Butylbenzene		27	U
95-50-1	1,2-Dichlorobenzene		27	U
96-12-8	1,2-Dibromo-3-chloropropane		27	U
120-82-1	1,2,4-Trichlorobenzene		27	U
87-68-3	Hexachlorobutadiene		27	U
91-20-3	Naphthalene		27	U
87-61-6	1,2,3-Trichlorobenzene		27	U
994-05-8	Tert-amyl Methyl Ether		27	U
75-71-8	Dichlorodifluoromethane		27	U
142-28-9	1,3-Dichloropropane		27	U
75-69-4	Trichlorofluoromethane		27	U
637-92-3	Ethyl Tert-butyl ether		27	U



Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: CONF-8 Matrix: (soil/water) SOIL Lab File ID: C010621.D Sample wt/vol: 20.5 (g/ml) G Date Sampled: 1/6/2014 % Moisture 9.64 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		27	U
123-91-1	1,4-Dioxane		14000	U

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: VBLK010614 Matrix: (soil/water) SOIL Lab File ID: C010607.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 1/6/2014 % Moisture 0 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		50	U
74-83-9	Bromomethane		50	U
75-00-3	Chloroethane		50	U
67-64-1	Acetone		250	U
75-35-4	1,1-Dichloroethene		50	U
75-15-0	Carbon Disulfide		50	U
75-09-2	Methylene Chloride		50	U
1634-04-4	tert-Butyl methyl ether		50	U
156-60-5	trans-1,2 Dichloroethene		50	U
75-34-3	1,1-Dichloroethane		50	U
78-93-3	2-Butanone		250	U
594-20-7	2,2-Dichloropropane		50	U
156-59-2	cis-1,2-Dichloroethene		50	U
67-66-3	Chloroform		50	U
74-97-5	Bromochloromethane		50	U
71-55-6	1,1,1-Trichloroethane		50	U
563-58-6	1,1-Dichloropropene		50	U
56-23-5	Carbon Tetrachloride		50	U
71-43-2	Benzene		50	U
107-06-2	1,2-Dichloroethane		50	U
79-01-6	Trichloroethene		50	U
78-87-5	1,2-Dichloropropane		50	U
75-27-4	Bromodichloromethane		50	U
74-95-3	Dibromomethane		50	U
108-10-1	4-Methyl-2-pentanone		250	U
106-93-4	Ethylene Dibromide		50	U
10061-01-5	cis-1,3-Dichloropropene		50	U
108-88-3	Toluene		50	U
10061-02-6	Trans-1,3-Dichloropropene		50	U
79-00-5	1,1,2-Trichloroethane		50	U
591-78-6	2-Hexanone		250	U
127-18-4	Tetrachloroethene		50	U
124-48-1	Chlorodibromomethane		50	U
108-90-7	Chlorobenzene		50	U
630-20-6	1,1,1,2-Tetrachloroethane		50	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0106-23 Method: 8260 Lab Sample ID: VBLK010614 Matrix: (soil/water) SOIL Lab File ID: C010607.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 1/6/2014 % Moisture 0 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		50	U
1330-20-7	m & p-Xylene		100	U
95-47-6	o-Xylene		50	U
100-42-5	Styrene		50	U
75-25-2	Bromoform		50	U
98-82-8	Isopropylbenzene		50	U
79-34-5	1,1,2,2-Tetrachloroethane		50	U
108-86-1	Bromobenzene		50	U
96-18-4	1,2,3-Trichloropropane		50	U
95-49-8	2-Chlorotoluene		50	U
103-65-1	n-Propylbenzene		50	U
108-67-8	1,3,5-Trimethylbenzene		50	U
106-43-4	4-Chlorotoluene		50	U
98-06-6	tert-Butylbenzene		50	U
95-63-6	1,2,4-Trimethylbenzene		50	U
135-98-8	sec-Butylbenzene		50	U
99-87-6	p-Isopropyltoluene		50	U
74-87-3	Chloromethane		50	U
75-65-0	tert butyl alcohol		50	U
541-73-1	1,3-Dichlorobenzene		50	U
109-99-9	Tetrahydrofuran		50	U
106-46-7	1,4-Dichlorobenzene		50	U
60-29-7	Diethyl Ether		50	U
104-51-8	n-Butylbenzene		50	U
95-50-1	1,2-Dichlorobenzene		50	U
96-12-8	1,2-Dibromo-3-chloropropane		50	U
120-82-1	1,2,4-Trichlorobenzene		50	U
87-68-3	Hexachlorobutadiene		50	U
91-20-3	Naphthalene		50	U
87-61-6	1,2,3-Trichlorobenzene		50	U
994-05-8	Tert-amyl Methyl Ether		50	U
75-71-8	Dichlorodifluoromethane		50	U
142-28-9	1,3-Dichloropropane		50	U
75-69-4	Trichlorofluoromethane		50	U
637-92-3	Ethyl Tert-butyl ether		50	U



Client Name: PARE Case No.: A0106-23 Lab Sample ID: VBLK010614 Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C010607.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 1/6/2014 % Moisture 0 Date Analyzed: 1/6/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		50	U
123-91-1	1,4-Dioxane		25000	U

2B



#### SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: NEW ENGLAND TESTING LAB Contract: CB-BUP-CONTA

Lab Code: RI010 Case No.: A0106-23 SAS No.: SDG No.: PARE

Level: (low/med) MED

	EPA	SMC1	SMC2	SMC3	TOT
	SAMPLE NO.	#	#	#	OUT
01	VLCS010614	106	99	96	0
02	VBLK010614	96	91	90	0
03	CONF-5	90	95	91	0
04	CONF-6	93	95	95	0
05	CONF-7	94	95	93	0
06	CONF-8	86	93	91	0

QC LIMITS

 SMC1
 =
 4-Bromofluorobenzene
 (70-130)

 SMC2
 =
 Toluene-D8
 (70-130)

 SMC3
 =
 1,2-Dichloroethane-D4
 (70-130)

# Column to be used to flag recovery values

New England Testing Laboratory, Inc.

page 1 of 1

FORM II VOA-2

<sup>\*</sup> Values outside of contract required QC limits

D System Monitoring Compound diluted out



## **Volatile Organics Laboratory Control Spike**

Date Analyzed: 01/06/2014 Sample ID: VLCS010614

	Spike	Spike	Recovery,	<b>Lower Control</b>	<b>Upper Control</b>
Compound	Added	Result	%	Limit, %	Limit, %
1,1-Dichloroethene	50.0	46.6	93	70	129
Benzene	50.0	48.3	97	73	129
Trichloroethene	50.0	48.0	96	77	122
Toluene	50.0	46.9	94	75	123
Chlorobenzene	50.0	48.2	96	73	125

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue North Providence, RI 02904 1-888-863-8522

**CHAIN OF CUSTODY RECORD** 

PROJ. NO. PROJECT NAME/LOCATION	7								/ /		
13062.09 CB-BUP-CONTAMINATED	DNTAMINATED SOIL				<b>6</b> . 62.1		\		\ \ \ \		
CLIENT CLIENT CLIENT					யலய	·•s2	<u> </u>		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
REPORT OF ACCOUNTING	LECORP. COM	<0>₩0	νo	OHHA Ö. A	<b>エ&gt;</b> ∢⊢−	S31	2	25		i	Ç.
DATE TIME O B A A P B A	SAMPLE I.D.	W	۳	R CONTAINERS		HII	20x	WIQI On-	TIDI SON THE	HEMAHKS	HAN W
16/14 3:15M X CONF-5	5		Х	7	Nov. Jecht		X	ン			
1 3:20 X CONF-6	9-:	•	ע	7		×	×	٧			
T = 18:15 X CONF - 7	t-:	•	X	7		×	×	<b>x</b>			
8-300 X 08:50 J	8	•	×	2	->	×	X	×			
		···									
Sampled by: (Signature)	Date/Time Received by: (Signature)			Date/Time		Laboratory Remarks: Temp. received:		ري	Special Instructions: List Specific Detection		PLEASE
	1/6/14 Sixtim MAR PARE		THE CHOICE	REPRESENT 1/12 4:00m		Cooled			Limit Requirements:		EXPEDITE
Relinquished by: (Signature)	Date/Time Received by: (Signature)			Date/Time						<del>-</del>	TURNAROUND
West Williams	16/14 4:16PM HILDER	Maria	_ \	1/6/4 4 11.0PM	Hopm					2	48 4 68 4 68 4 68 4 68 4 68 4 68 4 68 4
Relinquished by: (Signature)	Date/Time Redeived for Laboratory by: (Signature)	by: (Signature)		Date/Time	a.					•	(or faster)
Hud Mullow	1/11/11/11/11/11/11/11/11/11/11/11/11/1	1		1017 1743	£67.				Turnaround (Business Days)	usiness Days)	
## N											



## REPORT OF ANALYTICAL RESULTS

## **NETLAB Case Number Z1230-23B**

Prepared for:

Attn: M. Dowdell Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: January 10, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on December 30, 2013 and additional analysis was requested on January 9, 2014. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is Z1230-23B.

Custody records are included in this report.

**Site: CB-BVP-Contaminated Soil** 

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis Requested
Waste	12/30/13	Soil	Table II

#### TABLE II, Analysis and Methods

ANALYSIS PREPARATION METHOD DETERMINATIVE METHOD

Total Petroleum Hydrocarbons
Fingerprint 3550C 8100M

#### **CASE NARRATIVE:**

#### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

#### **Total Petroleum Hydrocarbons**

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

### Waste

Parameter	Result
Hydrocarbon Fingerprint	The sample was analyzed by Method 8100M, and was
	compared to various petroleum hydrocarbon patterns. #2
	Diesel Fuel/ Home Heating Oil was identified in the sample
	at a concentration of 1,033 mg/kg (ppm). The sample also had
	an additional hydrocarbon pattern resembling a heavy fuel
	such as #6 Fuel or Motor/Lubricating Oil at a concentration of
	1,287 mg/kg (ppm).

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue North Providence, RI 02904 1-888-863-852

CHAIN OF CUSTODY RECORD

13.06.2.0°  CG- EVP - CONTAHIN NTEP 5.01.   20.000   1.000	PROJ.NO. PROJECT NAME/LOCATION				13/14
C CORPORATION   C CONTROL	13062,09 CB-BVP-Co				19/5/20 TX
	PARE CORPORATION REPORTS MDD WOELL @ WYNGETO ACCOUNTING	PARECORP. COM	OHIW	81631	10 10 10 10 10 10 10 10 10 10 10 10 10 1
TOD    X   CONF - 2	<b>≩</b> }	⊃ છ	<b>E</b>	13 12 15 15 15/	
X CONF - 2	X Q::		2	×××	
	× -	•		X	
1/20   1/20   2.20   2   2   2   2   2   2   2   2   2		•		X	
1/30   PARE	_	:		×	
Desertine Received by (Signature)    720	X	•		× × ×	× × ×
Deserting Received by (Signature)    1/20   12.00   DARE (Refrigerator)   12/20   Deserting   12.00   Deserting   12.00   Deserting   12.00   Deserting   12.00   Deserting   12.00   Deserting   12.00   Deserting   Desertin					
Date Time Processed by (Signature)    1/20   DARE (Refrictorator)   1/20   Date/Time   Laboratory Remarks: c   Special Instructions: Laboratory Remarks: c   Date/Time   Date/					
Desertine Received by (Signature)    720   12.00   PARE (RefrideCattar)   124   12.20   Cooled 3     12   Desertine Received by (Signature)   Desertine Desertine   Desertine					
Date-Time Received by: (Signature)  Date-Time Received by: (Signat					
Detertine Received by (Signature)    730   7200   PARE (Refrigeration)   720   1200   PARE (Refrigeration)   1200   Parertine   Pacefic Detection   Detertine   Detertine   Pacefic Detection   Detertine   Pacefic Detection   Parertine   Pacefic Detection   Detertine   Pacefic Detection   Parertine   Pacefic Detection   Parertine   Pacefic Detection   Parertine   Pacefic Detection   Pa					
730   7200 PARE (Refriquence of 1:20 Cooled 3 Limit Requirements:    Date Time   Pacefron   1:20 Cooled 3 Limit Requirements:   Date Time   Date Tim	Sampled by: (Signature)		Date/Time		
Date/Time Received by: (Signature)  Date/Time Received to Laboratory by: (Signature)  Date/Time Date/Time  Date/Time Received to Laboratory by: (Signature)  Date/Time Date/Time Date/Time  The City of the City o	Service of the servic	1/2   12:00   DARE (Refrigerator)	٢٠	Temp. received: Cooled 3	-
Date-Time Received for Laboratory by, (Signature)  Date-Time  (2/1/2   1:55th	Relimquished by: (Signature)	DateTime Received by: (Signature)	Page	-	TIME TO YOUR
2581 C20655 1355 1355 1355 1355	Refinquished by: (Signature)		Date/Time		toddistinal analysis was requested by the client. 18 1-9-14
	some in	3	5951 6708-21		Tumaround (Business Days) 2 (48 Krs)

DUL 12-30-13 16:05

Page 5 of 5



## REPORT OF ANALYTICAL RESULTS

## **NETLAB Case Number A0106-23A**

Prepared for:

Attn: M. Dowdell Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: January 30, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on January 6, 2013 and additional analysis was requested January 29, 2014. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is Z1230-23

Custody records are included in this report.

**Site: CB-BVP-Contaminated Soil** 

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis Requested
CONF-5	1/6/14	Soil	Table II
CONF-6	1/6/14	Soil	Table II
CONF-7	1/6/14	Soil	Table II
CONF-8	1/6/14	Soil	Table II

#### TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Total Metals		
Arsenic	3050B	6010C
Mercury	NA	7471B

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

#### **CASE NARRATIVE:**

### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

### **Metals**

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.



The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.



Case Number: A0106-23A

Sample ID: CONF-5

Date collected: 1/6/14

Matrix Soil

Solids, % 87.46 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	7.41	0.76	mg/kg	1/7/14	1/8/14
Mercury	7439-97-6	NA	7471B	0.211	0.079	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Case Number: A0106-23A

Sample ID: CONF-6

Date collected: 1/6/14

Matrix Soil

Solids, % 92.07 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	0.89	0.64	mg/kg	1/7/14	1/8/14
Mercury	7439-97-6	NA	7471B	ND	0.069	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Case Number: A0106-23A

Sample ID: CONF-7

Date collected: 1/6/14

Matrix Soil

Solids, % 90.08 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	2.20	0.70	mg/kg	1/7/14	1/8/14
Mercury	7439-97-6	NA	7471B	ND	0.071	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Case Number: A0106-23A

Sample ID: CONF-8

Date collected: 1/6/14

Matrix Soil

Solids, % 90.36 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	2.63	0.71	mg/kg	1/7/14	1/8/14
Mercury	7439-97-6	NA	7471B	ND	0.072	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Sample ID: Preparation Blank

Matrix Soil

Solids, % 100 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	ND	0.67	mg/kg	1/7/14	1/8/14
Mercury	7439-97-6	NA	7471B	ND	0.067	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



# LABORATORY CONTROL SAMPLE RECOVERY

					Inte	rnal	
<b>Parameter</b>	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	6 Date Analyzed
Arsenic	13.3	15.7	mg/kg	118	80	120	1/8/14
Mercury	0.133	0.135	mg/kg	101	80	120	1/30/14

New England Testing Laboratory, Inc.

NEW ENGLAND TESTING LABORATORY, INC. 1254 Douglas Avenue North Providence, RI 02904 1-888-863-8522

CHAIN OF CUSTODY RECORD

PROJ. NO. PROJECT NAME/LOCATION										1	///	
13067.09 CB-BUP-CONTAMINATED		SOIL	į		۰.«۱				\		<u></u>	
PARE CORPORATION REPORTO MODINEL @ PARECORP. COM		≪⊘⊃	<b>у</b> о	0 ⊢1 O u	<b>₩</b> ଊ୴Œ⋗ <b>⋖</b> ⊦	~ ~	8183		16.879 20 20 20 20 20 20 20 20 20 20 20 20 20	DP3		
INVOICE TO: ACCOUNTING		u036		8			H	3	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		HEMARKS
DATE TIME O H	SAMPLE I.D.	us			m	1/	\$ \	S	202	A		
16/4 3:15h × CONF-5	-5	•	Х	7	Un, yell X	X	X	X V	X			
1 3:20 X COUF-6	9 -	•	ע	7		×		メメ	X			
5.35 X CONF-7	- +	•	X	7		×	X	×	×			
8-340 X 0216-8	00	•	×	2	<b>-</b>	×	X	X	×			
											-	
								<b></b>				
	:		-					-				
	THE PROPERTY OF THE PROPERTY O							-				
											į	
				,								
Sempled by: (Signature)	Date/Time Received by: (Signature)	(Signature)		Date/Time		Laboratory Remarks:	, Rema		_		Special Instructions:	
Mann	Temp. rec	PAOF Pres		///	न हैं <b>१</b> . <b>८०</b> म	Temp. received: Cooled ()	sived:		او		List Specific Detection Limit Requirements:	EXPEDITE
Attro)	Date/Time Received by	Received by: (Signature)	<u>}</u>	/6/14 Date/Time	e Li					<u>- n</u>	Acditional	TURNAROUND
		Mak Math	•	1 1 1 1 1 1	WdvII.h					<u></u>	onalysis was	
Reinquished by: (Signature)	Date/Time Rederved for	Redeived for Laboratory by: (Signature)	7	Detter/Ti	DeterTime						the Clith.	
High Mullow	1/22 wath 1 h1/n/1	11/10/1		434 4343m	4,72						Tumaround (Business Davs)	, (SVB)
	Today Bodon Ash	7 -01-01		   		oli contra	(	].		1		(6/62



## REPORT OF ANALYTICAL RESULTS

## **NETLAB Case Number Z1230-23C**

Prepared for:

Attn: M. Dowdell Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: January 30, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on December 30, 2013 and additional analysis was requested January 29, 2014. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is Z1230-23C.

Custody records are included in this report.

**Site: CB-BVP-Contaminated Soil** 

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis Requested
Conf-1	12/30/13	Soil	Table II
Conf-3	12/30/13	Soil	Table II
Conf-4	12/30/13	Soil	Table II

#### TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Total Metals		
Arsenic	3050B	6010C
Mercury	NA	7471B

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

#### **CASE NARRATIVE:**

### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

#### Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Sample analysis for mercury was performed outside of method recommended holding time.



The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.



Case Number: Z1230-23C

Sample ID: CONF-1

Date collected: 12/30/13

Matrix Soil

Solids, % 89.35 Analyst MM/JC/JM

Sample Type: <u>Total</u>

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	5.12	0.73	mg/kg	1/6/14	1/6/14
Mercury	7439-97-6	NA	7471B	0.256	0.077	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Case Number: Z1230-23C

Sample ID: CONF-3

Date collected: 12/30/13

Matrix Soil

Solids, % 95.86 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	6.87	0.68	mg/kg	1/6/14	1/6/14
Mercury	7439-97-6	NA	7471B	ND	0.067	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Case Number: Z1230-23C

Sample ID: CONF-4

Date collected: 12/30/13

Matrix Soil

Solids, % 91.78 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	6.20	0.71	mg/kg	1/6/14	1/6/14
Mercury	7439-97-6	NA	7471B	ND	0.077	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



Sample ID: Preparation Blank

Matrix Soil

Solids, % 100 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3050B	6010C	ND	0.67	mg/kg	1/6/14	1/6/14
Mercury	7439-97-6	NA	7471B	ND	0.067	mg/kg	1/30/14	1/30/14

ND indicates Not Detected.



# LABORATORY CONTROL SAMPLE RECOVERY

				Internal			
Parameter	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	<b>Date Analyzed</b>
Arsenic	13.3	11.7	mg/kg	88	80	120	1/6/14
Mercury	0.133	0.135	mg/kg	101	80	120	1/30/14

New England Testing Laboratory, Inc.

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue North Providence, RI 02904 1-888-863-8522

CHAIN OF CUSTODY RECORD

						ŀ			ŀ			+		[
PROJ. NO. PROJECT NAMELOCATION						\	<u> </u>	_	_	\ <u>`</u>	رح	\ \ \	\s\ \	_
13062,09 CB-BVP-CONTAMINATED	TAMINATED SOIL	ļ		<u> </u>		_	\	_		7	Zy Zy		12 × 13	_
	ARECORP.COM		Q {	<b>υ</b> νΨα>∢⊦	· £\$18.·				24 8 M	10ES MEI 2010	D170	10 15 15 15 15 15 15 15 15 15 15 15 15 15		
ニニ			CONTAINERS	>	F	3	50	1/17	₩ ₩	<b>₹</b>	30 S		50	
DATE TIME OF BA . BA	SAMPLE (.D.			п	87	202	330 330	2	732	183				
-7 NO) X 0:11 62/21		X	7	Non Hear	×	X				_		X		
X	2-	X	4		×	X								
X CONF-3	•	×	7		X	X			-			×		:
7, U200 X	. 5	×	7		×	X						×		
J V X VASTE	•	×	2	٠,	×	X	X	×	X	X	X	\ \		
					-									
					<u> </u>				<u> </u>			<u> </u>		
							<u> </u>		-					
							-							
			-   · -	-								-		
Sampled by: (Signature)	Date/Time Received by: (Signature)		Date/Fime	Lab	Laboratory Remarks:	marks:	ز.،		- Sector	Special instructions:	-  -  -  -	PLEASE	is is	
The same	14   17 m   DAPE (Ref. boots	<u> </u>	02:1		Temp. received: Cooled ☐		إد			List Specific Detection Limit Requirements:	lection ants:	FXP	EXPEDITE	
Reinquished by: (Signature)	DatedTime Received by: (Signature)		12									TORY	TURNAKONDO TIME TO 48 KS	0% P
									454	Jitona	20	عتاع وأهر	Acoditional analysis was regueted	7
6	Date/Time Received for Laboratory by: (Signature)	2	230-13 1355						180	ا الا راب	57+ -	139-14 1-39-19	-14 8 6/c	
m select	1 /2 / Sty 1:55th   C/								Turnar	Turnaround (Business Days)	siness D			
"Netlah Subcontracts the following tests: F	"Notice Superintraris the following tests: Badiotonicals Badon Ashestos UCMRs Perchlorate Bromate, Bromide, Sieve, Salmonella, Carbamates	te. Bromate	e, Bromide, 9	sieve. Sal	monella	. Carbar	ates							

\*\*Nettab Subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates THE BACK 18-30-13 16:05

Page 10 of 10



## REPORT OF ANALYTICAL RESULTS

## **NETLAB Case Number A0204-22**

Prepared for:

Attn: S. Driscoll Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

Report Date: February 10, 2014

Reviewed By:

Richard Warila Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, RI 02904 (401) 353-3420

#### **SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:**

The samples listed in Table I were submitted to New England Testing Laboratory on February 4, 2014. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provide to us by the client which are indicated on the custody record. The case number for this sample submission is A0204-22.

Custody records are included in this report.

Site: Blackstone Valley Prep.-Cumberland, RI

**TABLE I, Samples Submitted** 

Sample ID	Date Sampled	Matrix	Analysis
S-1 (2')	2/4/14	Soil	Table II
S-1 (7')	2/4/14	Soil	Table II
SC-1	2/4/14	Soil	Table II
SC-2	2/4/14	Soil	Table II
SC-3	2/4/14	Soil	Table II
SC-4	2/4/14	Soil	Table II
SC-5	2/4/14	Soil	Table II
S-6	2/4/14	Soil	Table II
S-7	2/4/14	Soil	Table II
S-8	2/4/14	Soil	Table II
S-2 (2')	2/4/14	Soil	Table II
S-2 (8')	2/4/14	Soil	Table II
S-3 (2')	2/4/14	Soil	Table II
S-3 (8')	2/4/14	Soil	Table II
S-4 (2')	2/4/14	Soil	Table II
S-4 (8')	2/4/14	Soil	Table II
S-5 (2')	2/4/14	Soil	Table II
S-5 (8')	2/4/14	Soil	Table II

**TABLE II, Analysis and Methods** 

ANALYSIS	DETERMINATIVE METHOD
Total Petroleum Hydrocarbons	8100M
Semi-volatile Organic Compounds	8270D
Volatile Organic Compounds	8260B
Total Cyanide	9014
PCBS	8082A
Proplyene Glycol Dinitrate	625/8270D Modified
Propylene Oxide	8100M
Total Metals	
Arsenic	6010C
Barium	6010C
Cadmium	6010C
Chromium	6010C
Lead	6010C
Mercury	7471A
Selenium	6010C
Silver	6010C

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

#### CASE NARRATIVE:

#### Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

#### Volatile Organic Compounds:

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria. The compounds listed in Table 1 were screened by method 8260B utilizing ion reconstruction and NIST library search parameters. There were no detections of Table 1 compounds to an estimated detection limit of 100 ug/Kg.

#### Semi-volatile Compounds

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria. The compounds listed in Table 2 were screened by method 8270D utilizing ion reconstruction and NIST library search parameters. There were no detections of Table 2 compounds to an estimated detection limit of 500 ug/Kg.

#### Cyanide:

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The compound Hydrogen Cyanide was not detected in any of the samples as no amount of total Cyanide was detected to a level of 0.25 mg/Kg.

#### <u>PCBs</u>

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

#### Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

#### **Total Petroleum Hydrocarbons**

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

#### Table 1

Acetaldehyde Nitroso-di-N-butylamine, N

Acetonitrile Nonane, nAcrolein Pentane, nAcrylonitrile Propyl benzene

Allyl Chloride Tetrafluoroethane, 1,1,1,2-

Bromo-2-chloroethane, 1- Tetrahydrofuran

Bromobenzene Trichloro-1,2,2-trifluoroethane, 1,1,2-

Butadiene, 1,3
Chloro-l,1-difluoroethane, 1
Chloro-1,3-butadiene, 2
Trichloropropene, 1,2,3
Trimethylbenzene, 1,2,3
Trimethylbenzene, 1,2,4-

Chlorodifluoromethane Vinyl Bromide

Cumene(isopropylbenzene) Acetone Cyanohydrin Cyclohexane Chlorobenzotrifluoride, 4-

Cyclohexene Chloropicrin Difluoroethane, 1,1-Dihydrosafrole Dimethylvinylchloride Epoxybutane, 1,2-Epichlorohydrin Triethylamine Ethyl Methacrylate Ethyleneimine Ethylene Oxide Methyl Isocyanate Hexane, N-Nitromethane Methacrylonitrile Propionaldehyde

Methyl Acrylate Propylene

Methyl Methacrylate

Methyl Styrene (Mixed Isomers)

Nitropropane, 2-

#### Table 2

Biphenyl, 1,1' Hexamethylene Diisocyanate, 1,6-

Bis(2-chloro-1-methylethyl) ether Dicyclopentadiene

Chloromethyl Methyl Ether

New England Testing Laboratory, Inc.

New England Testing Laboratory, Inc.

