

**DES Waste Management Division
29 Hazen Drive PO Box 95
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**LIMITED SITE ASSESSMENT
FORMER CROWN MACHINERY
123 Cleveland Street
Manchester, New Hampshire 03102
NHDES Site No. 200709016
Project No. 37849**

Prepared For:
Mr. Joshua Whipple, P.G.
New Hampshire Department of Environmental Services
MtBE Remediation Bureau
29 Hazen Drive
Concord, New Hampshire 03302

Prepared By:
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March 19, 2018
Nobis File No. 70631.01



March 19, 2018
File No. 70631.01

Mr. Joshua Whipple, P.G.
New Hampshire Department of Environmental Services
MtBE Remediation Bureau
29 Hazen Drive
Concord, NH 03302-0095

Re: **Limited Site Assessment Report**
Former Crown Machinery
123 Cleveland Street
Manchester, New Hampshire

Dear Mr. Whipple:

Nobis Engineering, Inc. (Nobis) is pleased to provide the New Hampshire Department of Environmental Services (NHDES) MtBE Remediation Bureau (MtBERB) with the following Limited Site Assessment (LSA) Report for the Former Crown Machinery property located at 123 Cleveland Street in Manchester, New Hampshire (NHDES Site No. 200709016).

This investigation was conducted following the completion of a Phase I Environmental Site Assessment (ESA) by Nobis on behalf of the City of Manchester in October 2017. The NHDES requested the LSA as an assignment under the Department's *Site Investigation, Remediation Design, Implementation Oversight at Petroleum and Hazardous Waste Sites, CERLCA and Brownfields Projects* Contract with Nobis. A Work Scope and Budget for the LSA was approved by the NHDES as Contract Project No. MTBE-040 on October 25, 2017, with Change Order #1 approved on December 15, 2017. This report is subject to the limitations in Appendix A.

Thank you for the opportunity to be of service to you. Please do not hesitate to contact us if you have any questions.

Sincerely,

NOBIS ENGINEERING, INC.

A handwritten signature in black ink that reads "Dylan H. Bush".

Dylan H. Bush
Staff Geologist

A handwritten signature in black ink that reads "James P. Ricker".

James P. Ricker, P.G.
Senior Project Manager

Attachments

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FORMER CROWN MACHINERY
123 CLEVELAND STREET
MANCHESTER, NEW HAMPSHIRE**

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1.0 INTRODUCTION

Nobis Engineering, Inc. (Nobis) has prepared this Limited Site Assessment (LSA) Report to describe additional investigative work conducted at the Former Crown Machinery property (“the Site”), located at 123 Cleveland Street in Manchester, New Hampshire (NHDES Site No. 200709016). The LSA was conducted as an assignment under the New Hampshire Department of Environmental Services (NHDES) *Site Investigation, Remediation Design, Implementation Oversight at Petroleum and Hazardous Waste Sites, CERLCA and Brownfields Projects* Contract with Nobis. The associated Work Scope and Budget was approved by the NHDES on October 25, 2017 and Change Order #1 approved on December 15, 2017.

This LSA was a follow-up to the completion of a Phase I Environmental Site Assessment (Phase I ESA) by Nobis in the summer of 2017. A site locus plan is included as Figure 1, and a site sketch depicting pertinent site features and test boring locations is included as Figure 2. The report is subject to the limitations in Appendix A.

The Phase I ESA Report included the following conclusions:

- The Site is largely vacant and has a multi-year history of being used as a junk yard for the storage of a variety of materials including motor vehicles, boats, trailers, construction equipment, automotive parts (including tires), machinery, 55-gallon drums with unknown contents, and wooden pallets.
- Nobis and NHDES personnel visited the site on July 10, 2017 and observed multiple items disposed of at the property including multiple junk cars, trucks, campers, boats, a car engine, car parts, empty gas and oil containers, household trash, 275-gallon liquid storage totes, and more than one dozen 55-gallon drums. Additionally, staining of soil was observed in the vicinity of the east garage bay opening, and on the concrete floor in several areas within the garage.
- Previous environmental investigations by others revealed the presence of petroleum constituents and arsenic contamination within soil above applicable NHDES Soil Remediation Standards (SRS) on portions of the site.

2.0 SITE DESCRIPTION

The target property is located at 123 Cleveland Street in Manchester, Hillsborough County, New Hampshire. The target property encompasses four parcels, including 123 Cleveland Street, 90 Blaine Street, 86 Blaine Street and a lot at the corner of Cleveland and Third Streets, which are identified by the City of Manchester Tax Assessors office as Map-Lots: 200-2, 200-22, 200-21, and 200-1, respectively. According to City of Manchester Tax assessment records, the parcels comprising the target property consist of an 0.23-acre parcel, an 0.11-acre parcel, an 0.10-acre parcel, and 0.11-acre parcel, respectively, comprising an approximate 0.55-acre contiguous lot. City of Manchester Tax assessment records indicate that the target property is zoned as “B-2: General Business District”, and is currently owned by Matthew Skwozinski, Jr. (123 Cleveland Street and Parcel 200-1) and Matthew Skwozinski, Sr. (90 and 86 Blaine Street).

A Phase II Environmental Site Assessment was conducted by TRC Environmental Corporation (TRC) in 2014, which included the collection of sixteen soil samples from eight soil borings (TRC-1 through TRC-8). No volatile organic compounds (VOCs) or total petroleum hydrocarbons (TPH) were detected in the sample at concentrations above applicable SRS; however, as indicated above, arsenic was detected above the SRS of 11 micrograms per kilogram (mg/kg) at soil boring TRC-8, which was located on the western edge of the Site along Third Street.

3.0 SCOPE OF SERVICES

Following the Phase I ESA report, Phase II investigative activities were warranted to further evaluate the target property for the potential presence of petroleum constituents and arsenic contamination within soil and groundwater. The information obtained during the LSA will be used by the NHDES to determine if the site can be closed or if further investigation or corrective actions will be necessary. To meet these objectives, Nobis provided the scope of services identified in the subsections below.

3.1 Drilling and Monitoring Well Installation

Prior to conducting any intrusive activities, Nobis performed a DigSafe utility clearance to identify the location of potential underground utilities in the vicinity of the proposed drilling area. Additionally, Bemis Utility Location Services, LLC (Bemis), a private utility locating service, was contracted to search for underground electric lines and other utilities at the Site. No subsurface utilities were identified within the proposed drilling locations.

Drilling was first initiated at the Site on December 5, 2017. Nobis oversaw the advancement of soil borings by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire. The drilling was conducted using a Geoprobe 7822 DT and direct-push techniques. The first soil boring attempt was at location GP-1 in the eastern corner of the Site at the property entrance off Blaine Street. The Geoprobe encountered difficult drilling conditions and could not advance past 14 feet below ground surface (ft bgs). Whereas soil borings advanced by others during previous investigations at the Site were successfully advanced to at least 15 ft bgs in other portions of the site without encountering bedrock, it could not be determined if the refusal conditions experienced at location GP-1 were the result of large cobbles or the bedrock surface. As such, the Geoprobe was relocated to location GP-10 to evaluate conditions in a more southern portion of the Site.

Soil test boring GP-10 was advanced through difficult drilling conditions to refusal at a depth of 19 ft bgs. Soil was screened continuously from the ground surface using 5-foot long, lined, macro-core samplers. Groundwater was encountered at a depth of approximately 18 ft bgs prior to encountering refusal. Nobis collected a soil sample from the 18 to 19-foot depth interval and submitted it to Aquarian Analytical, Inc. (AAI) of Canterbury, New Hampshire for laboratory analysis of VOCs by Method 8260B, polycyclic aromatic hydrocarbons (PAHs) by Method 8270, TPH – gasoline range organics (GRO) by Method 8015, TPH – diesel range organics (DRO) by Method 8100, polychlorinated biphenyls (PBCs) by Method 8082, and Resource Conservation Recovery Act (RCRA) metals by Method 6010.

One additional drilling attempt was made at location GP-5, but the difficult drilling conditions resulted in damage to the drill string lead and refusal at approximately 14 ft bgs. Due to the difficult drilling conditions, the decision was made by Nobis and NHDES to discontinue use of the Geoprobe in favor of a traditional overburden truck rig at a later date.

On January 9 through 11, 2018, soil test borings identified as GP-2 through GP-9, and surface soil borings SS-1 through SS-8 were advanced by Geosearch, Inc. (Geosearch) of Fitchburg, Massachusetts using an all-terrain vehicle (ATV) track rig. Soil borings GP-2 through GP-9 were advanced at the locations shown on Figure 2 using hollow-stem auger drilling techniques and 4.25-inch inner diameter augers. Two-inch diameter split spoons were advanced ahead of the augers from the ground surface to approximately 2 ft bgs, and then again beginning at approximately 10 ft bgs to the bottom of the borehole.

Surface soil borings SS-1 through SS-8 were located on a 30-ft square grid, with a spacing of 15-ft on center. The center “node” is boring GP-6, which was installed in the approximate area where arsenic was detected previously at sampling location TRC-8 at a concentration of 16 mg/kg. Surface soil borings SS-1, SS-3, SS-5, and SS-7 were advanced on the corners of the grid to depths of 8 ft bgs each, with one discrete sample (“grab”) collected from the 0-2 ft interval plus one composited sample over the 4-8 ft interval at each location. Soil borings SS-2, SS-4, SS-6, and SS-8 were advanced along the sides of the grid to depths of 2 ft bgs each. One soil sample was collected from the 0-2 ft interval at these locations. A summary of all the soil samples collected for analysis of arsenic, including the analytical results for each, is included in Table 1.

Field screening of recovered soil samples was performed at each interval with a photoionization detector (PID) measuring total VOCs. Additionally, soil cuttings were screened where continuous sampling was not conducted at approximate 2-ft intervals. Whereas no elevated detections of VOCs were noted on the PID, one soil sample was collected from each boring at or just above the soil-groundwater interface (estimated to be approximately 16 to 18 ft bgs, based on soil cuttings and field observations). Soil samples at the “GP” locations were submitted to AAI for laboratory analysis of VOCs by Method 8260B, PAHs by Method 8270, TPH–GRO by Method 8015, TPH–DRO by Method 8100, PBCs by Method 8082, and RCRA metals by Method 6010. The soil samples collected from the “SS” locations were submitted to AAI for laboratory analysis of arsenic, only.

Overburden monitoring wells were constructed at locations GP-3, GP-5, GP-6, GP-7, GP-8, and GP-9 using 10 feet of 2-inch diameter, 0.010-inch slotted polyvinylchloride (PVC) well screen with varying lengths of PVC riser. Clean filter sand was installed in the annular space around the PVC well material to a depth of approximately two feet above the top of well screens, and a 2-foot thick bentonite well seal was installed above the sand pack. The remainder of each borehole was filled with soil cuttings, and wells were completed at the surface using flush-mounted steel road boxes set in concrete. Well development was performed on the day of installation using a dedicated polyethylene bailer to remove fines from the well screen and surrounding sand pack and promote the free-flow of groundwater into the well. Finally, the vertical elevation of the top of the PVC riser was surveyed using a laser level relative to an arbitrary benchmark given the elevation 100-feet above mean sea level. Soil boring logs with well construction details are included in Appendix B.

3.2 Groundwater Sampling

On February 6, 2018, Nobis collected groundwater samples from monitoring wells GP-5 through GP-9. Monitoring well GP-3 was also scheduled for groundwater sample collection, but it was found to be dry at the time of the sampling event. Water level measurements were recorded in each well prior to purging and sampling. These measurements were used to calculate the depth to water values presented in Table 2 and to estimate the direction of overburden groundwater flow presented on Figure 2. Inferred direction of groundwater flow in the overburden is to the southwest.

Groundwater samples were collected using dedicated polyethylene bailers after purging at least three well volumes from each well. An insufficient volume of groundwater and very slow recharge within monitoring wells GP-5 and GP-6 did not allow for a purge of three well volumes, and as such, the groundwater samples were collected without purging. Groundwater samples from wells GP-5 through GP-9 were submitted to AAI for laboratory analysis of VOCs by EPA Method 8260, PAHs by EPA Method 8270C, and dissolved RCRA-8 metals. The samples that were submitted analysis of PAHs and RCRA-8 metals were field-filtered using a 0.45-micron filter prior to being delivered to AAI.

In addition to the above analyses, groundwater samples from wells GP-8 and GP-9 were also submitted to Absolute Resource Associates LLC (ARA) for analysis of per- and polyfluoroalkyl substances (PFAS) by EPA Method 537. The PFAS samples were collected using the same methodology as described above, but also following the NHDES “*PerFluorinated Compound (PFC) Sample Collection Guidance*” document. This document outlines specific sampling protocols that must be followed to mitigate false-positive detections of PFAS, such as the use of personal care products, the selection of field clothing, sample storage and preservation, and the handling of materials that may contain PFAS.

4.0 LABORATORY ANALYTICAL RESULTS

No VOCs, PAHs, TPH–GRO, TPH–DRO, or PCBs were detected in soil samples submitted for laboratory analyses. Various RCRA-8 metals were detected in each of the soil samples; however, the reported concentrations were below NHDES Soil Remediation Standards (SRS). Soil analytical data is included in Appendix C.

No VOCs or PAHs were detected in groundwater above laboratory method detection limits. RCRA-8 metals were detected in each of the groundwater samples; however, the reported concentrations were below AGQS for each analyte (Table 1).