# Cyanide

Sample ID	Result*	Reporting Limt*	Date Analyzed	Units
S-1 (2')	N.D.	0.25	2/6/14	mg/kg
S-1 (7')	N.D.	0.25	2/6/14	mg/kg
SC-1	N.D.	0.25	2/6/14	mg/kg
SC-2	N.D.	0.25	2/6/14	mg/kg
SC-3	N.D.	0.25	2/6/14	mg/kg
SC-4	N.D.	0.25	2/6/14	mg/kg
SC-5	N.D.	0.25	2/6/14	mg/kg
S-6	N.D.	0.25	2/6/14	mg/kg
S-7	N.D.	0.25	2/6/14	mg/kg
S-8	N.D.	0.25	2/6/14	mg/kg
S-2 (2')	N.D.	0.25	2/6/14	mg/kg
S-2 (8')	N.D.	0.25	2/6/14	mg/kg
S-3 (2')	N.D.	0.25	2/6/14	mg/kg
S-3 (8')	N.D.	0.25	2/6/14	mg/kg
S-4 (2')	N.D.	0.25	2/6/14	mg/kg
S-4 (8')	N.D.	0.25	2/6/14	mg/kg
S-5 (2')	N.D.	0.25	2/6/14	mg/kg
S-5 (8')	N.D.	0.25	2/6/14	mg/kg

\*Dry Weight Basis N.D. = Not Detected

## **Proplyene Glycol Dinitrate**

Sample ID	Result*	Reporting Limt*	Date Analyzed	Units
S-1 (2')	N.D.	0.80	2/6/14	mg/kg
S-1 (7')	N.D.	0.80	2/6/14	mg/kg
SC-1	N.D.	0.80	2/6/14	mg/kg
SC-2	N.D.	0.80	2/6/14	mg/kg
SC-3	N.D.	0.80	2/6/14	mg/kg
SC-4	N.D.	0.80	2/6/14	mg/kg
SC-5	N.D.	0.80	2/6/14	mg/kg
S-6	N.D.	0.80	2/6/14	mg/kg
S-7	N.D.	0.80	2/6/14	mg/kg
S-8	N.D.	0.80	2/6/14	mg/kg
S-2 (2')	N.D.	0.80	2/6/14	mg/kg
S-2 (8')	N.D.	0.80	2/6/14	mg/kg
S-3 (2')	N.D.	0.80	2/6/14	mg/kg
S-3 (8')	N.D.	0.80	2/6/14	mg/kg
S-4 (2')	N.D.	0.80	2/6/14	mg/kg
S-4 (8')	N.D.	0.80	2/6/14	mg/kg
S-5 (2')	N.D.	0.80	2/6/14	mg/kg
S-5 (8')	N.D.	0.80	2/6/14	mg/kg

\*Dry Weight Basis N.D. = Not Detected

## **Proplyene Oxide**

Sample ID	Result*	Reporting Limt*	Date Analyzed	Units
S-1 (2')	N.D.	13.0	2/10/14	mg/kg
S-1 (7')	N.D.	13.0	2/10/14	mg/kg
SC-1	N.D.	13.0	2/10/14	mg/kg
SC-2	N.D.	13.0	2/10/14	mg/kg
SC-3	N.D.	13.0	2/10/14	mg/kg
SC-4	N.D.	13.0	2/10/14	mg/kg
SC-5	N.D.	13.0	2/10/14	mg/kg
S-6	N.D.	13.0	2/10/14	mg/kg
S-7	N.D.	13.0	2/10/14	mg/kg
S-8	N.D.	13.0	2/10/14	mg/kg
S-2 (2')	N.D.	13.0	2/10/14	mg/kg
S-2 (8')	N.D.	13.0	2/10/14	mg/kg
S-3 (2')	N.D.	13.0	2/10/14	mg/kg
S-3 (8')	N.D.	13.0	2/10/14	mg/kg
S-4 (2')	N.D.	13.0	2/10/14	mg/kg
S-4 (8')	N.D.	13.0	2/10/14	mg/kg
S-5 (2')	N.D.	13.0	2/10/14	mg/kg
S-5 (8')	N.D.	13.0	2/10/14	mg/kg

\*Dry Weight Basis N.D. = Not Detected

Sample:S-1 (2')		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	72	44
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	98	62-151

Sample:S-1 (7')		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/5/14
Compound	Concentration,	Reporting Limit
_	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	43
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	94	62-151

Sample:SC-1		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration,	Reporting Limit
_	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	77	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	102	62-151

Sample:SC-2		Analyst's Initials: BJ
Case No. A0204-22		Ò
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	184	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	102	62-151

Sample:SC-3		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration,	Reporting Limit
-	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	232	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	102	62-151

Sample:SC-4		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/5/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	91	62-151

Sample:SC-5		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/5/14
Compound	Concentration,	Reporting Limit
_	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	40
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	85	62-151

Sample:S-6		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	302	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	124	62-151

Sample:S-7		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	173	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	129	62-151

Sample:S-8		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/5/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	40
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	109	62-151

Sample:S-2 (2')		Analyst's Initials: BJ
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/6/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	126	41
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	119	62-151

Sample:S-2 (8')		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	2/5/14	2/5/14
	2,0,1	2,0,1
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum Hydrocarbons	ND	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	102	62-151

Sample:S-3 (2')		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/5/14
Compound	Concentration,	Reporting Limit
_	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	38
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	98	62-151

Sample:S-3 (8')		Analyst's Initials: MM
Case No. A0204-22		·
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	2/5/14	2/5/14
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	39
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	88	62-151

Sample:S-4 (2')		Analyst's Initials: MM
Case No. A0204-22		·
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	2/5/14	2/5/14
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	42
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	98	62-151

Sample:S-4 (8')		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	2/5/14	2/5/14
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	40
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	81	62-151

Sample:S-5 (2')		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method:		
EPA 8100 M	2/5/14	2/5/14
Compound	Concentration,	Reporting Limit
	mg/kg* (ppm)	mg/kg* (ppm)
Total Petroleum		
Hydrocarbons	ND	41
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	88	62-151

Sample:S-5 (8')		Analyst's Initials: MM
Case No. A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: TPH		
Prep Method: EPA 3546	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	2/5/14	2/5/14
Compound	Concentration, mg/kg* (ppm)	Reporting Limit mg/kg* (ppm)
Total Petroleum Hydrocarbons	ND	41
Surrogates:		
Compound	% Recovery	Limits
Chlorooctadecane	96	62-151

ND = Not Detected \*Dry Weight Basis



The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.



Case Number: A0204-22

Sample ID: S-1 (2')

Date collected: 2/4/14

Matrix SOIL

Solids, % 85.77 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	5.19	1.36	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	27.1	0.68	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.68	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	6.54	0.68	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	193	0.68	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.080	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	3.06	1.36	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.68	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-1 (7')

Date collected: 2/4/14

Matrix SOIL

Solids, % 91.41 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	6.74	1.47	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	21.1	0.73	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.73	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	7.09	0.73	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	194	0.73	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	0.309	0.072	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.47	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.73	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: SC-1

Date collected: 2/4/14

Matrix SOIL

Solids, % 89.32 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	3.44	1.31	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	34.8	0.66	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.66	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	5.52	0.66	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	330	0.66	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	0.641	0.075	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	2.80	1.31	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.66	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: SC-2

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.29 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	3.49	1.26	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	20.4	0.63	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.63	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	5.90	0.63	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	157	0.63	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	0.370	0.071	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.26	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.63	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: SC-3

Date collected: 2/4/14

Matrix SOIL

Solids, % 90.05 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	4.87	1.45	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	44.1	0.72	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.72	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	4.86	0.72	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	468	0.72	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	2.58	0.771	mg/kg	2/7/14	2/7/14
Selenium	7782-49-2	3051A	6010C	2.44	1.45	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	1.34	0.72	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: SC-4

Date collected: 2/4/14

Matrix SOIL

Solids, % 91.19 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	2.75	1.37	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	30.9	0.68	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.68	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	5.28	0.68	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	315	0.68	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	0.772	0.302	mg/kg	2/7/14	2/7/14
Selenium	7782-49-2	3051A	6010C	ND	1.37	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.68	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: SC-5

Date collected: 2/4/14

Matrix SOIL

Solids, % 93.48 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	1.77	1.43	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	19.0	0.71	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.71	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	3.73	0.71	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	101	0.71	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.070	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	1.54	1.43	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.71	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-6

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.86 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	3.28	1.21	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	19.0	0.60	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	5.69	0.60	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	36.8	0.60	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	0.088	0.071	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.21	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-7

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.19 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	5.27	1.21	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	24.2	0.60	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	7.15	0.60	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	53.9	0.60	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.075	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.21	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: <u>S-8</u>

Date collected: 2/4/14

Matrix SOIL

Solids, % 96.05 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	3.40	1.29	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	11.0	0.64	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.64	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	3.79	0.64	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	7.78	0.64	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.066	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	1.48	1.29	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.64	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-2 (2')

Date collected: 2/4/14

Matrix SOIL

Solids, % 94.69 Analyst MM/JC/JM

Sample Type: <u>Total</u>

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	2.11	1.32	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	12.2	0.66	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.66	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	4.43	0.66	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	6.73	0.66	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.069	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	3.17	1.32	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.66	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-2 (8')

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.04 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	ND	1.20	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	19.7	0.60	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	2.73	0.60	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	43.3	0.60	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.074	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.20	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-3 (2')

Date collected: 2/4/14

Matrix SOIL

Solids, % 96.09 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	2.53	1.12	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	13.3	0.56	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.56	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	3.92	0.56	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	10.3	0.56	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.070	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.12	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.56	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-3 (8')

Date collected: 2/4/14

Matrix SOIL

Solids, % 97.85 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	1.43	1.16	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	6.69	0.58	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.58	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	3.20	0.58	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	2.11	0.58	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.067	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	4.07	1.16	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.58	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-4 (2')

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.57 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	2.40	1.24	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	5.90	0.62	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.62	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	2.84	0.62	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	1.75	0.62	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.068	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	3.30	1.24	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.62	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-4 (8')

Date collected: 2/4/14

Matrix SOIL

Solids, % 95.8 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	5.53	1.13	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	14.8	0.56	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.56	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	3.59	0.56	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	9.03	0.56	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.069	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.13	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.56	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: S-5 (2')

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.78 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	7.03	1.21	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	20.5	0.60	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	9.06	0.60	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	16.3	0.60	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.075	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.21	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.60	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Case Number: A0204-22

Sample ID: <u>S-5 (8')</u>

Date collected: 2/4/14

Matrix SOIL

Solids, % 92.77 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	10.8	1.29	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	25.1	0.65	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.65	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	8.46	0.65	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	8.21	0.65	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.070	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	1.29	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.65	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



Sample ID: Preparation Blank

Matrix SOIL

Solids, % 100 Analyst MM/JC/JM

Sample Type: Total

		Preparative	Analytical		Reporting		Date of	Date
Parameter	CAS Number	Method	Method	Result	Limit	Units	Preparation	Analyzed
Arsenic	7440-38-2	3051A	6010C	ND	0.67	mg/kg	2/6/14	2/6/14
Barium	7440-39-3	3051A	6010C	ND	0.33	mg/kg	2/6/14	2/6/14
Cadmium	7440-43-9	3051A	6010C	ND	0.33	mg/kg	2/6/14	2/6/14
Chromium	7440-47-3	3051A	6010C	ND	0.33	mg/kg	2/6/14	2/6/14
Lead	7439-92-1	3051A	6010C	ND	0.33	mg/kg	2/6/14	2/6/14
Mercury	7439-97-6	NA	7471B	ND	0.067	mg/kg	2/6/14	2/6/14
Selenium	7782-49-2	3051A	6010C	ND	0.67	mg/kg	2/6/14	2/6/14
Silver	7440-22-4	3051A	6010C	ND	0.33	mg/kg	2/6/14	2/6/14

ND indicates Not Detected.



# LABORATORY CONTROL SAMPLE RECOVERY

					Inte	rnal	
Parameter	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	<b>Date Analyzed</b>
Arsenic	13.3	11.4	mg/kg	86	80	120	2/6/14
Barium	66.7	55.5	mg/kg	83	80	115	2/6/14
Cadmium	66.7	59.6	mg/kg	89	80	113	2/6/14
Chromium	66.7	57.2	mg/kg	86	80	115	2/6/14
Lead	66.7	57.1	mg/kg	86	80	114	2/6/14
Mercury	0.133	0.136	mg/kg	102	80	120	2/6/14
Selenium	13.3	13.0	mg/kg	98	80	120	2/6/14
Silver	33.3	32.3	mg/kg	97	80	120	2/6/14

New England Testing Laboratory, Inc.



**RESULTS: PCBs** 

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.



Sample: S-1 (2')		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	102	45-109
DCBP	102	53-127

New England Testing Laboratory, Inc.



Sample: S-1 (7')		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	98	45-109
DCBP	108	53-127

NETTLAB New England Testing Laboratory, Inc.



Sample: SC-1		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	103	45-109
DCBP	108	53-127



Sample: SC-2		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	105	45-109
DCBP	118	53-127



Sample: SC-3		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	104	45-109
DCBP	110	53-127



Sample: SC-4		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	109	45-109
DCBP	113	53-127

New England Testing Laboratory, Inc.



Sample: SC-5		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	103	45-109
DCBP	108	53-127



g 1 g 6		A 1 (2 T 1/2 1 D)
Sample: S-6		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil	Data Entro ata d	Data Analysis d
Subject: PCBs  Prop Method: EDA 2546	Date Extracted 2/5/14	Date Analyzed 2/6/14
Prep Method: EPA 3546	2/3/14	2/0/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	107	45-109
DCBP	110	53-127

NETTLAB
New England Testing Laboratory, Inc.



Sample: S-7		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	105	45-109
DCBP	108	53-127



Sample: S-8		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	104	45-109
DCBP	110	53-127



<b>Sample: S-2(2')</b>		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	105	45-109
DCBP	108	53-127

NETTLAB
New England Testing Laboratory, Inc.



Sample: S-2(8')		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	104	45-109
DCBP	123	53-127

NETTLAB New England Testing Laboratory, Inc.



<b>Sample: S-3(2')</b>		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	104	45-109
DCBP	112	53-127

NETTLAB
New England Testing Laboratory, Inc.



<b>Sample: S-3(8')</b>		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	102	45-109
DCBP	108	53-127

NETTLAB
New England Testing Laboratory, Inc.



<b>Sample: S-4(2')</b>		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	102	45-109
DCBP	112	53-127

NETTLAB
New England Testing Laboratory, Inc.



Sample: S-4(8')		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	106	45-109
DCBP	115	53-127



<b>Sample: S-5(2')</b>		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	106	45-109
DCBP	117	53-127

NETTLAB New England Testing Laboratory, Inc.



<b>Sample: S-5(8')</b>		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: 2/4/14		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg* (ppb)	ug/kg* (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	105	45-109
DCBP	114	53-127



Sample: Method Blank		Analyst's Initials: BJ
Case No.: A0204-22		
Date Collected: NA		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3546	2/5/14	2/6/14
Analytical Method: EPA 8082A		
Compound	Concentration	Reporting Limit
	ug/kg (ppb)	ug/kg (ppb)
Aroclor-1221	N.D.	100
Aroclor-1232	N.D.	100
Aroclor-1016	N.D.	100
Aroclor-1242	N.D.	100
Aroclor-1248	N.D.	100
Aroclor-1254	N.D.	100
Aroclor-1260	N.D.	100
Aroclor-1262	N.D.	100
Aroclor-1268	N.D.	100
Surrogates:		
Compound	% Recovery	Limits
TCMX	91	45-109
DCBP	101	53-127

N.D. = Not Detected



# **PCB Laboratory Control Spike**

Subject: PCB	Date Extracted			Date Analyzed
Prep Method: EPA 3546	2/5/14			2/6/14
Analytical Method: EPA 8082A				
Compound	Amount Spiked	Result	Recovery	Recovery
	mg/kg	mg/kg	%	Limits
Aroclor 1016	0.500	0.528	106	53-140
Aroclor 1260	0.500	0.551	110	60-126
Surrogates:				
Compound	% Recovery	Limits		
TCMX	100	45-109		
DCBP	105	53-127		



# **RESULTS: SEMIVOLATILE ORGANIC COMPOUNDS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

Lab Name: New England Testing Laboratory Contract: Blackstone S-1 (2')

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-1 (2')

 Sample wt/vol:
 15.386
 (g/ml)
 G
 Lab File ID:
 B020626.D

 Level:
 (low/med)
 LOW
 Date Received:
 2/4/2014

% Moisture: 14.23 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamir	ie	230	U
110-86-1	Pyridine		150	U
108-95-2	Phenol		150	U
62-53-3	Aniline		150	U
111-44-4	bis(2-Chloroethyl)ethe	r	150	U
95-57-8	2-Chlorophenol		150	U
541-73-1	1,3-Dichlorobenzene		150	U
106-46-7	1,4-Dichlorobenzene		150	U
95-50-1	1,2-Dichlorobenzene		150	U
95-48-7	2-Methylphenol		150	U
108-60-1	bis(2-chloroisopropyl)e	ether	150	U
106-44-5	3- & 4-Methylphenol		300	U
621-64-7	n-Nitroso-di-n-propyla	mine	150	U
67-72-1	Hexachloroethane		150	U
98-95-3	Nitrobenzene		150	U
78-59-1	Isophorone		150	U
88-75-5	2-Nitrophenol		380	U
105-67-9	2,4-Dimethylphenol		760	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)me	ethane	150	U
120-83-2	2,4-Dichlorophenol		380	U
120-82-1	1,2,4-Trichlorobenzen	e	150	U
91-20-3	Naphthalene		150	U
106-47-8	4-Chloroaniline		150	U
87-68-3	Hexachlorobutadiene		150	U
59-50-7	4-Chloro-3-methylphe	nol	380	U
91-57-6	2-Methylnaphthalene		150	U
77-47-4	Hexachlorocyclopenta	diene	150	U
88-06-2	2,4,6-Trichlorophenol		150	U
95-95-4	2,4,5-Trichlorophenol		150	U
91-58-7	2-Chloronaphthalene		150	U
88-74-4	2-Nitroaniline		150	U
131-11-3	Dimethyl phthalate		150	U
208-96-8	Acenaphthylene		150	U
606-20-2	2,6-Dinitrotoluene		150	U
99-09-2	3-Nitroaniline		150	Ū
83-32-9	Acenaphthene		150	Ū

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

Lab Name:	New En	gland T	esting Labo	oratory	Contract:	Blackstone	S-1 (2')
Lab Code:	RI010		Case No.:	A0204-22	SAS No	.: PARE S	DG No.: PARE
Matrix: (soil/v	vater)	SOIL			Lal	o Sample ID:	S-1 (2')
Sample wt/vo	ol:	15.386	6 (g/ml)	G	Lal	o File ID:	B020626.D
Level: (low/n	ned)	LOW			Da	te Received:	2/4/2014
% Moisture:	14.23	3	decanted:(	(Y/N)N	l Da	te Extracted:	2/6/2014
Concentrated	d Extract	Volume	: 1000	(uL)	Da	te Analyzed:	2/6/2014

GPC Cleanup: (Y/N) \_\_\_\_N \_\_\_ pH: \_\_\_\_\_

Injection Volume: 1.0 (uL)

#### **CONCENTRATION UNITS:**

Dilution Factor: 1.0

		CONCLINITATI	ON ONLIS.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		380	U
100-02-7	4-Nitrophenol		380	U
132-64-9	Dibenzofuran		150	U
121-14-2	2,4-Dinitrotoluene		150	U
84-66-2	Diethyl phthalate		150	U
86-73-7	Fluorene		150	U
7005-72-3	4-Chlorophenyl phen	yl ether	150	U
100-01-6	4-Nitroaniline		150	U
534-52-1	4,6-Dinitro-2-methylp	henol	380	U
86-30-6	n-Nitrosodiphenylami	ne	150	U
101-55-3	4-Bromophenyl pheny	yl ether	150	U
118-74-1	Hexachlorobenzene	•	150	U
87-86-5	Pentachlorophenol		380	U
85-01-8	Phenanthrene		150	U
120-12-7	Anthracene		150	U
84-74-2	Di-n-butylphthalate		230	U
206-44-0	Fluoranthene		150	U
92-87-5	Benzidine		4500	U
129-00-0	Pyrene		280	
85-68-7	Butyl benzyl phthalate	е	150	U
91-94-1	3,3'-Dichlorobenzidin	е	380	U
56-55-3	Benzo(a)anthracene		160	
218-01-9	Chrysene		190	
117-81-7	bis(2-Ethylhexyl)phth	alate	230	U
117-84-0	Di-n-octyl phthalate		230	U
205-99-2	Benzo(b)fluoranthene	)	220	
207-08-9	Benzo(k)fluoranthene	)	150	U
50-32-8	Benzo(a)pyrene		170	
53-70-3	Dibenz(a,h)anthracer	ne	150	U
193-39-5	Indeno(1,2,3-cd)pyre	ne	150	U
191-24-2	Benzo(g,h,i)perylene		150	U

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETCLAB

S-1 (7') Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: S-1 (7') Sample wt/vol: 15.117 (g/ml) G Lab File ID: B020620.D Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 8.59 decanted:(Y/N) Date Extracted: 2/6/2014 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

GPC Cleanup: (Y/N) N pH:

Injection Volume: 1.0 (uL)

#### **CONCENTRATION UNITS:**

Dilution Factor: 1.0

		CONCLINITION	ON ONLIG.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamir	ne	220	U
110-86-1	Pyridine		150	U
108-95-2	Phenol		150	U
62-53-3	Aniline		150	U
111-44-4	bis(2-Chloroethyl)ethe	r	150	U
95-57-8	2-Chlorophenol		150	U
541-73-1	1,3-Dichlorobenzene		150	U
106-46-7	1,4-Dichlorobenzene		150	U
95-50-1	1,2-Dichlorobenzene		150	U
95-48-7	2-Methylphenol		150	U
108-60-1	bis(2-chloroisopropyl)e	ether	150	U
106-44-5	3- & 4-Methylphenol		290	U
621-64-7	n-Nitroso-di-n-propyla	mine	150	U
67-72-1	Hexachloroethane		150	U
98-95-3	Nitrobenzene		150	U
78-59-1	Isophorone		150	U
88-75-5	2-Nitrophenol		360	U
105-67-9	2,4-Dimethylphenol		730	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)me	ethane	150	U
120-83-2	2,4-Dichlorophenol		360	U
120-82-1	1,2,4-Trichlorobenzen	е	150	U
91-20-3	Naphthalene		150	U
106-47-8	4-Chloroaniline		150	U
87-68-3	Hexachlorobutadiene		150	U
59-50-7	4-Chloro-3-methylphe	nol	360	U
91-57-6	2-Methylnaphthalene		150	U
77-47-4	Hexachlorocyclopenta	diene	150	U
88-06-2	2,4,6-Trichlorophenol		150	U
95-95-4	2,4,5-Trichlorophenol		150	U
91-58-7	2-Chloronaphthalene		150	U
88-74-4	2-Nitroaniline		150	U
131-11-3	Dimethyl phthalate		150	U
208-96-8	Acenaphthylene		150	U
606-20-2	2,6-Dinitrotoluene		150	U
99-09-2	3-Nitroaniline		150	U
83-32-9	Acenaphthene		150	U

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

S-1 (7') Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: S-1 (7') Sample wt/vol: 15.117 (g/ml) G Lab File ID: B020620.D Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 8.59 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014
Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		360	U
100-02-7	4-Nitrophenol		360	U
132-64-9	Dibenzofuran		150	U
121-14-2	2,4-Dinitrotoluene		150	U
84-66-2	Diethyl phthalate		150	U
86-73-7	Fluorene		150	U
7005-72-3	4-Chlorophenyl pher	nyl ether	150	U
100-01-6	4-Nitroaniline	•	150	U
534-52-1	4,6-Dinitro-2-methylp	phenol	360	U
86-30-6	n-Nitrosodiphenylam	ine	150	U
101-55-3	4-Bromophenyl pher	nyl ether	150	U
118-74-1	Hexachlorobenzene	•	150	U
87-86-5	Pentachlorophenol		360	U
85-01-8	Phenanthrene		150	U
120-12-7	Anthracene		150	U
84-74-2	Di-n-butylphthalate		220	U
206-44-0	Fluoranthene		150	U
92-87-5	Benzidine		4400	U
129-00-0	Pyrene		150	U
85-68-7	Butyl benzyl phthalat	te	150	U
91-94-1	3,3'-Dichlorobenzidir	ne	360	U
56-55-3	Benzo(a)anthracene		150	U
218-01-9	Chrysene		150	U
117-81-7	bis(2-Ethylhexyl)phth	nalate	220	U
117-84-0	Di-n-octyl phthalate		220	U
205-99-2	Benzo(b)fluoranthen	e	150	U
207-08-9	Benzo(k)fluoranthen	e	150	U
50-32-8	Benzo(a)pyrene		150	U
53-70-3	Dibenz(a,h)anthrace	ne	150	U
193-39-5	Indeno(1,2,3-cd)pyre	ene	150	U
191-24-2	Benzo(g,h,i)perylene	)	150	U

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SC-1

NEL CLAR

Lab Name:	New England	Testing Laboratory	Contract:	Blackston	ie		JU-1	
Lab Code:	RI010	Case No.: A0204-22	SAS No	.: PARE	SDO	G No.:	PARE	

Matrix: (soil/water) SOIL Lab Sample ID: SC-1

 Sample wt/vol:
 15.922
 (g/ml)
 G
 Lab File ID:
 B020619.D

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 10.68 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

		OONOLINITONI	011 011110.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamine	<b>)</b>	210	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)ether		140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl)et	ther	140	U
106-44-5	3- & 4-Methylphenol		280	U
621-64-7	n-Nitroso-di-n-propylam	nine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		350	U
105-67-9	2,4-Dimethylphenol		710	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)met	thane	140	U
120-83-2	2,4-Dichlorophenol		350	U
120-82-1	1,2,4-Trichlorobenzene		140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylphen	ol	350	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopentad	liene	140	U
88-06-2	2,4,6-Trichlorophenol		140	U
95-95-4	2,4,5-Trichlorophenol		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	Ū
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



SC-1 New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-1

Sample wt/vol: 15.922 (g/ml) G Lab File ID: B020619.D Level: (low/med) LOW Date Received: 2/4/2014

10.68 % Moisture: decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		350	U
100-02-7	4-Nitrophenol		350	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phen	yl ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylp	henol	350	U
86-30-6	n-Nitrosodiphenylam	ine	140	U
101-55-3	4-Bromophenyl phen	yl ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		350	U
85-01-8	Phenanthrene		720	
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		1200	
92-87-5	Benzidine		4200	U
129-00-0	Pyrene		1000	
85-68-7	Butyl benzyl phthalat	е	140	U
91-94-1	3,3'-Dichlorobenzidin	е	350	U
56-55-3	Benzo(a)anthracene		480	
218-01-9	Chrysene		550	
117-81-7	bis(2-Ethylhexyl)phth	alate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene	Э	570	
207-08-9	Benzo(k)fluoranthene	e	210	
50-32-8	Benzo(a)pyrene		420	
53-70-3	Dibenz(a,h)anthrace	ne	140	U
193-39-5	Indeno(1,2,3-cd)pyre		320	
191-24-2	Benzo(g,h,i)perylene		290	

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



NETTLAB

Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-2

 Sample wt/vol:
 15.907
 (g/ml)
 G
 Lab File ID:
 B020624.D

 Level:
 (low/med)
 LOW
 Date Received:
 2/4/2014

% Moisture: 7.71 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamin	ie	200	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)ethe	r	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl)e	ether	140	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propyla	mine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		340	U
105-67-9	2,4-Dimethylphenol		680	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)me	ethane	140	U
120-83-2	2,4-Dichlorophenol		340	U
120-82-1	1,2,4-Trichlorobenzen	е	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylphei	nol	340	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopenta	diene	140	U
88-06-2	2,4,6-Trichlorophenol		140	U
95-95-4	2,4,5-Trichlorophenol		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

# EPA SAMPLE NO.



# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:	New England Testing Laboratory	Contract:	Blackstone	SC-2
		_		

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-2 Sample wt/vol: 15.907 (g/ml) G Lab File ID: B020624.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 7.71 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		340	U
100-02-7	4-Nitrophenol		340	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phen	yl ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylp	henol	340	U
86-30-6	n-Nitrosodiphenylam	ne	140	U
101-55-3	4-Bromophenyl phen	yl ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		340	U
85-01-8	Phenanthrene		170	
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4100	U
129-00-0	Pyrene		360	
85-68-7	Butyl benzyl phthalat	е	140	U
91-94-1	3,3'-Dichlorobenzidin	е	340	U
56-55-3	Benzo(a)anthracene		200	
218-01-9	Chrysene		210	
117-81-7	bis(2-Ethylhexyl)phth	alate	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene	9	250	
207-08-9	Benzo(k)fluoranthene	)	140	U
50-32-8	Benzo(a)pyrene		190	
53-70-3	Dibenz(a,h)anthracei	ne	140	U
193-39-5	Indeno(1,2,3-cd)pyre	ne	150	
191-24-2	Benzo(g,h,i)perylene		140	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SC-3

NETCLAB

Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: SC-3 Sample wt/vol: 15.277 (g/ml) G Lab File ID: B020622.D Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: 9.95 decanted:(Y/N) N Date Extracted: 2/6/2014 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylam	ne	220	U
110-86-1	Pyridine		150	U
108-95-2	Phenol		150	U
62-53-3	Aniline		150	U
111-44-4	bis(2-Chloroethyl)eth	er	150	U
95-57-8	2-Chlorophenol		150	U
541-73-1	1,3-Dichlorobenzene		150	U
106-46-7	1,4-Dichlorobenzene		150	U
95-50-1	1,2-Dichlorobenzene		150	U
95-48-7	2-Methylphenol		150	U
108-60-1	bis(2-chloroisopropyl	)ether	150	U
106-44-5	3- & 4-Methylphenol		290	U
621-64-7	n-Nitroso-di-n-propyla	amine	150	U
67-72-1	Hexachloroethane		150	U
98-95-3	Nitrobenzene		150	U
78-59-1	Isophorone		150	U
88-75-5	2-Nitrophenol		360	U
105-67-9	2,4-Dimethylphenol		730	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)n	nethane	150	U
120-83-2	2,4-Dichlorophenol		360	U
120-82-1	1,2,4-Trichlorobenze	ne	150	U
91-20-3	Naphthalene		150	U
106-47-8	4-Chloroaniline		150	U
87-68-3	Hexachlorobutadiene	!	150	U
59-50-7	4-Chloro-3-methylpho	enol	360	U
91-57-6	2-Methylnaphthalene		150	U
77-47-4	Hexachlorocyclopent	adiene	150	U
88-06-2	2,4,6-Trichloropheno		150	U
95-95-4	2,4,5-Trichloropheno		150	U
91-58-7	2-Chloronaphthalene		150	U
88-74-4	2-Nitroaniline		150	U
131-11-3	Dimethyl phthalate		150	U
208-96-8	Acenaphthylene		150	U
606-20-2	2,6-Dinitrotoluene		150	U
99-09-2	3-Nitroaniline		150	U
83-32-9	Acenaphthene		150	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



SC-3 Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: SC-3

Sample wt/vol: 15.277 (g/ml) G Lab File ID: B020622.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 9.95 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		360	U
100-02-7	4-Nitrophenol		360	U
132-64-9	Dibenzofuran		150	U
121-14-2	2,4-Dinitrotoluene		150	U
84-66-2	Diethyl phthalate		150	U
86-73-7	Fluorene		150	U
7005-72-3	4-Chlorophenyl phenyl et	ther	150	U
100-01-6	4-Nitroaniline		150	U
534-52-1	4,6-Dinitro-2-methylphen	ol	360	U
86-30-6	n-Nitrosodiphenylamine		150	U
101-55-3	4-Bromophenyl phenyl et	ther	150	U
118-74-1	Hexachlorobenzene		150	U
87-86-5	Pentachlorophenol		360	U
85-01-8	Phenanthrene		150	U
120-12-7	Anthracene		150	U
84-74-2	Di-n-butylphthalate		220	U
206-44-0	Fluoranthene		330	
92-87-5	Benzidine		4400	U
129-00-0	Pyrene		270	
85-68-7	Butyl benzyl phthalate		150	U
91-94-1	3,3'-Dichlorobenzidine		360	U
56-55-3	Benzo(a)anthracene		150	
218-01-9	Chrysene		170	
117-81-7	bis(2-Ethylhexyl)phthalat	e	220	U
117-84-0	Di-n-octyl phthalate		220	U
205-99-2	Benzo(b)fluoranthene		210	
207-08-9	Benzo(k)fluoranthene		150	U
50-32-8	Benzo(a)pyrene		150	
53-70-3	Dibenz(a,h)anthracene		150	U
193-39-5	Indeno(1,2,3-cd)pyrene		150	U
191-24-2	Benzo(g,h,i)perylene		150	U

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-4

Sample wt/vol: <u>15.494</u> (g/ml) <u>G</u> Lab File ID: <u>B020609.D</u>

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 8.81 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylami	ne	210	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)eth	er	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl	)ether	140	U
106-44-5	3- & 4-Methylphenol		280	U
621-64-7	n-Nitroso-di-n-propyla	amine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		350	U
105-67-9	2,4-Dimethylphenol		710	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)m	nethane	140	U
120-83-2	2,4-Dichlorophenol		350	U
120-82-1	1,2,4-Trichlorobenze	ne	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene	)	140	U
59-50-7	4-Chloro-3-methylphe	enol	350	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopent	adiene	140	U
88-06-2	2,4,6-Trichloropheno		140	U
95-95-4	2,4,5-Trichloropheno		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



SC-4 New England Testing Laboratory Contract: Blackstone

Lab Name: Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-4

Sample wt/vol: 15.494 (g/ml) G Lab File ID: B020609.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 8.81 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

#### **CONCENTRATION UNITS:**

		OONOLIVITATI	ON CINITO.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		350	U
100-02-7	4-Nitrophenol		350	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phen	yl ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylp	henol	350	U
86-30-6	n-Nitrosodiphenylami	ine	140	U
101-55-3	4-Bromophenyl phen	yl ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		350	U
85-01-8	Phenanthrene		140	U
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4300	U
129-00-0	Pyrene		140	U
85-68-7	Butyl benzyl phthalate	е	140	U
91-94-1	3,3'-Dichlorobenzidin	е	350	U
56-55-3	Benzo(a)anthracene		140	U
218-01-9	Chrysene		140	U
117-81-7	bis(2-Ethylhexyl)phth	alate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene	Э	140	U
207-08-9	Benzo(k)fluoranthene	9	140	U
50-32-8	Benzo(a)pyrene		140	U
53-70-3	Dibenz(a,h)anthracer	ne	140	U
193-39-5	Indeno(1,2,3-cd)pyre		140	U
191-24-2	Benzo(g,h,i)perylene		140	U

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETCLAB

Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-5

Sample wt/vol: 15.933 (g/ml) G Lab File ID: B020610.D

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 6.52 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

		CONCLINITION	CIN CINITO.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamine	 e	200	U
110-86-1	Pyridine		130	U
108-95-2	Phenol		130	Ū
62-53-3	Aniline		130	U
111-44-4	bis(2-Chloroethyl)ether	•	130	U
95-57-8	2-Chlorophenol		130	U
541-73-1	1,3-Dichlorobenzene		130	U
106-46-7	1,4-Dichlorobenzene		130	U
95-50-1	1,2-Dichlorobenzene		130	U
95-48-7	2-Methylphenol		130	U
108-60-1	bis(2-chloroisopropyl)e	ther	130	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propylan	nine	130	U
67-72-1	Hexachloroethane		130	U
98-95-3	Nitrobenzene		130	U
78-59-1	Isophorone		130	U
88-75-5	2-Nitrophenol		340	U
105-67-9	2,4-Dimethylphenol		670	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)me	thane	130	U
120-83-2	2,4-Dichlorophenol		340	U
120-82-1	1,2,4-Trichlorobenzene	)	130	C
91-20-3	Naphthalene		130	U
106-47-8	4-Chloroaniline		130	U
87-68-3	Hexachlorobutadiene		130	U
59-50-7	4-Chloro-3-methylphen	ol	340	C
91-57-6	2-Methylnaphthalene		130	U
77-47-4	Hexachlorocyclopentac	diene	130	C
88-06-2	2,4,6-Trichlorophenol		130	C
95-95-4	2,4,5-Trichlorophenol		130	C
91-58-7	2-Chloronaphthalene		130	C
88-74-4	2-Nitroaniline		130	C
131-11-3	Dimethyl phthalate		130	U
208-96-8	Acenaphthylene		130	U
606-20-2	2,6-Dinitrotoluene		130	U
99-09-2	3-Nitroaniline		130	U
83-32-9	Acenaphthene		130	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



SC-5 New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: SC-5

Sample wt/vol: 15.933 (g/ml) G Lab File ID: B020610.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 6.52 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

Lab Name:

#### **CONCENTRATION UNITS:**

		CONCLINITATI	ON ONLIG.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		340	U
100-02-7	4-Nitrophenol		340	U
132-64-9	Dibenzofuran		130	U
121-14-2	2,4-Dinitrotoluene		130	U
84-66-2	Diethyl phthalate		130	U
86-73-7	Fluorene		130	U
7005-72-3	4-Chlorophenyl phen	yl ether	130	U
100-01-6	4-Nitroaniline		130	U
534-52-1	4,6-Dinitro-2-methylp	henol	340	U
86-30-6	n-Nitrosodiphenylam	ine	130	U
101-55-3	4-Bromophenyl phen	yl ether	130	U
118-74-1	Hexachlorobenzene		130	U
87-86-5	Pentachlorophenol		340	U
85-01-8	Phenanthrene		130	U
120-12-7	Anthracene		130	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		130	U
92-87-5	Benzidine		4000	U
129-00-0	Pyrene		130	U
85-68-7	Butyl benzyl phthalat	е	130	U
91-94-1	3,3'-Dichlorobenzidin	e	340	U
56-55-3	Benzo(a)anthracene		130	U
218-01-9	Chrysene		130	U
117-81-7	bis(2-Ethylhexyl)phth	alate	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene	е	130	U
207-08-9	Benzo(k)fluoranthene	e	130	U
50-32-8	Benzo(a)pyrene		130	U
53-70-3	Dibenz(a,h)anthracei	ne	130	U
193-39-5	Indeno(1,2,3-cd)pyre	ene	130	U
191-24-2	Benzo(g,h,i)perylene		130	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



S-6 New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-6

Sample wt/vol: 15.116 (g/ml) G Lab File ID: B020625.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 7.14 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylami	ne	210	U
110-86-1	Pyridine		140	Ū
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)eth	er	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	C
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl	)ether	140	C
106-44-5	3- & 4-Methylphenol		280	C
621-64-7	n-Nitroso-di-n-propyla	amine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		360	U
105-67-9	2,4-Dimethylphenol		710	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)m	nethane	140	U
120-83-2	2,4-Dichlorophenol		360	U
120-82-1	1,2,4-Trichlorobenzei	ne	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylphe	enol	360	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopent	adiene	140	U
88-06-2	2,4,6-Trichloropheno		140	U
95-95-4	2,4,5-Trichloropheno		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		160	
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



S-6 Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 SAS No.: PARE SDG No.: PARE Case No.: A0204-22

Matrix: (soil/water) SOIL Lab Sample ID: S-6

Sample wt/vol: 15.116 (g/ml) G Lab File ID: B020625.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 7.14 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

#### **CONCENTRATION UNITS:**

CAS NO. COMPOUND		(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		360	U
100-02-7	4-Nitrophenol		360	U
132-64-9	Dibenzofuran		230	
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl pheny	d ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylph	nenol	360	U
86-30-6	n-Nitrosodiphenylamir	ne	140	U
101-55-3	4-Bromophenyl pheny	d ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		360	U
85-01-8	Phenanthrene		2300	
120-12-7	Anthracene		410	
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4300	U
129-00-0	Pyrene		2700	
85-68-7	Butyl benzyl phthalate	}	140	U
91-94-1	3,3'-Dichlorobenzidine	)	360	U
56-55-3	Benzo(a)anthracene		1400	
218-01-9	Chrysene		1500	
117-81-7	bis(2-Ethylhexyl)phtha	alate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene		1700	
207-08-9	Benzo(k)fluoranthene		560	
50-32-8	Benzo(a)pyrene		1300	
53-70-3	Dibenz(a,h)anthracen	e	240	
193-39-5	Indeno(1,2,3-cd)pyrer		1000	
191-24-2	Benzo(g,h,i)perylene		930	

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



S-7 Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-7

Sample wt/vol: 15.666 (g/ml) G Lab File ID: B020621.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 7.81 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamine		210	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)ether		140	Ū
95-57-8	2-Chlorophenol		140	Ū
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl)ethe	er	140	U
106-44-5	3- & 4-Methylphenol		280	U
621-64-7	n-Nitroso-di-n-propylamin	ie	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		350	U
105-67-9	2,4-Dimethylphenol		690	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)metha	ane	140	U
120-83-2	2,4-Dichlorophenol		350	U
120-82-1	1,2,4-Trichlorobenzene		140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylphenol		350	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopentadie	ne	140	U
88-06-2	2,4,6-Trichlorophenol		140	U
95-95-4	2,4,5-Trichlorophenol		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



**S-7** New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 SAS No.: PARE SDG No.: PARE Case No.: A0204-22

Matrix: (soil/water) SOIL Lab Sample ID: S-7

Sample wt/vol: 15.666 (g/ml) G Lab File ID: B020621.D Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: 7.81 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		350	U
100-02-7	4-Nitrophenol		350	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl pheny	yl ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylp	henol	350	U
86-30-6	n-Nitrosodiphenylami	ne	140	U
101-55-3	4-Bromophenyl pheny	yl ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		350	U
85-01-8	Phenanthrene		740	
120-12-7	Anthracene		160	
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4200	U
129-00-0	Pyrene		1100	
85-68-7	Butyl benzyl phthalate	e	140	U
91-94-1	3,3'-Dichlorobenziding	е	350	U
56-55-3	Benzo(a)anthracene		610	
218-01-9	Chrysene		650	
117-81-7	bis(2-Ethylhexyl)phtha	alate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene	)	790	
207-08-9	Benzo(k)fluoranthene	,	280	
50-32-8	Benzo(a)pyrene		590	
53-70-3	Dibenz(a,h)anthracer	ne	140	U
193-39-5	Indeno(1,2,3-cd)pyrei	ne	440	
191-24-2	Benzo(g,h,i)perylene		390	

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



S-8 New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-8

Sample wt/vol: 15.696 (g/ml) G Lab File ID: B020614.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 3.95 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylam	ine	200	U
110-86-1	Pyridine		130	U
108-95-2	Phenol		130	U
62-53-3	Aniline		130	U
111-44-4	bis(2-Chloroethyl)eth	er	130	U
95-57-8	2-Chlorophenol		130	U
541-73-1	1,3-Dichlorobenzene		130	U
106-46-7	1,4-Dichlorobenzene		130	U
95-50-1	1,2-Dichlorobenzene		130	U
95-48-7	2-Methylphenol		130	U
108-60-1	bis(2-chloroisopropyl	)ether	130	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propyl	amine	130	U
67-72-1	Hexachloroethane		130	U
98-95-3	Nitrobenzene		130	U
78-59-1	Isophorone		130	U
88-75-5	2-Nitrophenol		330	U
105-67-9	2,4-Dimethylphenol		660	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)n	nethane	130	U
120-83-2	2,4-Dichlorophenol		330	U
120-82-1	1,2,4-Trichlorobenze	ne	130	U
91-20-3	Naphthalene		130	U
106-47-8	4-Chloroaniline		130	U
87-68-3	Hexachlorobutadiene	)	130	U
59-50-7	4-Chloro-3-methylph	enol	330	U
91-57-6	2-Methylnaphthalene	,	130	U
77-47-4	Hexachlorocyclopent	adiene	130	U
88-06-2	2,4,6-Trichloropheno	l	130	U
95-95-4	2,4,5-Trichloropheno		130	U
91-58-7	2-Chloronaphthalene	,	130	U
88-74-4	2-Nitroaniline		130	U
131-11-3	Dimethyl phthalate		130	U
208-96-8	Acenaphthylene		130	U
606-20-2	2,6-Dinitrotoluene		130	U
99-09-2	3-Nitroaniline		130	U
83-32-9	Acenaphthene		130	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



S-8 New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 SAS No.: PARE SDG No.: PARE Case No.: A0204-22

Matrix: (soil/water) SOIL Lab Sample ID: S-8

Sample wt/vol: 15.696 (g/ml) G Lab File ID: B020614.D

Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 3.95 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO.	CAS NO. COMPOUND		UG/KG	Q
51-28-5	2,4-Dinitrophenol		330	U
100-02-7	4-Nitrophenol		330	U
132-64-9	Dibenzofuran		130	U
121-14-2	2,4-Dinitrotoluene		130	U
84-66-2	Diethyl phthalate		130	U
86-73-7	Fluorene		130	U
7005-72-3	4-Chlorophenyl phenyl	ether	130	U
100-01-6	4-Nitroaniline		130	U
534-52-1	4,6-Dinitro-2-methylphe	enol	330	U
86-30-6	n-Nitrosodiphenylamine	е	130	U
101-55-3	4-Bromophenyl phenyl	ether	130	U
118-74-1	Hexachlorobenzene		130	U
87-86-5	Pentachlorophenol		330	U
85-01-8	Phenanthrene		130	U
120-12-7	Anthracene		130	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		130	U
92-87-5	Benzidine		4000	U
129-00-0	Pyrene		130	U
85-68-7	Butyl benzyl phthalate		130	U
91-94-1	3,3'-Dichlorobenzidine		330	U
56-55-3	Benzo(a)anthracene		130	U
218-01-9	Chrysene		130	U
117-81-7	bis(2-Ethylhexyl)phthal	ate	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene		130	U
207-08-9	Benzo(k)fluoranthene		130	U
50-32-8	Benzo(a)pyrene		130	U
53-70-3	Dibenz(a,h)anthracene		130	U
193-39-5	Indeno(1,2,3-cd)pyrene	Э	130	U
191-24-2	Benzo(g,h,i)perylene		130	U

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: New England Testing Laboratory Contract: Blackstone S-2 (2')

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-2 (2')

 Sample wt/vol:
 15.203
 (g/ml)
 G
 Lab File ID:
 B020623.D

 Level:
 (low/med)
 LOW
 Date Received:
 2/4/2014

% Moisture: 5.31 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

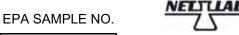
Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylami	ne	210	U
110-86-1	Pyridine		140	Ū
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)eth	er	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl	ether)	140	U
106-44-5	3- & 4-Methylphenol		280	U
621-64-7	n-Nitroso-di-n-propyla	amine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		350	U
105-67-9	2,4-Dimethylphenol		690	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)m	nethane	140	U
120-83-2	2,4-Dichlorophenol		350	U
120-82-1	1,2,4-Trichlorobenze	ne	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylphe	enol	350	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopent	adiene	140	U
88-06-2	2,4,6-Trichloropheno		140	U
95-95-4	2,4,5-Trichloropheno		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

 Matrix: (soil/water)
 SOIL
 Lab Sample ID:
 S-2 (2')

 Sample wt/vol:
 15.203
 (g/ml) G
 Lab File ID:
 B020623.D

Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: \_\_\_\_5.31\_\_ decanted:(Y/N) \_\_\_N \_\_ Date Extracted: <u>2/6/2014</u>

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_\_N \_\_\_ pH: \_\_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO. COMPOUND		(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		350	U
100-02-7	4-Nitrophenol		350	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phenyl	ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylphe	nol	350	U
86-30-6	n-Nitrosodiphenylamine	)	140	U
101-55-3	4-Bromophenyl phenyl	ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		350	U
85-01-8	Phenanthrene		1300	
120-12-7	Anthracene		230	
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4200	U
129-00-0	Pyrene		2000	
85-68-7	Butyl benzyl phthalate		140	U
91-94-1	3,3'-Dichlorobenzidine		350	U
56-55-3	Benzo(a)anthracene		1200	
218-01-9	Chrysene		1200	
117-81-7	bis(2-Ethylhexyl)phthala	ate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene		1500	
207-08-9	Benzo(k)fluoranthene		550	
50-32-8	Benzo(a)pyrene		1100	
53-70-3	Dibenz(a,h)anthracene		190	
193-39-5	Indeno(1,2,3-cd)pyrene	l .	910	
191-24-2	Benzo(g,h,i)perylene		790	

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETCLAB

Lab Name: New England Testing Laboratory Contract: Blackstone S-2 (8')

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

 Matrix: (soil/water)
 SOIL
 Lab Sample ID:
 S-2 (8')

 Sample wt/vol:
 15.13
 (g/ml) G
 Lab File ID:
 B020618.D

Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: \_\_\_\_\_\_\_ decanted:(Y/N) \_\_\_\_N \_\_\_ Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylam	ne	220	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)eth	er	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl	)ether	140	U
106-44-5	3- & 4-Methylphenol		290	U
621-64-7	n-Nitroso-di-n-propyla	amine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		360	U
105-67-9	2,4-Dimethylphenol		720	U
65-85-0	Benzoic acid		1100	U
111-91-1	bis(2-Chloroethoxy)m	nethane	140	U
120-83-2	2,4-Dichlorophenol		360	U
120-82-1	1,2,4-Trichlorobenze	ne	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene	,	140	U
59-50-7	4-Chloro-3-methylpho	enol	360	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopent	adiene	140	U
88-06-2	2,4,6-Trichloropheno		140	U
95-95-4	2,4,5-Trichloropheno		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NETCLAB

EPA SAMPLE NO.

New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-2 (8')

Sample wt/vol: 15.13 (g/ml) G Lab File ID: B020618.D

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 7.96 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_\_N \_\_\_ pH: \_\_\_\_\_

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO. COMPOUND		(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		350	U
100-02-7	4-Nitrophenol		360	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phenyl	ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylphe	nol	360	U
86-30-6	n-Nitrosodiphenylamine	)	140	U
101-55-3	4-Bromophenyl phenyl	ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		360	U
85-01-8	Phenanthrene		720	
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		220	U
206-44-0	Fluoranthene		1200	
92-87-5	Benzidine		4300	U
129-00-0	Pyrene		1000	
85-68-7	Butyl benzyl phthalate		140	U
91-94-1	3,3'-Dichlorobenzidine		360	U
56-55-3	Benzo(a)anthracene		500	
218-01-9	Chrysene		520	
117-81-7	bis(2-Ethylhexyl)phthala	ate	220	U
117-84-0	Di-n-octyl phthalate		220	U
205-99-2	Benzo(b)fluoranthene		630	
207-08-9	Benzo(k)fluoranthene		240	
50-32-8	Benzo(a)pyrene		460	
53-70-3	Dibenz(a,h)anthracene		140	U
193-39-5	Indeno(1,2,3-cd)pyrene	l .	320	
191-24-2	Benzo(g,h,i)perylene		290	

GPC Cleanup: (Y/N) N pH:

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETCLIAB

Lab Name:	New Eng	gland Testing	g Laboratory	Contrac	ct: Blackstone	S-3 (2')
Lab Code:	RI010	Case	e No.: A0204-	22 SAS	No.: PARE S	DG No.: PARE
Matrix: (soil/v	vater)	SOIL			Lab Sample ID:	S-3 (2')
Sample wt/vo	ol:	15.582	(g/ml) G		Lab File ID:	B020611.D
Level: (low/n	ned)	LOW			Date Received:	2/4/2014
% Moisture:	3.91	deca	anted:(Y/N)	N	Date Extracted:	2/6/2014
Concentrated	d Extract '	Volume: 10	000 (uL)		Date Analyzed:	2/6/2014
Injection Volu	ıme: <u>1</u> .	0 (uL)			Dilution Factor:	1.0

#### **CONCENTRATION UNITS:**

		CONCLINITION	ON ONLIG.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamir	ne	200	U
110-86-1	Pyridine		130	U
108-95-2	Phenol		130	U
62-53-3	Aniline		130	U
111-44-4	bis(2-Chloroethyl)ethe	r	130	U
95-57-8	2-Chlorophenol		130	U
541-73-1	1,3-Dichlorobenzene		130	U
106-46-7	1,4-Dichlorobenzene		130	U
95-50-1	1,2-Dichlorobenzene		130	U
95-48-7	2-Methylphenol		130	U
108-60-1	bis(2-chloroisopropyl)e	ether	130	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propyla	mine	130	U
67-72-1	Hexachloroethane		130	U
98-95-3	Nitrobenzene		130	U
78-59-1	Isophorone		130	U
88-75-5	2-Nitrophenol		330	U
105-67-9	2,4-Dimethylphenol		670	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)me	ethane	130	U
120-83-2	2,4-Dichlorophenol		330	U
120-82-1	1,2,4-Trichlorobenzen	е	130	U
91-20-3	Naphthalene		130	U
106-47-8	4-Chloroaniline		130	U
87-68-3	Hexachlorobutadiene		130	U
59-50-7	4-Chloro-3-methylphe	nol	330	U
91-57-6	2-Methylnaphthalene		130	U
77-47-4	Hexachlorocyclopenta	diene	130	U
88-06-2	2,4,6-Trichlorophenol		130	U
95-95-4	2,4,5-Trichlorophenol		130	U
91-58-7	2-Chloronaphthalene		130	U
88-74-4	2-Nitroaniline		130	U
131-11-3	Dimethyl phthalate		130	U
208-96-8	Acenaphthylene		130	U
606-20-2	2,6-Dinitrotoluene		130	U
99-09-2	3-Nitroaniline		130	U
83-32-9	Acenaphthene		130	U

#### EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET



S-3 (2') New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-3 (2')

Sample wt/vol: 15.582 (g/ml) G Lab File ID: B020611.D Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: 3.91 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Ν pH:

Lab Name:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		330	U
100-02-7	4-Nitrophenol		330	U
132-64-9	Dibenzofuran		130	U
121-14-2	2,4-Dinitrotoluene		130	U
84-66-2	Diethyl phthalate		130	U
86-73-7	Fluorene		130	U
7005-72-3	4-Chlorophenyl phenyl e	ether	130	U
100-01-6	4-Nitroaniline		130	U
534-52-1	4,6-Dinitro-2-methylpher	nol	330	U
86-30-6	n-Nitrosodiphenylamine		130	U
101-55-3	4-Bromophenyl phenyl e	ether	130	U
118-74-1	Hexachlorobenzene		130	U
87-86-5	Pentachlorophenol		330	U
85-01-8	Phenanthrene		130	U
120-12-7	Anthracene		130	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		130	U
92-87-5	Benzidine		4000	U
129-00-0	Pyrene		130	U
85-68-7	Butyl benzyl phthalate		130	U
91-94-1	3,3'-Dichlorobenzidine		330	U
56-55-3	Benzo(a)anthracene		130	U
218-01-9	Chrysene		130	U
117-81-7	bis(2-Ethylhexyl)phthala	ite	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene		130	U
207-08-9	Benzo(k)fluoranthene		130	U
50-32-8	Benzo(a)pyrene		130	U
53-70-3	Dibenz(a,h)anthracene		130	U
193-39-5	Indeno(1,2,3-cd)pyrene		130	U
191-24-2	Benzo(g,h,i)perylene		130	U

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-3 (8')

NETTLAB

Lab Name:	New England	I Testing Laboratory	Contract:	Blackston	ie	·	3-3 (0 <i>)</i>	
Lab Code:	RI010	Case No.: A0204-22	SAS No	.: PARE	SDO	G No.:	PARE	

 Matrix: (soil/water)
 SOIL
 Lab Sample ID:
 S-3 (8')

 Sample wt/vol:
 15.018
 (g/ml)
 G
 Lab File ID:
 B020612.D

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 2.15 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamin	e	200	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)ethe	r	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl)e	ether	140	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propylai	mine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		340	U
105-67-9	2,4-Dimethylphenol		680	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)me	ethane	140	U
120-83-2	2,4-Dichlorophenol		340	U
120-82-1	1,2,4-Trichlorobenzen	Э	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylphei	nol	340	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopenta	diene	140	U
88-06-2	2,4,6-Trichlorophenol		140	U
95-95-4	2,4,5-Trichlorophenol		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

Lab Name: New England Testing Laboratory Contract: Blackstone S-3 (8')

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-3 (8')

 Sample wt/vol:
 15.018
 (g/ml)
 G
 Lab File ID:
 B020612.D

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 2.15 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_\_N \_\_\_ pH: \_\_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		340	U
100-02-7	4-Nitrophenol		340	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl pher	nyl ether	140	U
100-01-6	4-Nitroaniline	•	140	U
534-52-1	4,6-Dinitro-2-methylp	ohenol	340	U
86-30-6	n-Nitrosodiphenylam	nine	140	U
101-55-3	4-Bromophenyl pher	nyl ether	140	U
118-74-1	Hexachlorobenzene	•	140	U
87-86-5	Pentachlorophenol		340	U
85-01-8	Phenanthrene		140	U
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4100	U
129-00-0	Pyrene		140	U
85-68-7	Butyl benzyl phthala	te	140	U
91-94-1	3,3'-Dichlorobenzidir	ne	340	U
56-55-3	Benzo(a)anthracene		140	U
218-01-9	Chrysene		140	U
117-81-7	bis(2-Ethylhexyl)phtl	nalate	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthen	е	140	U
207-08-9	Benzo(k)fluoranthen	е	140	U
50-32-8	Benzo(a)pyrene		140	U
53-70-3	Dibenz(a,h)anthrace		140	U
193-39-5	Indeno(1,2,3-cd)pyre	ene	140	U
191-24-2	Benzo(g,h,i)perylene	)	140	U

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

Lab Name: New England Testing Laboratory Contract: Blackstone S-4 (2')

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-4 (2')

Sample wt/vol: 15.508 (g/ml) G Lab File ID: B020615.D

Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: \_\_\_\_7.43 \_\_\_ decanted:(Y/N) \_\_\_N \_\_ Date Extracted: \_\_\_2/6/2014 Concentrated Extract Volume: 1000 (uL) Date Analyzed: \_\_\_2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_\_N \_\_\_ pH: \_\_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamin	e	210	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)ethe	r	140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl)e	ether	140	U
106-44-5	3- & 4-Methylphenol		280	U
621-64-7	n-Nitroso-di-n-propylar	mine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		350	U
105-67-9	2,4-Dimethylphenol		690	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)me	ethane	140	U
120-83-2	2,4-Dichlorophenol		350	U
120-82-1	1,2,4-Trichlorobenzene	9	140	U
91-20-3	Naphthalene		140	U
106-47-8	4-Chloroaniline		140	U
87-68-3	Hexachlorobutadiene		140	U
59-50-7	4-Chloro-3-methylpher	nol	350	U
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopenta	diene	140	U
88-06-2	2,4,6-Trichlorophenol		140	U
95-95-4	2,4,5-Trichlorophenol		140	U
91-58-7	2-Chloronaphthalene		140	U
88-74-4	2-Nitroaniline		140	U
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

FORM I SV-1 OLM03.0

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-4 (2')

Sample wt/vol: <u>15.508</u> (g/ml) <u>G</u> Lab File ID: <u>B020615.D</u>

Level: (low/med) LOW Date Received: 2/4/2014
% Moisture: 7.43 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		350	U
100-02-7	4-Nitrophenol		350	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phenyl	ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylphe	enol	350	U
86-30-6	n-Nitrosodiphenylamin	е	140	U
101-55-3	4-Bromophenyl phenyl	ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		350	U
85-01-8	Phenanthrene		140	U
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4200	U
129-00-0	Pyrene		140	U
85-68-7	Butyl benzyl phthalate		140	U
91-94-1	3,3'-Dichlorobenzidine		350	U
56-55-3	Benzo(a)anthracene		140	U
218-01-9	Chrysene		140	U
117-81-7	bis(2-Ethylhexyl)phthal	ate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene		140	U
207-08-9	Benzo(k)fluoranthene		140	U
50-32-8	Benzo(a)pyrene		140	U
53-70-3	Dibenz(a,h)anthracene		140	U
193-39-5	Indeno(1,2,3-cd)pyrene	Э	140	U
191-24-2	Benzo(g,h,i)perylene		140	U