PFAS analytical results revealed the presence of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) in the samples collected from GP-8 and GP-9. PFOA and PFOS were detected in wells GP-8 and GP-9 at combined concentrations of 23 and 17 parts per trillion (ppt), respectively, both of which are below the AGQS of 70 ppt for these compounds. Laboratory reports for groundwater samples are included in Appendix C.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Nobis performed an LSA at the former Crown Machine Property, located at 123 Cleveland Street in Manchester, New Hampshire. The following provides a summary of work performed, conclusions, and recommendations:

5.1 Conclusions

- The LSA was requested by the NHDES as a follow up to the recent Phase I ESA completed by Nobis. The rationale for the additional investigative activities was to further evaluate soil and groundwater quality at the site.
- The LSA included the completion of 18 soil borings; 6 completed as overburden monitoring wells (GP-3, GP-5, GP-6, GP-7, GP-8, and GP-9), 8 surface soil borings (SS-1 through SS-8), and 4 soil test borings (GP-1, GP-2, GP-4, and GP-10).
- One soil sample from each boring was submitted to AAI for laboratory analyses of VOCs, PAHs, PCBs, TPH-DRO and GRO, and RCRA-8 metals. Soil samples from SS-1 through SS-8 were submitted for arsenic analyses only. Analytical results indicated no detections of VOCs, PAHs, PCBs, or TPH within soil samples. Several RCRA-8 metals were detected, but at concentrations below NHDES SRS and likely representative of background conditions.
- Arsenic was detected in all 13 of the soil samples collected around former boring location TRC-8, but none at concentrations above the SRS of 11 mg/kg. The average concentration was 6.43 mg/kg, with the highest concentration being 10.9 mg/kg in sample SS-6 from 0-2 ft bgs.
- Groundwater samples were collected from five of the six newly installed monitoring wells (GP-5, GP-6, GP-7, GP-8, and GP-9) and submitted to AAI for VOCs, PAHs (field filtered), and dissolved RCRA-8 metals. Analytical results indicated no detections of VOCs or PAHs within sampled groundwater. Several RCRA-8 metals were detected, but at concentrations below NHDES AGQS and likely representative of background conditions.
- PFOA and PFOS were detected in groundwater, but at concentrations less than AGQS.
- Groundwater flow across the site is estimated to be in a southwesterly direction based upon depth to water measurements recorded on February 6, 2018.

5.2 Recommendations

Due to the lack of observed impacts to the quality of site soil and groundwater, additional investigative activities are not warranted at this time; however, the site continues to be utilized for the storage of miscellaneous items and automobiles in various states of disrepair, thus creating

the potential for a release of petroleum products or hazardous substances to the environment at any time. The conclusions and recommendations outlined above are limited to observations and data collected as part of this assessment. Events that occurred after field observations are not covered under this report.

Nobis recommends the following:

- Remove potential sources of contamination, i.e., 55-gallon drums, 275-gallon tote tanks, automobiles, and miscellaneous waste from the site.
- Conduct a final site inspection following the removal of potential sources of contamination from the Site to document any new releases or areas of concern that are noted.
- Due to the detections of PFAS in monitoring wells GP-8 and GP-9, Nobis recommends the collection of samples from monitoring wells GP-5, GP-6, and GP-7 for analysis of PFAS by EPA Method 537.

TABLES

Table 1
Summary of Arsenic Concentrations in Soil

Former Crown Machinery
 123 Cleveland Street, Manchester, NH
 NHDES Site No. 200709016 / Project No. 0037849

Boring ID	Sample ID	Sample Type	Sample Collection Depth (ft bgs)	Arsenic Concentration (mg/kg)
TRC-8	TRC-8	Grab	0-2	16.0
	TRC-8	Grab	4-6	4.10
GP-6	GP-6	Grab	16-18	2.50
SS-1	SS-1 @ 0-2	Grab	0-2	6.08
	SS-1 4-8 COMP	Composite	4-8	4.81
SS-2	SS-2 @ 0-2	Grab	0-2	3.04
SS-3	SS-3 @ 0-2	Grab	0-2	7.22
	SS-3 4-8 COMP	Composite	4-8	4.68
SS-4	SS-4 @ 0-2	Grab	0-2	6.55
SS-5	SS-5 @ 0-2	Grab	0-2	8.46
	SS-5 4-8 COMP	Composite	4-8	7.76
SS-6	SS-6 @ 0-2	Grab	0-2	10.9
SS-7	SS-7 @ 0-2	Grab	0-2	9.33
	SS-7 4-8 COMP	Composite	4-8	5.17
SS-8	SS-8 @ 0-2	Grab	0-2	7.04

Notes:

1. Samples TRC-8 were collected by TRC on September 17, 2014; all others were collected by Nobis on January 10, 2018.
2. The SRS for arsenic is 11.0 mg/kg
3. **Bold** = SRS exceedance

Table 2
Summary of Groundwater Elevations

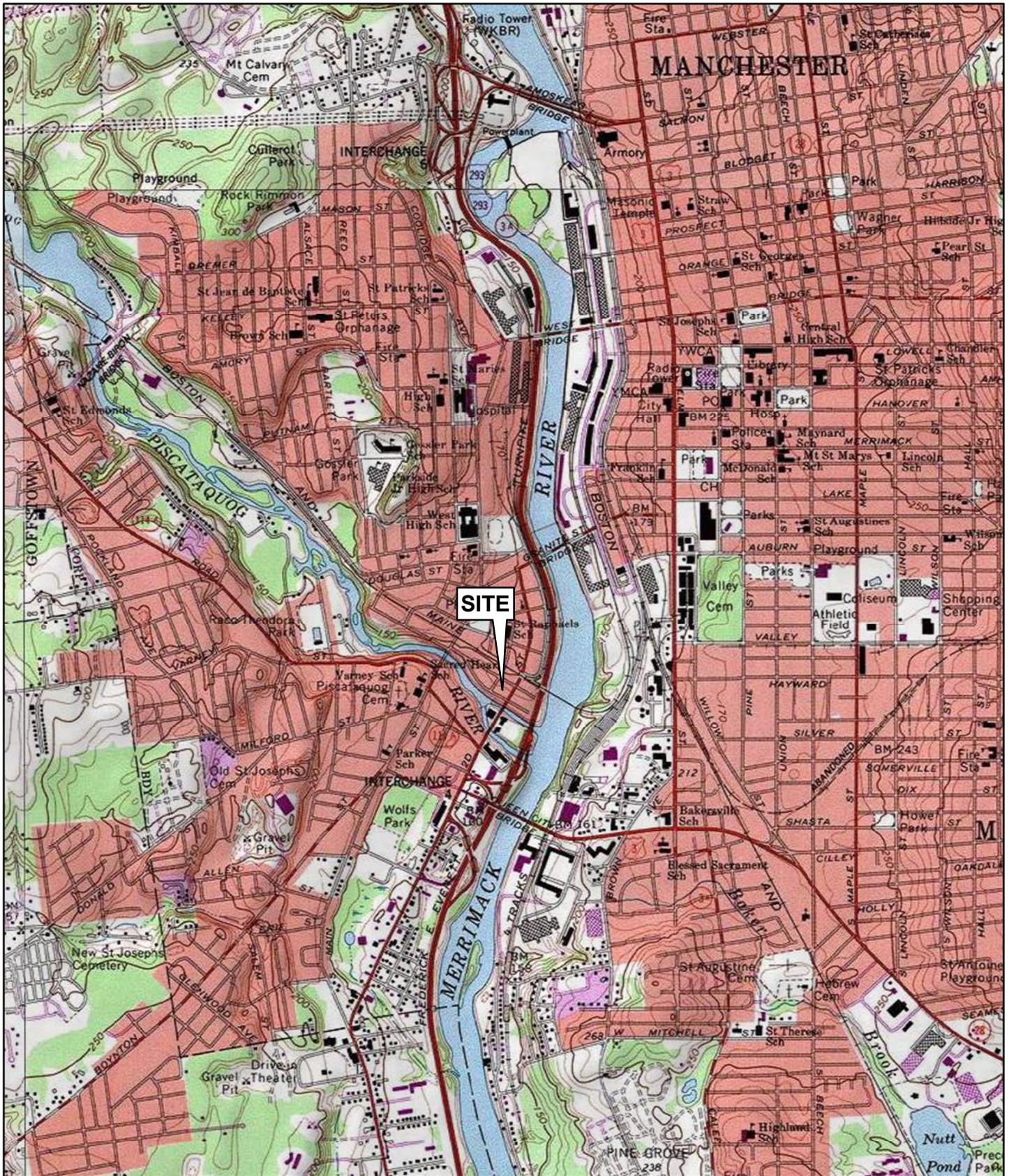
Former Crown Machinery
123 Cleveland Street, Manchester, NH
NHDES Site No. 200709016 / Project No. 0037849

Well ID	Reference Elevation (feet)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet)
GP/MW-3 ³	100.41	2/6/2018	16.31	84.10
GP/MW-5	97.28	2/6/2018	16.73	80.55
GP/MW-6	96.64	2/6/2018	16.70	79.94
GP/MW-7	95.36	2/6/2018	16.58	78.78
GP/MW-8	95.75	2/6/2018	17.02	78.73
GP/MW-9	97.57	2/6/2018	18.07	79.50

Notes:

1. Elevations referenced to an arbitrary benchmark of 100 ft AMSL by Nobis Engineering, Inc. on February 6, 2018.
2. Groundwater levels were measured by Nobis Engineering, Inc. on the date indicated using a Solinst electronic water level indicator.
3. Recorded depth to groundwater may have been condensate in end cap and not representative of overburden groundwater elevation.

FIGURES



J:\70631.00 - Former Crown Machinery Phase I ESA\GIS\Figures\Figure 1 - Locus Plan.mxd 2/19/2018 dbush



USGS Topographic Map
 Manchester South, NH
 Revised 1985
 0 500 1,000 2,000
 Feet
 1 inch = 2,000 feet



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Client-Focused, Employee-Owned

FIGURE 1

LOCUS PLAN
FORMER CROWN MACHINERY
123 CLEVELAND STREET
MANCHESTER, NEW HAMPSHIRE

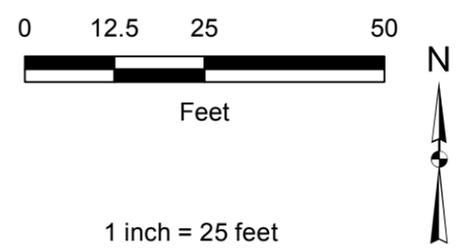
PREPARED BY: DHB	CHECKED BY: JPR
PROJECT NO. 70631.01	DATE: FEBRUARY 2018



Notes:

1. Site Sketch was developed from observations by Nobis Engineering, Inc. Property boundaries provided by NHDES OneStop Data Mapper. Aerial photograph provided by ESRI.
2. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

- Legend**
- Monitoring Well
 - Soil Boring
 - Geoprobe Boring
 - Groundwater Contour (Feb. 2018)
 - Inferred Flow Direction
 - Inferred Contour
 - Property Boundary
 - Site Boundary



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FIGURE 2

SITE SKETCH
FORMER CROWN MACHINERY
123 CLEVELAND STREET
MANCHESTER, NEW HAMPSHIRE

PREPARED BY: DHB	CHECKED BY: JPR
PROJECT NO. 70631.01	DATE: FEBRUARY 2018

J:\70631.00 - Former Crown Machinery Phase 1 ESA\GIS\Figures\Figure 2 - Site Sketch_Feb2018_Contour.mxd 3/5/2018 dbush

APPENDICES

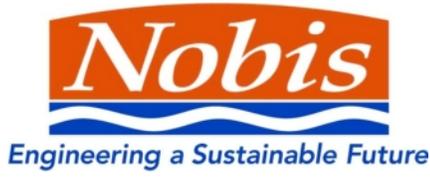
APPENDIX A

APPENDIX A

LIMITATIONS

- 1) This Limited Site Assessment was performed in accordance with generally accepted practices of other consultants undertaking similar assessments at the same time and in the same geographical area. The results of this assessment are based on our professional judgment and are not scientific certainties. Specifically, Nobis Engineering, Inc. does not and cannot represent that the property contains no hazardous wastes or other latent conditions beyond those observed during this preliminary assessment. No other warranty, express or implied, is made.
- 2) The observations and conclusions presented in this report were made solely on the basis of conditions described thereon and not on scientific tasks or procedures beyond the scope of described services or the budgetary and time constraints imposed by the client. The work described in this report was performed in general accordance with the project scope and budget dated October 12, 2017, and approved CO#1 dated December 15, 2017. No other warranty, express or implied, is made.
- 3) Observations were made of the property as indicated in this report. Where access to portions of the property was unavailable or limited, Nobis Engineering, Inc. renders no opinion as to the presence of hazardous wastes or the presence of indirect evidence of hazardous wastes in those portions of the property.
- 4) No property boundary, site feature, or topographic surveys of the property were performed by Nobis Engineering, Inc.
- 5) Our services did not include assessments for the presence of pesticides, herbicides, urea-formaldehyde foam insulation (UFFI), or lead and arsenic in drinking water at the property. In addition, no air quality evaluation or chemical analyses of soil, surface water, or groundwater were performed as part of this assessment. The property was not assessed for compliance with the Clean Air Act. Our services did not include an assessment for typical non-friable asbestos-containing materials such as floor tiles, exterior siding, and roofing materials.
- 6) The purpose of this assessment was to investigate the physical characteristics of the property with respect to the presence or potential presence of hazardous substances and petroleum products in the environment. No attempt was made to check the compliance of present or past owners of the property with federal, state, or local laws.
- 7) A vapor encroachment assessment in accordance with ASTM E 2600-10 was beyond the scope of work with the exception of performing the level of such a screening necessary to evaluate the potential for vapor migration onto the property.
- 8) This assessment has been prepared for the exclusive use of the New Hampshire Department of Environmental Services (NHDES) and the City of Manchester, solely for use in an environmental evaluation of the property. Reliance by others on the information and opinions contained herein is strictly prohibited without prior written consent of Nobis Engineering, Inc.