FORM I SV-2 OLM03.0

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-4 (8')

NETCLAB

Lab Name:	New En	gland T	esting Labo	ratory	Contract:	Blackston	ne	,	) <del>-</del>	
Lab Code:	RI010		Case No.:	A0204-22	SAS No.	: PARE	SDO	3 No.:	PARE	
Matrix: (soil/v	water)	SOIL			Lab	Sample II	D: S	-4 (8')		

 Sample wt/vol:
 15.982
 (g/ml)
 G
 Lab File ID:
 B020616.D

 Level: (low/med)
 LOW
 Date Received:
 2/4/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

		CONCLINITION	CIN CINITO.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamine	 e	200	U
110-86-1	Pyridine	-	130	Ū
108-95-2	Phenol		130	U
62-53-3	Aniline		130	Ū
111-44-4	bis(2-Chloroethyl)ether	•	130	Ū
95-57-8	2-Chlorophenol		130	Ū
541-73-1	1,3-Dichlorobenzene		130	U
106-46-7	1,4-Dichlorobenzene		130	U
95-50-1	1,2-Dichlorobenzene		130	U
95-48-7	2-Methylphenol		130	U
108-60-1	bis(2-chloroisopropyl)e	ther	130	U
106-44-5	3- & 4-Methylphenol		260	U
621-64-7	n-Nitroso-di-n-propylan	nine	130	U
67-72-1	Hexachloroethane		130	U
98-95-3	Nitrobenzene		130	U
78-59-1	Isophorone		130	U
88-75-5	2-Nitrophenol		330	U
105-67-9	2,4-Dimethylphenol		650	U
65-85-0	Benzoic acid		980	U
111-91-1	bis(2-Chloroethoxy)me	thane	130	U
120-83-2	2,4-Dichlorophenol		330	U
120-82-1	1,2,4-Trichlorobenzene	)	130	U
91-20-3	Naphthalene		130	U
106-47-8	4-Chloroaniline		130	U
87-68-3	Hexachlorobutadiene		130	U
59-50-7	4-Chloro-3-methylphen	ol	330	U
91-57-6	2-Methylnaphthalene		130	U
77-47-4	Hexachlorocyclopentac	diene	130	U
88-06-2	2,4,6-Trichlorophenol		130	U
95-95-4	2,4,5-Trichlorophenol		130	U
91-58-7	2-Chloronaphthalene		130	U
88-74-4	2-Nitroaniline		130	U
131-11-3	Dimethyl phthalate		130	U
208-96-8	Acenaphthylene		130	U
606-20-2	2,6-Dinitrotoluene		130	U
99-09-2	3-Nitroaniline		130	U
83-32-9	Acenaphthene		130	U

FORM I SV-1 OLM03.0

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-4 (8')

NETTLAB

Lab Name:	New En	gland T	esting Labo	ratory	Contract:	Blackston	е	,	J- <del>4</del> (0 )	
Lab Code:	RI010		Case No.:	A0204-22	SAS No.	: PARE	SDO	3 No.:	PARE	
Matrix: (soil/\	water)	SOIL			Lab	Sample II	D: S	-4 (8')		

 Sample wt/vol:
 15.982
 (g/ml)
 G
 Lab File ID:
 B020616.D

 Level:
 (low/med)
 LOW
 Date Received:
 2/4/2014

% Moisture: 4.2 decanted:(Y/N) N Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) \_\_\_ N \_\_ pH: \_\_\_\_

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		330	U
100-02-7	4-Nitrophenol		330	U
132-64-9	Dibenzofuran		130	U
121-14-2	2,4-Dinitrotoluene		130	U
84-66-2	Diethyl phthalate		130	U
86-73-7	Fluorene		130	U
7005-72-3	4-Chlorophenyl phenyl e	ether	130	U
100-01-6	4-Nitroaniline		130	U
534-52-1	4,6-Dinitro-2-methylpher	nol	330	U
86-30-6	n-Nitrosodiphenylamine		130	U
101-55-3	4-Bromophenyl phenyl e	ther	130	U
118-74-1	Hexachlorobenzene		130	U
87-86-5	Pentachlorophenol		330	U
85-01-8	Phenanthrene		130	U
120-12-7	Anthracene		130	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		230	
92-87-5	Benzidine		3900	U
129-00-0	Pyrene		210	
85-68-7	Butyl benzyl phthalate		130	U
91-94-1	3,3'-Dichlorobenzidine		330	U
56-55-3	Benzo(a)anthracene		130	U
218-01-9	Chrysene		140	
117-81-7	bis(2-Ethylhexyl)phthala	te	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene		170	
207-08-9	Benzo(k)fluoranthene		130	U
50-32-8	Benzo(a)pyrene		130	
53-70-3	Dibenz(a,h)anthracene		130	U
193-39-5	Indeno(1,2,3-cd)pyrene		130	U
191-24-2	Benzo(g,h,i)perylene		130	U

FORM I SV-2 OLM03.0

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETCLIAB

S-5 (2') Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: S-5 (2') Sample wt/vol: 15.948 (g/ml) G Lab File ID: B020617.D Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 7.22 decanted:(Y/N) Date Extracted: 2/6/2014 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylami	ne	200	U
110-86-1	Pyridine		130	U
108-95-2	Phenol		130	U
62-53-3	Aniline		130	U
111-44-4	bis(2-Chloroethyl)eth	er	130	U
95-57-8	2-Chlorophenol		130	U
541-73-1	1,3-Dichlorobenzene		130	U
106-46-7	1,4-Dichlorobenzene		130	U
95-50-1	1,2-Dichlorobenzene		130	U
95-48-7	2-Methylphenol		130	U
108-60-1	bis(2-chloroisopropyl	)ether	130	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propyla	amine	130	U
67-72-1	Hexachloroethane		130	U
98-95-3	Nitrobenzene		130	U
78-59-1	Isophorone		130	U
88-75-5	2-Nitrophenol		340	U
105-67-9	2,4-Dimethylphenol		670	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)m	nethane	130	U
120-83-2	2,4-Dichlorophenol		340	U
120-82-1	1,2,4-Trichlorobenze	ne	130	U
91-20-3	Naphthalene		130	U
106-47-8	4-Chloroaniline		130	U
87-68-3	Hexachlorobutadiene	!	130	U
59-50-7	4-Chloro-3-methylphe	enol	340	U
91-57-6	2-Methylnaphthalene		130	U
77-47-4	Hexachlorocyclopent	adiene	130	U
88-06-2	2,4,6-Trichloropheno		130	U
95-95-4	2,4,5-Trichloropheno		130	U
91-58-7	2-Chloronaphthalene		130	U
88-74-4	2-Nitroaniline		130	U
131-11-3	Dimethyl phthalate		130	U
208-96-8	Acenaphthylene		130	U
606-20-2	2,6-Dinitrotoluene		130	U
99-09-2	3-Nitroaniline		130	U
83-32-9	Acenaphthene		130	U

FORM I SV-1 OLM03.0

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-5 (2') Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: S-5 (2') Sample wt/vol: 15.948 (g/ml) G Lab File ID: B020617.D Level: (low/med) LOW Date Received: 2/4/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

decanted:(Y/N)

GPC Cleanup: (Y/N) Ν pH:

7.22

% Moisture:

#### **CONCENTRATION UNITS:**

Date Extracted: 2/6/2014

		CONCLINITATI	CIN CINITO.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		330	J
100-02-7	4-Nitrophenol		340	U
132-64-9	Dibenzofuran		130	U
121-14-2	2,4-Dinitrotoluene		130	U
84-66-2	Diethyl phthalate		130	U
86-73-7	Fluorene		130	U
7005-72-3	4-Chlorophenyl phen	yl ether	130	U
100-01-6	4-Nitroaniline		130	U
534-52-1	4,6-Dinitro-2-methylp	henol	340	U
86-30-6	n-Nitrosodiphenylami	ne	130	U
101-55-3	4-Bromophenyl phen	yl ether	130	U
118-74-1	Hexachlorobenzene	•	130	U
87-86-5	Pentachlorophenol		340	U
85-01-8	Phenanthrene		130	U
120-12-7	Anthracene		130	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		130	U
92-87-5	Benzidine		4000	U
129-00-0	Pyrene		130	U
85-68-7	Butyl benzyl phthalat	е	130	U
91-94-1	3,3'-Dichlorobenzidin	е	340	U
56-55-3	Benzo(a)anthracene		130	U
218-01-9	Chrysene		130	U
117-81-7	bis(2-Ethylhexyl)phth	alate	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene	9	130	U
207-08-9	Benzo(k)fluoranthene	)	130	U
50-32-8	Benzo(a)pyrene		130	U
53-70-3	Dibenz(a,h)anthracer	ne	130	U
193-39-5	Indeno(1,2,3-cd)pyre	ne	130	U
191-24-2	Benzo(g,h,i)perylene		130	U

FORM I SV-2 OLM03.0 1B

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-5 (8') Lab Name: New England Testing Laboratory Contract: Blackstone

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Matrix: (soil/water) SOIL Lab Sample ID: S-5 (8') Sample wt/vol: 15.59 (g/ml) G Lab File ID: B020613.D

Level: (low/med) LOW Date Received: 2/4/2014

% Moisture: 7.23 decanted:(Y/N) Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014 Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

GPC Cleanup: (Y/N) Ν pH:

#### **CONCENTRATION UNITS:**

		OONOLINIIVAII	CIN CINITO.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylamine	<del></del>	210	U
110-86-1	Pyridine		140	U
108-95-2	Phenol		140	U
62-53-3	Aniline		140	U
111-44-4	bis(2-Chloroethyl)ether		140	U
95-57-8	2-Chlorophenol		140	U
541-73-1	1,3-Dichlorobenzene		140	U
106-46-7	1,4-Dichlorobenzene		140	U
95-50-1	1,2-Dichlorobenzene		140	U
95-48-7	2-Methylphenol		140	U
108-60-1	bis(2-chloroisopropyl)et	ther	140	U
106-44-5	3- & 4-Methylphenol		280	U
621-64-7	n-Nitroso-di-n-propylam	nine	140	U
67-72-1	Hexachloroethane		140	U
98-95-3	Nitrobenzene		140	U
78-59-1	Isophorone		140	U
88-75-5	2-Nitrophenol		340	U
105-67-9	2,4-Dimethylphenol		690	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)met	thane	140	U
120-83-2	2,4-Dichlorophenol		340	U
120-82-1	1,2,4-Trichlorobenzene		140	C
91-20-3	Naphthalene		140	C
106-47-8	4-Chloroaniline		140	C
87-68-3	Hexachlorobutadiene		140	C
59-50-7	4-Chloro-3-methylphen	ol	340	C
91-57-6	2-Methylnaphthalene		140	U
77-47-4	Hexachlorocyclopentad	liene	140	C
88-06-2	2,4,6-Trichlorophenol		140	C
95-95-4	2,4,5-Trichlorophenol		140	C
91-58-7	2-Chloronaphthalene		140	C
88-74-4	2-Nitroaniline		140	C
131-11-3	Dimethyl phthalate		140	U
208-96-8	Acenaphthylene		140	U
606-20-2	2,6-Dinitrotoluene		140	U
99-09-2	3-Nitroaniline		140	U
83-32-9	Acenaphthene		140	U

FORM I SV-1 OLM03.0 1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NETTLAB

Lab Name: New England Testing Laboratory Contract: Blackstone S-5 (8')

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

 Matrix: (soil/water)
 SOIL
 Lab Sample ID:
 S-5 (8')

 Sample wt/vol:
 15.59
 (g/ml)
 G
 Lab File ID:
 B020613.D

 Level: (low/med)
 LOW
 Date Received: 2/4/2014

 % Moisture:
 7.23
 decanted:(Y/N)
 N
 Date Extracted: 2/6/2014

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		340	U
100-02-7	4-Nitrophenol		340	U
132-64-9	Dibenzofuran		140	U
121-14-2	2,4-Dinitrotoluene		140	U
84-66-2	Diethyl phthalate		140	U
86-73-7	Fluorene		140	U
7005-72-3	4-Chlorophenyl phenyl	ether	140	U
100-01-6	4-Nitroaniline		140	U
534-52-1	4,6-Dinitro-2-methylphe	nol	340	U
86-30-6	n-Nitrosodiphenylamine	)	140	U
101-55-3	4-Bromophenyl phenyl	ether	140	U
118-74-1	Hexachlorobenzene		140	U
87-86-5	Pentachlorophenol		340	U
85-01-8	Phenanthrene		140	U
120-12-7	Anthracene		140	U
84-74-2	Di-n-butylphthalate		210	U
206-44-0	Fluoranthene		140	U
92-87-5	Benzidine		4100	U
129-00-0	Pyrene		140	U
85-68-7	Butyl benzyl phthalate		140	U
91-94-1	3,3'-Dichlorobenzidine		340	U
56-55-3	Benzo(a)anthracene		140	U
218-01-9	Chrysene		140	U
117-81-7	bis(2-Ethylhexyl)phthala	ate	210	U
117-84-0	Di-n-octyl phthalate		210	U
205-99-2	Benzo(b)fluoranthene		140	U
207-08-9	Benzo(k)fluoranthene		140	U
50-32-8	Benzo(a)pyrene		140	U
53-70-3	Dibenz(a,h)anthracene		140	U
193-39-5	Indeno(1,2,3-cd)pyrene		140	U
191-24-2	Benzo(g,h,i)perylene		140	U

FORM I SV-2 OLM03.0

1B

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSS020614

NETCLAB

Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: BSS020614 Sample wt/vol: 15 (g/ml) G Lab File ID: B020606.D Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 0 decanted:(Y/N) Date Extracted: 2/6/2014 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014 Injection Volume: 1.0 (uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
62-75-9	n-Nitrosodimethylam	ine	200	U
110-86-1	Pyridine		130	U
108-95-2	Phenol		130	U
62-53-3	Aniline		130	U
111-44-4	bis(2-Chloroethyl)eth	er	130	U
95-57-8	2-Chlorophenol		130	U
541-73-1	1,3-Dichlorobenzene		130	U
106-46-7	1,4-Dichlorobenzene		130	U
95-50-1	1,2-Dichlorobenzene		130	U
95-48-7	2-Methylphenol		130	U
108-60-1	bis(2-chloroisopropyl	)ether	130	U
106-44-5	3- & 4-Methylphenol		270	U
621-64-7	n-Nitroso-di-n-propyla	amine	130	U
67-72-1	Hexachloroethane		130	U
98-95-3	Nitrobenzene		130	U
78-59-1	Isophorone		130	U
88-75-5	2-Nitrophenol		330	U
105-67-9	2,4-Dimethylphenol		670	U
65-85-0	Benzoic acid		1000	U
111-91-1	bis(2-Chloroethoxy)n	nethane	130	U
120-83-2	2,4-Dichlorophenol		330	U
120-82-1	1,2,4-Trichlorobenze	ne	130	U
91-20-3	Naphthalene		130	U
106-47-8	4-Chloroaniline		130	U
87-68-3	Hexachlorobutadiene	)	130	U
59-50-7	4-Chloro-3-methylpho	enol	330	U
91-57-6	2-Methylnaphthalene	)	130	U
77-47-4	Hexachlorocyclopent	adiene	130	U
88-06-2	2,4,6-Trichloropheno		130	U
95-95-4	2,4,5-Trichloropheno		130	U
91-58-7	2-Chloronaphthalene	)	130	U
88-74-4	2-Nitroaniline		130	U
131-11-3	Dimethyl phthalate		130	U
208-96-8	Acenaphthylene		130	U
606-20-2	2,6-Dinitrotoluene		130	U
99-09-2	3-Nitroaniline		130	U
83-32-9	Acenaphthene		130	U

FORM I SV-1 OLM03.0

1C

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSS020614

Lab Name: New England Testing Laboratory Contract: Blackstone Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE Matrix: (soil/water) SOIL Lab Sample ID: BSS020614 Sample wt/vol: 15 (g/ml) G Lab File ID: B020606.D Level: (low/med) LOW Date Received: 2/4/2014 % Moisture: 0 decanted:(Y/N) Date Extracted: 2/6/2014 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/6/2014 Injection Volume: 1.0 (uL) Dilution Factor: 1.0

N pH:

GPC Cleanup: (Y/N)

### **CONCENTRATION UNITS:**

		CONCLINITATI	CIN CINITO.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		330	U
100-02-7	4-Nitrophenol		330	U
132-64-9	Dibenzofuran		130	U
121-14-2	2,4-Dinitrotoluene		130	U
84-66-2	Diethyl phthalate		130	U
86-73-7	Fluorene		130	U
7005-72-3	4-Chlorophenyl phen	yl ether	130	U
100-01-6	4-Nitroaniline		130	U
534-52-1	4,6-Dinitro-2-methylp	henol	330	U
86-30-6	n-Nitrosodiphenylami	ne	130	U
101-55-3	4-Bromophenyl phen	yl ether	130	U
118-74-1	Hexachlorobenzene		130	U
87-86-5	Pentachlorophenol		330	U
85-01-8	Phenanthrene		130	U
120-12-7	Anthracene		130	U
84-74-2	Di-n-butylphthalate		200	U
206-44-0	Fluoranthene		130	U
92-87-5	Benzidine		4000	U
129-00-0	Pyrene		130	U
85-68-7	Butyl benzyl phthalate	е	130	U
91-94-1	3,3'-Dichlorobenzidin	е	330	U
56-55-3	Benzo(a)anthracene		130	U
218-01-9	Chrysene		130	U
117-81-7	bis(2-Ethylhexyl)phth	alate	200	U
117-84-0	Di-n-octyl phthalate		200	U
205-99-2	Benzo(b)fluoranthene	9	130	U
207-08-9	Benzo(k)fluoranthene	)	130	U
50-32-8	Benzo(a)pyrene		130	U
53-70-3	Dibenz(a,h)anthracer	ne	130	U
193-39-5	Indeno(1,2,3-cd)pyre	ne	130	U
191-24-2	Benzo(g,h,i)perylene		130	U

FORM I SV-2 OLM03.0



# SOIL SEMIVOLATILE SURROGATE RECOVERY



Lab Name: New England Testing Laboratory Contract: Blackstone Valley

Lab Code: RI010 Case No.: A0204-22 SAS No.: PARE SDG No.: PARE

Level: (low/med) LOW

Γ	1							
	EPA	S1	S2	S3	S4	S5	S6	TOT
	SAMPLE NO.	#	#	#	#	#	#	OUT
01	BSS020614	87	93	92	92	86	96	0
02	LCS020614	118	125	121	120	130	123	0
03	SC-4	93	98	94	97	102	100	0
04	SC-5	89	94	92	93	100	89	0
05	S-3 (2)	83	88	85	88	90	85	0
06	S-3 (8)	84	89	86	89	93	86	0
07	S-5 (8)	78	83	79	83	83	82	0
80	S-8	75	81	78	82	85	81	0
09	S-4 (2)	91	97	94	97	100	97	0
10	S-4 (8)	76	81	79	82	87	76	0
11	S-5 (2)	86	92	90	92	97	87	0
12	S-2 (8)	86	92	88	91	98	86	0
13	SC-1	76	80	76	81	91	93	0
14	S-1 (7)	93	99	94	97	106	102	0
15	S-7	82	86	84	88	95	86	0
16	SC-3	95	101	95	99	116	107	0
17	S-2 (2)	77	81	80	81	92	82	0
18	SC-2	80	85	80	84	97	96	0
19	S-6	82	88	84	88	99	96	0
20	S-1 (2)	87	93	90	92	106	91	0

#### QC LIMITS

S1	=	2-Fluorophenol	(27-130)
S2	=	Phenol-d6	(30-130)
S3	=	Nitrobenzene-d5	(35-130)
S4	=	2-Fluorobiphenyl	(36-130)
S5	=	2,4,6-Tribromophenol	(43-130)
S6	=	Terphenyl-d14	(30-130)

<sup>#</sup> Column to be used to flag recovery values

D Surrogate diluted out

<sup>\*</sup> Values outside of contract required QC limits



# Semivolatile Soil Laboratory Control Spike

Date Extracted: 2/6/2014 Date Analyzed: 2/6/2014

	Amount Spiked	Result,	Recovery	Lower Recovery	Upper Recovery
	ug/Kg	ug/Kg	%	Limit	Limit
n-Nitrosodimethylamine	2500	1682	67	40	130
Phenol	2500	1914	77	40	130
Aniline	2500	899	36	40	130
bis(2-Chloroethyl)ether	2500	1474	59	40	130
2-Chlorophenol	2500	1717	69	40	130
1,3-Dichlorobenzene	2500	1663	67	40	130
1,4-Dichlorobenzene	2500	1680	67	40	130
1,2-Dichlorobenzene	2500	1717	69	40	130
2-Methylphenol	2500	1944	78	40	130
3- & 4-Methylphenol	2500	1974	79	40	130
n-Nitroso-di-n-propylamine	2500	1803	72	40	130
Hexachloroethane	2500	1638	66	40	130
Nitrobenzene	2500	1681	67	40	130
Isophorone	2500	1781	71	40	130
2-Nitrophenol	2500	1687	67	40	130
2,4-Dimethylphenol	2500	1818	73	40	130
bis(2-Chloroethoxy)methane	2500	1832	73	40	130
2,4-Dichlorophenol	2500	1768	71	40	130
1,2,4-Trichlorobenzene	2500	1759	70	40	130
Naphthalene	2500	1753	70	40	130
Hexachlorobutadiene	2500	1800	72	40	130
4-Chloro-3-methylphenol	2500	1863	75	40	130
2-Methylnaphthalene	2500	1792	72	40	130
2,4,6-Trichlorophenol	2500	1813	73	40	130
2,4,5-Trichlorophenol	2500	1707	68	40	130
2-Chloronaphthalene	2500	1723	69	40	130
2-Nitroaniline	2500	1900	76	40	130
Dimethyl phthalate	2500	1708	68	40	130
Acenaphthylene	2500	1802	72	40	130
2,6-Dinitrotoluene	2500	1911	76	40	130
Acenaphthene	2500	1829	73	40	130
4-Nitrophenol	2500	1977	79	40	130
Dibenzofuran	2500	1881	75	40	130
2,4-Dinitrotoluene	2500	1983	79	40	130
Diethyl phthalate	2500	1748	70	40	130
Fluorene	2500	1755	70	40	130



# Semivolatile Soil Laboratory Control Spike

Date Extracted: 2/6/2014 Date Analyzed: 2/6/2014

	Amount Spiked		Recovery	Lower Recovery	Upper Recovery
	ug/Kg	ug/Kg	%	Limit	Limit
4-Chlorophenyl phenyl ether	2500	1688	68	40	130
n-Nitrosodiphenylamine	2500	2166	87	40	130
4-Bromophenyl phenyl ether	2500	1700	68	40	130
Hexachlorobenzene	2500	1756	70	40	130
Pentachlorophenol	2500	1669	67	40	130
Phenanthrene	2500	1849	74	40	130
Anthracene	2500	1835	73	40	130
Di-n-butylphthalate	2500	1759	70	40	130
Fluoranthene	2500	1877	75	40	130
Pyrene	2500	1770	71	40	130
Butyl benzyl phthalate	2500	1841	74	40	130
Benzo(a)anthracene	2500	1899	76	40	130
Chrysene	2500	1980	79	40	130
bis(2-Ethylhexyl)phthalate	2500	1979	79	40	130
Di-n-octyl phthalate	2500	1899	76	40	130
Benzo(b)fluoranthene	2500	1978	79	40	130
Benzo(k)fluoranthene	2500	1968	79	40	130
Benzo(a)pyrene	2500	1966	79	40	130
Indeno(1,2,3-cd)pyrene	2500	2076	83	40	130
Dibenz(a,h)anthracene	2500	2187	87	40	130
Benzo(g,h,i)perylene	2500	2146	86	40	130



# **RESULTS: VOLATILE ORGANIC COMPOUNDS**

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-1 (2') Matrix: (soil/water) SOIL Lab File ID: C020427.D Sample wt/vol: 8.2 (g/ml) G Date Sampled: 2/4/2014 % Moisture 14.23 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		71	U
74-83-9	Bromomethane		71	U
75-00-3	Chloroethane		71	U
67-64-1	Acetone		360	U
75-35-4	1,1-Dichloroethene		71	U
75-15-0	Carbon Disulfide		71	U
75-09-2	Methylene Chloride		360	U
1634-04-4	tert-Butyl methyl ether		71	U
156-60-5	trans-1,2 Dichloroethene		71	U
75-34-3	1,1-Dichloroethane		71	U
78-93-3	2-Butanone		360	U
594-20-7	2,2-Dichloropropane		71	U
156-59-2	cis-1,2-Dichloroethene		71	U
67-66-3	Chloroform		71	U
74-97-5	Bromochloromethane		71	U
71-55-6	1,1,1-Trichloroethane		71	U
563-58-6	1,1-Dichloropropene		71	U
56-23-5	Carbon Tetrachloride		71	U
71-43-2	Benzene		71	U
107-06-2	1,2-Dichloroethane		71	U
79-01-6	Trichloroethene		71	U
78-87-5	1,2-Dichloropropane		71	U
75-27-4	Bromodichloromethane		71	U
74-95-3	Dibromomethane		71	U
108-10-1	4-Methyl-2-pentanone		360	U
106-93-4	Ethylene Dibromide		71	U
10061-01-5	cis-1,3-Dichloropropene		71	U
108-88-3	Toluene		71	U
10061-02-6	Trans-1,3-Dichloropropene		71	U
79-00-5	1,1,2-Trichloroethane		71	U
591-78-6	2-Hexanone		360	U
127-18-4	Tetrachloroethene		71	U
124-48-1	Chlorodibromomethane		71	U
108-90-7	Chlorobenzene		71	U
630-20-6	1,1,1,2-Tetrachloroethane		71	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-1 (2') Matrix: (soil/water) SOIL Lab File ID: C020427.D Sample wt/vol: 8.2 (g/ml) G Date Sampled: 2/4/2014 % Moisture 14.23 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		71	U
1330-20-7	m & p-Xylene		140	U
95-47-6	o-Xylene		71	U
100-42-5	Styrene		71	U
75-25-2	Bromoform		71	U
98-82-8	Isopropylbenzene		71	U
79-34-5	1,1,2,2-Tetrachloroethane		71	U
108-86-1	Bromobenzene		71	U
96-18-4	1,2,3-Trichloropropane		71	U
95-49-8	2-Chlorotoluene		71	U
103-65-1	n-Propylbenzene		71	U
108-67-8	1,3,5-Trimethylbenzene		71	U
106-43-4	4-Chlorotoluene		71	U
98-06-6	tert-Butylbenzene		71	U
95-63-6	1,2,4-Trimethylbenzene		71	U
135-98-8	sec-Butylbenzene		71	U
99-87-6	p-Isopropyltoluene		71	U
75-87-3	Chloromethane		71	U
75-65-0	tert butyl alcohol		71	U
541-73-1	1,3-Dichlorobenzene		71	U
109-99-9	Tetrahydrofuran		71	U
106-46-7	1,4-Dichlorobenzene		71	U
60-29-7	Diethyl Ether		71	U
104-51-8	n-Butylbenzene		71	U
95-50-1	1,2-Dichlorobenzene		71	U
96-12-8	1,2-Dibromo-3-chloropropane		71	U
120-82-1	1,2,4-Trichlorobenzene		71	U
87-68-3	Hexachlorobutadiene		71	U
91-20-3	Naphthalene		71	U
87-61-6	1,2,3-Trichlorobenzene		71	U
994-05-8	Tert-amyl Methyl Ether		71	U
75-71-8	Dichlorodifluoromethane		71	U
142-28-9	1,3-Dichloropropane		71	U
75-69-4	Trichlorofluoromethane		71	U
637-92-3	Ethyl Tert-butyl ether		71	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-1 (2') Matrix: (soil/water) SOIL Lab File ID: C020427.D Sample wt/vol: 8.2 (g/ml) G Date Sampled: 2/4/2014 % Moisture 14.23 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		71	U
123-91-1	1,4-Dioxane		36000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-1 (7') Matrix: (soil/water) SOIL Lab File ID: C020428.D Sample wt/vol: 12.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 8.59 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		44	U
74-83-9	Bromomethane		44	U
75-00-3	Chloroethane		44	U
67-64-1	Acetone		220	U
75-35-4	1,1-Dichloroethene		44	U
75-15-0	Carbon Disulfide		44	U
75-09-2	Methylene Chloride		220	U
1634-04-4	tert-Butyl methyl ether		44	U
156-60-5	trans-1,2 Dichloroethene		44	U
75-34-3	1,1-Dichloroethane		44	U
78-93-3	2-Butanone		220	U
594-20-7	2,2-Dichloropropane		44	U
156-59-2	cis-1,2-Dichloroethene		44	U
67-66-3	Chloroform		44	U
74-97-5	Bromochloromethane		44	U
71-55-6	1,1,1-Trichloroethane		44	U
563-58-6	1,1-Dichloropropene		44	U
56-23-5	Carbon Tetrachloride		44	U
71-43-2	Benzene		44	U
107-06-2	1,2-Dichloroethane		44	U
79-01-6	Trichloroethene		44	U
78-87-5	1,2-Dichloropropane		44	U
75-27-4	Bromodichloromethane		44	U
74-95-3	Dibromomethane		44	U
108-10-1	4-Methyl-2-pentanone		220	U
106-93-4	Ethylene Dibromide		44	U
10061-01-5	cis-1,3-Dichloropropene		44	U
108-88-3	Toluene		44	U
10061-02-6	Trans-1,3-Dichloropropene		44	U
79-00-5	1,1,2-Trichloroethane		44	U
591-78-6	2-Hexanone		220	U
127-18-4	Tetrachloroethene		44	U
124-48-1	Chlorodibromomethane		44	U
108-90-7	Chlorobenzene		44	U
630-20-6	1,1,1,2-Tetrachloroethane		44	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-1 (7') Matrix: (soil/water) SOIL Lab File ID: C020428.D Sample wt/vol: 12.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 8.59 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		44	U
1330-20-7	m & p-Xylene		87	U
95-47-6	o-Xylene		44	U
100-42-5	Styrene		44	U
75-25-2	Bromoform		44	U
98-82-8	Isopropylbenzene		44	U
79-34-5	1,1,2,2-Tetrachloroethane		44	U
108-86-1	Bromobenzene		44	U
96-18-4	1,2,3-Trichloropropane		44	U
95-49-8	2-Chlorotoluene		44	U
103-65-1	n-Propylbenzene		44	U
108-67-8	1,3,5-Trimethylbenzene		44	U
106-43-4	4-Chlorotoluene		44	U
98-06-6	tert-Butylbenzene		44	U
95-63-6	1,2,4-Trimethylbenzene		44	U
135-98-8	sec-Butylbenzene		44	U
99-87-6	p-Isopropyltoluene		44	U
75-87-3	Chloromethane		44	U
75-65-0	tert butyl alcohol		44	U
541-73-1	1,3-Dichlorobenzene		44	U
109-99-9	Tetrahydrofuran		44	U
106-46-7	1,4-Dichlorobenzene		44	U
60-29-7	Diethyl Ether		44	U
104-51-8	n-Butylbenzene		44	U
95-50-1	1,2-Dichlorobenzene		44	U
96-12-8	1,2-Dibromo-3-chloropropane		44	U
120-82-1	1,2,4-Trichlorobenzene		44	U
87-68-3	Hexachlorobutadiene		44	U
91-20-3	Naphthalene		44	U
87-61-6	1,2,3-Trichlorobenzene		44	U
994-05-8	Tert-amyl Methyl Ether		44	U
75-71-8	Dichlorodifluoromethane		44	U
142-28-9	1,3-Dichloropropane		44	U
75-69-4	Trichlorofluoromethane		44	U
637-92-3	Ethyl Tert-butyl ether		44	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-1 (7') Matrix: (soil/water) SOIL Lab File ID: C020428.D Sample wt/vol: 12.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 8.59 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		44	U
123-91-1	1,4-Dioxane		22000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-1 Matrix: (soil/water) SOIL Lab File ID: C020429.D Sample wt/vol: 13.9 (g/ml) G Date Sampled: 2/4/2014 % Moisture 10.68 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		40	U
74-83-9	Bromomethane		40	U
75-00-3	Chloroethane		40	U
67-64-1	Acetone		200	U
75-35-4	1,1-Dichloroethene		40	U
75-15-0	Carbon Disulfide		40	U
75-09-2	Methylene Chloride		200	U
1634-04-4	tert-Butyl methyl ether		40	U
156-60-5	trans-1,2 Dichloroethene		40	U
75-34-3	1,1-Dichloroethane		40	U
78-93-3	2-Butanone		200	U
594-20-7	2,2-Dichloropropane		40	U
156-59-2	cis-1,2-Dichloroethene		40	U
67-66-3	Chloroform		40	U
74-97-5	Bromochloromethane		40	U
71-55-6	1,1,1-Trichloroethane		40	U
563-58-6	1,1-Dichloropropene		40	U
56-23-5	Carbon Tetrachloride		40	U
71-43-2	Benzene		40	U
107-06-2	1,2-Dichloroethane		40	U
79-01-6	Trichloroethene		40	U
78-87-5	1,2-Dichloropropane		40	U
75-27-4	Bromodichloromethane		40	U
74-95-3	Dibromomethane		40	U
108-10-1	4-Methyl-2-pentanone		200	U
106-93-4	Ethylene Dibromide		40	U
10061-01-5	cis-1,3-Dichloropropene		40	U
108-88-3	Toluene		40	U
10061-02-6	Trans-1,3-Dichloropropene		40	U
79-00-5	1,1,2-Trichloroethane		40	U
591-78-6	2-Hexanone		200	U
127-18-4	Tetrachloroethene		40	U
124-48-1	Chlorodibromomethane		40	U
108-90-7	Chlorobenzene		40	U
630-20-6	1,1,1,2-Tetrachloroethane		40	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-1 Matrix: (soil/water) SOIL Lab File ID: C020429.D Sample wt/vol: 13.9 (g/ml) G Date Sampled: 2/4/2014 % Moisture 10.68 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		40	U
1330-20-7	m & p-Xylene		81	U
95-47-6	o-Xylene		40	U
100-42-5	Styrene		40	U
75-25-2	Bromoform		40	U
98-82-8	Isopropylbenzene		40	U
79-34-5	1,1,2,2-Tetrachloroethane		40	U
108-86-1	Bromobenzene		40	U
96-18-4	1,2,3-Trichloropropane		40	U
95-49-8	2-Chlorotoluene		40	U
103-65-1	n-Propylbenzene		40	U
108-67-8	1,3,5-Trimethylbenzene		40	U
106-43-4	4-Chlorotoluene		40	U
98-06-6	tert-Butylbenzene		40	U
95-63-6	1,2,4-Trimethylbenzene		40	U
135-98-8	sec-Butylbenzene		40	U
99-87-6	p-Isopropyltoluene		40	U
75-87-3	Chloromethane		40	U
75-65-0	tert butyl alcohol		40	U
541-73-1	1,3-Dichlorobenzene		40	U
109-99-9	Tetrahydrofuran		40	U
106-46-7	1,4-Dichlorobenzene		40	U
60-29-7	Diethyl Ether		40	U
104-51-8	n-Butylbenzene		40	U
95-50-1	1,2-Dichlorobenzene		40	U
96-12-8	1,2-Dibromo-3-chloropropane		40	U
120-82-1	1,2,4-Trichlorobenzene		40	U
87-68-3	Hexachlorobutadiene		40	U
91-20-3	Naphthalene		40	U
87-61-6	1,2,3-Trichlorobenzene		40	U
994-05-8	Tert-amyl Methyl Ether		40	U
75-71-8	Dichlorodifluoromethane		40	U
142-28-9	1,3-Dichloropropane		40	U
75-69-4	Trichlorofluoromethane		40	U
637-92-3	Ethyl Tert-butyl ether		40	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-1 Matrix: (soil/water) SOIL Lab File ID: C020429.D Sample wt/vol: 13.9 (g/ml) G Date Sampled: 2/4/2014 % Moisture 10.68 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		40	U
123-91-1	1,4-Dioxane		20000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-2 Matrix: (soil/water) SOIL Lab File ID: C020430.D Sample wt/vol: 9.7 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.71 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		56	U
74-83-9	Bromomethane		56	U
75-00-3	Chloroethane		56	U
67-64-1	Acetone		280	U
75-35-4	1,1-Dichloroethene		56	U
75-15-0	Carbon Disulfide		56	U
75-09-2	Methylene Chloride		280	U
1634-04-4	tert-Butyl methyl ether		56	U
156-60-5	trans-1,2 Dichloroethene		56	U
75-34-3	1,1-Dichloroethane		56	U
78-93-3	2-Butanone		280	U
594-20-7	2,2-Dichloropropane		56	U
156-59-2	cis-1,2-Dichloroethene		56	U
67-66-3	Chloroform		56	U
74-97-5	Bromochloromethane		56	U
71-55-6	1,1,1-Trichloroethane		56	U
563-58-6	1,1-Dichloropropene		56	U
56-23-5	Carbon Tetrachloride		56	U
71-43-2	Benzene		56	U
107-06-2	1,2-Dichloroethane		56	U
79-01-6	Trichloroethene		56	U
78-87-5	1,2-Dichloropropane		56	U
75-27-4	Bromodichloromethane		56	U
74-95-3	Dibromomethane		56	U
108-10-1	4-Methyl-2-pentanone		280	U
106-93-4	Ethylene Dibromide		56	U
10061-01-5	cis-1,3-Dichloropropene		56	U
108-88-3	Toluene		56	U
10061-02-6	Trans-1,3-Dichloropropene		56	U
79-00-5	1,1,2-Trichloroethane		56	U
591-78-6	2-Hexanone		280	U
127-18-4	Tetrachloroethene		56	U
124-48-1	Chlorodibromomethane		56	U
108-90-7	Chlorobenzene		56	U
630-20-6	1,1,1,2-Tetrachloroethane		56	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-2 Matrix: (soil/water) SOIL Lab File ID: C020430.D Sample wt/vol: 9.7 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.71 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		56	U
1330-20-7	m & p-Xylene		110	U
95-47-6	o-Xylene		56	U
100-42-5	Styrene		56	U
75-25-2	Bromoform		56	U
98-82-8	Isopropylbenzene		56	U
79-34-5	1,1,2,2-Tetrachloroethane		56	U
108-86-1	Bromobenzene		56	U
96-18-4	1,2,3-Trichloropropane		56	U
95-49-8	2-Chlorotoluene		56	U
103-65-1	n-Propylbenzene		56	U
108-67-8	1,3,5-Trimethylbenzene		56	U
106-43-4	4-Chlorotoluene		56	U
98-06-6	tert-Butylbenzene		56	U
95-63-6	1,2,4-Trimethylbenzene		56	U
135-98-8	sec-Butylbenzene		56	U
99-87-6	p-Isopropyltoluene		56	U
75-87-3	Chloromethane		56	U
75-65-0	tert butyl alcohol		56	U
541-73-1	1,3-Dichlorobenzene		56	U
109-99-9	Tetrahydrofuran		56	U
106-46-7	1,4-Dichlorobenzene		56	U
60-29-7	Diethyl Ether		56	U
104-51-8	n-Butylbenzene		56	U
95-50-1	1,2-Dichlorobenzene		56	U
96-12-8	1,2-Dibromo-3-chloropropane		56	U
120-82-1	1,2,4-Trichlorobenzene		56	U
87-68-3	Hexachlorobutadiene		56	U
91-20-3	Naphthalene		56	U
87-61-6	1,2,3-Trichlorobenzene		56	U
994-05-8	Tert-amyl Methyl Ether		56	U
75-71-8	Dichlorodifluoromethane		56	U
142-28-9	1,3-Dichloropropane		56	U
75-69-4	Trichlorofluoromethane		56	U
637-92-3	Ethyl Tert-butyl ether		56	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-2 Matrix: (soil/water) SOIL Lab File ID: C020430.D Sample wt/vol: 9.7 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.71 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		56	U
123-91-1	1,4-Dioxane		28000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-3 Matrix: (soil/water) SOIL Lab File ID: C020431.D Sample wt/vol: 10.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 9.95 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		54	U
74-83-9	Bromomethane		54	U
75-00-3	Chloroethane		54	U
67-64-1	Acetone		270	U
75-35-4	1,1-Dichloroethene		54	U
75-15-0	Carbon Disulfide		54	U
75-09-2	Methylene Chloride		270	U
1634-04-4	tert-Butyl methyl ether		54	U
156-60-5	trans-1,2 Dichloroethene		54	U
75-34-3	1,1-Dichloroethane		54	U
78-93-3	2-Butanone		270	U
594-20-7	2,2-Dichloropropane		54	U
156-59-2	cis-1,2-Dichloroethene		54	U
67-66-3	Chloroform		54	U
74-97-5	Bromochloromethane		54	U
71-55-6	1,1,1-Trichloroethane		54	U
563-58-6	1,1-Dichloropropene		54	U
56-23-5	Carbon Tetrachloride		54	U
71-43-2	Benzene		54	U
107-06-2	1,2-Dichloroethane		54	U
79-01-6	Trichloroethene		54	U
78-87-5	1,2-Dichloropropane		54	U
75-27-4	Bromodichloromethane		54	U
74-95-3	Dibromomethane		54	U
108-10-1	4-Methyl-2-pentanone		270	U
106-93-4	Ethylene Dibromide		54	U
10061-01-5	cis-1,3-Dichloropropene		54	U
108-88-3	Toluene		54	U
10061-02-6	Trans-1,3-Dichloropropene		54	U
79-00-5	1,1,2-Trichloroethane		54	U
591-78-6	2-Hexanone		270	U
127-18-4	Tetrachloroethene		54	U
124-48-1	Chlorodibromomethane		54	U
108-90-7	Chlorobenzene		54	U
630-20-6	1,1,1,2-Tetrachloroethane		54	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-3 Matrix: (soil/water) SOIL Lab File ID: C020431.D Sample wt/vol: 10.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 9.95 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		54	U
1330-20-7	m & p-Xylene		110	U
95-47-6	o-Xylene		54	U
100-42-5	Styrene		54	U
75-25-2	Bromoform		54	U
98-82-8	Isopropylbenzene		54	U
79-34-5	1,1,2,2-Tetrachloroethane		54	U
108-86-1	Bromobenzene		54	U
96-18-4	1,2,3-Trichloropropane		54	U
95-49-8	2-Chlorotoluene		54	U
103-65-1	n-Propylbenzene		54	U
108-67-8	1,3,5-Trimethylbenzene		54	U
106-43-4	4-Chlorotoluene		54	U
98-06-6	tert-Butylbenzene		54	U
95-63-6	1,2,4-Trimethylbenzene		54	U
135-98-8	sec-Butylbenzene		54	U
99-87-6	p-Isopropyltoluene		54	U
75-87-3	Chloromethane		54	U
75-65-0	tert butyl alcohol		54	U
541-73-1	1,3-Dichlorobenzene		54	U
109-99-9	Tetrahydrofuran		54	U
106-46-7	1,4-Dichlorobenzene		54	U
60-29-7	Diethyl Ether		54	U
104-51-8	n-Butylbenzene		54	U
95-50-1	1,2-Dichlorobenzene		54	U
96-12-8	1,2-Dibromo-3-chloropropane		54	U
120-82-1	1,2,4-Trichlorobenzene		54	U
87-68-3	Hexachlorobutadiene		54	U
91-20-3	Naphthalene		54	U
87-61-6	1,2,3-Trichlorobenzene		54	U
994-05-8	Tert-amyl Methyl Ether		54	U
75-71-8	Dichlorodifluoromethane		54	U
142-28-9	1,3-Dichloropropane		54	U
75-69-4	Trichlorofluoromethane		54	U
637-92-3	Ethyl Tert-butyl ether		54	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-3 Matrix: (soil/water) SOIL Lab File ID: C020431.D Sample wt/vol: 10.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 9.95 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		54	U
123-91-1	1,4-Dioxane		27000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-4 Matrix: (soil/water) SOIL Lab File ID: C020432.D Sample wt/vol: 10.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 8.81 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		52	U
74-83-9	Bromomethane		52	U
75-00-3	Chloroethane		52	U
67-64-1	Acetone		260	U
75-35-4	1,1-Dichloroethene		52	U
75-15-0	Carbon Disulfide		52	U
75-09-2	Methylene Chloride		260	U
1634-04-4	tert-Butyl methyl ether		52	U
156-60-5	trans-1,2 Dichloroethene		52	U
75-34-3	1,1-Dichloroethane		52	U
78-93-3	2-Butanone		260	U
594-20-7	2,2-Dichloropropane		52	U
156-59-2	cis-1,2-Dichloroethene		52	U
67-66-3	Chloroform		52	U
74-97-5	Bromochloromethane		52	U
71-55-6	1,1,1-Trichloroethane		52	U
563-58-6	1,1-Dichloropropene		52	U
56-23-5	Carbon Tetrachloride		52	U
71-43-2	Benzene		52	U
107-06-2	1,2-Dichloroethane		52	U
79-01-6	Trichloroethene		52	U
78-87-5	1,2-Dichloropropane		52	U
75-27-4	Bromodichloromethane		52	U
74-95-3	Dibromomethane		52	U
108-10-1	4-Methyl-2-pentanone		260	U
106-93-4	Ethylene Dibromide		52	U
10061-01-5	cis-1,3-Dichloropropene		52	U
108-88-3	Toluene		52	U
10061-02-6	Trans-1,3-Dichloropropene		52	U
79-00-5	1,1,2-Trichloroethane		52	U
591-78-6	2-Hexanone		260	U
127-18-4	Tetrachloroethene		52	U
124-48-1	Chlorodibromomethane		52	U
108-90-7	Chlorobenzene		52	U
630-20-6	1,1,1,2-Tetrachloroethane		52	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-4 Matrix: (soil/water) SOIL Lab File ID: C020432.D Sample wt/vol: 10.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 8.81 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		52	U
1330-20-7	m & p-Xylene		100	U
95-47-6	o-Xylene		52	U
100-42-5	Styrene		52	U
75-25-2	Bromoform		52	U
98-82-8	Isopropylbenzene		52	U
79-34-5	1,1,2,2-Tetrachloroethane		52	U
108-86-1	Bromobenzene		52	U
96-18-4	1,2,3-Trichloropropane		52	U
95-49-8	2-Chlorotoluene		52	U
103-65-1	n-Propylbenzene		52	U
108-67-8	1,3,5-Trimethylbenzene		52	U
106-43-4	4-Chlorotoluene		52	U
98-06-6	tert-Butylbenzene		52	U
95-63-6	1,2,4-Trimethylbenzene		52	U
135-98-8	sec-Butylbenzene		52	U
99-87-6	p-Isopropyltoluene		52	U
75-87-3	Chloromethane		52	U
75-65-0	tert butyl alcohol		52	U
541-73-1	1,3-Dichlorobenzene		52	U
109-99-9	Tetrahydrofuran		52	U
106-46-7	1,4-Dichlorobenzene		52	U
60-29-7	Diethyl Ether		52	U
104-51-8	n-Butylbenzene		52	U
95-50-1	1,2-Dichlorobenzene		52	C
96-12-8	1,2-Dibromo-3-chloropropane		52	C
120-82-1	1,2,4-Trichlorobenzene		52	C
87-68-3	Hexachlorobutadiene		52	C
91-20-3	Naphthalene		52	C
87-61-6	1,2,3-Trichlorobenzene		52	U
994-05-8	Tert-amyl Methyl Ether		52	U
75-71-8	Dichlorodifluoromethane		52	U
142-28-9	1,3-Dichloropropane		52	U
75-69-4	Trichlorofluoromethane		52	U
637-92-3	Ethyl Tert-butyl ether		52	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-4 Matrix: (soil/water) SOIL Lab File ID: C020432.D Sample wt/vol: 10.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 8.81 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		52	U
123-91-1	1,4-Dioxane		26000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-5 Matrix: (soil/water) SOIL Lab File ID: C020433.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 6.52 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		54	U
74-83-9	Bromomethane		54	U
75-00-3	Chloroethane		54	U
67-64-1	Acetone		270	U
75-35-4	1,1-Dichloroethene		54	U
75-15-0	Carbon Disulfide		54	U
75-09-2	Methylene Chloride		270	U
1634-04-4	tert-Butyl methyl ether		54	U
156-60-5	trans-1,2 Dichloroethene		54	U
75-34-3	1,1-Dichloroethane		54	U
78-93-3	2-Butanone		270	U
594-20-7	2,2-Dichloropropane		54	U
156-59-2	cis-1,2-Dichloroethene		54	U
67-66-3	Chloroform		54	U
74-97-5	Bromochloromethane		54	U
71-55-6	1,1,1-Trichloroethane		54	U
563-58-6	1,1-Dichloropropene		54	U
56-23-5	Carbon Tetrachloride		54	U
71-43-2	Benzene		54	U
107-06-2	1,2-Dichloroethane		54	U
79-01-6	Trichloroethene		54	U
78-87-5	1,2-Dichloropropane		54	U
75-27-4	Bromodichloromethane		54	U
74-95-3	Dibromomethane		54	U
108-10-1	4-Methyl-2-pentanone		270	U
106-93-4	Ethylene Dibromide		54	U
10061-01-5	cis-1,3-Dichloropropene		54	U
108-88-3	Toluene		54	U
10061-02-6	Trans-1,3-Dichloropropene		54	U
79-00-5	1,1,2-Trichloroethane		54	U
591-78-6	2-Hexanone		270	U
127-18-4	Tetrachloroethene		54	U
124-48-1	Chlorodibromomethane		54	U
108-90-7	Chlorobenzene		54	U
630-20-6	1,1,1,2-Tetrachloroethane		54	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-5 Matrix: (soil/water) SOIL Lab File ID: C020433.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 6.52 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		54	U
1330-20-7	m & p-Xylene		110	U
95-47-6	o-Xylene		54	U
100-42-5	Styrene		54	U
75-25-2	Bromoform		54	U
98-82-8	Isopropylbenzene		54	U
79-34-5	1,1,2,2-Tetrachloroethane		54	U
108-86-1	Bromobenzene		54	U
96-18-4	1,2,3-Trichloropropane		54	U
95-49-8	2-Chlorotoluene		54	U
103-65-1	n-Propylbenzene		54	U
108-67-8	1,3,5-Trimethylbenzene		54	U
106-43-4	4-Chlorotoluene		54	U
98-06-6	tert-Butylbenzene		54	U
95-63-6	1,2,4-Trimethylbenzene		54	U
135-98-8	sec-Butylbenzene		54	U
99-87-6	p-Isopropyltoluene		54	U
75-87-3	Chloromethane		54	U
75-65-0	tert butyl alcohol		54	U
541-73-1	1,3-Dichlorobenzene		54	U
109-99-9	Tetrahydrofuran		54	U
106-46-7	1,4-Dichlorobenzene		54	U
60-29-7	Diethyl Ether		54	U
104-51-8	n-Butylbenzene		54	U
95-50-1	1,2-Dichlorobenzene		54	U
96-12-8	1,2-Dibromo-3-chloropropane		54	U
120-82-1	1,2,4-Trichlorobenzene		54	U
87-68-3	Hexachlorobutadiene		54	U
91-20-3	Naphthalene		54	U
87-61-6	1,2,3-Trichlorobenzene		54	U
994-05-8	Tert-amyl Methyl Ether		54	U
75-71-8	Dichlorodifluoromethane		54	U
142-28-9	1,3-Dichloropropane		54	U
75-69-4	Trichlorofluoromethane		54	U
637-92-3	Ethyl Tert-butyl ether		54	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: SC-5 Matrix: (soil/water) SOIL Lab File ID: C020433.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 6.52 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		54	U
123-91-1	1,4-Dioxane		27000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-6 Matrix: (soil/water) SOIL Lab File ID: C020434.D Sample wt/vol: 11.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.14 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		48	U
74-83-9	Bromomethane		48	U
75-00-3	Chloroethane		48	U
67-64-1	Acetone		240	U
75-35-4	1,1-Dichloroethene		48	U
75-15-0	Carbon Disulfide		48	U
75-09-2	Methylene Chloride		240	U
1634-04-4	tert-Butyl methyl ether		48	U
156-60-5	trans-1,2 Dichloroethene		48	U
75-34-3	1,1-Dichloroethane		48	U
78-93-3	2-Butanone		240	U
594-20-7	2,2-Dichloropropane		48	U
156-59-2	cis-1,2-Dichloroethene		48	U
67-66-3	Chloroform		48	U
74-97-5	Bromochloromethane		48	U
71-55-6	1,1,1-Trichloroethane		48	U
563-58-6	1,1-Dichloropropene		48	U
56-23-5	Carbon Tetrachloride		48	U
71-43-2	Benzene		48	U
107-06-2	1,2-Dichloroethane		48	U
79-01-6	Trichloroethene		48	U
78-87-5	1,2-Dichloropropane		48	U
75-27-4	Bromodichloromethane		48	U
74-95-3	Dibromomethane		48	U
108-10-1	4-Methyl-2-pentanone		240	U
106-93-4	Ethylene Dibromide		48	U
10061-01-5	cis-1,3-Dichloropropene		48	U
108-88-3	Toluene		48	U
10061-02-6	Trans-1,3-Dichloropropene		48	U
79-00-5	1,1,2-Trichloroethane		48	U
591-78-6	2-Hexanone		240	U
127-18-4	Tetrachloroethene		48	U
124-48-1	Chlorodibromomethane		48	Ü
108-90-7	Chlorobenzene		48	Ü
630-20-6	1,1,1,2-Tetrachloroethane		48	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-6 Matrix: (soil/water) SOIL Lab File ID: C020434.D Sample wt/vol: 11.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.14 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		48	U
1330-20-7	m & p-Xylene		96	U
95-47-6	o-Xylene		48	U
100-42-5	Styrene		48	U
75-25-2	Bromoform		48	U
98-82-8	Isopropylbenzene		48	U
79-34-5	1,1,2,2-Tetrachloroethane		48	U
108-86-1	Bromobenzene		48	U
96-18-4	1,2,3-Trichloropropane		48	U
95-49-8	2-Chlorotoluene		48	U
103-65-1	n-Propylbenzene		48	U
108-67-8	1,3,5-Trimethylbenzene		48	U
106-43-4	4-Chlorotoluene		48	U
98-06-6	tert-Butylbenzene		48	U
95-63-6	1,2,4-Trimethylbenzene		48	U
135-98-8	sec-Butylbenzene		48	U
99-87-6	p-Isopropyltoluene		48	U
75-87-3	Chloromethane		48	U
75-65-0	tert butyl alcohol		48	U
541-73-1	1,3-Dichlorobenzene		48	U
109-99-9	Tetrahydrofuran		48	U
106-46-7	1,4-Dichlorobenzene		48	U
60-29-7	Diethyl Ether		48	U
104-51-8	n-Butylbenzene		48	U
95-50-1	1,2-Dichlorobenzene		48	U
96-12-8	1,2-Dibromo-3-chloropropane		48	U
120-82-1	1,2,4-Trichlorobenzene		48	U
87-68-3	Hexachlorobutadiene		48	U
91-20-3	Naphthalene		48	U
87-61-6	1,2,3-Trichlorobenzene		48	U
994-05-8	Tert-amyl Methyl Ether		48	U
75-71-8	Dichlorodifluoromethane		48	U
142-28-9	1,3-Dichloropropane		48	U
75-69-4	Trichlorofluoromethane		48	U
637-92-3	Ethyl Tert-butyl ether		48	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-6 Matrix: (soil/water) SOIL Lab File ID: C020434.D Sample wt/vol: 11.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.14 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		48	U
123-91-1	1,4-Dioxane		24000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-7 Matrix: (soil/water) SOIL Lab File ID: C020435.D Sample wt/vol: 10.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.81 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		54	U
74-83-9	Bromomethane		54	U
75-00-3	Chloroethane		54	U
67-64-1	Acetone		270	U
75-35-4	1,1-Dichloroethene		54	U
75-15-0	Carbon Disulfide		54	U
75-09-2	Methylene Chloride		270	U
1634-04-4	tert-Butyl methyl ether		54	U
156-60-5	trans-1,2 Dichloroethene		54	U
75-34-3	1,1-Dichloroethane		54	U
78-93-3	2-Butanone		270	U
594-20-7	2,2-Dichloropropane		54	U
156-59-2	cis-1,2-Dichloroethene		54	U
67-66-3	Chloroform		54	U
74-97-5	Bromochloromethane		54	U
71-55-6	1,1,1-Trichloroethane		54	U
563-58-6	1,1-Dichloropropene		54	U
56-23-5	Carbon Tetrachloride		54	U
71-43-2	Benzene		54	U
107-06-2	1,2-Dichloroethane		54	U
79-01-6	Trichloroethene		54	U
78-87-5	1,2-Dichloropropane		54	U
75-27-4	Bromodichloromethane		54	U
74-95-3	Dibromomethane		54	U
108-10-1	4-Methyl-2-pentanone		270	U
106-93-4	Ethylene Dibromide		54	U
10061-01-5	cis-1,3-Dichloropropene		54	U
108-88-3	Toluene		54	U
10061-02-6	Trans-1,3-Dichloropropene		54	U
79-00-5	1,1,2-Trichloroethane		54	U
591-78-6	2-Hexanone		270	U
127-18-4	Tetrachloroethene		54	U
124-48-1	Chlorodibromomethane		54	Ü
108-90-7	Chlorobenzene		54	Ü
630-20-6	1,1,1,2-Tetrachloroethane		54	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-7 Matrix: (soil/water) SOIL Lab File ID: C020435.D Sample wt/vol: 10.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.81 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		54	U
1330-20-7	m & p-Xylene		110	U
95-47-6	o-Xylene		54	U
100-42-5	Styrene		54	U
75-25-2	Bromoform		54	U
98-82-8	Isopropylbenzene		54	U
79-34-5	1,1,2,2-Tetrachloroethane		54	U
108-86-1	Bromobenzene		54	U
96-18-4	1,2,3-Trichloropropane		54	U
95-49-8	2-Chlorotoluene		54	U
103-65-1	n-Propylbenzene		54	U
108-67-8	1,3,5-Trimethylbenzene		54	U
106-43-4	4-Chlorotoluene		54	U
98-06-6	tert-Butylbenzene		54	U
95-63-6	1,2,4-Trimethylbenzene		54	U
135-98-8	sec-Butylbenzene		54	U
99-87-6	p-Isopropyltoluene		54	U
75-87-3	Chloromethane		54	U
75-65-0	tert butyl alcohol		54	U
541-73-1	1,3-Dichlorobenzene		54	U
109-99-9	Tetrahydrofuran		54	U
106-46-7	1,4-Dichlorobenzene		54	U
60-29-7	Diethyl Ether		54	U
104-51-8	n-Butylbenzene		54	U
95-50-1	1,2-Dichlorobenzene		54	U
96-12-8	1,2-Dibromo-3-chloropropane		54	U
120-82-1	1,2,4-Trichlorobenzene		54	U
87-68-3	Hexachlorobutadiene		54	U
91-20-3	Naphthalene		54	U
87-61-6	1,2,3-Trichlorobenzene		54	U
994-05-8	Tert-amyl Methyl Ether		54	U
75-71-8	Dichlorodifluoromethane		54	U
142-28-9	1,3-Dichloropropane		54	U
75-69-4	Trichlorofluoromethane		54	U
637-92-3	Ethyl Tert-butyl ether		54	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-7 Matrix: (soil/water) SOIL Lab File ID: C020435.D Sample wt/vol: 10.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.81 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		54	U
123-91-1	1,4-Dioxane		27000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-8 Matrix: (soil/water) SOIL Lab File ID: C020436.D Sample wt/vol: 11.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 3.95 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		47	U
74-83-9	Bromomethane		47	U
75-00-3	Chloroethane		47	U
67-64-1	Acetone		230	U
75-35-4	1,1-Dichloroethene		47	U
75-15-0	Carbon Disulfide		47	U
75-09-2	Methylene Chloride		230	U
1634-04-4	tert-Butyl methyl ether		47	U
156-60-5	trans-1,2 Dichloroethene		47	U
75-34-3	1,1-Dichloroethane		47	U
78-93-3	2-Butanone		230	U
594-20-7	2,2-Dichloropropane		47	U
156-59-2	cis-1,2-Dichloroethene		47	U
67-66-3	Chloroform		47	U
74-97-5	Bromochloromethane		47	U
71-55-6	1,1,1-Trichloroethane		47	U
563-58-6	1,1-Dichloropropene		47	U
56-23-5	Carbon Tetrachloride		47	U
71-43-2	Benzene		47	U
107-06-2	1,2-Dichloroethane		47	U
79-01-6	Trichloroethene		47	U
78-87-5	1,2-Dichloropropane		47	U
75-27-4	Bromodichloromethane		47	U
74-95-3	Dibromomethane		47	U
108-10-1	4-Methyl-2-pentanone		230	U
106-93-4	Ethylene Dibromide		47	U
10061-01-5	cis-1,3-Dichloropropene		47	U
108-88-3	Toluene		47	U
10061-02-6	Trans-1,3-Dichloropropene		47	U
79-00-5	1,1,2-Trichloroethane		47	U
591-78-6	2-Hexanone		230	U
127-18-4	Tetrachloroethene		47	U
124-48-1	Chlorodibromomethane		47	U
108-90-7	Chlorobenzene		47	U
630-20-6	1,1,1,2-Tetrachloroethane		47	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-8 Matrix: (soil/water) SOIL Lab File ID: C020436.D Sample wt/vol: 11.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 3.95 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		47	U
1330-20-7	m & p-Xylene		94	U
95-47-6	o-Xylene		47	U
100-42-5	Styrene		47	U
75-25-2	Bromoform		47	U
98-82-8	Isopropylbenzene		47	U
79-34-5	1,1,2,2-Tetrachloroethane		47	U
108-86-1	Bromobenzene		47	U
96-18-4	1,2,3-Trichloropropane		47	U
95-49-8	2-Chlorotoluene		47	U
103-65-1	n-Propylbenzene		47	U
108-67-8	1,3,5-Trimethylbenzene		47	U
106-43-4	4-Chlorotoluene		47	U
98-06-6	tert-Butylbenzene		47	U
95-63-6	1,2,4-Trimethylbenzene		47	U
135-98-8	sec-Butylbenzene		47	U
99-87-6	p-Isopropyltoluene		47	U
75-87-3	Chloromethane		47	U
75-65-0	tert butyl alcohol		47	U
541-73-1	1,3-Dichlorobenzene		47	U
109-99-9	Tetrahydrofuran		47	U
106-46-7	1,4-Dichlorobenzene		47	U
60-29-7	Diethyl Ether		47	U
104-51-8	n-Butylbenzene		47	U
95-50-1	1,2-Dichlorobenzene		47	U
96-12-8	1,2-Dibromo-3-chloropropane		47	U
120-82-1	1,2,4-Trichlorobenzene		47	U
87-68-3	Hexachlorobutadiene		47	U
91-20-3	Naphthalene		47	U
87-61-6	1,2,3-Trichlorobenzene		47	U
994-05-8	Tert-amyl Methyl Ether		47	U
75-71-8	Dichlorodifluoromethane		47	U
142-28-9	1,3-Dichloropropane		47	U
75-69-4	Trichlorofluoromethane		47	U
637-92-3	Ethyl Tert-butyl ether		47	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-8 Matrix: (soil/water) SOIL Lab File ID: C020436.D Sample wt/vol: 11.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 3.95 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		47	U
123-91-1	1,4-Dioxane		23000	C