APPENDIX B



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-1
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: December 5, 2017
 Date Finish: December 5, 2017

Contractor: Eastern Analytical, Inc.
 Driller: B. Law
 Nobis Rep.: K. Karlsson

Rig Type / Model: Geoprobe / 7822 DT
 Hammer Type: N/A
 Hammer Hoist: N/A

Ground Surface Elev.: _____
 Datum: _____

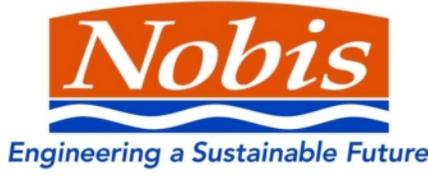
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	12/05/17	09:00	11	14	14	W.D.
Size ID (in.)	3.25	1.75 x 60						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	Graphic	LITHOLOGY Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.						
1	S1	36	0-5		<1		Fill	S1: Light brown, fine to medium SAND, some Silt. dry.		
2					<1					
3					<1					
4										
5										
6	S2	48	5-10		<1		Alluvium	S2: Gray brown, fine to medium SAND and Silt. dry.		
7					<1					
8					<1					
9					<1					
10					<1					
11	S3	48	10-15		<1					
12					<1					
13					<1					
14					<1					
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES: _____

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-2
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 9, 2018
 Date Finish: January 9, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

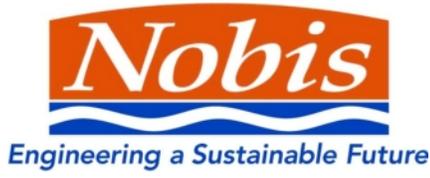
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/09/18	10:50	Not Encountered	14	14	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)				
1									
2					0.0		Fill	Brown, fine to coarse SAND and Gravel, trace Silt. moist. Auger cuttings screened for TOV's. Drill action suggests cobble from 3 to 4-feet.	
3									
4					0.0			Brown, fine to coarse SAND and Gravel, trace Silt. moist. Auger cuttings screened for TOV's.	
5									
6					0.0		/ 6.0		
7								Light brown, fine to coarse SAND and Gravel, trace Silt. moist. Auger cuttings screened for TOV's.	
8					0.0		Alluvium	Light brown, fine to coarse SAND and Gravel, trace Silt. moist. Auger cuttings screened for TOV's.	
9									
10							/ 10.0		
11	S1	20	10-12	4	0.0			S1: Dense, brown, SILT, some fine to coarse Sand. moist. Fe staining present.	
12				19	0.0				
13	S2	6	12-13.3	16	0.1		Glacial Till	S2: Dense, brown, SILT, some fine to coarse Sand. moist. Fe staining present.	
14				24				Drill action suggests cobble at 12.5 to 13-feet.	
15	S3	0	14-14	50/3"			/ 14.0	S3: Spoon refusal at 14-feet, auger refusal at 14-feet, off-set boring location 5-feet east, auger to 14-feet - refusal. Boring terminated at 14 feet on auger refusal.	
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-2 @ 12'-13.5' Sampled at 10:55

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-3
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 9, 2018
 Date Finish: January 9, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

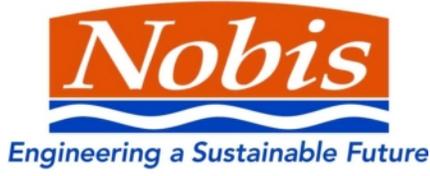
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/09/18	12:00	10	10	10	W.D.
			01/09/18	12:35	16	16	16	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)			
1	S1	12	0-2	50	0.0			S1: Medium dense, gray brown, SILT, some fine to coarse Sand, little Gravel. moist. Fill Brown, fine SAND and Silt. moist. / 6.0			
2				23							
3				7							
4				5							
5					0.2						
6											
7					0.1						
8											
9											
10											
11	S2	24	10-12	7	0.1			S2: Loose, brown, SILT. moist/wet. Alluvium S3: Dense, orange brown, fine to medium SAND, little Silt. moist. S4: Medium dense, brown, fine to medium SAND, trace Gravel, trace Silt. moist. / 16.0			
12				5							
13				3	0.1						
14				33							
15	S3	14	12-14	18	0.1						
16				26							
17				28							
18				25							
19	S4	12	14-16	14	0.0						
20				12							
21				9							
22				8							
23	S5	6	16-16.7	9	0.3			S5: Very dense, gray brown, fine to coarse SAND, trace Gravel, trace Silt. wet. Glacial Till / 17.0 Boring terminated at 17 feet on auger refusal.			
24				50/2"							
25											
26											

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-3 @ 16' Sampled at 12:30



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-4
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 9, 2018
 Date Finish: January 9, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

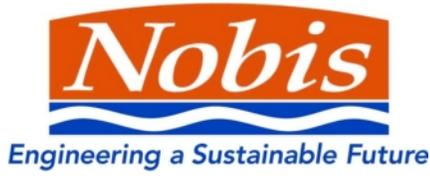
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/09/18	14:30	Not Encountered	14	14	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)				
1	S1A	6	0-0.5	33	0.1		S1A (6"): Very dense, dark brown, fine to coarse SAND and Silt, trace fine Roots. moist. Frozen.		
	S1B	10	0.5-2	45	0.1				S1B (10"): Very dense, brown, fine to medium SAND, little Silt, trace Gravel, trace fine roots. moist. Frozen.
2				25			Drill action suggests cobble from 2 to 3-feet.		
3				12					
4							Soil not coming up in auger flights.		
5									
6							Drill action suggests cobbles from 6 to 10-feet.		
7									
8									
9									
10							/ 10.0		
11	S2	12	10-12	51	0.1		S2: Very dense, brown, fine to coarse SAND, and, pulverized rock, trace silt. dry.		
12				50					
13	S3	12	12-14	67	0.1		S3: Very dense, gray brown, fine to coarse SAND, trace Silt, trace, pulverized rock.		
14				26		Drill action suggests cobbles from 10 to 14-feet.			
15				12		Boring terminated at 14 feet on auger refusal.			
16				25					
17				51					
18				53					
19									
20									
21									
22									
23									
24									
25									

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-4 @ 12'-14' Sampled at 14:00

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-5
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 9, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

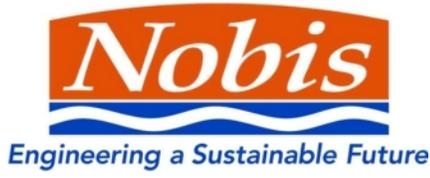
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/09/18	16:00	18	18	18	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)			
1	S1	4	0-2	6	0.2			S1: Medium dense, brown, fine to coarse SAND, trace Silt, trace fine Roots. moist.			
2				9							
3				8							
4				8							
5					0.3			Brown, fine to coarse SAND, little Gravel, trace Silt. moist. Auger cuttings screened for TOV's.			
6							/ 6.0				
7											
8					0.2			Dark brown, fine to coarse SAND, some Gravel, trace Silt. moist. Auger cuttings screened for TOV's.			
9											
10											
11	S2	6	10-12	3	0.0			S2: Medium dense, brown, fine to medium SAND, trace Silt. moist. Drill action suggests cobbles from 10 to 14-feet.			
12				7							
13	S3	6	12-14	27	0.3			S3: Very dense, brown, fine to medium SAND, trace Silt, and, pulverized rock. moist.			
14				23							
15	S4	6	14-16	14	0.0			S4: Dense, brown, fine to coarse SAND, and, pulverized rock. dry.			
16				28							
17	S5	8	16-18	20	0.1			S5: Dense, gray brown, fine to coarse SAND, trace Silt, trace, pulverized rock. dry.			
18				22							
19	S6	5	18-18.6	21	0.2		/ 18.0	S6: Very dense, gray brown, fine to coarse SAND, trace Silt, trace, pulverized rock. moist/wet. Spoon refusal at 18.5-feet, auger refusal at 19-feet. Boring terminated at 19 feet on auger refusal.			
20				50/1"			Glacial till / 19.0				
21											
22											
23											
24											
25											

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-5 @ 18' Sampled at 14:00



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-6
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 11, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

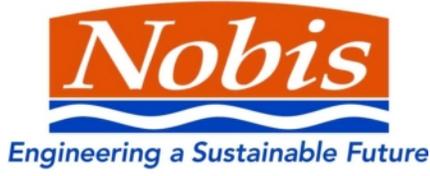
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/11/18	08:45	16	14	18	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	20	0-2	17	0.2		Fill / 4.0	S1: Medium dense, light brown, fine SAND, trace Silt. moist.		
2				14	0.4					
3				13						
4				10						
5					0.5					
6										
7										
8					0.3					
9										
10										
11	S2	10	10-12	6	1.2		Alluvium	S2: Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt. moist.		
12				9						
13	S3	8	12-14	16	0.6					
14				9						
15	S4	6	14-16	10	1.4					
16				7						
17	S5	12	16-18	7	1.9					
18				7						
19	S6	5	18-19.9	12	1.8					
20				10						
21	S7	2	20-20.5	50	0.2		/ 20.0 Glacial till / 20.5	S7: Very dense, gray brown, fine to coarse SAND and Gravel, trace Silt. wet. Boring terminated at 20.5 feet on auger refusal.		
22				15						
23				50/5"						
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab Saple: GP-6 @ 16'-18', sampled at 9:20

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-7
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

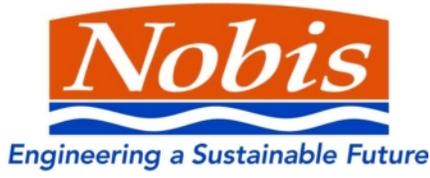
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	11:00	19	18	18	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	6	0-2	6	0.0		Topsoil / 0.5	S1: Medium dense, brown, SILT, trace fine Roots. moist.		
2				8			Fill	Brown, fine to coarse SAND, little Gravel, trace Silt. moist.		
3				4						
4				5						
5					0.0		/ 6.0			
6							Alluvium	Brown, fine to coarse SAND, little Gravel, trace Silt. moist.		
7										
8					0.3					
9										
10										
11	S2	6	10-12	3	0.0			S2: Loose, brown, fine SAND, trace Gravel, trace coarse Sand. moist. Fe staining observed.		
12				3						
13	S3	4	12-14	6	0.0			S3: Medium dense, brown, fine to coarse SAND, little Gravel, trace Silt. moist.		
14				12			Alluvium	S4: Medium dense, brown, fine to medium SAND, trace Gravel, trace Silt. moist.		
15	S4	8	14-16	10	0.0					
16				7						
17				3						
18	S5	4	16-17.1	10	0.1			S5: Very dense, brown, fine to coarse SAND, trace Gravel, trace Silt, trace pulverized rock. moist. Drill action suggests cobbles from 17 to 18-feet.		
19				12						
20				23			/ 18.0			
21	S6	5	18-20	26	0.5			S6: Dense, gray, fine to coarse SAND, trace Gravel, trace Silt. wet.		
22				30			Glacial Till	S7: Very dense, gray, fine to coarse SAND, little Gravel, trace Silt. wet.		
23				18						
24	S7	4	20-21	18	4.3					
25				3			/ 21.5	Boring terminated at 21.5 feet on auger refusal.		
				34						
				50/1"						
				50/0"						

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-7 @ 20'-21' Sample at 12:00



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-8
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 11, 2018
 Date Finish: January 11, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

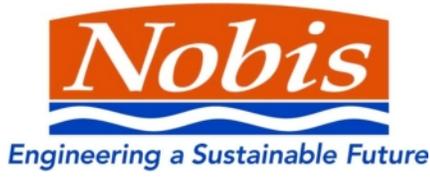
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/11/18	13:50	18	18	20	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)			
1	S1	5	0-2	6	0.6		Topsoil / 0.5	S1: Loose, brown, SILT, and Organic Silt, trace fine Roots. moist.			
2				3			Fill	Brown, fine to coarse SAND, trace Silt. moist.			
3				4							
4				4							
5					0.5						
6					0.4						
7											
8					0.7						
9						/ 8.0					
10											
11	S2	8	10-12	7	2.0		S2: Loose, brown, fine SAND, trace Silt. moist.				
12				4							
13	S3	2	12-14	7	1.4		S3: Medium dense, brown-black, fine to coarse SAND, trace Gravel, trace Silt. moist.				
14				13							
15	S4	6	14-16	6	1.7		S4: Medium dense, brown, fine to coarse SAND, trace Silt. moist.				
16				14							
17	S5	5	16-18	12	2.0		S5: Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt. moist.				
18				13							
19	S6	12	18-20	3	3.0		S6: Medium dense, brown, SILT. wet.				
20				6							
21	S7	10	20-22	2	2.0		S7: Loose, brown, SILT. wet.				
22				3							
23	S8	6	22-23	23	1.8		S8: Loose, brown, SILT. wet. Spoon refusal at 21-feet. Boring terminated at 21.5 feet on auger refusal.				
24				8							
25				50/0"							

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-8 @ 16'-18', sampled at 14:00



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-9
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 11, 2018
 Date Finish: January 11, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

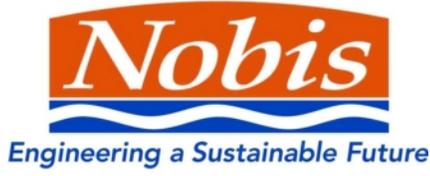
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/11/18	11:05	16	14	18	W.D.
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	6	0-2	4	0.8		Fill Brown, fine to coarse SAND, some Gravel, trace Silt. moist. / 8.0			
2				5						
3				5						
4				22						
5										
6										
7										
8										
9										
10										
11	S2	9	10-12	4	1.6		Alluvium S2: Loose, gray brown, SILT, trace Gravel. moist/wet. S3: Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt. moist. S4: Loose, brown, fine to medium SAND, trace Silt. moist. S5: Loose, brown, SILT. wet. / 18.0			
12				4						
13	S3	12	12-14	4	1.6					
14				6						
15	S4	8	14-16	10	0.9					
16				6						
17	S5	10	16-18	8	2.0					
18				3						
19	S6	5	18-20	6	1.2					
20				6						
21				3						
22				30						
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-9 @ 16'-18'



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: GP-10
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: December 5, 2017
 Date Finish: December 5, 2017

Contractor: Eastern Analytical, Inc.
 Driller: B. Law
 Nobis Rep.: K. Karlsson

Rig Type / Model: Geoprobe / 7822 DT
 Hammer Type: N/A
 Hammer Hoist: N/A

Ground Surface Elev.: _____
 Datum: _____

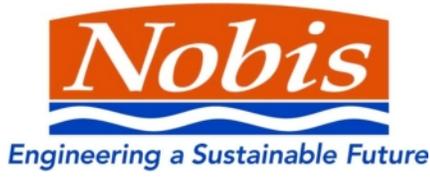
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	12/05/17	09:30	18	19	19	WD
Size ID (in.)	3.25	1.75 x 60						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	Graphic	LITHOLOGY Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.						
1	S-1	48	0-5		<1			S-1: Brown, fine to medium SAND, some Silt, trace Gravel. dry.		
2					<1					
3					<1		Fill			
4					<1					
5							/ 5.0			
6	S-2	46	5-10		<1			S-2: Light brown, fine to medium SAND, some Silt, trace Gravel. moist.		
7					<1					
8					<1					
9					<1					
10					<1					
11	S-3	50	10-15		<1		Alluvium	S-3 (24"): Gray brown, fine to medium SAND, some Silt, trace Gravel. moist.		
12					<1					
13					<1			S-3 (26"): Red brown, fine to coarse SAND, some Gravel, trace Silt. moist.		
14					<1					
15					<1					
16	S-4	48	15-20		<1			S-4 (36"): Light brown, fine to medium SAND, some Silt, trace Gravel. moist.		
17					<1					
18					<1		/ 18.0			
19					<1		Glacial Till / 19.0	S-4 (12"): Light brown, fine to coarse SAND, some Silt. wet.		
20								Boring terminated at 19 feet on refusal.		
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: GP-10, S-4, 18'-19' @ 09:50