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-2 (2') Matrix: (soil/water) SOIL Lab File ID: C020437.D Sample wt/vol: 11.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 5.31 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		45	U
74-83-9	Bromomethane		45	U
75-00-3	Chloroethane		45	U
67-64-1	Acetone		230	U
75-35-4	1,1-Dichloroethene		45	U
75-15-0	Carbon Disulfide		45	U
75-09-2	Methylene Chloride		230	U
1634-04-4	tert-Butyl methyl ether		45	U
156-60-5	trans-1,2 Dichloroethene		45	U
75-34-3	1,1-Dichloroethane		45	U
78-93-3	2-Butanone		230	U
594-20-7	2,2-Dichloropropane		45	U
156-59-2	cis-1,2-Dichloroethene		45	U
67-66-3	Chloroform		45	U
74-97-5	Bromochloromethane		45	U
71-55-6	1,1,1-Trichloroethane		45	U
563-58-6	1,1-Dichloropropene		45	U
56-23-5	Carbon Tetrachloride		45	U
71-43-2	Benzene		45	U
107-06-2	1,2-Dichloroethane		45	U
79-01-6	Trichloroethene		45	U
78-87-5	1,2-Dichloropropane		45	U
75-27-4	Bromodichloromethane		45	U
74-95-3	Dibromomethane		45	U
108-10-1	4-Methyl-2-pentanone		230	U
106-93-4	Ethylene Dibromide		45	U
10061-01-5	cis-1,3-Dichloropropene		45	U
108-88-3	Toluene		45	U
10061-02-6	Trans-1,3-Dichloropropene		45	U
79-00-5	1,1,2-Trichloroethane		45	U
591-78-6	2-Hexanone		230	U
127-18-4	Tetrachloroethene		45	U
124-48-1	Chlorodibromomethane		45	U
108-90-7	Chlorobenzene		45	U
630-20-6	1,1,1,2-Tetrachloroethane		45	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-2 (2') Matrix: (soil/water) SOIL Lab File ID: C020437.D Sample wt/vol: 11.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 5.31 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		45	U
1330-20-7	m & p-Xylene		91	U
95-47-6	o-Xylene		45	U
100-42-5	Styrene		45	U
75-25-2	Bromoform		45	U
98-82-8	Isopropylbenzene		45	U
79-34-5	1,1,2,2-Tetrachloroethane		45	U
108-86-1	Bromobenzene		45	U
96-18-4	1,2,3-Trichloropropane		45	U
95-49-8	2-Chlorotoluene		45	U
103-65-1	n-Propylbenzene		45	U
108-67-8	1,3,5-Trimethylbenzene		45	U
106-43-4	4-Chlorotoluene		45	U
98-06-6	tert-Butylbenzene		45	U
95-63-6	1,2,4-Trimethylbenzene		45	U
135-98-8	sec-Butylbenzene		45	U
99-87-6	p-Isopropyltoluene		45	U
75-87-3	Chloromethane		45	U
75-65-0	tert butyl alcohol		45	U
541-73-1	1,3-Dichlorobenzene		45	U
109-99-9	Tetrahydrofuran		45	U
106-46-7	1,4-Dichlorobenzene		45	U
60-29-7	Diethyl Ether		45	U
104-51-8	n-Butylbenzene		45	U
95-50-1	1,2-Dichlorobenzene		45	U
96-12-8	1,2-Dibromo-3-chloropropane		45	U
120-82-1	1,2,4-Trichlorobenzene		45	U
87-68-3	Hexachlorobutadiene		45	U
91-20-3	Naphthalene		45	U
87-61-6	1,2,3-Trichlorobenzene		45	U
994-05-8	Tert-amyl Methyl Ether		45	U
75-71-8	Dichlorodifluoromethane		45	U
142-28-9	1,3-Dichloropropane		45	U
75-69-4	Trichlorofluoromethane		45	U
637-92-3	Ethyl Tert-butyl ether		45	U



Client Name: PARE Case No.: A0204-22 Lab Sample ID: S-2 (2') Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020437.D Sample wt/vol: 11.6 (g/ml) G Date Sampled: 2/4/2014 % Moisture 5.31 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		45	U
123-91-1	1,4-Dioxane		23000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Lab Sample ID: S-2 (8') Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020438.D Sample wt/vol: 10.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.96 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		53	U
74-83-9	Bromomethane		53	U
75-00-3	Chloroethane		53	U
67-64-1	Acetone		260	U
75-35-4	1,1-Dichloroethene		53	U
75-15-0	Carbon Disulfide		53	U
75-09-2	Methylene Chloride		260	U
1634-04-4	tert-Butyl methyl ether		53	U
156-60-5	trans-1,2 Dichloroethene		53	U
75-34-3	1,1-Dichloroethane		53	U
78-93-3	2-Butanone		260	U
594-20-7	2,2-Dichloropropane		53	U
156-59-2	cis-1,2-Dichloroethene		53	U
67-66-3	Chloroform		53	U
74-97-5	Bromochloromethane		53	U
71-55-6	1,1,1-Trichloroethane		53	U
563-58-6	1,1-Dichloropropene		53	U
56-23-5	Carbon Tetrachloride		53	U
71-43-2	Benzene		53	U
107-06-2	1,2-Dichloroethane		53	U
79-01-6	Trichloroethene		53	U
78-87-5	1,2-Dichloropropane		53	U
75-27-4	Bromodichloromethane		53	U
74-95-3	Dibromomethane		53	U
108-10-1	4-Methyl-2-pentanone		260	U
106-93-4	Ethylene Dibromide		53	U
10061-01-5	cis-1,3-Dichloropropene		53	U
108-88-3	Toluene		53	U
10061-02-6	Trans-1,3-Dichloropropene		53	U
79-00-5	1,1,2-Trichloroethane		53	U
591-78-6	2-Hexanone		260	U
127-18-4	Tetrachloroethene		53	U
124-48-1	Chlorodibromomethane		53	U
108-90-7	Chlorobenzene		53	U
630-20-6	1,1,1,2-Tetrachloroethane		53	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-2 (8') Matrix: (soil/water) SOIL Lab File ID: C020438.D Sample wt/vol: 10.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.96 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: _	UG/KG	Q
100-41-4	Ethylbenzene		53	U
1330-20-7	m & p-Xylene		110	U
95-47-6	o-Xylene		53	U
100-42-5	Styrene		53	U
75-25-2	Bromoform		53	U
98-82-8	Isopropylbenzene		53	U
79-34-5	1,1,2,2-Tetrachloroethane		53	U
108-86-1	Bromobenzene		53	U
96-18-4	1,2,3-Trichloropropane		53	U
95-49-8	2-Chlorotoluene		53	U
103-65-1	n-Propylbenzene		53	U
108-67-8	1,3,5-Trimethylbenzene		53	U
106-43-4	4-Chlorotoluene		53	U
98-06-6	tert-Butylbenzene		53	U
95-63-6	1,2,4-Trimethylbenzene		53	U
135-98-8	sec-Butylbenzene		53	U
99-87-6	p-Isopropyltoluene		53	U
75-87-3	Chloromethane		53	U
75-65-0	tert butyl alcohol		53	U
541-73-1	1,3-Dichlorobenzene		53	U
109-99-9	Tetrahydrofuran		53	U
106-46-7	1,4-Dichlorobenzene		53	U
60-29-7	Diethyl Ether		53	U
104-51-8	n-Butylbenzene		53	U
95-50-1	1,2-Dichlorobenzene		53	U
96-12-8	1,2-Dibromo-3-chloropropane		53	U
120-82-1	1,2,4-Trichlorobenzene		53	U
87-68-3	Hexachlorobutadiene		53	U
91-20-3	Naphthalene		53	U
87-61-6	1,2,3-Trichlorobenzene		53	U
994-05-8	Tert-amyl Methyl Ether		53	U
75-71-8	Dichlorodifluoromethane		53	U
142-28-9	1,3-Dichloropropane		53	U
75-69-4	Trichlorofluoromethane		53	U
637-92-3	Ethyl Tert-butyl ether		53	U



Client Name: PARE Case No.: A0204-22 Lab Sample ID: S-2 (8') Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020438.D Sample wt/vol: 10.3 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.96 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		53	U
123-91-1	1,4-Dioxane		26000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-3 (2') Matrix: (soil/water) SOIL Lab File ID: C020439.D Sample wt/vol: 9.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 3.91 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		58	U
74-83-9	Bromomethane		58	U
75-00-3	Chloroethane		58	U
67-64-1	Acetone		290	U
75-35-4	1,1-Dichloroethene		58	U
75-15-0	Carbon Disulfide		58	U
75-09-2	Methylene Chloride		290	U
1634-04-4	tert-Butyl methyl ether		58	U
156-60-5	trans-1,2 Dichloroethene		58	U
75-34-3	1,1-Dichloroethane		58	U
78-93-3	2-Butanone		290	U
594-20-7	2,2-Dichloropropane		58	U
156-59-2	cis-1,2-Dichloroethene		58	U
67-66-3	Chloroform		58	U
74-97-5	Bromochloromethane		58	U
71-55-6	1,1,1-Trichloroethane		58	U
563-58-6	1,1-Dichloropropene		58	U
56-23-5	Carbon Tetrachloride		58	U
71-43-2	Benzene		58	U
107-06-2	1,2-Dichloroethane		58	U
79-01-6	Trichloroethene		58	U
78-87-5	1,2-Dichloropropane		58	U
75-27-4	Bromodichloromethane		58	U
74-95-3	Dibromomethane		58	U
108-10-1	4-Methyl-2-pentanone		290	U
106-93-4	Ethylene Dibromide		58	U
10061-01-5	cis-1,3-Dichloropropene		58	U
108-88-3	Toluene		58	U
10061-02-6	Trans-1,3-Dichloropropene		58	U
79-00-5	1,1,2-Trichloroethane		58	U
591-78-6	2-Hexanone		290	U
127-18-4	Tetrachloroethene		58	U
124-48-1	Chlorodibromomethane		58	U
108-90-7	Chlorobenzene		58	U
630-20-6	1,1,1,2-Tetrachloroethane		58	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-3 (2') Matrix: (soil/water) SOIL Lab File ID: C020439.D Sample wt/vol: 9.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 3.91 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		58	U
1330-20-7	m & p-Xylene		120	U
95-47-6	o-Xylene		58	U
100-42-5	Styrene		58	U
75-25-2	Bromoform		58	U
98-82-8	Isopropylbenzene		58	U
79-34-5	1,1,2,2-Tetrachloroethane		58	U
108-86-1	Bromobenzene		58	U
96-18-4	1,2,3-Trichloropropane		58	U
95-49-8	2-Chlorotoluene		58	U
103-65-1	n-Propylbenzene		58	U
108-67-8	1,3,5-Trimethylbenzene		58	U
106-43-4	4-Chlorotoluene		58	U
98-06-6	tert-Butylbenzene		58	U
95-63-6	1,2,4-Trimethylbenzene		58	U
135-98-8	sec-Butylbenzene		58	U
99-87-6	p-Isopropyltoluene		58	U
75-87-3	Chloromethane		58	U
75-65-0	tert butyl alcohol		58	U
541-73-1	1,3-Dichlorobenzene		58	U
109-99-9	Tetrahydrofuran		58	U
106-46-7	1,4-Dichlorobenzene		58	U
60-29-7	Diethyl Ether		58	U
104-51-8	n-Butylbenzene		58	U
95-50-1	1,2-Dichlorobenzene		58	U
96-12-8	1,2-Dibromo-3-chloropropane		58	U
120-82-1	1,2,4-Trichlorobenzene		58	U
87-68-3	Hexachlorobutadiene		58	U
91-20-3	Naphthalene		58	U
87-61-6	1,2,3-Trichlorobenzene		58	U
994-05-8	Tert-amyl Methyl Ether		58	U
75-71-8	Dichlorodifluoromethane		58	U
142-28-9	1,3-Dichloropropane		58	U
75-69-4	Trichlorofluoromethane		58	U
637-92-3	Ethyl Tert-butyl ether		58	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-3 (2') Matrix: (soil/water) SOIL Lab File ID: C020439.D Sample wt/vol: 9.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 3.91 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		58	U
123-91-1	1,4-Dioxane		29000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-3 (8') Matrix: (soil/water) SOIL Lab File ID: C020440.D Sample wt/vol: 11.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 2.15 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		46	U
74-83-9	Bromomethane		46	U
75-00-3	Chloroethane		46	U
67-64-1	Acetone		230	U
75-35-4	1,1-Dichloroethene		46	U
75-15-0	Carbon Disulfide		46	U
75-09-2	Methylene Chloride		230	U
1634-04-4	tert-Butyl methyl ether		46	U
156-60-5	trans-1,2 Dichloroethene		46	U
75-34-3	1,1-Dichloroethane		46	U
78-93-3	2-Butanone		230	U
594-20-7	2,2-Dichloropropane		46	U
156-59-2	cis-1,2-Dichloroethene		46	U
67-66-3	Chloroform		46	U
74-97-5	Bromochloromethane		46	U
71-55-6	1,1,1-Trichloroethane		46	U
563-58-6	1,1-Dichloropropene		46	U
56-23-5	Carbon Tetrachloride		46	U
71-43-2	Benzene		46	U
107-06-2	1,2-Dichloroethane		46	U
79-01-6	Trichloroethene		46	U
78-87-5	1,2-Dichloropropane		46	U
75-27-4	Bromodichloromethane		46	U
74-95-3	Dibromomethane		46	U
108-10-1	4-Methyl-2-pentanone		230	U
106-93-4	Ethylene Dibromide		46	U
10061-01-5	cis-1,3-Dichloropropene		46	U
108-88-3	Toluene		46	U
10061-02-6	Trans-1,3-Dichloropropene		46	U
79-00-5	1,1,2-Trichloroethane		46	U
591-78-6	2-Hexanone		230	U
127-18-4	Tetrachloroethene		46	U
124-48-1	Chlorodibromomethane		46	U
108-90-7	Chlorobenzene		46	U
630-20-6	1,1,1,2-Tetrachloroethane		46	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-3 (8') Matrix: (soil/water) SOIL Lab File ID: C020440.D Sample wt/vol: 11.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 2.15 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		46	U
1330-20-7	m & p-Xylene		92	U
95-47-6	o-Xylene		46	U
100-42-5	Styrene		46	U
75-25-2	Bromoform		46	U
98-82-8	Isopropylbenzene		46	U
79-34-5	1,1,2,2-Tetrachloroethane		46	U
108-86-1	Bromobenzene		46	U
96-18-4	1,2,3-Trichloropropane		46	U
95-49-8	2-Chlorotoluene		46	U
103-65-1	n-Propylbenzene		46	U
108-67-8	1,3,5-Trimethylbenzene		46	U
106-43-4	4-Chlorotoluene		46	U
98-06-6	tert-Butylbenzene		46	U
95-63-6	1,2,4-Trimethylbenzene		46	U
135-98-8	sec-Butylbenzene		46	U
99-87-6	p-Isopropyltoluene		46	U
75-87-3	Chloromethane		46	U
75-65-0	tert butyl alcohol		46	U
541-73-1	1,3-Dichlorobenzene		46	U
109-99-9	Tetrahydrofuran		46	U
106-46-7	1,4-Dichlorobenzene		46	U
60-29-7	Diethyl Ether		46	U
104-51-8	n-Butylbenzene		46	U
95-50-1	1,2-Dichlorobenzene		46	U
96-12-8	1,2-Dibromo-3-chloropropane		46	U
120-82-1	1,2,4-Trichlorobenzene		46	U
87-68-3	Hexachlorobutadiene		46	U
91-20-3	Naphthalene		46	U
87-61-6	1,2,3-Trichlorobenzene		46	U
994-05-8	Tert-amyl Methyl Ether		46	U
75-71-8	Dichlorodifluoromethane		46	U
142-28-9	1,3-Dichloropropane		46	U
75-69-4	Trichlorofluoromethane		46	U
637-92-3	Ethyl Tert-butyl ether		46	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-3 (8') Matrix: (soil/water) SOIL Lab File ID: C020440.D Sample wt/vol: 11.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 2.15 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		46	U
123-91-1	1,4-Dioxane		23000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-4 (2') Matrix: (soil/water) SOIL Lab File ID: C020517.D Sample wt/vol: 10.7 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.43 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		50	U
74-83-9	Bromomethane		50	U
75-00-3	Chloroethane		50	U
67-64-1	Acetone		250	U
75-35-4	1,1-Dichloroethene		50	U
75-15-0	Carbon Disulfide		50	U
75-09-2	Methylene Chloride		250	U
1634-04-4	tert-Butyl methyl ether		50	U
156-60-5	trans-1,2 Dichloroethene		50	U
75-34-3	1,1-Dichloroethane		50	U
78-93-3	2-Butanone		250	U
594-20-7	2,2-Dichloropropane		50	U
156-59-2	cis-1,2-Dichloroethene		50	U
67-66-3	Chloroform		50	U
74-97-5	Bromochloromethane		50	U
71-55-6	1,1,1-Trichloroethane		50	U
563-58-6	1,1-Dichloropropene		50	U
56-23-5	Carbon Tetrachloride		50	U
71-43-2	Benzene		50	U
107-06-2	1,2-Dichloroethane		50	U
79-01-6	Trichloroethene		50	U
78-87-5	1,2-Dichloropropane		50	U
75-27-4	Bromodichloromethane		50	U
74-95-3	Dibromomethane		50	U
108-10-1	4-Methyl-2-pentanone		250	U
106-93-4	Ethylene Dibromide		50	U
10061-01-5	cis-1,3-Dichloropropene		50	U
108-88-3	Toluene		50	U
10061-02-6	Trans-1,3-Dichloropropene		50	U
79-00-5	1,1,2-Trichloroethane		50	U
591-78-6	2-Hexanone		250	U
127-18-4	Tetrachloroethene		50	U
124-48-1	Chlorodibromomethane		50	U
108-90-7	Chlorobenzene		50	U
630-20-6	1,1,1,2-Tetrachloroethane		50	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-4 (2') Matrix: (soil/water) SOIL Lab File ID: C020517.D Sample wt/vol: 10.7 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.43 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		50	U
1330-20-7	m & p-Xylene		100	U
95-47-6	o-Xylene		50	U
100-42-5	Styrene		50	U
75-25-2	Bromoform		50	U
98-82-8	Isopropylbenzene		50	U
79-34-5	1,1,2,2-Tetrachloroethane		50	U
108-86-1	Bromobenzene		50	U
96-18-4	1,2,3-Trichloropropane		50	U
95-49-8	2-Chlorotoluene		50	U
103-65-1	n-Propylbenzene		50	U
108-67-8	1,3,5-Trimethylbenzene		50	U
106-43-4	4-Chlorotoluene		50	U
98-06-6	tert-Butylbenzene		50	U
95-63-6	1,2,4-Trimethylbenzene		50	U
135-98-8	sec-Butylbenzene		50	U
99-87-6	p-Isopropyltoluene		50	U
75-87-3	Chloromethane		50	U
75-65-0	tert butyl alcohol		50	U
541-73-1	1,3-Dichlorobenzene		50	U
109-99-9	Tetrahydrofuran		50	U
106-46-7	1,4-Dichlorobenzene		50	U
60-29-7	Diethyl Ether		50	U
104-51-8	n-Butylbenzene		50	U
95-50-1	1,2-Dichlorobenzene		50	U
96-12-8	1,2-Dibromo-3-chloropropane		50	U
120-82-1	1,2,4-Trichlorobenzene		50	U
87-68-3	Hexachlorobutadiene		50	U
91-20-3	Naphthalene		50	U
87-61-6	1,2,3-Trichlorobenzene		50	U
994-05-8	Tert-amyl Methyl Ether		50	U
75-71-8	Dichlorodifluoromethane		50	U
142-28-9	1,3-Dichloropropane		50	U
75-69-4	Trichlorofluoromethane		50	U
637-92-3	Ethyl Tert-butyl ether		50	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-4 (2') Matrix: (soil/water) SOIL Lab File ID: C020517.D Sample wt/vol: 10.7 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.43 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS	: UG/KG	Q
108-20-3	Diisopropyl Ether		50	U
123-91-1	1,4-Dioxane		25000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-4 (8') Matrix: (soil/water) SOIL Lab File ID: C020518.D Sample wt/vol: 14.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 4.2 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		37	U
74-83-9	Bromomethane		37	U
75-00-3	Chloroethane		37	U
67-64-1	Acetone		190	U
75-35-4	1,1-Dichloroethene		37	U
75-15-0	Carbon Disulfide		37	U
75-09-2	Methylene Chloride		190	U
1634-04-4	tert-Butyl methyl ether		37	U
156-60-5	trans-1,2 Dichloroethene		37	U
75-34-3	1,1-Dichloroethane		37	U
78-93-3	2-Butanone		190	U
594-20-7	2,2-Dichloropropane		37	U
156-59-2	cis-1,2-Dichloroethene		37	U
67-66-3	Chloroform		37	U
74-97-5	Bromochloromethane		37	U
71-55-6	1,1,1-Trichloroethane		37	U
563-58-6	1,1-Dichloropropene		37	U
56-23-5	Carbon Tetrachloride		37	U
71-43-2	Benzene		37	U
107-06-2	1,2-Dichloroethane		37	U
79-01-6	Trichloroethene		37	U
78-87-5	1,2-Dichloropropane		37	U
75-27-4	Bromodichloromethane		37	U
74-95-3	Dibromomethane		37	U
108-10-1	4-Methyl-2-pentanone		190	U
106-93-4	Ethylene Dibromide		37	U
10061-01-5	cis-1,3-Dichloropropene		37	U
108-88-3	Toluene		37	U
10061-02-6	Trans-1,3-Dichloropropene		37	U
79-00-5	1,1,2-Trichloroethane		37	U
591-78-6	2-Hexanone		190	U
127-18-4	Tetrachloroethene		37	U
124-48-1	Chlorodibromomethane		37	U
108-90-7	Chlorobenzene		37	U
630-20-6	1,1,1,2-Tetrachloroethane		37	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-4 (8') Matrix: (soil/water) SOIL Lab File ID: C020518.D Sample wt/vol: 14.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 4.2 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		37	U
1330-20-7	m & p-Xylene		74	U
95-47-6	o-Xylene		37	U
100-42-5	Styrene		37	U
75-25-2	Bromoform		37	U
98-82-8	Isopropylbenzene		37	U
79-34-5	1,1,2,2-Tetrachloroethane		37	U
108-86-1	Bromobenzene		37	U
96-18-4	1,2,3-Trichloropropane		37	U
95-49-8	2-Chlorotoluene		37	U
103-65-1	n-Propylbenzene		37	U
108-67-8	1,3,5-Trimethylbenzene		37	U
106-43-4	4-Chlorotoluene		37	U
98-06-6	tert-Butylbenzene		37	U
95-63-6	1,2,4-Trimethylbenzene		37	U
135-98-8	sec-Butylbenzene		37	U
99-87-6	p-Isopropyltoluene		37	U
75-87-3	Chloromethane		37	U
75-65-0	tert butyl alcohol		37	U
541-73-1	1,3-Dichlorobenzene		37	U
109-99-9	Tetrahydrofuran		37	U
106-46-7	1,4-Dichlorobenzene		37	U
60-29-7	Diethyl Ether		37	U
104-51-8	n-Butylbenzene		37	U
95-50-1	1,2-Dichlorobenzene		37	U
96-12-8	1,2-Dibromo-3-chloropropane		37	U
120-82-1	1,2,4-Trichlorobenzene		37	U
87-68-3	Hexachlorobutadiene		37	U
91-20-3	Naphthalene		37	U
87-61-6	1,2,3-Trichlorobenzene		37	U
994-05-8	Tert-amyl Methyl Ether		37	U
75-71-8	Dichlorodifluoromethane		37	U
142-28-9	1,3-Dichloropropane		37	U
75-69-4	Trichlorofluoromethane		37	U
637-92-3	Ethyl Tert-butyl ether		37	U



Client Name: PARE Case No.: A0204-22 Lab Sample ID: S-4 (8') Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020518.D Sample wt/vol: 14.1 (g/ml) G Date Sampled: 2/4/2014 % Moisture 4.2 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		37	U
123-91-1	1,4-Dioxane		19000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-5 (2') Matrix: (soil/water) SOIL Lab File ID: C020519.D Sample wt/vol: 13.4 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.22 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		40	U
74-83-9	Bromomethane		40	U
75-00-3	Chloroethane		40	U
67-64-1	Acetone		200	U
75-35-4	1,1-Dichloroethene		40	U
75-15-0	Carbon Disulfide		40	U
75-09-2	Methylene Chloride		200	U
1634-04-4	tert-Butyl methyl ether		40	U
156-60-5	trans-1,2 Dichloroethene		40	U
75-34-3	1,1-Dichloroethane		40	U
78-93-3	2-Butanone		200	U
594-20-7	2,2-Dichloropropane		40	U
156-59-2	cis-1,2-Dichloroethene		40	U
67-66-3	Chloroform		40	U
74-97-5	Bromochloromethane		40	U
71-55-6	1,1,1-Trichloroethane		40	U
563-58-6	1,1-Dichloropropene		40	U
56-23-5	Carbon Tetrachloride		40	U
71-43-2	Benzene		40	U
107-06-2	1,2-Dichloroethane		40	U
79-01-6	Trichloroethene		40	U
78-87-5	1,2-Dichloropropane		40	U
75-27-4	Bromodichloromethane		40	U
74-95-3	Dibromomethane		40	U
108-10-1	4-Methyl-2-pentanone		200	U
106-93-4	Ethylene Dibromide		40	U
10061-01-5	cis-1,3-Dichloropropene		40	U
108-88-3	Toluene		40	U
10061-02-6	Trans-1,3-Dichloropropene		40	U
79-00-5	1,1,2-Trichloroethane		40	U
591-78-6	2-Hexanone		200	U
127-18-4	Tetrachloroethene		40	U
124-48-1	Chlorodibromomethane		40	U
108-90-7	Chlorobenzene		40	U
630-20-6	1,1,1,2-Tetrachloroethane		40	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETTLAB

Client Name: PARE Case No.: A0204-22 Lab Sample ID: S-5 (2') Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020519.D Sample wt/vol: 13.4 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.22 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		40	U
1330-20-7	m & p-Xylene		80	U
95-47-6	o-Xylene		40	U
100-42-5	Styrene		40	U
75-25-2	Bromoform		40	U
98-82-8	Isopropylbenzene		40	U
79-34-5	1,1,2,2-Tetrachloroethane		40	U
108-86-1	Bromobenzene		40	U
96-18-4	1,2,3-Trichloropropane		40	U
95-49-8	2-Chlorotoluene		40	U
103-65-1	n-Propylbenzene		40	U
108-67-8	1,3,5-Trimethylbenzene		40	U
106-43-4	4-Chlorotoluene		40	U
98-06-6	tert-Butylbenzene		40	U
95-63-6	1,2,4-Trimethylbenzene		40	U
135-98-8	sec-Butylbenzene		40	U
99-87-6	p-Isopropyltoluene		40	U
75-87-3	Chloromethane		40	U
75-65-0	tert butyl alcohol		40	U
541-73-1	1,3-Dichlorobenzene		40	U
109-99-9	Tetrahydrofuran		40	U
106-46-7	1,4-Dichlorobenzene		40	U
60-29-7	Diethyl Ether		40	U
104-51-8	n-Butylbenzene		40	U
95-50-1	1,2-Dichlorobenzene		40	U
96-12-8	1,2-Dibromo-3-chloropropane		40	U
120-82-1	1,2,4-Trichlorobenzene		40	U
87-68-3	Hexachlorobutadiene		40	U
91-20-3	Naphthalene		40	U
87-61-6	1,2,3-Trichlorobenzene		40	U
994-05-8	Tert-amyl Methyl Ether		40	U
75-71-8	Dichlorodifluoromethane		40	U
142-28-9	1,3-Dichloropropane		40	U
75-69-4	Trichlorofluoromethane		40	U
637-92-3	Ethyl Tert-butyl ether		40	U



Client Name: PARE Case No.: A0204-22 Lab Sample ID: S-5 (2') Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020519.D Sample wt/vol: 13.4 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.22 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		40	U
123-91-1	1,4-Dioxane		20000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-5 (8') Matrix: (soil/water) SOIL Lab File ID: C020520.D Sample wt/vol: 13.5 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.23 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		40	U
74-83-9	Bromomethane		40	U
75-00-3	Chloroethane		40	U
67-64-1	Acetone		200	U
75-35-4	1,1-Dichloroethene		40	U
75-15-0	Carbon Disulfide		40	U
75-09-2	Methylene Chloride		200	U
1634-04-4	tert-Butyl methyl ether		40	U
156-60-5	trans-1,2 Dichloroethene		40	U
75-34-3	1,1-Dichloroethane		40	U
78-93-3	2-Butanone		200	U
594-20-7	2,2-Dichloropropane		40	U
156-59-2	cis-1,2-Dichloroethene		40	U
67-66-3	Chloroform		40	U
74-97-5	Bromochloromethane		40	U
71-55-6	1,1,1-Trichloroethane		40	U
563-58-6	1,1-Dichloropropene		40	U
56-23-5	Carbon Tetrachloride		40	U
71-43-2	Benzene		40	U
107-06-2	1,2-Dichloroethane		40	U
79-01-6	Trichloroethene		40	U
78-87-5	1,2-Dichloropropane		40	U
75-27-4	Bromodichloromethane		40	U
74-95-3	Dibromomethane		40	U
108-10-1	4-Methyl-2-pentanone		200	U
106-93-4	Ethylene Dibromide		40	U
10061-01-5	cis-1,3-Dichloropropene		40	U
108-88-3	Toluene		40	U
10061-02-6	Trans-1,3-Dichloropropene		40	U
79-00-5	1,1,2-Trichloroethane		40	U
591-78-6	2-Hexanone		200	U
127-18-4	Tetrachloroethene		40	U
124-48-1	Chlorodibromomethane		40	U
108-90-7	Chlorobenzene		40	U
630-20-6	1,1,1,2-Tetrachloroethane		40	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-5 (8') Matrix: (soil/water) SOIL Lab File ID: C020520.D Sample wt/vol: 13.5 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.23 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		40	U
1330-20-7	m & p-Xylene		80	U
95-47-6	o-Xylene		40	U
100-42-5	Styrene		40	U
75-25-2	Bromoform		40	U
98-82-8	Isopropylbenzene		40	U
79-34-5	1,1,2,2-Tetrachloroethane		40	U
108-86-1	Bromobenzene		40	U
96-18-4	1,2,3-Trichloropropane		40	U
95-49-8	2-Chlorotoluene		40	U
103-65-1	n-Propylbenzene		40	U
108-67-8	1,3,5-Trimethylbenzene		40	U
106-43-4	4-Chlorotoluene		40	U
98-06-6	tert-Butylbenzene		40	U
95-63-6	1,2,4-Trimethylbenzene		40	U
135-98-8	sec-Butylbenzene		40	U
99-87-6	p-Isopropyltoluene		40	U
75-87-3	Chloromethane		40	U
75-65-0	tert butyl alcohol		40	U
541-73-1	1,3-Dichlorobenzene		40	U
109-99-9	Tetrahydrofuran		40	U
106-46-7	1,4-Dichlorobenzene		40	U
60-29-7	Diethyl Ether		40	U
104-51-8	n-Butylbenzene		40	U
95-50-1	1,2-Dichlorobenzene		40	U
96-12-8	1,2-Dibromo-3-chloropropane		40	U
120-82-1	1,2,4-Trichlorobenzene		40	U
87-68-3	Hexachlorobutadiene		40	U
91-20-3	Naphthalene		40	U
87-61-6	1,2,3-Trichlorobenzene		40	U
994-05-8	Tert-amyl Methyl Ether		40	U
75-71-8	Dichlorodifluoromethane		40	U
142-28-9	1,3-Dichloropropane		40	U
75-69-4	Trichlorofluoromethane		40	U
637-92-3	Ethyl Tert-butyl ether		40	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: S-5 (8') Matrix: (soil/water) SOIL Lab File ID: C020520.D Sample wt/vol: 13.5 (g/ml) G Date Sampled: 2/4/2014 % Moisture 7.23 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		40	U
123-91-1	1,4-Dioxane		20000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: VBLK020414 Matrix: (soil/water) SOIL Lab File ID: C020426.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 0 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		50	U
74-83-9	Bromomethane		50	U
75-00-3	Chloroethane		50	U
67-64-1	Acetone		250	U
75-35-4	1,1-Dichloroethene		50	U
75-15-0	Carbon Disulfide		50	U
75-09-2	Methylene Chloride		250	U
1634-04-4	tert-Butyl methyl ether		50	U
156-60-5	trans-1,2 Dichloroethene		50	U
75-34-3	1,1-Dichloroethane		50	U
78-93-3	2-Butanone		250	U
594-20-7	2,2-Dichloropropane		50	U
156-59-2	cis-1,2-Dichloroethene		50	U
67-66-3	Chloroform		50	U
74-97-5	Bromochloromethane		50	U
71-55-6	1,1,1-Trichloroethane		50	U
563-58-6	1,1-Dichloropropene		50	U
56-23-5	Carbon Tetrachloride		50	U
71-43-2	Benzene		50	U
107-06-2	1,2-Dichloroethane		50	U
79-01-6	Trichloroethene		50	U
78-87-5	1,2-Dichloropropane		50	U
75-27-4	Bromodichloromethane		50	U
74-95-3	Dibromomethane		50	U
108-10-1	4-Methyl-2-pentanone		250	U
106-93-4	Ethylene Dibromide		50	U
10061-01-5	cis-1,3-Dichloropropene		50	U
108-88-3	Toluene		50	U
10061-02-6	Trans-1,3-Dichloropropene		50	U
79-00-5	1,1,2-Trichloroethane		50	U
591-78-6	2-Hexanone		250	U
127-18-4	Tetrachloroethene		50	U
124-48-1	Chlorodibromomethane		50	U
108-90-7	Chlorobenzene		50	U
630-20-6	1,1,1,2-Tetrachloroethane		50	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: VBLK020414 Matrix: (soil/water) SOIL Lab File ID: C020426.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 0 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		50	U
1330-20-7	m & p-Xylene		100	U
95-47-6	o-Xylene		50	U
100-42-5	Styrene		50	U
75-25-2	Bromoform		50	U
98-82-8	Isopropylbenzene		50	U
79-34-5	1,1,2,2-Tetrachloroethane		50	U
108-86-1	Bromobenzene		50	U
96-18-4	1,2,3-Trichloropropane		50	U
95-49-8	2-Chlorotoluene		50	U
103-65-1	n-Propylbenzene		50	U
108-67-8	1,3,5-Trimethylbenzene		50	U
106-43-4	4-Chlorotoluene		50	U
98-06-6	tert-Butylbenzene		50	U
95-63-6	1,2,4-Trimethylbenzene		50	U
135-98-8	sec-Butylbenzene		50	U
99-87-6	p-Isopropyltoluene		50	U
75-87-3	Chloromethane		50	U
75-65-0	tert butyl alcohol		50	U
541-73-1	1,3-Dichlorobenzene		50	U
109-99-9	Tetrahydrofuran		50	U
106-46-7	1,4-Dichlorobenzene		50	U
60-29-7	Diethyl Ether		50	U
104-51-8	n-Butylbenzene		50	U
95-50-1	1,2-Dichlorobenzene		50	U
96-12-8	1,2-Dibromo-3-chloropropane		50	U
120-82-1	1,2,4-Trichlorobenzene		50	U
87-68-3	Hexachlorobutadiene		50	U
91-20-3	Naphthalene		50	U
87-61-6	1,2,3-Trichlorobenzene		50	U
994-05-8	Tert-amyl Methyl Ether		50	U
75-71-8	Dichlorodifluoromethane		50	U
142-28-9	1,3-Dichloropropane		50	U
75-69-4	Trichlorofluoromethane		50	U
637-92-3	Ethyl Tert-butyl ether		50	U



Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: VBLK020414 Matrix: (soil/water) SOIL Lab File ID: C020426.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 0 Date Analyzed: 2/4/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
108-20-3	Diisopropyl Ether		50	U
123-91-1	1,4-Dioxane		25000	U

NETTLAB

Client Name: PARE Case No.: A0204-22 Lab Sample ID: VBLK020514 Method: 8260 Matrix: (soil/water) SOIL Lab File ID: C020516.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 0 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
75-01-4	Vinyl Chloride		50	U
74-83-9	Bromomethane		50	U
75-00-3	Chloroethane		50	U
67-64-1	Acetone		250	U
75-35-4	1,1-Dichloroethene		50	U
75-15-0	Carbon Disulfide		50	U
75-09-2	Methylene Chloride		250	U
1634-04-4	tert-Butyl methyl ether		50	U
156-60-5	trans-1,2 Dichloroethene		50	U
75-34-3	1,1-Dichloroethane		50	U
78-93-3	2-Butanone		250	U
594-20-7	2,2-Dichloropropane		50	U
156-59-2	cis-1,2-Dichloroethene		50	U
67-66-3	Chloroform		50	U
74-97-5	Bromochloromethane		50	U
71-55-6	1,1,1-Trichloroethane		50	U
563-58-6	1,1-Dichloropropene		50	U
56-23-5	Carbon Tetrachloride		50	U
71-43-2	Benzene		50	U
107-06-2	1,2-Dichloroethane		50	U
79-01-6	Trichloroethene		50	U
78-87-5	1,2-Dichloropropane		50	U
75-27-4	Bromodichloromethane		50	U
74-95-3	Dibromomethane		50	U
108-10-1	4-Methyl-2-pentanone		250	U
106-93-4	Ethylene Dibromide		50	U
10061-01-5	cis-1,3-Dichloropropene		50	U
108-88-3	Toluene		50	U
10061-02-6	Trans-1,3-Dichloropropene		50	U
79-00-5	1,1,2-Trichloroethane		50	U
591-78-6	2-Hexanone		250	U
127-18-4	Tetrachloroethene		50	U
124-48-1	Chlorodibromomethane		50	U
108-90-7	Chlorobenzene		50	U
630-20-6	1,1,1,2-Tetrachloroethane		50	U

### **VOLATILE ORGANICS ANALYSIS DATA SHEET**

NETTLAB

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: VBLK020514 Matrix: (soil/water) SOIL Lab File ID: C020516.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 0 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS:	UG/KG	Q
100-41-4	Ethylbenzene		50	U
1330-20-7	m & p-Xylene		100	U
95-47-6	o-Xylene		50	U
100-42-5	Styrene		50	U
75-25-2	Bromoform		50	U
98-82-8	Isopropylbenzene		50	U
79-34-5	1,1,2,2-Tetrachloroethane		50	U
108-86-1	Bromobenzene		50	U
96-18-4	1,2,3-Trichloropropane		50	U
95-49-8	2-Chlorotoluene		50	U
103-65-1	n-Propylbenzene		50	U
108-67-8	1,3,5-Trimethylbenzene		50	U
106-43-4	4-Chlorotoluene		50	U
98-06-6	tert-Butylbenzene		50	U
95-63-6	1,2,4-Trimethylbenzene		50	U
135-98-8	sec-Butylbenzene		50	U
99-87-6	p-Isopropyltoluene		50	U
75-87-3	Chloromethane		50	U
75-65-0	tert butyl alcohol		50	U
541-73-1	1,3-Dichlorobenzene		50	U
109-99-9	Tetrahydrofuran	Tetrahydrofuran 50		
106-46-7	1,4-Dichlorobenzene		50	U
60-29-7	Diethyl Ether		50	U
104-51-8	n-Butylbenzene		50	U
95-50-1	1,2-Dichlorobenzene		50	U
96-12-8	1,2-Dibromo-3-chloropropane		50	U
120-82-1	1,2,4-Trichlorobenzene		50	U
87-68-3	Hexachlorobutadiene		50	U
91-20-3	Naphthalene		50	U
87-61-6	1,2,3-Trichlorobenzene		50	U
994-05-8	Tert-amyl Methyl Ether		50	U
75-71-8	Dichlorodifluoromethane		50	U
142-28-9	1,3-Dichloropropane		50	U
75-69-4	Trichlorofluoromethane		50	U
637-92-3	Ethyl Tert-butyl ether		50	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.



### **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Client Name: PARE Case No.: A0204-22 Method: 8260 Lab Sample ID: VBLK020514 Matrix: (soil/water) SOIL Lab File ID: C020516.D Sample wt/vol: 10.0 (g/ml) G Date Sampled: 2/4/2014 % Moisture 0 Date Analyzed: 2/5/2014 Soil Extract Volume: (uL) Dilution Factor: 1.0 Analyst's Initials: NS Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS	: UG/KG	Q
108-20-3	Diisopropyl Ether		50	U
123-91-1	1,4-Dioxane		25000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

2B



### SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: NEW ENGLAND TESTING LAB Contract: BLACKSTONE V

Lab Code: RI010 Case No.: A0204-22 SAS No.: SDG No.: PARE

Level: (low/med) MED

	EPA	SMC1	SMC2	SMC3	TOT
	SAMPLE NO.	#	#	#	OUT
01	VLCS020414	104	112	104	0
02	VBLK020414	101	109	109	0
03	S-1 (2')	102	110	108	0
04	S-1 (7')	102	110	109	0
05	SC-1	101	110	103	0
06	SC-2	101	110	108	0
07	SC-3	101	108	107	0
80	SC-4	100	108	108	0
09	SC-5	101	110	106	0
10	S-6	102	108	100	0
11	S-7	101	109	102	0
12	S-8	99	109	107	0
13	S-2 (2')	101	109	107	0
14	S-2 (8')	100	109	103	0
15	S-3 (2')	101	110	108	0
16	S-3 (8')	102	109	105	0
17	VLCS020514	100	99	99	0
18	VBLK020514	97	99	103	0
19	S-4 (2')	97	99	103	0
20	S-4 (8')	97	99	104	0
21	S-5 (2')	96	99	104	0
22	S-5 (8')	97	100	106	0

### QC LIMITS

 SMC1
 =
 4-Bromofluorobenzene
 (70-130)

 SMC2
 =
 Toluene-D8
 (70-130)

 SMC3
 =
 1,2-Dichloroethane-D4
 (70-130)

# Column to be used to flag recovery values

New England Testing Laboratory, Inc.

<sup>\*</sup> Values outside of contract required QC limits

D System Monitoring Compound diluted out



### **Volatile Organics Laboratory Control Spike**

Date Analyzed: 02/05/2014 Sample ID: VLCS020514

	Spike	Spike	Recovery,	<b>Lower Control</b>	<b>Upper Control</b>
Compound	Added	Result	%	Limit, %	Limit, %
1,1-Dichloroethene	50.0	49.2	98	70	129
Benzene	50.0	48.3	97	73	129
Trichloroethene	50.0	47.5	95	77	122
Toluene	50.0	48.3	97	75	123
Chlorobenzene	50.0	49.1	98	73	125



### **Volatile Organics Laboratory Control Spike**

Date Analyzed: 02/04/2014 Sample ID: VLCS020414

	Spike	Spike	Recovery,	<b>Lower Control</b>	<b>Upper Control</b>
Compound	Added	Result	%	Limit, %	Limit, %
1,1-Dichloroethene	50.0	58.3	117	70	129
Benzene	50.0	62.3	125	73	129
Trichloroethene	50.0	57.0	114	77	122
Toluene	50.0	59.7	119	75	123
Chlorobenzene	50.0	47.8	96	73	125

A0204-22

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue North Providence, RI 02904

1-888-863-8522

CHAIN OF CUSTODY RECORD

2 REMARKS Turnaround (Business Days)\_ Special Instructions: List Specific Detection Limit Requirements: \* Expedited reder BOUND Laboratory Remarks: Temp. received: 6 Cooled □ x SNOCZ TESTS. 5201 Y × HOOM (1)  $\sigma$ Emomes  $\prec$   $\vdash$ 250 M/W Date/Time CONTAINERS § ₽ 4 O⊢IMŒ SO-1 <a⊃mo⊃∞ • Comberland, RU Received by: (Signature) SAMPLE LD. 2 4 14 2.50 m 2/4/14 2:50pm Blackstone Valley Irep Sariscoll Opare corp.com (2) 1-5 5-1(7') PROJECT NAME/LOCATION (17) 2-5 5-2 (8) 5-3 (2) 5-3 (8) (3)4-5 5.5(%) 2-5(8') h -25 50.5 7.75 9-8 いい 1 \$-\$0 Than P. Wood Accounting on ≤ o Relinquished by: (Signature) elinquished by: (Signature) OOM Sampled by: (Signature \$ x x 5 1740 140 845 312 557 345 (3.23 7 46 = 35 002 TIME 8 120 13062.09 PARE REPORT TO: INVOICE TO: PROJ. NO. DATE CLENT

# **APPENDIX K**

Letter of Responsibility



# LETTER OF RESPONSIBILITY File No. SR-08-1723

January 24, 2014

#### **CERTIFIED MAIL**

Ms. Janelle Bosek Civic Builders 304 Hudson Street New York, NY 10013

RE:

Blackstone Valley Prep School

52 Broad Street

Cumberland, Rhode Island

Plat Map 2 / Lot 26

Dear Ms. Bosek:

On November 9, 2011, the Rhode Island Department of Environmental Management (the Department) enacted the amended <u>Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases</u> (the <u>Remediation Regulations</u>). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a Performing Party.

Please be advised of the following facts:

- 1. The above referenced property is located at 52 Broad Street, Cumberland, Rhode Island (the Site). The Site is further identified by the Town of Cumberland Tax Assessor's Office as Plat Map 2 / Lot 26.
- 2. The Department is in receipt of the following documents:
  - a. <u>Geotechnical Design Basis Report</u>, received by the Department on January 16, 2014, prepared by PARE Corporation (PARE), submitted by Rhode Island Department of Elementary and Secondary Education (RIDE);
  - b. <u>Notification of Release</u>, received by the Department on January 16, 2014, prepared and submitted by PARE; and
  - c. Geotechnical Report Review, received by the Department on January 16, 2014,

prepared by Northeast Geotechnical, Inc., submitted by RIDE.

- 3. The above referenced documents identify concentrations of total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), arsenic, lead, and mercury in Site soils that exceed the Department's Method 1 Direct Exposure Criteria, as referenced in the Remediation Regulations.
- 4. Based on the presence and nature of these Hazardous Substances and petroleum hydrocarbons, the Department concurs that a Release of Hazardous Materials has occurred as defined by Rules 3.33, 3.34, 3.59, and 3.63 of the <u>Remediation Regulations</u>.
- 5. Civic Builders is identified as the current owner of the Site by the Town of Cumberland Tax Assessor's office and as such is a Responsible Party as defined by Rule 3.70 of the Remediation Regulations.

As a result of the information known and the conditions observed at the site, the Department requests that Civic Builders comply with the following:

1. If necessary, prior to the implementation of any additional site investigation field activities and in accordance with Rule 7.07(A)(i) of the Remediation Regulations, Civic Builders must notify all abutting property owners, tenants, easement holders, and the municipality that an investigation is about to occur. The notice should briefly indicate the purpose of the investigation, the work to be performed, and the approximate scheduled dates of activities. Please submit a draft notification to the Department via E-mail for review and approval prior to distribution. A boilerplate notification to be distributed can be found online at: http://www.dem.ri.gov/programs/benviron/waste/topicrem.htm#process.

The Department will require a copy of the public notice letter and a list of all recipients. Failure to comply with the aforementioned items may result in enforcement actions as specified in Rhode Island General Laws 23-19.1-17 and 23-19.1-18.

- 2. Ensure that the requirements of Rhode Island General Law (RIGL), Title 23, Health and Safety, Chapter 23-19.14, Industrial Property Remediation and Reuse Act, Section 23-19.14-5, Environmental Equity and Public Participation, have been fulfilled. A copy of this section of the RIGL has been attached for your reference. In accordance with the Industrial Property Remediation and Reuse Act, prior to the establishment of a final scope of investigation for the Site, and after the completion of All Appropriate Inquiries (AAI), hold a public meeting for the purposes of obtaining information about conditions at the Site and the environmental history at the Site that may be useful in establishing the scope of the investigation and/or establishing the objectives for the environmental cleanup of the Site.
  - a. The public meeting shall be held in the City or Town in which the Site is located.
  - b. Public notice shall be given of the meeting at least ten (10) business days prior to the meeting.

- c. Following the meeting, the record of the meeting shall be open for a period of not less than ten (10) and not more than twenty (20) business days for the receipt of public comment.
- d. The results of all appropriate inquiries, analysis and the public meeting, including the comment period and responses to all comments received, shall be documented in a written report submitted to the Department.

No work (remediation or construction) shall be permitted at the property until the public meeting and comment period regarding the Site's proposed reuse has closed. The above detailed required public notice, meeting and comment period shall be in addition to any other requirements for public notice and comment relating to the investigation or remedy of the Site and may be part of another meeting pertaining to the Site provided that the minimum standards established by RIGL Section 23-19.14-5 for notice and comment are met.

- 3. Additionally, ensure that the requirements of RIGL Title 23, *Health and Safety*, Chapter 23-19.14, *Industrial Property Remediation and Reuse Act*, Section 23-19.14-4, *Objectives of Environmental Clean-Up* have been met. A copy of this section of the RIGL has been attached for your reference. The requirements of the Objectives of Environmental Clean-Up statute, include, but are not limited to the following:
  - a. The site investigation shall include analysis for the chemicals of potential concern for vapor intrusion. The list of chemicals of potential concern for vapor intrusion is attached for your reference;
  - b. Remediate the soils where chemicals of potential concern for vapor intrusion or petroleum exceed the residential direct exposure criteria through the physical removal of said chemicals or petroleum through excavation or in situ treatment; and
  - c. Equip the school building with both a passive sub slab ventilation system capable of conversion to an active system and a vapor barrier beneath the school building or incorporated in the concrete slab, all in compliance with an approved Department Remedial Action Work Plan (RAWP) and completed prior to the occupancy of the school;
- 4. Conduct further investigation of the Site soil and groundwater, if warranted, in accordance with Section 7.00 of the <u>Remediation Regulations</u>.
- 5. Upon completion of the additional site investigation submit a Site Investigation Report (SIR) in accordance with Section 7.00 of the <u>Remediation Regulations</u> within ninety (90) days from the date of this letter. Given that some limited environmental investigation has already been performed at the Site, you may incorporate portions of the information already gathered and work already performed to address the items covered in Section 7.00. The SIR should include at least two remedial alternatives other than no action/natural attenuation and include future plans for the re-use or redevelopment (if applicable) of the property.
- 6. Submit an SIR checklist in accordance with Rule 7.08 of the <u>Remediation Regulations</u>. The SIR checklist was created as a supplemental tool to expedite the review and approval process

by cross-referencing the specific sections and pages within the SIR that provide the detailed information that addresses each stated requirement within Section 7.00 of the <u>Remediation Regulations</u>.

7. Upon approval by the Department of the SIR, be prepared to bring the Site into compliance with the Remediation Regulations.

Please be advised that Civic Builders, as the Responsible Party, is responsible for the proper investigation and remediation of hazardous substances and petroleum hydrocarbons at this site. Also be advised that any remedial alternative that proposes to leave contaminated media on-site at levels which exceed the Department's Residential Direct Exposure Criteria, applicable Leachability Criteria, or applicable Groundwater Criteria will, at a minimum, necessitate the recording of an institutional control in the form of an Environmental Land Usage Restriction (ELUR) on the deed for the site, and will likely require implementation of additional engineered controls to restrict human exposure.

Please notify this office within seven days of the receipt of this letter of your plans to address these items. All correspondences should be sent to the attention of:

Ashley L. Blauvelt
RIDEM / Office of Waste Management
235 Promenade Street
Providence, RI 02908

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, ext. 7026, or by E-mail at ashley.blauvelt@dem.ri.gov.