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-1
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

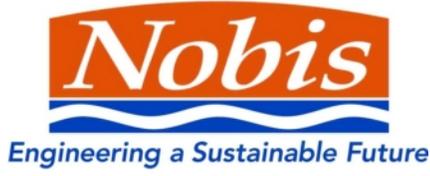
Ground Surface Elev.: _____
 Datum: _____

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	14:55	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	Graphic	LITHOLOGY Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	14	0-2	20	2.4		[Cross-hatch pattern]	Fill	S1: Medium dense, light brown, fine SAND, trace Silt. moist.	
2				18						
3				12						
4				10						
5	S2	24	4-6	2	2.3		[Dotted pattern]	Alluvium	S2: Loose, light brown, fine SAND, trace Silt. moist.	
6				2						
7	S3	18	6-8	3	2.6					
8				3						
9				3						
10				4						
11				3						
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) Lab samples: SS-1 @ 0'-2', sampled at 14:55, SS-1 @ 4'-8' Comp, sampled at 15:05
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-2
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

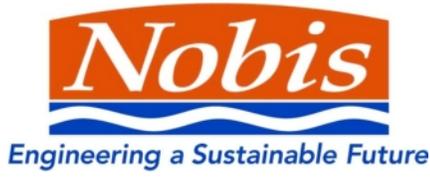
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	13:35	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)		
1	S1	10	0-2	3	0.1			S1: Medium dense, brown, fine SAND, trace Silt. moist.		
2				5			Fill			
3				4			/ 2.0			
4								Boring terminated at 2 feet.		
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: SS-2 @ 0'-2', sampled at 13:35

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-3
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

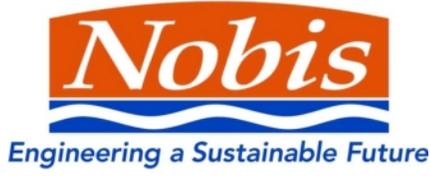
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	13:00	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	Graphic	LITHOLOGY Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	14	0-2	3	0.1			S1: Loose, brown, fine SAND, trace Silt, trace fine Roots. moist.		
2				2			Fill			
3										
4							/ 4.0			
5	S2	6	4-6	5	0.1			S2: Loose, brown, fine SAND, trace Silt. moist.		
6				5						
7	S3	7	6-8	3	0.2		Alluvium	S3: Loose, brown, fine SAND, trace Silt. moist.		
8				5			/ 8.0			
9								Boring terminated at 8 feet.		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab samples: SS-3 @ 0'-2' sampled at 13:00, SS-3 @ 4'-8' Comp sampled at 13:10

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-4
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

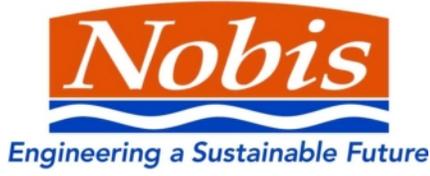
Ground Surface Elev.: _____
 Datum: _____

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	13:20	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)		
1	S1	4	0-2	17	0.2			S1: Medium dense, gray BROWN, fine to coarse SAND, trace Gravel, trace Silt. moist.		
2				8						
				5						
				6						
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil	NOTES: 1) Lab sample: SS-4 @ 0'-2', sampled at 13:25
trace	5 - 10	very few	
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-5
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

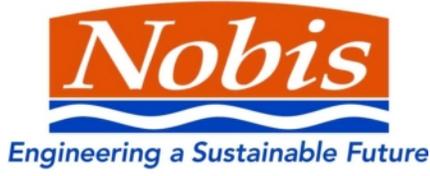
Ground Surface Elev.: _____
 Datum: _____

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	13:50	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	Graphic	LITHOLOGY Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	6	0-2	3	1.9			S1: Loose, brown-black, fine SAND and Silt. moist.		
2				4			Fill			
3				4						
4				3			/ 4.0			
5	S2	3	4-6	4	1.4			S2: Loose, dark brown, fine to coarse SAND and Gravel, trace Silt. moist.		
6				4						
7	S3	3	6-8	4	0.2		Alluvium	S3: Loose, brown, fine SAND and Silt. moist.		
8				5						
9				5						
10				6			/ 8.0			
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) Lab samples: SS-5 @ 0'-2', sampled at 13:50, SS-5 @ 4'-8' Comp, sampled at 14:00
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-6
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

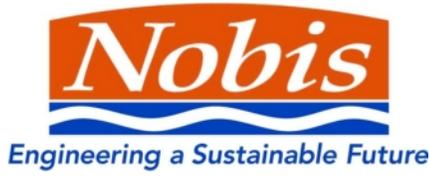
Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	14:10	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)		
1	S1	12	0-2	2	1.7			S1: Loose, brown, SILT, some fine Sand. moist.		
2				4			Fill			
3				4			/ 2.0			
4				6				Boring terminated at 2 feet.		
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: SS-6 @ 0'-2', sampled at 14:15

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-7
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

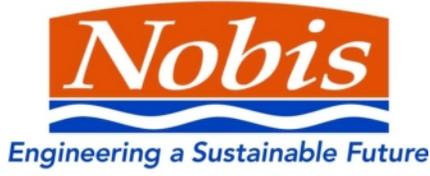
Ground Surface Elev.: _____
 Datum: _____

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	14:20	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	Graphic	LITHOLOGY Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)					
1	S1	12	0-2	22	1.4			S1: Medium dense, brown, fine SAND and Silt, trace Gravel. moist.		
2				14				Fill / 4.0		
3				9						
4				7						
5	S2	10	4-6	3	2.2				S2: Loose, light brown, fine SAND, trace Silt. moist.	
6				2				Alluvium / 8.0		
7	S3	20	6-8	3	2.3				S3: Loose, light brown, fine SAND, trace Silt. moist.	
8				3						
9				4						
10				5					Boring terminated at 8 feet.	
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) Lab samples: SS-7 @ 0'-2', sampled at 14:20, SS-7 @ 4'-8' Comp, sampled at 14:30
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ



BORING LOG

Project: Former Crown Machinery
 Location: 123 Cleveland Street, Manchester, N.H.
 Nobis Project No.: 70631.01

Boring No.: SS-8
 Boring Location: _____
 Checked by: J. Ricker
 Date Start: January 10, 2018
 Date Finish: January 10, 2018

Contractor: Geosearch, Inc.
 Driller: P. McClennahan
 Nobis Rep.: D. Bush

Rig Type / Model: ATV Track Rig / CME 55 LC
 Hammer Type: Automatic Hammer
 Hammer Hoist: Automatic

Ground Surface Elev.: _____
 Datum: _____

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Hollow Stem Auger	Split-Spoon	01/10/18	14:45	Not Encountered			
Size ID (in.)	4.25	1-3/8						
Advancement	Augered	140-lb Hammer						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)		
1	S1	20	0-2	18	1.6			S1: Medium dense, light brown, fine to medium SAND, trace Gravel, trace Silt. moist.		
2				12				Fill		
3				9				/ 2.0		
4				8					Boring terminated at 2 feet.	
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:
 1) Lab sample: SS-8 @ 0'-2', sampled at 14:45

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 3/14/18 10:47 - J:\70631.01 - FORMER CROWN MACHINERY PHASE II ESADATA\SUBSURFACEBORING AND WELL LOGS\LOGS.GPJ

APPENDIX C

AQUARIAN ANALYTICAL LAB

A Division of Nelson Analytical, LLC

153 West Road
Canterbury, NH 03224
www.aquarianlabs.com
(603) 783-9097

15 December 2017

Nobis Engineering

18 Chenell Drive

Concord, NH 03301

RE: Former Crown Machinery - Manchester, NH

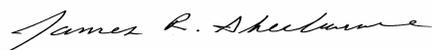
Dear Mr. Ricker:

Enclosed are the results of analytical testing performed on the following samples, which were received at 3.2 degrees C.

Laboratory ID	Sample ID	Sample matrix	Date sampled	Date received
1712044-01	Trip blank	Soil	05-Dec-17 06:00	06-Dec-17 07:55
1712044-02	GP-10, S-4, 18'-19'	Soil	05-Dec-17 09:50	06-Dec-17 07:55

The results in this report relate only to the submitted samples. Please refer to our website listed above for a complete list of accredited parameters. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James R. Sherburne

Laboratory Director

AQUARIAN ANALYTICAL LAB



A Division of Nelson Analytical, LLC

153 West Road
Canterbury, NH 03224
www.aquarianlabs.com

National Environmental Lab Accreditation Program
NELAP Accreditation #NH1004, VT1004, NH00035(ME)
MADEP Accreditation #M-NH035

(603) 783-9097
frontdesk@aquarianlabs.com

Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.00
Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

Trip blank 1712044-01 (Soil)

Sampled: 05-Dec-2017 6:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	2.5	mg/Kg	08-Dec-17 02:11	JRS	
Benzene	BD	0.04	mg/Kg	08-Dec-17 02:11	JRS	
Bromobenzene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Bromochloromethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Bromodichloromethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Bromoform	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Bromomethane	BD	0.25	mg/Kg	08-Dec-17 02:11	JRS	
Butylbenzene, n-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Butylbenzene, sec-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Butylbenzene, tert-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Carbon disulfide	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Carbon Tetrachloride	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Chloroethane	BD	0.25	mg/Kg	08-Dec-17 02:11	JRS	
Chloromethane	BD	0.25	mg/Kg	08-Dec-17 02:11	JRS	
Chlorotoluene, 2	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Chlorotoluene, 4	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dibromochloromethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dibromochloropropane	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Dibromomethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichlorobenzene, 1,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichlorobenzene, 1,3-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichlorobenzene, 1,4-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichlorodifluoromethane	BD	0.25	mg/Kg	08-Dec-17 02:11	JRS	
Dichloroethane, 1,1-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloroethane, 1,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloroethylene, 1,1-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloroethylene, cis-1,2-	BD	0.04	mg/Kg	08-Dec-17 02:11	JRS	
Dichloroethylene, trans-1,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloromethane	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Dichloropropane, 1,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloropropane, 1,3-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloropropane, 2,2-	BD	0.25	mg/Kg	08-Dec-17 02:11	JRS	
Dichloropropene, 1,1-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloropropene, cis-1,3-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Dichloropropene, trans-1,3-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Diethyl Ether	BD	1.3	mg/Kg	08-Dec-17 02:11	JRS	
Diisopropyl Ether	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.00
Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

Trip blank 1712044-01 (Soil)

Sampled: 05-Dec-2017 6:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Ethylene dibromide	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Ethyl tert-Butyl Ether	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Hexachlorobutadiene	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Isopropylbenzene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Isopropyltoluene, p-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Methyl Butyl Ketone (2-Hexanone)	BD	2.5	mg/Kg	08-Dec-17 02:11	JRS	
Methyl Ethyl Ketone (2-Butanone)	BD	2.5	mg/Kg	08-Dec-17 02:11	JRS	
Methyl Isobutyl Ketone	BD	2.5	mg/Kg	08-Dec-17 02:11	JRS	
Methyl-tert-Butyl Ether	BD	0.04	mg/Kg	08-Dec-17 02:11	JRS	
Monochlorobenzene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Naphthalene	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
n-Propylbenzene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Styrene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
tert-Amyl Methyl Ether	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
tert-Butyl alcohol	BD	1.0	mg/Kg	08-Dec-17 02:11	JRS	
Tetrachloroethane, 1,1,1,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Tetrachloroethane, 1,1,2,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Tetrachloroethylene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Tetrahydrofuran	BD	2.5	mg/Kg	08-Dec-17 02:11	JRS	
Toluene	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trichlorobenzene, 1,2,3-	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Trichlorobenzene, 1,2,4-	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Trichlorobenzene, 1,3,5-	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Trichloroethane, 1,1,1-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trichloroethane, 1,1,2-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trichloroethylene	BD	0.04	mg/Kg	08-Dec-17 02:11	JRS	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trichlorofluoromethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trichloromethane	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trichloropropane, 1,2,3-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trimethylbenzene, 1,2,4-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Trimethylbenzene, 1,3,5-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	
Vinyl chloride	BD	0.04	mg/Kg	08-Dec-17 02:11	JRS	
Xylenes, m & p-	BD	0.20	mg/Kg	08-Dec-17 02:11	JRS	
Xylenes, o-	BD	0.10	mg/Kg	08-Dec-17 02:11	JRS	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.00
Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

Trip blank 1712044-01 (Soil)

Sampled: 05-Dec-2017 6:00

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	100.0	0.1	[blank]	07-Dec-17 08:20	SM 2540G	MWB	

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18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.00
Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

GP-10, S-4, 18'-19'
1712044-02 (Soil)

Sampled: 05-Dec-2017 9:50

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	2.7	mg/Kg	08-Dec-17 02:46	JRS	
Benzene	BD	0.04	mg/Kg	08-Dec-17 02:46	JRS	
Bromobenzene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Bromochloromethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Bromodichloromethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Bromoform	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Bromomethane	BD	0.27	mg/Kg	08-Dec-17 02:46	JRS	
Butylbenzene, n-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Butylbenzene, sec-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Butylbenzene, tert-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Carbon disulfide	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Carbon Tetrachloride	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Chloroethane	BD	0.27	mg/Kg	08-Dec-17 02:46	JRS	
Chloromethane	BD	0.27	mg/Kg	08-Dec-17 02:46	JRS	
Chlorotoluene, 2	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Chlorotoluene, 4	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dibromochloromethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dibromochloropropane	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Dibromomethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichlorobenzene, 1,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichlorobenzene, 1,3-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichlorobenzene, 1,4-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichlorodifluoromethane	BD	0.27	mg/Kg	08-Dec-17 02:46	JRS	
Dichloroethane, 1,1-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloroethane, 1,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloroethylene, 1,1-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloroethylene, cis-1,2-	BD	0.04	mg/Kg	08-Dec-17 02:46	JRS	
Dichloroethylene, trans-1,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloromethane	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Dichloropropane, 1,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloropropane, 1,3-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloropropane, 2,2-	BD	0.27	mg/Kg	08-Dec-17 02:46	JRS	
Dichloropropene, 1,1-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloropropene, cis-1,3-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Dichloropropene, trans-1,3-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Diethyl Ether	BD	1.3	mg/Kg	08-Dec-17 02:46	JRS	
Diisopropyl Ether	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.00
Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