Sincerely,

Ashley L. Blauvelt Sanitary Engineer

Office of Waste Management

cc: Terrence Gay, Assoc. Director for Environmental Protection, RIDEM/Office of the Director

Leo Hellested, Chief, RIDEM/OWM

Matthew DeStefano, Deputy Chief, RIDEM/OWM

Kelly J. Owens, Assoc. Supervising Engineer, RIDEM/OWM

Jeffrey Crawford, Principal Environmental Scientist, RIDEM/OWM

Susan Forcier, Esq., RIDEM/Legal Services

Nichole Pollock, Legislative Liaison, RIDEM/Office of the Director

Joseph da Silva, RI Dept. of Elementary and Secondary Education

Timothy P. Thies, PARE Corporation

Attachments: RIGL 23-19.14-5, Environmental Equity and Public Participation

RIGL 23-19.14-4, *Objectives of Environmental Clean-Up*List of Chemicals of Potential Concern for Vapor Instrusion

# TITLE 23 Health and Safety

# CHAPTER 23-19.14 Industrial Property Remediation and Reuse Act

### **SECTION 23-19.14-5**

- § 23-19.14-5 Environmental equity and public participation. (a) The department of environmental management shall consider the effects that clean-ups would have on the populations surrounding each site and shall consider the issues of environmental equity for low income and racial minority populations. The department of environmental management will develop and implement a process to ensure community involvement throughout the investigation and remediation of contaminated sites. That process shall include, but not be limited to, the following components:
  - (1) Notification to abutting residents when a work plan for a site investigation is proposed;
- (2) Adequate availability of all public records concerning the investigation and clean-up of the site, including, where necessary, the establishment of informational repositories in the impacted community; and
- (3) Notification to abutting residents, and other interested parties, when the investigation of the site is deemed complete by the department of environmental management.
- (4) Whenever a site that is known to be contaminated or is suspected of being contaminated based upon its past use is considered for possible reuse as the location of a school, child-care facility, or as a recreational facility for public use, the person proposing such reuse shall, prior to the establishment of a final scope of investigation for the site and after the completion of all appropriate inquiries, hold a public meeting for the purposes of obtaining information about conditions at the site and the environmental history at the site that may be useful in establishing the scope of the investigation of the site and/or establishing the objectives for the environmental clean-up of the site. The public meeting shall be held in a city or town in which the site is located; public notice shall be given of the meeting at least ten (10) business days prior to the meeting; and following the meeting, the record of the meeting shall be open for a period of not less than ten (10) and not more than twenty (20) business days for the receipt of public comment. The results of all appropriate inquiries, analysis and the public meeting, including the comment period, shall be documented in a written report submitted to the department.
- (ii) No work (remediation or construction), shall be permitted at the property until the public meeting and comment period regarding the site's proposed reuse has closed except where the director determines that such work is necessary to mitigate or prevent:
  - (A) an imminent threat to human health, public safety or the environment; or
  - (B) off-site migration of known or suspected contamination.
  - (iii) The public notice, meeting and comment required by this section shall be in addition to any other

requirements for public notice and comment relating to the investigation or remedy of the site and may be made part of another meeting pertaining to the site provided that the minimum standards established by this section for notice and comment are met. Any investigation or remediation undertaken prior to the completion of the public comment period shall be limited to measures necessary to define and/or mitigate the imminent threat and/or off-site migration.

- (iv) The director shall establish, by regulation, standards and practice, which are consistent with federal practices, for purposes of satisfying the requirement to carry out all appropriate inquiries for the purposes of this chapter, the standard for the reporting of the results of those inquiries, and the process for notification to the public of the public meeting, the standards and practices for conducting the public meeting, and reporting on public comment.
- (b) Effective until January 1, 2007, the community involvement process may be coordinated, as appropriate, with the public notice and comment opportunity provided in § 23-19.14-11.
- (c) The department of environmental management will develop and implement a process by which a person that is or may be affected by a release or threatened release of a hazardous material at a site located in the community in which the person works or resides may request the conduct of a site assessment; and a decision process, with objective criteria, specifying how the department will consider and appropriately respond to such requests.
- (d) The department of environmental management will maintain, update not less than annually, and make available to the public a record of sites, by name and location, at which remedial actions have been completed in the previous year and are planned to be addressed under the state site remediation and Brownfields program in the upcoming year. The public record shall identify whether or not the site, on completion of the remedial action, will be suitable for unrestricted use and, if not, shall identify the institutional controls relied on in the remedy.

History of Section. (P.L. 1995, ch. 187, § 1; P.L. 2002, ch. 186, § 1; P.L. 2006, ch. 250, § 1; P.L. 2006, ch. 275, § 1.)

# TITLE 23 Health and Safety

# CHAPTER 23-19.14 Industrial Property Remediation and Reuse Act

### **SECTION 23-19.14-4**

- § 23-19.14-4 Objectives of environmental clean-up. (a) The department of environmental management will develop, maintain and publish numerical objectives for the most commonly found hazardous substances. These objectives will be applicable for the clean-up of contaminated properties to levels which are protective of human health and the environment based on current and reasonably foreseeable future use of a property and the surrounding natural resources. To further ensure the safety of school children while attending school, the department of environmental management, shall:
- (1) Adopt numerical objectives for properties dedicated to school use equivalent to the numerical objectives set by the department for residential use of such properties;
- (2) Evaluate chemicals of concern for vapor intrusion and adopt numerical objectives for those contaminants in soil and groundwater where such standards do not already exist in regulation and apply the numerical objectives for residential use established for said chemicals and petroleum to properties dedicated to school use; and
- (3) Develop and adopt procedures for determining whether levels of chemicals of potential concern for vapor intrusion and petroleum in soil or groundwater pose a reasonable potential for migration of contaminated vapors or gases into structures to be utilized as school facilities.
  - (b) The construction of any new school building; or
  - (2) Construction of an addition to any existing school building; or
- (3) Leasing of any portion of an existing building to serve as a school shall be prohibited on any portion of a parcel of property for which, upon occupancy, there exists an ongoing potential for hazardous materials and/or petroleum to migrate as vapors or gases into the building from the subsurface of the parcel of property, unless:
- (i) At a property where concentrations of chemicals of potential concern for vapor intrusion or petroleum in the subsurface exceed the residential direct exposure criteria in soil, source areas of said chemicals or petroleum within the vadose zone of the site that includes said property shall be remediated:
- (A) Through the physical removal of said chemicals or petroleum through excavation or in situ treatment; and
- (B) The school building shall be equipped with both a passive sub slab ventilation system capable of conversion to an active system and a vapor barrier beneath the school building or incorporated in the

concrete slab, all in compliance with an approved department of environmental management remedial action work plan and completed prior to the occupancy of the school;

- (ii) At a property where concentrations of chemicals of potential concern for vapor intrusion or petroleum in the subsurface do not exceed the residential direct exposure criteria in soil but contamination exists on the property due to the presence of any chemicals of potential concern for vapor intrusion or petroleum in groundwater, the department of environmental management shall:
- (A) Require the property's owner or operator to prepare a site specific conceptual site model and conduct soil gas sampling to determine the location of the source area of said chemicals or petroleum in the site's vadose zone;
- (B) Evaluate the results of said model and sampling to determine if levels of any chemicals of potential concern for vapor intrusion or petroleum could migrate as vapors or gases into the occupied portions of the building where the school is proposed based on procedures developed pursuant to this chapter; and
- (C) Where the reasonable potential for migration of contaminated vapors or gases is determined to exist, the department shall require remediation to eliminate said potential as follows:
- (I) Where the source area is located on the site that includes said property, requiring the physical removal of said chemicals or petroleum in the source area in the vadose zone through excavation or in situ treatment; provided, the concentrations of said chemicals or petroleum in said source area exceed the direct residential exposure criteria in soil; and
- (II) Requiring the installation of both a passive sub slab ventilation system capable of conversion to an active system and a vapor barrier beneath the school building or incorporated in the concrete slab, all in compliance with an approved department of environmental management remedial action work plan and completed prior to the occupancy of the school; and, provided further, should monitoring of a passive sub-slab ventilation system indicate that active ventilation is necessary to protect the health and safety of users of a school equipped with a passive system, the department of environmental management shall require conversion of the passive system to an active system along with financial assurances to provide for the funding of the operation and monitoring of said active system for as long as active ventilation is deemed necessary by the department.
- (iii) At a property where concentrations of chemicals of potential concern for vapor intrusion or petroleum in the subsurface do not exceed the residential direct exposure criteria in soil on the site that includes said property, and where the department has determined that levels of any chemicals of potential concern for vapor intrusion or petroleum will not present a reasonable potential for migration of contaminated vapors or gases into structures to be utilized as school facilities on the property, the property may be used for school purposes subject to any conditions that the department of environmental management may impose pursuant to this chapter.
- (c) The construction of any school building, or construction of an addition to any existing school building, or leasing of any portion of an existing building to serve as a school on any portion of a parcel of property formerly used for industrial, manufacturing or landfill purposes that is contaminated by hazardous materials, shall be prohibited unless at least thirty (30) days prior to selecting the location for construction or leasing the building the project sponsor undertakes all of the following measures with ten (10) days prior written notice to the public of each measure undertaken:
  - (1) Prepares and posts on the sponsor's website a written report that: (i) Projects the costs to acquire or

lease the property, and to cleanup and maintain the property in accordance with the department of environmental management's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations); (ii) Projects the time period required to complete a cleanup of the property for school purposes prior to occupancy by obtaining either an Interim Letter of Compliance, a Letter of Compliance or a Non-Jurisdictional Letter indicating that the property is not jurisdictional under the Remediation Regulations of the department of environmental management; (iii) Discusses the rationale for selecting the property for use as school purposes and an explanation of any alternatives to selecting said property considered by the project sponsor;

- (2) Solicits written comments on the report prepared pursuant to subdivision (1) of this subsection for a period of at least thirty (30) days after posting said report on the sponsors website and conducts a public hearing during said thirty (30) day period at which public comment is taken on said report; and
- (3) Prepares a second written report that summarizes and responds to the public comments received during the public comment period and at the public hearing and posts said second report on the sponsor's website.
- (d) The sponsor of any school project subject to the provisions of subsection (c) of this section shall consider the results and findings contained in the reports required by subsection (c) when selecting the location of said project.
  - (e) As used in this section.
- (1) The term "school" means any residential or non-residential school building, public, private or charter, of any city or town or community educational system regulated, directly or secondarily, by the board of regents for elementary and secondary education or the department of elementary and secondary education or any other state education board or local city or town school board or school committee or other legal educational subdivision acting under it. As used in this chapter, the term "school or schools" includes, but is not limited to, school playgrounds, school administration buildings, indoor school athletic facilities, school gymnasiums, school locker rooms, and similar school buildings. A school shall not include any institutions for education of adults (e.g. colleges, universities, graduate schools, trade schools) or child-care facilities as regulated by the department of children, youth and families.
- (2) The term "landfill" means for the purposes of this section, any portion of a parcel of property that was used as a landfill as defined in § 23-19.1-4 or a sanitary landfill, dump or other disposal area where more than thirty (30) cubic yards of solid waste was disposed.
- (3) The term "hazardous materials" means any materials defined as hazardous materials pursuant to § 23-19.14-3.
  - (4) The term "solid waste" means any materials defined as solid waste pursuant to § 23-18.9-7.
- (5) The term "chemicals of potential concern for vapor intrusion" means those chemicals that the U.S. Environmental Protection Agency recommends for routine evaluation during vapor intrusion assessments in said Agency's most recent guidance on the assessment of vapor intrusion into indoor air from subsurface sources, and any other chemicals that the department of environmental management may recommend for said routine evaluation.
- (6) The term "source area" means the horizontal and vertical extent of natural or man-made media impacted by a release of hazardous materials or causing a release of hazardous materials at

concentrations in excess of the numerical objectives developed pursuant to paragraph (a) of this section.

- (7) The term "vadose zone" means the full extent of the soil column existing above the elevation of groundwater.
- (8) The term "conceptual site model" means a written and/or illustrative representation of the physical, chemical and biological processes that control the transport, migration and actual or potential impacts of hazardous materials in soil, air, groundwater, surface water and/or sediments to human and/or ecological receptors at a site.
- (f) The provisions of this section shall not apply to the renovation or reconstruction of any building for school purposes that was used continuously as a school for a period of at least twenty-five (25) years where: (1) The footprint of the building after renovation or reconstruction does not exceed more than five percent (5%) of the current footprint of the building; and (2) The site of the building is not subject to a remedial action work plan approved by the department of environmental management.

History of Section. (P.L. 1995, ch. 187, § 1; P.L. 1997, ch. 41, § 1; P.L. 1997, ch. 60, § 1; P.L. 2012, ch. 163, § 1; P.L. 2012, ch. 179, § 1; P.L. 2013, ch. 296, § 1.)

### **Chemicals of Potential Concern for Vapor Intrusion**

Acetaldehyde

Acetone

Acetone Cyanohydrin

Acetonitrile

Acrolein

Acrylonitrile

Allyl Chloride

Aroclor 1221

Aroclor 1232

Azobenzene

Benzene

Benzyl Chloride

Biphenyl, 1,1'-

Bis(2-chloro-1-methylethyl) ether

Bis(2-chloroethyl)ether

Bis(chloromethyl)ether

Bromo-2-chloroethane, 1-

Bromobenzene

Bromochloromethane

Bromodichloromethane

Bromomethane

Butadiene, 1,3-

Carbon Disulfide

Carbon Tetrachloride

Chloro-1,1-difluoroethane, 1-

Chloro-1,3-butadiene, 2-

Chlorobenzene

Chlorobenzotrifluoride, 4-

Chlorodifluoromethane

Chloroform

Chloromethane

Chloromethyl Methyl Ether

Chloropicrin

Cumene

Cyanide (CN-)

Cyclohexane

Cyclohexene

Dibromo-3-chloropropane, 1,2-

Dibromochloromethane

Dibromoethane, 1,2-

Dibromomethane (Methylene Bromide)

Dichloro-2-butene, 1,4-

Dichloro-2-butene, cis-1,4-

Dichloro-2-butene, trans-1,4-

Dichlorobenzene, 1,2-

Dichlorobenzene, 1,4-

Dichlorodifluoromethane

Dichloroethane, 1,1-

Dichloroethane, 1,2-

Dichloroethylene, 1,1-

Dichloroethylene, 1,2-trans-

Dichloropropane, 1,2-

Dichloropropene, 1,3-

Dicyclopentadiene

Difluoroethane, 1,1-

Dihydrosafrole

Diisopropyl Ether

Dimethylvinylchloride

Epichlorohydrin

Epoxybutane, 1,2-

Ethyl Chloride

Ethyl Methacrylate

Ethylbenzene

Ethyleneimine

Ethylene Oxide

Hexamethylene Diisocyanate, 1,6-

Hexane, N-

Hexanone, 2-

Hydrogen Cyanide

Mercury (elemental)

Methacrylonitrile

Methyl Acrylate

Methyl Ethyl Ketone (2-Butanone)

Methyl Isobutyl Ketone (4-methyl-2-pentanone)

Methyl Isocyanate

Methyl Methacrylate

Methyl Styrene (Mixed Isomers)

Methyl tert-Butyl Ether (MTBE)

Methylene Chloride

Naphthalene

Nitrobenzene

Nitromethane

Nitropropane, 2-

Nitroso-di-N-butylamine, N-

Nonane, n-

Pentane, n-

Phosgene

Propionaldehyde

Propyl benzene

Propylene

Propylene Glycol Dinitrate

Propylene Oxide

Styrene

Tetrachloroethane, 1,1,1,2-

Tetrachloroethane, 1,1,2,2-

Tetrachloroethylene

Tetrafluoroethane, 1,1,1,2-

Tetrahydrofuran

Toluene

Trichloro-1,2,2-trifluoroethane, 1,1,2-

Trichlorobenzene, 1,2,4-

Trichloroethane, 1,1,1-

Trichloroethane, 1,1,2-

Trichloroethylene

Trichlorofluoromethane

Trichloropropane, 1,2,3-

Trichloropropene, 1,2,3-

Triethylamine

Trimethylbenzene, 1,2,3-

Trimethylbenzene, 1,2,4-

Vinyl Acetate

Vinyl Bromide

Vinyl Chloride

Xylene, p-

Xylene, m-

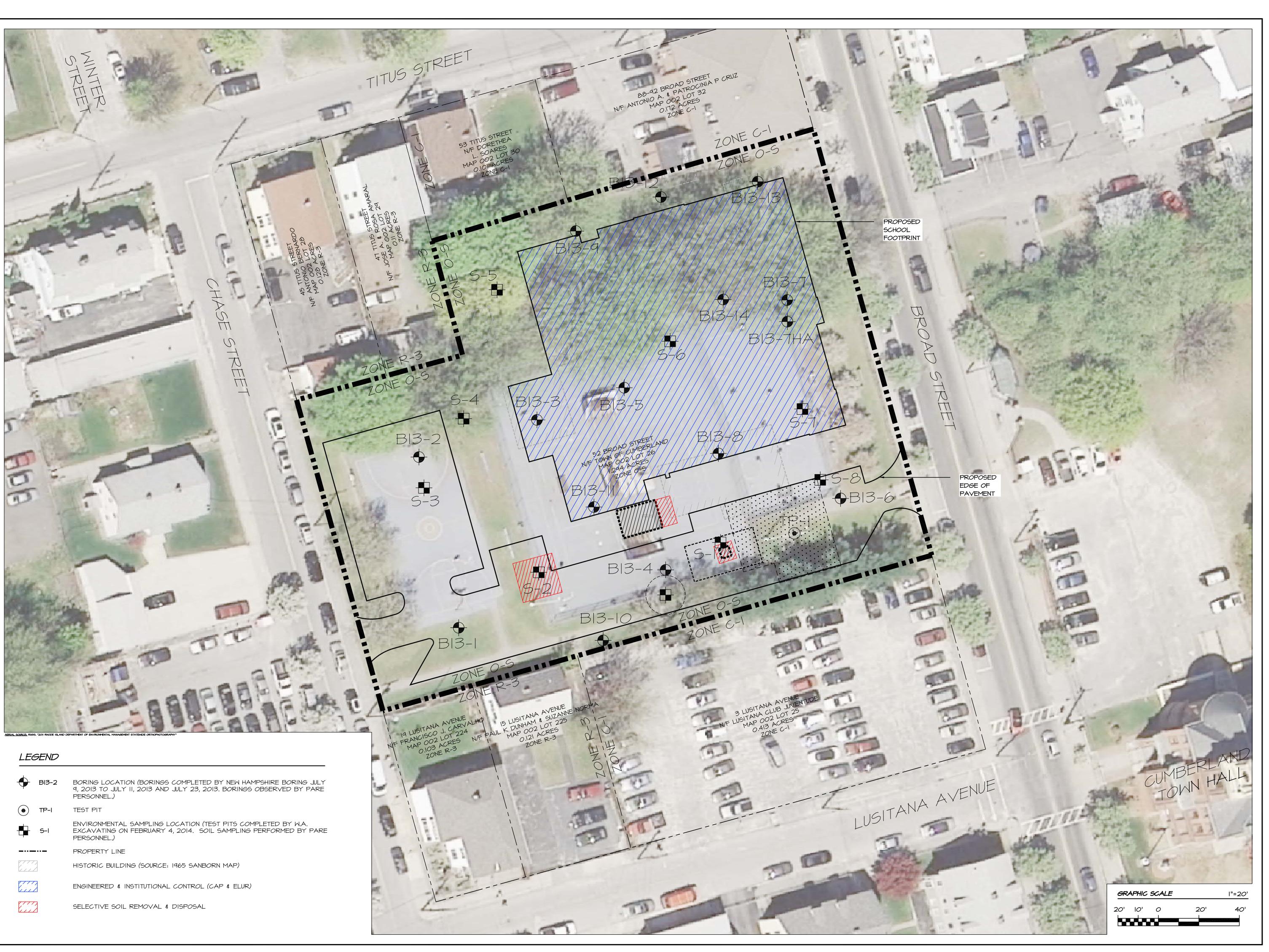
Xylene, o-

Xylenes

# **APPENDIX L**

Proposed Remedial Option Plan







Blackstone Valley Prepartory School

0.5" 0 1.0"

BAR SCALE

REVISIONS:

PROJECT NO.: 13062.09
DATE: MARCH 2014
SCALE: 1"=20'
DESIGNED BY: SPD

DATE: MARCH 2014

SCALE: 1"=20'

DESIGNED BY: SPD

CHECKED BY: TPT

DRAWN BY: SPD

APPROVED BY: TPT

DRAWING TITLE:

PREFERRED REMEDIAL OPTION

DRAWING NO.:

SHEET NO. <u>2</u> OF <u>2</u>

## **APPENDIX M**

SIR Checklist



### APPENDIX "I"

## Section 7 of the "Remediation Regulations" Site Investigation Report (SIR)Checklist

(The following information shall be completed and submitted with the SIR)

Contact Name:	Timothy P. Thies, P.E., Managing Engineer, Pare Corporation
Contact Address:	8 Blackstone Valley Place, Lincoln, Rhode Island 02865
	(404) 204 4400

Contact Telephone: (401) 334-4100

Site Name: Blackstone Valley Preparatory School

Site Address: 52 Broad Street, A.P. 2 Lot 26, Cumberland, Rhode Island 02864

OFFICE USE ONLY	
SITE INVESTIGATION REPORT (SIR)SITE:	
PROJECT CODE:	
SIR SUBMITTAL DATE:	
CHECKLIST SUBMITTAL DATE:	

**DIRECTIONS:** The box to the left of each item listed below is for the administrative review of the SIR submission and is for **RIDEM USE ONLY**. Under each item listed below, cross-reference the specific sections and pages in the SIR that provide detailed information that addresses each stated requirement. Failure to include cross-references shall delay review and approval. If an item is not applicable, simply state that it is not applicable and provide an explanation in the SIR.

$\hfill\Box$ 7.03.A. List specific objectives of the SIR related to characterization of the Release, impacts of the Release and remedy.
SECTION 7.03 A - PAGE 2
$\square$ 7.03.B. Include information reported in the Notification Of Release. A copy of the Release notification form should be included in the SIR. Include information relating to short-term response, if applicable.
SECTION 7.03 B - PAGE 2
☐ 7.03.C. Include documentation of any past incidents or Releases.
SECTION 7.03 C - PAGE 7

	Include list of prior property Owners and Operators, as well as sequencing of property d time periods of occupancy.
SECTION 7	7.03 D - PAGE 8
□ 7.03.E.	Include previously existing environmental information which characterizes the Contaminated-Site and all information that led to the discovery of the Contaminated-Site.
SECTION 7	7.03 E - PAGE 9
□ 7.03.F. 1	Include current uses and zoning of the Contaminated-Site, including brief statements of operations, processes employed, waste generated, Hazardous Materials handled, and any residential activities on the site, if applicable. (This section should be linked to the specific objectives section demonstrating how the compounds of concern in the investigation are those that are used or may have been used on the site or are those that may have impacted the site from an off-site source.)
SECTION 7	.03 F - PAGE 9
☐ 7.03.G.	Include a locus map showing the location of the site using US Geological Survey 7.5-min quadrangle map or a copy of a section of that USGS map.
SECTION 7.	03 G - PAGE 9
☐ 7.03.H.	Include a site plan, to scale, showing:
	Buildings
	Activities
	Structures
	North Arrow
	Wells
	UIC Systems, septic tanks, UST, piping and other underground structures
	Outdoor Hazardous Materials storage and handling areas
	Extent of paved areas

	Location of environmental samples previously taken with analytical results
	Waste management and disposal areas
	Property Lines
SECTION 7.	03 H - PAGE 9
7.03.I. Inclimited to:	clude a general characterization of the property surrounding the area including, but not
	Location and distance to any surface water bodies within 500 ft of the site
	Location and distance to any Environmentally Sensitive Areas within 500 ft of the site
	Actual sources of potable water for all properties immediately abutting the site
	Location and distance to all public water supplies, which have been active within the previous 2 years and within one mile of the site
	Determination as to whether the Release impacts any off-site area utilized for residential or industrial/commercial property or both
	Determination of the underlying groundwater classification and if the classification is GB, the distance to the nearest GA area
SECTION 7	03 I - PAGE 10
	clude classifications of surface and ground water at and surrounding the site that could e impacted by a Release.
SECTION 7.0	3 J - PAGE 11
□ 7.03.K. I	nclude a description of the contamination from the Release, including:
	Free liquids on the surface
	LNAPL and DNAPL

	Concentrations of Hazardous Substances which can be shown to present an actual or potential threat to human health and any concentrations in excess of any of the remedial objectives; (reference Section 12 for requirements related to arsenic in soil).
	Impact to Environmentally Sensitive Areas
	Contamination of man-made structures
	Odors or stained soil
	Stressed vegetation
	Presence of excavated or stockpiled material and an estimate of its total volume
	Environmental sampling locations, procedures and copies of the results of any analytical testing at the site
	List of Hazardous Substances at the site
	Discuss if the contamination falls outside of the jurisdiction of the Remediation Regulations, including but not limited to USTs, UICs, and wetlands
SECTION 7	7.03 K - PAGE 14
□ 7.03.L. I	include the concentration gradients of Hazardous Substances throughout the site for each media impacted by the Release.
SECTION 7	7.03 L - PAGE 15
7.03.M.	Include the methodology and results of any investigation conducted to determine background concentrations of Hazardous Substances identified at the Contaminated-Site (see Section 12 for Special Requirements for Managing Arsenic in Soil).
SECTION 7	7.03 M - PAGE 18
□ 7.03.N.	Include a listing and evaluation of the site specific hydrogeological properties which could influence the migration of Hazardous Substances throughout and away from the site, including but not limited to, where appropriate:
	Depth to GW
	Presence and effects of both the natural and man-made barriers to and conduits

	for contaminant migration
	Characterization of bedrock
□ SECTION 7	Groundwater contours, flow rates and gradients throughout the site 7.03 N - PAGE 19
☐ 7.03.O.	Include a characterization of the topography, surface water and run-off flow patterns including the flooding potential, of the site
SECTION 7	7.03 O - PAGE 20
□ 7.03.P.	Include the potential for Hazardous Substances from the site to volatilize and any and all potential impacts of the volatilization to structures within the site.
SECTION '	7.03 P - PAGE 21
☐ 7.03.Q.	Include the potential for entrainment of Hazardous Substances from the site by wind or erosion actions.
SECTION 7	7.03 Q - PAGE 23
☐ 7.03.R. Investigation	Include detailed protocols for all fate and transport models used in the Site on.
SECTION 7	7.03 R - PAGE 23
☐ 7.03.S.	Include a complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation. (Be sure to include the samples locations and analytical results on a site figure).
SECTION	7.03 S - PAGE 23
☐ 7.03.T.	Include construction plans and development procedures for all monitoring wells. Well construction shall be consistent with the requirements of Appendix 1 of the Groundwater Quality Rules.
SECTION	7.03 T - PAGE 26
☐ 7.03.U.	Include procedures for the handling, storage and disposal of wastes derived from and during the investigation.
SECTION '	7.03 U - PAGE 26
7.03.V.	Include a quality assurance and quality control evaluation summary report for sample

procedures and sample preservation techniques. SECTION 7.03 V - PAGE 27 7.03.W. Include any other site-specific factor, that the Director believes, is necessary to make an accurate decision as to the appropriate Remedial Action to be taken at the site. SECTION 7.03 X - PAGE 28 ☐ 7.04 Include Remedial Alternatives. The Site Investigation Report **shall** contain a minimum of 2 remedial alternatives other than no action/natural attenuation alternative, unless this requirement is waived by the Department. It should be clear which of these alternatives is most preferable. All alternatives shall be supported by relevant data contained in the Site Investigation Report and consistent with the current and reasonably forseeable land usage, and documentation of the following: ☐ Compliance with Section 8 (RISK MANGEMENT); ☐ Technical feasibility of the preferred remedial alternative; ☐ Compliance with Federal, State and local laws or other public concerns; and ☐ The ability of the Performing Party to perform the preferred remedial alternative SECTION 3 - PAGE 29 ☐ 7.05 **Certification Requirements:** The Site Investigation Report and all associated progress reports shall include the following statements signed by an authorized representative of the party specified: П A statement signed by an authorized representative of the Person who prepared the Site Investigation Report certifying the completeness and accuracy of the information contained in that report to the best of their knowledge; and A statement signed by the Performing Party responsible for the submittal of the Site

handling and analytical procedures, including, but not limited to, chain-of-custody

#### **CERTIFICATION - PAGE iii**

☐ 7.06 **Progress Reports:** If the Site Investigation is not complete, include a schedule for the

the Release to the best of their knowledge

Investigation Report certifying that the report is a complete and accurate representation of the site and the Release and contains all known facts surrounding submission of periodic progress reports on the status of the investigation and interim reports on any milestones achieved in the project

### SITE INVESTIGATION IS COMPLETE

 $\square$  7.07 **Public Involvement and Notice:** Be prepared to implement public notice requirements per

Section 7.07 and 7.09 of the Remediation Regulations when the Department deems the Site Investigation Report to be complete.

SECTION 7.03 W - PAGE 27

# **APPENDIX N**

Limitations



### GEOHYDROLOGICAL LIMITATIONS

- 1. PARE's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and PARE observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. This work plan was designed to provide an appropriate level of remediation given our current understanding of site conditions. If additional data is obtained during the course of this project, PARE reserves the right to modify any and all of the criteria specified in this plan.
- 2. The conclusions and recommendations submitted in this report are based in part upon the data obtained from a limited number of soil samples from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further investigation. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the recommendations of this report.
- 3. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, PARE has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.
- 4. The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by PARE and the conclusions and recommendations presented therein modified accordingly.
- 5. Chemical analyses have been performed for specific parameters during the course of this study, as detailed in the text. It must be noted that additional constituents not searched for during the current study may be present in soil and groundwater at the site.
- 6. It is recommended that this firm be retained to provide further engineering services during design, implementation, and/or construction of any remedial measures, if necessary. This is to observe compliance with the concepts and recommendations contained herein and to allow design changes in the event that subsurface conditions differ from those anticipated.