GP-10, S-4, 18'-19'
1712044-02 (Soil)

Sampled: 05-Dec-2017 9:50

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Ethylene dibromide	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Ethyl tert-Butyl Ether	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Hexachlorobutadiene	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Isopropylbenzene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Isopropyltoluene, p-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Methyl Butyl Ketone (2-Hexanone)	BD	2.7	mg/Kg	08-Dec-17 02:46	JRS	
Methyl Ethyl Ketone (2-Butanone)	BD	2.7	mg/Kg	08-Dec-17 02:46	JRS	
Methyl Isobutyl Ketone	BD	2.7	mg/Kg	08-Dec-17 02:46	JRS	
Methyl-tert-Butyl Ether	BD	0.04	mg/Kg	08-Dec-17 02:46	JRS	
Monochlorobenzene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Naphthalene	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
n-Propylbenzene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Styrene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
tert-Amyl Methyl Ether	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
tert-Butyl alcohol	BD	1.1	mg/Kg	08-Dec-17 02:46	JRS	
Tetrachloroethane, 1,1,1,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Tetrachloroethane, 1,1,2,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Tetrachloroethylene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Tetrahydrofuran	BD	2.7	mg/Kg	08-Dec-17 02:46	JRS	
Toluene	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trichlorobenzene, 1,2,3-	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Trichlorobenzene, 1,2,4-	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Trichlorobenzene, 1,3,5-	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Trichloroethane, 1,1,1-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trichloroethane, 1,1,2-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trichloroethylene	BD	0.04	mg/Kg	08-Dec-17 02:46	JRS	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trichlorofluoromethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trichloromethane	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trichloropropane, 1,2,3-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trimethylbenzene, 1,2,4-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Trimethylbenzene, 1,3,5-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	
Vinyl chloride	BD	0.04	mg/Kg	08-Dec-17 02:46	JRS	
Xylenes, m & p-	BD	0.21	mg/Kg	08-Dec-17 02:46	JRS	
Xylenes, o-	BD	0.11	mg/Kg	08-Dec-17 02:46	JRS	

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18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.00
Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

GP-10, S-4, 18'-19'
1712044-02 (Soil)

Sampled: 05-Dec-2017 9:50

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Acenaphthylene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Anthracene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Benzo(a)anthracene	BD	0.13	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Benzo(a)pyrene	BD	0.25	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Benzo(b)fluoranthene	BD	0.13	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Benzo(k)fluoranthene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Chrysene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.13	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Fluoranthene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Fluorene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.13	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Methylnaphthalene, 2-	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Naphthalene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Phenanthrene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	
Pyrene	BD	0.51	mg/Kg	08-Dec-17 11:03	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	
Aroclor 1221	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	
Aroclor 1232	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	
Aroclor 1242	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	
Aroclor 1248	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	
Aroclor 1254	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	
Aroclor 1260	BD	0.0630	mg/Kg	08-Dec-17 10:46	8082	MWB	

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Project Manager: Mr. Jim Ricker

Reported:
15-Dec-17 14:24

GP-10, S-4, 18'-19'
1712044-02 (Soil)

Sampled: 05-Dec-2017 9:50

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	250	mg/Kg	07-Dec-17 12:06	EPA 8100/8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	3.74	1.00	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Barium	55.2	10.0	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Chromium	BD	1.00	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Lead	7.56	1.00	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	15-Dec-17	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	78.8	0.1	[blank]	07-Dec-17 08:20	SM 2540G	MWB	

Notes and Definitions

Sub Analysis subcontracted to Nelson Analytical, Manchester, NH.

BD - Analyte result is below the method reporting limit.

NR - Not reported.

Soil sample results are reported on a dry weight basis.

The reporting limit is the lowest value at which reliable quantitation has been demonstrated and verified.

Analytes in **bold** are values above the reporting limit.

AQUARIAN ANALYTICAL LAB

153 West Road
Canterbury, NH 03224
Phone: (603)783-9097
E-mail: frontdesk@aquarianlabs.com

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Turnaround Requirements (check one)	Project Information										
<p>Please inquire about rush service. If we are able to meet your rush needs with reasonable effort, we will not charge a rush fee. Please call ahead.</p> <p>Rush Samples Need Prior Approval</p> <table><tr><td><input type="checkbox"/></td><td>Same Day Turnaround</td></tr><tr><td><input type="checkbox"/></td><td>One Day Turnaround</td></tr><tr><td><input type="checkbox"/></td><td>Two Day Turnaround</td></tr><tr><td><input type="checkbox"/></td><td>Three Day Turnaround</td></tr><tr><td><input checked="checked" type="checkbox"/></td><td>Normal Turnaround</td></tr></table>	<input type="checkbox"/>	Same Day Turnaround	<input type="checkbox"/>	One Day Turnaround	<input type="checkbox"/>	Two Day Turnaround	<input type="checkbox"/>	Three Day Turnaround	<input checked="checked" type="checkbox"/>	Normal Turnaround	<p>Project #: <u>70631.00</u> Project Name: <u>Former Crown Machinery</u> Town/Site: <u>Manchester</u> Sampler: <u>Leif Karlson</u> Company: <u>Nabis</u> Bid Reference: _____</p> <p>Project Manager: <u>Jim Ricker</u> Report To: <u>Jim Ricker</u> Invoice To: <u>Accounts Payable</u> Phone: <u>603-224-4182</u> E-mail: <u>jricker@nabisey.com</u></p>
<input type="checkbox"/>	Same Day Turnaround										
<input type="checkbox"/>	One Day Turnaround										
<input type="checkbox"/>	Two Day Turnaround										
<input type="checkbox"/>	Three Day Turnaround										
<input checked="checked" type="checkbox"/>	Normal Turnaround										

Sample Information			VOCs	SVOCs	Petroleum	Metals	Water Chemistry/Inorganics			Aquarian ID							
Sample ID	Collection Date/Time	Sample Matrix # of Containers	VOCs: EPA 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	SVOCs: EPA 821C, 821D, 822C, 822D, 823C, 823D, 824C, 824D, 825C, 825D, 826C, 826D, 827C, 827D, 828C, 828D, 829C, 829D, 830C, 830D, 831C, 831D, 832C, 832D, 833C, 833D, 834C, 834D, 835C, 835D, 836C, 836D, 837C, 837D, 838C, 838D, 839C, 839D, 840C, 840D, 841C, 841D, 842C, 842D, 843C, 843D, 844C, 844D, 845C, 845D, 846C, 846D, 847C, 847D, 848C, 848D, 849C, 849D, 850C, 850D, 851C, 851D, 852C, 852D, 853C, 853D, 854C, 854D, 855C, 855D, 856C, 856D, 857C, 857D, 858C, 858D, 859C, 859D, 860C, 860D, 861C, 861D, 862C, 862D, 863C, 863D, 864C, 864D, 865C, 865D, 866C, 866D, 867C, 867D, 868C, 868D, 869C, 869D, 870C, 870D, 871C, 871D, 872C, 872D, 873C, 873D, 874C, 874D, 875C, 875D, 876C, 876D, 877C, 877D, 878C, 878D, 879C, 879D, 880C, 880D, 881C, 881D, 882C, 882D, 883C, 883D, 884C, 884D, 885C, 885D, 886C, 886D, 887C, 887D, 888C, 888D, 889C, 889D, 890C, 890D, 891C, 891D, 892C, 892D, 893C, 893D, 894C, 894D, 895C, 895D, 896C, 896D, 897C, 897D, 898C, 898D, 899C, 899D, 900C, 900D, 901C, 901D, 902C, 902D, 903C, 903D, 904C, 904D, 905C, 905D, 906C, 906D, 907C, 907D, 908C, 908D, 909C, 909D, 910C, 910D, 911C, 911D, 912C, 912D, 913C, 913D, 914C, 914D, 915C, 915D, 916C, 916D, 917C, 917D, 918C, 918D, 919C, 919D, 920C, 920D, 921C, 921D, 922C, 922D, 923C, 923D, 924C, 924D, 925C, 925D, 926C, 926D, 927C, 927D, 928C, 928D, 929C, 929D, 930C, 930D, 931C, 931D, 932C, 932D, 933C, 933D, 934C, 934D, 935C, 935D, 936C, 936D, 937C, 937D, 938C, 938D, 939C, 939D, 940C, 940D, 941C, 941D, 942C, 942D, 943C, 943D, 944C, 944D, 945C, 945D, 946C, 946D, 947C, 947D, 948C, 948D, 949C, 949D, 950C, 950D, 951C, 951D, 952C, 952D, 953C, 953D, 954C, 954D, 955C, 955D, 956C, 956D, 957C, 957D, 958C, 958D, 959C, 959D, 960C, 960D, 961C, 961D, 962C, 962D, 963C, 963D, 964C, 964D, 965C, 965D, 966C, 966D, 967C, 967D, 968C, 968D, 969C, 969D, 970C, 970D, 971C, 971D, 972C, 972D, 973C, 973D, 974C, 974D, 975C, 975D, 976C, 976D, 977C, 977D, 978C, 978D, 979C, 979D, 980C, 980D, 981C, 981D, 982C, 982D, 983C, 983D, 984C, 984D, 985C, 985D, 986C, 986D, 987C, 987D, 988C, 988D, 989C, 989D, 990C, 990D, 991C, 991D, 992C, 992D, 993C, 993D, 994C, 994D, 995C, 995D, 996C, 996D, 997C, 997D, 998C, 998D, 999C, 999D, 1000C, 1000D	Petroleum: EPA 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	Metals: EPA 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	Water Chemistry/Inorganics: EPA 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	Aquarian ID									
71 Blank	12/5/17	S 1	X														1712044-01
69-10, 5-4, 18'-19'	12/5/17	S 1	X	X		X											1712044-02

Relinquished by: <u>[Signature]</u>	Date/Time: <u>11/6/17</u> <u>10:55</u>	Received by: <u>[Signature]</u>	Receipt Conditions (laboratory use only):	PROJECT REQUIREMENTS (Please complete):
Relinquished by: _____	Date/Time: _____	Received by: _____	Laboratory Supplied Containers? <input checked="checked" type="checkbox"/> No	ISO 17025 accreditation required? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished by: _____	Date/Time: _____	Received by: _____	Conc/Inn: Inscr/Property Labels <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No	EDU required? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
			Were samples delivered on ice? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No	MCP Compliance required? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
			Reorder Temperature: <u>3.7.0</u>	Is this NH "Odd Fund" related? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
				Does a price quote apply? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No

AQUARIAN ANALYTICAL LAB

A Division of Nelson Analytical, LLC

153 West Road
Canterbury, NH 03224
www.aquarianlabs.com
(603) 783-9097

19 January 2018

Nobis Engineering

18 Chenell Drive

Concord, NH 03301

RE: Former Crown Machinery - Manchester, NH

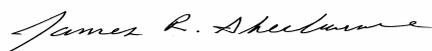
Dear Mr. Ricker:

Enclosed are the results of analytical testing performed on the following samples, which were received at 1.0 degrees C.

Laboratory ID	Sample ID	Sample matrix	Date sampled	Date received
1801091-01	GP-2 @ 12'-13.5'	Soil	09-Jan-18 10:55	15-Jan-18 08:25
1801091-02	GP-3 @ 16'	Soil	09-Jan-18 12:30	15-Jan-18 08:25
1801091-03	GP-4 @ 12'-14'	Soil	09-Jan-18 14:00	15-Jan-18 08:25
1801091-04	GP-5 @ 18'	Soil	09-Jan-18 16:10	15-Jan-18 08:25
1801091-05	GP-7 @ 20'-21'	Soil	10-Jan-18 12:00	15-Jan-18 08:25
1801091-06	SS-3 @ 0'-2'	Soil	10-Jan-18 13:00	15-Jan-18 08:25
1801091-07	SS-3 4'-8' COMP	Soil	10-Jan-18 13:10	15-Jan-18 08:25
1801091-08	SS-4 @ 0'-2'	Soil	10-Jan-18 13:25	15-Jan-18 08:25
1801091-09	SS-2 @ 0'-2'	Soil	10-Jan-18 13:35	15-Jan-18 08:25
1801091-10	SS-5 @ 0'-2'	Soil	10-Jan-18 13:50	15-Jan-18 08:25
1801091-11	SS-5 4'-8' COMP	Soil	10-Jan-18 14:00	15-Jan-18 08:25
1801091-12	SS-6 @ 0'-2'	Soil	10-Jan-18 14:15	15-Jan-18 08:25
1801091-13	SS-7 @ 0'-2'	Soil	10-Jan-18 14:20	15-Jan-18 08:25
1801091-14	SS-7 4'-8' COMP	Soil	10-Jan-18 14:30	15-Jan-18 08:25
1801091-15	SS-8 @ 0'-2'	Soil	10-Jan-18 14:45	15-Jan-18 08:25
1801091-16	SS-1 @ 0'-2'	Soil	10-Jan-18 14:55	15-Jan-18 08:25
1801091-17	SS-1 4'-8' COMP	Soil	10-Jan-18 15:05	15-Jan-18 08:25
1801091-18	GP-6 @ 16'-18'	Soil	11-Jan-18 09:20	15-Jan-18 08:25
1801091-19	GP-9 @ 16'-18'	Soil	11-Jan-18 11:45	15-Jan-18 08:25
1801091-20	GP-8 @ 18'-20'	Soil	11-Jan-18 14:00	15-Jan-18 08:25

The results in this report relate only to the submitted samples. Please refer to our website listed above for a complete list of accredited parameters. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James R. Sherburne

Laboratory Director

AQUARIAN ANALYTICAL LAB



A Division of Nelson Analytical, LLC

153 West Road
Canterbury, NH 03224
www.aquarianlabs.com

National Environmental Lab Accreditation Program
NELAP Accreditation #NH1004, VT1004, NH00035(ME)
MADEP Accreditation #M-NH035

(603) 783-9097
frontdesk@aquarianlabs.com

Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-2 @ 12'-13.5'
1801091-01 (Soil)

Sampled: 09-Jan-2018 10:55

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	1.8	mg/Kg	16-Jan-18 23:18	MWB	
Benzene	BD	0.03	mg/Kg	16-Jan-18 23:18	MWB	
Bromobenzene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Bromochloromethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Bromodichloromethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Bromoform	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Bromomethane	BD	0.18	mg/Kg	16-Jan-18 23:18	MWB	
Butylbenzene, n-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Butylbenzene, sec-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Butylbenzene, tert-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Carbon disulfide	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Carbon Tetrachloride	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Chloroethane	BD	0.18	mg/Kg	16-Jan-18 23:18	MWB	
Chloromethane	BD	0.18	mg/Kg	16-Jan-18 23:18	MWB	
Chlorotoluene, 2	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Chlorotoluene, 4	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dibromochloromethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dibromochloropropane	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Dibromomethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichlorobenzene, 1,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichlorobenzene, 1,3-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichlorobenzene, 1,4-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichlorodifluoromethane	BD	0.18	mg/Kg	16-Jan-18 23:18	MWB	
Dichloroethane, 1,1-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloroethane, 1,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloroethylene, 1,1-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloroethylene, cis-1,2-	BD	0.03	mg/Kg	16-Jan-18 23:18	MWB	
Dichloroethylene, trans-1,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloromethane	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Dichloropropane, 1,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloropropane, 1,3-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloropropane, 2,2-	BD	0.18	mg/Kg	16-Jan-18 23:18	MWB	
Dichloropropene, 1,1-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloropropene, cis-1,3-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Dichloropropene, trans-1,3-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Diethyl Ether	BD	0.92	mg/Kg	16-Jan-18 23:18	MWB	
Diisopropyl Ether	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
<http://www2.des.nh.gov/CertifiedLabs/Certified-Method-Result.aspx?matrix=%&cat1=&method=%&analyte=%&labstate=%&labcity=%&labname=1004>.



AQUARIAN ANALYTICAL LAB



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National Environmental Lab Accreditation Program
 NELAP Accreditation #NH1004, VT1004, NH00035(ME)
 MADEP Accreditation #M-NH035

(603) 783-9097
 frontdesk@aquarianlabs.com

Nobis Engineering
 18 Chenell Drive
 Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

GP-2 @ 12'-13.5'
1801091-01 (Soil)

Sampled: 09-Jan-2018 10:55

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Ethylene dibromide	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Ethyl tert-Butyl Ether	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Hexachlorobutadiene	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Isopropylbenzene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Isopropyltoluene, p-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	1.8	mg/Kg	16-Jan-18 23:18	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	1.8	mg/Kg	16-Jan-18 23:18	MWB	
Methyl Isobutyl Ketone	BD	1.8	mg/Kg	16-Jan-18 23:18	MWB	
Methyl-tert-Butyl Ether	BD	0.03	mg/Kg	16-Jan-18 23:18	MWB	
Monochlorobenzene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Naphthalene	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
n-Propylbenzene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Styrene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
tert-Amyl Methyl Ether	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
tert-Butyl alcohol	BD	0.37	mg/Kg	16-Jan-18 23:18	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Tetrachloroethylene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Tetrahydrofuran	BD	1.8	mg/Kg	16-Jan-18 23:18	MWB	
Toluene	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trichlorobenzene, 1,2,3-	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Trichlorobenzene, 1,2,4-	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Trichlorobenzene, 1,3,5-	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Trichloroethane, 1,1,1-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trichloroethane, 1,1,2-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trichloroethylene	BD	0.03	mg/Kg	16-Jan-18 23:18	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trichlorofluoromethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trichloromethane	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trichloropropane, 1,2,3-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trimethylbenzene, 1,2,4-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Trimethylbenzene, 1,3,5-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	
Vinyl chloride	BD	0.03	mg/Kg	16-Jan-18 23:18	MWB	
Xylenes, m & p-	BD	0.15	mg/Kg	16-Jan-18 23:18	MWB	
Xylenes, o-	BD	0.07	mg/Kg	16-Jan-18 23:18	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-2 @ 12'-13.5'
1801091-01 (Soil)

Sampled: 09-Jan-2018 10:55

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Acenaphthylene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Anthracene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Benzo(a)anthracene	BD	0.11	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Benzo(a)pyrene	BD	0.21	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Benzo(b)fluoranthene	BD	0.11	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Benzo(k)fluoranthene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Chrysene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.11	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Fluoranthene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Fluorene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.11	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Methylnaphthalene, 2-	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Naphthalene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Phenanthrene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	
Pyrene	BD	0.43	mg/Kg	16-Jan-18 15:58	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	
Aroclor 1221	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	
Aroclor 1232	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	
Aroclor 1242	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	
Aroclor 1248	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	
Aroclor 1254	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	
Aroclor 1260	BD	0.0534	mg/Kg	16-Jan-18 12:45	EPA 8082A	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-2 @ 12'-13.5'
1801091-01 (Soil)

Sampled: 09-Jan-2018 10:55

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	214	mg/Kg	16-Jan-18 11:44	EPA 8100/8015m	MWB	
TPH Gasoline	BD	3.7	mg/Kg	16-Jan-18 23:18	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	2.52	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	28.0	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	10.4	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	92.8	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-3 @ 16'
1801091-02 (Soil)

Sampled: 09-Jan-2018 12:30

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	2.0	mg/Kg	16-Jan-18 23:55	MWB	
Benzene	BD	0.03	mg/Kg	16-Jan-18 23:55	MWB	
Bromobenzene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Bromochloromethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Bromodichloromethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Bromoform	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Bromomethane	BD	0.20	mg/Kg	16-Jan-18 23:55	MWB	
Butylbenzene, n-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Butylbenzene, sec-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Butylbenzene, tert-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Carbon disulfide	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Carbon Tetrachloride	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Chloroethane	BD	0.20	mg/Kg	16-Jan-18 23:55	MWB	
Chloromethane	BD	0.20	mg/Kg	16-Jan-18 23:55	MWB	
Chlorotoluene, 2	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Chlorotoluene, 4	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dibromochloromethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dibromochloropropane	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Dibromomethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichlorobenzene, 1,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichlorobenzene, 1,3-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichlorobenzene, 1,4-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichlorodifluoromethane	BD	0.20	mg/Kg	16-Jan-18 23:55	MWB	
Dichloroethane, 1,1-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloroethane, 1,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloroethylene, 1,1-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloroethylene, cis-1,2-	BD	0.03	mg/Kg	16-Jan-18 23:55	MWB	
Dichloroethylene, trans-1,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloromethane	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Dichloropropane, 1,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloropropane, 1,3-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloropropane, 2,2-	BD	0.20	mg/Kg	16-Jan-18 23:55	MWB	
Dichloropropene, 1,1-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloropropene, cis-1,3-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Dichloropropene, trans-1,3-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Diethyl Ether	BD	1.0	mg/Kg	16-Jan-18 23:55	MWB	
Diisopropyl Ether	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-3 @ 16'
1801091-02 (Soil)

Sampled: 09-Jan-2018 12:30

Volatile Organic Compounds by EPA 8260B

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Notes</u>
Ethylbenzene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Ethylene dibromide	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Ethyl tert-Butyl Ether	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Hexachlorobutadiene	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Isopropylbenzene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Isopropyltoluene, p-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	2.0	mg/Kg	16-Jan-18 23:55	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	2.0	mg/Kg	16-Jan-18 23:55	MWB	
Methyl Isobutyl Ketone	BD	2.0	mg/Kg	16-Jan-18 23:55	MWB	
Methyl-tert-Butyl Ether	BD	0.03	mg/Kg	16-Jan-18 23:55	MWB	
Monochlorobenzene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Naphthalene	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
n-Propylbenzene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Styrene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
tert-Amyl Methyl Ether	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
tert-Butyl alcohol	BD	0.41	mg/Kg	16-Jan-18 23:55	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Tetrachloroethylene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Tetrahydrofuran	BD	2.0	mg/Kg	16-Jan-18 23:55	MWB	
Toluene	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trichlorobenzene, 1,2,3-	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Trichlorobenzene, 1,2,4-	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Trichlorobenzene, 1,3,5-	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Trichloroethane, 1,1,1-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trichloroethane, 1,1,2-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trichloroethylene	BD	0.03	mg/Kg	16-Jan-18 23:55	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trichlorofluoromethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trichloromethane	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trichloropropane, 1,2,3-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trimethylbenzene, 1,2,4-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Trimethylbenzene, 1,3,5-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	
Vinyl chloride	BD	0.03	mg/Kg	16-Jan-18 23:55	MWB	
Xylenes, m & p-	BD	0.16	mg/Kg	16-Jan-18 23:55	MWB	
Xylenes, o-	BD	0.08	mg/Kg	16-Jan-18 23:55	MWB	

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19-Jan-18 08:22

GP-3 @ 16' 1801091-02 (Soil)

Sampled: 09-Jan-2018 12:30

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Acenaphthylene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Anthracene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Benzo(a)anthracene	BD	0.12	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Benzo(a)pyrene	BD	0.23	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Benzo(b)fluoranthene	BD	0.12	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Benzo(k)fluoranthene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Chrysene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.12	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Fluoranthene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Fluorene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.12	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Methylnaphthalene, 2-	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Naphthalene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Phenanthrene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	
Pyrene	BD	0.47	mg/Kg	16-Jan-18 16:25	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	
Aroclor 1221	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	
Aroclor 1232	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	
Aroclor 1242	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	
Aroclor 1248	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	
Aroclor 1254	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	
Aroclor 1260	BD	0.0588	mg/Kg	16-Jan-18 13:17	EPA 8082A	MWB	

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Reported:
19-Jan-18 08:22

GP-3 @ 16'
1801091-02 (Soil)

Sampled: 09-Jan-2018 12:30

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	231	mg/Kg	16-Jan-18 12:14	EPA 8100/8015m	MWB	
TPH Gasoline	BD	4.1	mg/Kg	16-Jan-18 23:55	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	1.68	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	25.9	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	14.7	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	3.22	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	84.9	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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(603) 783-9097
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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-4 @ 12'-14' 1801091-03 (Soil)

Sampled: 09-Jan-2018 14:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	1.8	mg/Kg	17-Jan-18 00:30	MWB	
Benzene	BD	0.03	mg/Kg	17-Jan-18 00:30	MWB	
Bromobenzene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Bromochloromethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Bromodichloromethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Bromoform	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Bromomethane	BD	0.18	mg/Kg	17-Jan-18 00:30	MWB	
Butylbenzene, n-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Butylbenzene, sec-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Butylbenzene, tert-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Carbon disulfide	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Carbon Tetrachloride	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Chloroethane	BD	0.18	mg/Kg	17-Jan-18 00:30	MWB	
Chloromethane	BD	0.18	mg/Kg	17-Jan-18 00:30	MWB	
Chlorotoluene, 2	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Chlorotoluene, 4	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dibromochloromethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dibromochloropropane	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Dibromomethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichlorobenzene, 1,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichlorobenzene, 1,3-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichlorobenzene, 1,4-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichlorodifluoromethane	BD	0.18	mg/Kg	17-Jan-18 00:30	MWB	
Dichloroethane, 1,1-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloroethane, 1,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloroethylene, 1,1-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloroethylene, cis-1,2-	BD	0.03	mg/Kg	17-Jan-18 00:30	MWB	
Dichloroethylene, trans-1,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloromethane	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Dichloropropane, 1,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloropropane, 1,3-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloropropane, 2,2-	BD	0.18	mg/Kg	17-Jan-18 00:30	MWB	
Dichloropropene, 1,1-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloropropene, cis-1,3-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Dichloropropene, trans-1,3-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Diethyl Ether	BD	0.88	mg/Kg	17-Jan-18 00:30	MWB	
Diisopropyl Ether	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-4 @ 12'-14'
1801091-03 (Soil)

Sampled: 09-Jan-2018 14:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Ethylene dibromide	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Ethyl tert-Butyl Ether	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Hexachlorobutadiene	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Isopropylbenzene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Isopropyltoluene, p-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	1.8	mg/Kg	17-Jan-18 00:30	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	1.8	mg/Kg	17-Jan-18 00:30	MWB	
Methyl Isobutyl Ketone	BD	1.8	mg/Kg	17-Jan-18 00:30	MWB	
Methyl-tert-Butyl Ether	BD	0.03	mg/Kg	17-Jan-18 00:30	MWB	
Monochlorobenzene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Naphthalene	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
n-Propylbenzene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Styrene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
tert-Amyl Methyl Ether	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
tert-Butyl alcohol	BD	0.35	mg/Kg	17-Jan-18 00:30	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Tetrachloroethylene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Tetrahydrofuran	BD	1.8	mg/Kg	17-Jan-18 00:30	MWB	
Toluene	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trichlorobenzene, 1,2,3-	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Trichlorobenzene, 1,2,4-	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Trichlorobenzene, 1,3,5-	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Trichloroethane, 1,1,1-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trichloroethane, 1,1,2-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trichloroethylene	BD	0.03	mg/Kg	17-Jan-18 00:30	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trichlorofluoromethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trichloromethane	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trichloropropane, 1,2,3-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trimethylbenzene, 1,2,4-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Trimethylbenzene, 1,3,5-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	
Vinyl chloride	BD	0.03	mg/Kg	17-Jan-18 00:30	MWB	
Xylenes, m & p-	BD	0.14	mg/Kg	17-Jan-18 00:30	MWB	
Xylenes, o-	BD	0.07	mg/Kg	17-Jan-18 00:30	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-4 @ 12'-14'
1801091-03 (Soil)

Sampled: 09-Jan-2018 14:00

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Acenaphthylene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Anthracene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Benzo(a)anthracene	BD	0.11	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Benzo(a)pyrene	BD	0.21	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Benzo(b)fluoranthene	BD	0.11	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Benzo(k)fluoranthene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Chrysene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.11	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Fluoranthene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Fluorene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.11	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Methylnaphthalene, 2-	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Naphthalene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Phenanthrene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	
Pyrene	BD	0.42	mg/Kg	16-Jan-18 16:51	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	
Aroclor 1221	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	
Aroclor 1232	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	
Aroclor 1242	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	
Aroclor 1248	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	
Aroclor 1254	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	
Aroclor 1260	BD	0.0528	mg/Kg	16-Jan-18 13:49	EPA 8082A	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-4 @ 12'-14'
1801091-03 (Soil)

Sampled: 09-Jan-2018 14:00

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	210	mg/Kg	16-Jan-18 12:44	EPA 8100/8015m	MWB	
TPH Gasoline	BD	3.5	mg/Kg	17-Jan-18 00:30	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	1.12	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	19.8	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	9.31	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	94.7	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-5 @ 18'
1801091-04 (Soil)

Sampled: 09-Jan-2018 16:10

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	1.8	mg/Kg	17-Jan-18 01:07	MWB	
Benzene	BD	0.03	mg/Kg	17-Jan-18 01:07	MWB	
Bromobenzene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Bromochloromethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Bromodichloromethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Bromoform	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Bromomethane	BD	0.18	mg/Kg	17-Jan-18 01:07	MWB	
Butylbenzene, n-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Butylbenzene, sec-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Butylbenzene, tert-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Carbon disulfide	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Carbon Tetrachloride	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Chloroethane	BD	0.18	mg/Kg	17-Jan-18 01:07	MWB	
Chloromethane	BD	0.18	mg/Kg	17-Jan-18 01:07	MWB	
Chlorotoluene, 2	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Chlorotoluene, 4	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dibromochloromethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dibromochloropropane	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Dibromomethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichlorobenzene, 1,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichlorobenzene, 1,3-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichlorobenzene, 1,4-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichlorodifluoromethane	BD	0.18	mg/Kg	17-Jan-18 01:07	MWB	
Dichloroethane, 1,1-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloroethane, 1,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloroethylene, 1,1-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloroethylene, cis-1,2-	BD	0.03	mg/Kg	17-Jan-18 01:07	MWB	
Dichloroethylene, trans-1,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloromethane	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Dichloropropane, 1,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloropropane, 1,3-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloropropane, 2,2-	BD	0.18	mg/Kg	17-Jan-18 01:07	MWB	
Dichloropropene, 1,1-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloropropene, cis-1,3-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Dichloropropene, trans-1,3-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Diethyl Ether	BD	0.89	mg/Kg	17-Jan-18 01:07	MWB	
Diisopropyl Ether	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-5 @ 18'
1801091-04 (Soil)

Sampled: 09-Jan-2018 16:10

Volatile Organic Compounds by EPA 8260B

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Notes</u>
Ethylbenzene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Ethylene dibromide	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Ethyl tert-Butyl Ether	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Hexachlorobutadiene	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Isopropylbenzene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Isopropyltoluene, p-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	1.8	mg/Kg	17-Jan-18 01:07	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	1.8	mg/Kg	17-Jan-18 01:07	MWB	
Methyl Isobutyl Ketone	BD	1.8	mg/Kg	17-Jan-18 01:07	MWB	
Methyl-tert-Butyl Ether	BD	0.03	mg/Kg	17-Jan-18 01:07	MWB	
Monochlorobenzene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Naphthalene	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
n-Propylbenzene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Styrene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
tert-Amyl Methyl Ether	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
tert-Butyl alcohol	BD	0.36	mg/Kg	17-Jan-18 01:07	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Tetrachloroethylene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Tetrahydrofuran	BD	1.8	mg/Kg	17-Jan-18 01:07	MWB	
Toluene	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trichlorobenzene, 1,2,3-	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Trichlorobenzene, 1,2,4-	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Trichlorobenzene, 1,3,5-	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Trichloroethane, 1,1,1-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trichloroethane, 1,1,2-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trichloroethylene	BD	0.03	mg/Kg	17-Jan-18 01:07	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trichlorofluoromethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trichloromethane	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trichloropropane, 1,2,3-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trimethylbenzene, 1,2,4-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Trimethylbenzene, 1,3,5-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	
Vinyl chloride	BD	0.03	mg/Kg	17-Jan-18 01:07	MWB	
Xylenes, m & p-	BD	0.14	mg/Kg	17-Jan-18 01:07	MWB	
Xylenes, o-	BD	0.07	mg/Kg	17-Jan-18 01:07	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-5 @ 18'
1801091-04 (Soil)

Sampled: 09-Jan-2018 16:10

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Acenaphthylene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Anthracene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Benzo(a)anthracene	BD	0.11	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Benzo(a)pyrene	BD	0.22	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Benzo(b)fluoranthene	BD	0.11	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Benzo(k)fluoranthene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Chrysene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.11	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Fluoranthene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Fluorene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.11	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Methylnaphthalene, 2-	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Naphthalene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Phenanthrene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	
Pyrene	BD	0.43	mg/Kg	16-Jan-18 17:17	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	
Aroclor 1221	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	
Aroclor 1232	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	
Aroclor 1242	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	
Aroclor 1248	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	
Aroclor 1254	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	
Aroclor 1260	BD	0.0543	mg/Kg	16-Jan-18 14:20	EPA 8082A	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-5 @ 18'
1801091-04 (Soil)

Sampled: 09-Jan-2018 16:10

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	213	mg/Kg	16-Jan-18 13:14	EPA 8100/8015m	MWB	
TPH Gasoline	BD	3.6	mg/Kg	17-Jan-18 01:07	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	2.03	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	37.4	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	3.11	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	91.9	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-7 @ 20'-21'
1801091-05 (Soil)

Sampled: 10-Jan-2018 12:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	1.9	mg/Kg	17-Jan-18 01:43	MWB	
Benzene	BD	0.03	mg/Kg	17-Jan-18 01:43	MWB	
Bromobenzene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Bromochloromethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Bromodichloromethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Bromoform	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Bromomethane	BD	0.19	mg/Kg	17-Jan-18 01:43	MWB	
Butylbenzene, n-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Butylbenzene, sec-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Butylbenzene, tert-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Carbon disulfide	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Carbon Tetrachloride	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Chloroethane	BD	0.19	mg/Kg	17-Jan-18 01:43	MWB	
Chloromethane	BD	0.19	mg/Kg	17-Jan-18 01:43	MWB	
Chlorotoluene, 2	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Chlorotoluene, 4	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dibromochloromethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dibromochloropropane	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Dibromomethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichlorobenzene, 1,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichlorobenzene, 1,3-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichlorobenzene, 1,4-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichlorodifluoromethane	BD	0.19	mg/Kg	17-Jan-18 01:43	MWB	
Dichloroethane, 1,1-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloroethane, 1,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloroethylene, 1,1-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloroethylene, cis-1,2-	BD	0.03	mg/Kg	17-Jan-18 01:43	MWB	
Dichloroethylene, trans-1,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloromethane	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Dichloropropane, 1,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloropropane, 1,3-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloropropane, 2,2-	BD	0.19	mg/Kg	17-Jan-18 01:43	MWB	
Dichloropropene, 1,1-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloropropene, cis-1,3-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Dichloropropene, trans-1,3-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Diethyl Ether	BD	0.97	mg/Kg	17-Jan-18 01:43	MWB	
Diisopropyl Ether	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-7 @ 20'-21'
1801091-05 (Soil)

Sampled: 10-Jan-2018 12:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Ethylene dibromide	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Ethyl tert-Butyl Ether	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Hexachlorobutadiene	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Isopropylbenzene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Isopropyltoluene, p-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	1.9	mg/Kg	17-Jan-18 01:43	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	1.9	mg/Kg	17-Jan-18 01:43	MWB	
Methyl Isobutyl Ketone	BD	1.9	mg/Kg	17-Jan-18 01:43	MWB	
Methyl-tert-Butyl Ether	BD	0.03	mg/Kg	17-Jan-18 01:43	MWB	
Monochlorobenzene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Naphthalene	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
n-Propylbenzene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Styrene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
tert-Amyl Methyl Ether	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
tert-Butyl alcohol	BD	0.39	mg/Kg	17-Jan-18 01:43	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Tetrachloroethylene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Tetrahydrofuran	BD	1.9	mg/Kg	17-Jan-18 01:43	MWB	
Toluene	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trichlorobenzene, 1,2,3-	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Trichlorobenzene, 1,2,4-	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Trichlorobenzene, 1,3,5-	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Trichloroethane, 1,1,1-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trichloroethane, 1,1,2-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trichloroethylene	BD	0.03	mg/Kg	17-Jan-18 01:43	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trichlorofluoromethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trichloromethane	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trichloropropane, 1,2,3-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trimethylbenzene, 1,2,4-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Trimethylbenzene, 1,3,5-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	
Vinyl chloride	BD	0.03	mg/Kg	17-Jan-18 01:43	MWB	
Xylenes, m & p-	BD	0.16	mg/Kg	17-Jan-18 01:43	MWB	
Xylenes, o-	BD	0.08	mg/Kg	17-Jan-18 01:43	MWB	

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Reported:
19-Jan-18 08:22

GP-7 @ 20'-21'
1801091-05 (Soil)

Sampled: 10-Jan-2018 12:00

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Acenaphthylene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Anthracene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Benzo(a)anthracene	BD	0.12	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Benzo(a)pyrene	BD	0.24	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Benzo(b)fluoranthene	BD	0.12	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Benzo(k)fluoranthene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Chrysene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.12	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Fluoranthene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Fluorene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.12	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Methylnaphthalene, 2-	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Naphthalene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Phenanthrene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	
Pyrene	BD	0.47	mg/Kg	16-Jan-18 17:44	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	
Aroclor 1221	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	
Aroclor 1232	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	
Aroclor 1242	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	
Aroclor 1248	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	
Aroclor 1254	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	
Aroclor 1260	BD	0.0587	mg/Kg	16-Jan-18 14:52	EPA 8082A	MWB	

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Reported:
19-Jan-18 08:22

GP-7 @ 20'-21'
1801091-05 (Soil)

Sampled: 10-Jan-2018 12:00

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	234	mg/Kg	16-Jan-18 13:44	EPA 8100/8015m	MWB	
TPH Gasoline	BD	3.9	mg/Kg	17-Jan-18 01:43	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	1.69	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	41.0	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	32.3	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	4.03	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	84.8	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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Nobis Engineering
 18 Chenell Drive
 Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-3 @ 0'-2'
 1801091-06 (Soil)

Sampled: 10-Jan-2018 13:00

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	7.22	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	88.0	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-3 4'-8' COMP
1801091-07 (Soil)

Sampled: 10-Jan-2018 13:10

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	4.68	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	81.2	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-4 @ 0'-2'
 1801091-08 (Soil)

Sampled: 10-Jan-2018 13:25

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	6.55	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	87.3	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Concord NH, 03301

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 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-2 @ 0'-2'
 1801091-09 (Soil)

Sampled: 10-Jan-2018 13:35

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	3.04	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	95.6	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Concord NH, 03301

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 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-5 @ 0'-2'
 1801091-10 (Soil)

Sampled: 10-Jan-2018 13:50

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	8.46	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	84.2	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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 Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-5 4'-8' COMP
1801091-11 (Soil)

Sampled: 10-Jan-2018 14:00

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	7.76	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	79.3	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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 Concord NH, 03301

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 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-6 @ 0'-2'
 1801091-12 (Soil)

Sampled: 10-Jan-2018 14:15

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	10.9	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	85.1	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-7 @ 0'-2'
 1801091-13 (Soil)

Sampled: 10-Jan-2018 14:20

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	9.33	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	89.9	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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Concord NH, 03301

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Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

SS-7 4'-8' COMP
1801091-14 (Soil)

Sampled: 10-Jan-2018 14:30

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	5.17	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	91.7	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-8 @ 0'-2'
1801091-15 (Soil)

Sampled: 10-Jan-2018 14:45

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	7.04	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	92.3	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-1 @ 0'-2'
 1801091-16 (Soil)

Sampled: 10-Jan-2018 14:55

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	6.08	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	90.9	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

SS-1 4'-8' COMP
1801091-17 (Soil)

Sampled: 10-Jan-2018 15:05

Metals by ICPMS

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
Arsenic	4.81	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

<u>Analyte</u>	<u>Result</u>	<u>Rpt Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>	<u>Notes</u>
% Solids	89.9	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-6 @ 16'-18' 1801091-18 (Soil)

Sampled: 11-Jan-2018 9:20

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	2.4	mg/Kg	17-Jan-18 02:20	MWB	
Benzene	BD	0.04	mg/Kg	17-Jan-18 02:20	MWB	
Bromobenzene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Bromochloromethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Bromodichloromethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Bromoform	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Bromomethane	BD	0.24	mg/Kg	17-Jan-18 02:20	MWB	
Butylbenzene, n-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Butylbenzene, sec-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Butylbenzene, tert-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Carbon disulfide	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Carbon Tetrachloride	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Chloroethane	BD	0.24	mg/Kg	17-Jan-18 02:20	MWB	
Chloromethane	BD	0.24	mg/Kg	17-Jan-18 02:20	MWB	
Chlorotoluene, 2	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Chlorotoluene, 4	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dibromochloromethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dibromochloropropane	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Dibromomethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichlorobenzene, 1,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichlorobenzene, 1,3-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichlorobenzene, 1,4-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichlorodifluoromethane	BD	0.24	mg/Kg	17-Jan-18 02:20	MWB	
Dichloroethane, 1,1-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloroethane, 1,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloroethylene, 1,1-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloroethylene, cis-1,2-	BD	0.04	mg/Kg	17-Jan-18 02:20	MWB	
Dichloroethylene, trans-1,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloromethane	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Dichloropropane, 1,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloropropane, 1,3-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloropropane, 2,2-	BD	0.24	mg/Kg	17-Jan-18 02:20	MWB	
Dichloropropene, 1,1-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloropropene, cis-1,3-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Dichloropropene, trans-1,3-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Diethyl Ether	BD	1.2	mg/Kg	17-Jan-18 02:20	MWB	
Diisopropyl Ether	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-6 @ 16'-18'
1801091-18 (Soil)

Sampled: 11-Jan-2018 9:20

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Ethylene dibromide	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Ethyl tert-Butyl Ether	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Hexachlorobutadiene	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Isopropylbenzene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Isopropyltoluene, p-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	2.4	mg/Kg	17-Jan-18 02:20	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	2.4	mg/Kg	17-Jan-18 02:20	MWB	
Methyl Isobutyl Ketone	BD	2.4	mg/Kg	17-Jan-18 02:20	MWB	
Methyl-tert-Butyl Ether	BD	0.04	mg/Kg	17-Jan-18 02:20	MWB	
Monochlorobenzene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Naphthalene	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
n-Propylbenzene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Styrene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
tert-Amyl Methyl Ether	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
tert-Butyl alcohol	BD	0.47	mg/Kg	17-Jan-18 02:20	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Tetrachloroethylene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Tetrahydrofuran	BD	2.4	mg/Kg	17-Jan-18 02:20	MWB	
Toluene	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trichlorobenzene, 1,2,3-	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Trichlorobenzene, 1,2,4-	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Trichlorobenzene, 1,3,5-	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Trichloroethane, 1,1,1-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trichloroethane, 1,1,2-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trichloroethylene	BD	0.04	mg/Kg	17-Jan-18 02:20	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trichlorofluoromethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trichloromethane	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trichloropropane, 1,2,3-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trimethylbenzene, 1,2,4-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Trimethylbenzene, 1,3,5-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	
Vinyl chloride	BD	0.04	mg/Kg	17-Jan-18 02:20	MWB	
Xylenes, m & p-	BD	0.19	mg/Kg	17-Jan-18 02:20	MWB	
Xylenes, o-	BD	0.09	mg/Kg	17-Jan-18 02:20	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-6 @ 16'-18' 1801091-18 (Soil)

Sampled: 11-Jan-2018 9:20

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Acenaphthylene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Anthracene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Benzo(a)anthracene	BD	0.12	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Benzo(a)pyrene	BD	0.24	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Benzo(b)fluoranthene	BD	0.12	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Benzo(k)fluoranthene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Chrysene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.12	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Fluoranthene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Fluorene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.12	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Methylnaphthalene, 2-	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Naphthalene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Phenanthrene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	
Pyrene	BD	0.48	mg/Kg	16-Jan-18 18:10	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	
Aroclor 1221	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	
Aroclor 1232	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	
Aroclor 1242	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	
Aroclor 1248	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	
Aroclor 1254	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	
Aroclor 1260	BD	0.0598	mg/Kg	16-Jan-18 15:24	EPA 8082A	MWB	

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Project Number: 70631.01
Project Manager: Mr. Jim Ricker

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GP-6 @ 16'-18' 1801091-18 (Soil)

Sampled: 11-Jan-2018 9:20

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	238	mg/Kg	16-Jan-18 14:13	EPA 8100/8015m	MWB	
TPH Gasoline	BD	4.7	mg/Kg	17-Jan-18 02:20	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	2.50	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	11.0	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	2.36	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	82.7	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-9 @ 16'-18' 1801091-19 (Soil)

Sampled: 11-Jan-2018 11:45

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	2.7	mg/Kg	17-Jan-18 02:55	MWB	
Benzene	BD	0.04	mg/Kg	17-Jan-18 02:55	MWB	
Bromobenzene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Bromochloromethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Bromodichloromethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Bromoform	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Bromomethane	BD	0.27	mg/Kg	17-Jan-18 02:55	MWB	
Butylbenzene, n-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Butylbenzene, sec-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Butylbenzene, tert-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Carbon disulfide	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Carbon Tetrachloride	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Chloroethane	BD	0.27	mg/Kg	17-Jan-18 02:55	MWB	
Chloromethane	BD	0.27	mg/Kg	17-Jan-18 02:55	MWB	
Chlorotoluene, 2	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Chlorotoluene, 4	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dibromochloromethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dibromochloropropane	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Dibromomethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichlorobenzene, 1,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichlorobenzene, 1,3-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichlorobenzene, 1,4-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichlorodifluoromethane	BD	0.27	mg/Kg	17-Jan-18 02:55	MWB	
Dichloroethane, 1,1-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloroethane, 1,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloroethylene, 1,1-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloroethylene, cis-1,2-	BD	0.04	mg/Kg	17-Jan-18 02:55	MWB	
Dichloroethylene, trans-1,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloromethane	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Dichloropropane, 1,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloropropane, 1,3-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloropropane, 2,2-	BD	0.27	mg/Kg	17-Jan-18 02:55	MWB	
Dichloropropene, 1,1-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloropropene, cis-1,3-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Dichloropropene, trans-1,3-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Diethyl Ether	BD	1.3	mg/Kg	17-Jan-18 02:55	MWB	
Diisopropyl Ether	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	

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19-Jan-18 08:22

GP-9 @ 16'-18' 1801091-19 (Soil)

Sampled: 11-Jan-2018 11:45

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Ethylene dibromide	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Ethyl tert-Butyl Ether	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Hexachlorobutadiene	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Isopropylbenzene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Isopropyltoluene, p-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	2.7	mg/Kg	17-Jan-18 02:55	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	2.7	mg/Kg	17-Jan-18 02:55	MWB	
Methyl Isobutyl Ketone	BD	2.7	mg/Kg	17-Jan-18 02:55	MWB	
Methyl-tert-Butyl Ether	BD	0.04	mg/Kg	17-Jan-18 02:55	MWB	
Monochlorobenzene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Naphthalene	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
n-Propylbenzene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Styrene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
tert-Amyl Methyl Ether	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
tert-Butyl alcohol	BD	0.54	mg/Kg	17-Jan-18 02:55	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Tetrachloroethane, 1,1,2,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Tetrachloroethylene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Tetrahydrofuran	BD	2.7	mg/Kg	17-Jan-18 02:55	MWB	
Toluene	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trichlorobenzene, 1,2,3-	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Trichlorobenzene, 1,2,4-	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Trichlorobenzene, 1,3,5-	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Trichloroethane, 1,1,1-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trichloroethane, 1,1,2-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trichloroethylene	BD	0.04	mg/Kg	17-Jan-18 02:55	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trichlorofluoromethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trichloromethane	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trichloropropane, 1,2,3-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trimethylbenzene, 1,2,4-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Trimethylbenzene, 1,3,5-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	
Vinyl chloride	BD	0.04	mg/Kg	17-Jan-18 02:55	MWB	
Xylenes, m & p-	BD	0.21	mg/Kg	17-Jan-18 02:55	MWB	
Xylenes, o-	BD	0.11	mg/Kg	17-Jan-18 02:55	MWB	

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1801091-19 (Soil)

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Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Acenaphthylene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Anthracene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Benzo(a)anthracene	BD	0.13	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Benzo(a)pyrene	BD	0.27	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Benzo(b)fluoranthene	BD	0.13	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Benzo(k)fluoranthene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Chrysene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.13	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Fluoranthene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Fluorene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.13	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Methylnaphthalene, 2-	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Naphthalene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Phenanthrene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	
Pyrene	BD	0.53	mg/Kg	16-Jan-18 18:36	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	
Aroclor 1221	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	
Aroclor 1232	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	
Aroclor 1242	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	
Aroclor 1248	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	
Aroclor 1254	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	
Aroclor 1260	BD	0.0664	mg/Kg	16-Jan-18 15:55	EPA 8082A	MWB	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
<http://www2.des.nh.gov/CertifiedLabs/Certified-Method-Result.aspx?matrix=%&cat1=&method=%&analyte=%&labstate=%&labcity=%&labname=1004>.



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MADEP Accreditation #M-NH035

(603) 783-9097
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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-9 @ 16'-18' 1801091-19 (Soil)

Sampled: 11-Jan-2018 11:45

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	264	mg/Kg	16-Jan-18 14:44	EPA 8100/8015m	MWB	
TPH Gasoline	BD	5.4	mg/Kg	17-Jan-18 02:55	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	7.61	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	41.5	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	8.22	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	74.9	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

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Nobis Engineering
 18 Chenell Drive
 Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
 Project Number: 70631.01
 Project Manager: Mr. Jim Ricker

Reported:
 19-Jan-18 08:22

GP-8 @ 18'-20'
1801091-20 (Soil)

Sampled: 11-Jan-2018 14:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	2.6	mg/Kg	17-Jan-18 03:30	MWB	
Benzene	BD	0.04	mg/Kg	17-Jan-18 03:30	MWB	
Bromobenzene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Bromochloromethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Bromodichloromethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Bromoform	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Bromomethane	BD	0.26	mg/Kg	17-Jan-18 03:30	MWB	
Butylbenzene, n-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Butylbenzene, sec-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Butylbenzene, tert-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Carbon disulfide	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Carbon Tetrachloride	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Chloroethane	BD	0.26	mg/Kg	17-Jan-18 03:30	MWB	
Chloromethane	BD	0.26	mg/Kg	17-Jan-18 03:30	MWB	
Chlorotoluene, 2	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Chlorotoluene, 4	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dibromochloromethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dibromochloropropane	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Dibromomethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichlorobenzene, 1,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichlorobenzene, 1,3-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichlorobenzene, 1,4-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichlorodifluoromethane	BD	0.26	mg/Kg	17-Jan-18 03:30	MWB	
Dichloroethane, 1,1-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloroethane, 1,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloroethylene, 1,1-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloroethylene, cis-1,2-	BD	0.04	mg/Kg	17-Jan-18 03:30	MWB	
Dichloroethylene, trans-1,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloromethane	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Dichloropropane, 1,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloropropane, 1,3-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloropropane, 2,2-	BD	0.26	mg/Kg	17-Jan-18 03:30	MWB	
Dichloropropene, 1,1-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloropropene, cis-1,3-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Dichloropropene, trans-1,3-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Diethyl Ether	BD	1.3	mg/Kg	17-Jan-18 03:30	MWB	
Diisopropyl Ether	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-8 @ 18'-20' 1801091-20 (Soil)

Sampled: 11-Jan-2018 14:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Ethylene dibromide	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Ethyl tert-Butyl Ether	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Hexachlorobutadiene	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Isopropylbenzene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Isopropyltoluene, p-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	2.6	mg/Kg	17-Jan-18 03:30	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	2.6	mg/Kg	17-Jan-18 03:30	MWB	
Methyl Isobutyl Ketone	BD	2.6	mg/Kg	17-Jan-18 03:30	MWB	
Methyl-tert-Butyl Ether	BD	0.04	mg/Kg	17-Jan-18 03:30	MWB	
Monochlorobenzene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Naphthalene	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
n-Propylbenzene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Styrene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
tert-Amyl Methyl Ether	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
tert-Butyl alcohol	BD	0.51	mg/Kg	17-Jan-18 03:30	MWB	
Tetrachloroethane, 1,1,1,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Tetrachloroethane, 1,1,1,2,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Tetrachloroethylene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Tetrahydrofuran	BD	2.6	mg/Kg	17-Jan-18 03:30	MWB	
Toluene	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trichlorobenzene, 1,2,3-	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Trichlorobenzene, 1,2,4-	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Trichlorobenzene, 1,3,5-	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Trichloroethane, 1,1,1-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trichloroethane, 1,1,2-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trichloroethylene	BD	0.04	mg/Kg	17-Jan-18 03:30	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trichlorofluoromethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trichloromethane	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trichloropropane, 1,2,3-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trimethylbenzene, 1,2,4-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Trimethylbenzene, 1,3,5-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	
Vinyl chloride	BD	0.04	mg/Kg	17-Jan-18 03:30	MWB	
Xylenes, m & p-	BD	0.21	mg/Kg	17-Jan-18 03:30	MWB	
Xylenes, o-	BD	0.10	mg/Kg	17-Jan-18 03:30	MWB	

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MADEP Accreditation #M-NH035

(603) 783-9097
frontdesk@aquarianlabs.com

Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-8 @ 18'-20'
1801091-20 (Soil)

Sampled: 11-Jan-2018 14:00

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Acenaphthylene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Anthracene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Benzo(a)anthracene	BD	0.13	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Benzo(a)pyrene	BD	0.26	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Benzo(b)fluoranthene	BD	0.13	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Benzo(k)fluoranthene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Chrysene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.13	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Fluoranthene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Fluorene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.13	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Methylnaphthalene, 2-	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Naphthalene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Phenanthrene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	
Pyrene	BD	0.52	mg/Kg	16-Jan-18 19:03	8270C	MWB	

Polychlorinated biphenyls

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Aroclor 1016	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	
Aroclor 1221	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	
Aroclor 1232	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	
Aroclor 1242	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	
Aroclor 1248	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	
Aroclor 1254	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	
Aroclor 1260	BD	0.0649	mg/Kg	16-Jan-18 16:27	EPA 8082A	MWB	

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18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
19-Jan-18 08:22

GP-8 @ 18'-20'
1801091-20 (Soil)

Sampled: 11-Jan-2018 14:00

Total Petroleum Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
TPH Fuel Oil	BD	259	mg/Kg	16-Jan-18 15:13	EPA 8100/8015m	MWB	
TPH Gasoline	BD	5.1	mg/Kg	17-Jan-18 03:30	EPA 8015m	MWB	

Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	7.39	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Barium	36.2	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Cadmium	BD	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Chromium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Lead	7.39	1.00	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Mercury	BD	0.40	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Selenium	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub
Silver	BD	10.0	mg/kg	17-Jan-18	EPA 200.8	SUBL	Sub

% Solids, dry weight

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
% Solids	76.6	0.1	[blank]	16-Jan-18 11:15	SM 2540G	WRR	

Notes and Definitions

Sub Analysis subcontracted to Nelson Analytical, Manchester, NH.

BD - Analyte result is below the method reporting limit.

NR - Not reported.

Soil sample results are reported on a dry weight basis.

The reporting limit is the lowest value at which reliable quantitation has been demonstrated and verified.

Analytes in **bold** are values above the reporting limit.





Aquarian Analytical, Inc.

Laboratory Services

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 Phone: (603) 783-9097
 Fax: (603) 783-0360
 E-Mail: aquarianlab@comcast.net

P 1 of 3

Turnaround/Requirements (check one)				Project Information																											
RUSH SAMPLES NEED PRIOR APPROVAL. <input type="checkbox"/> Same Day Turnaround (150% upcharge) <input type="checkbox"/> One Day Turnaround (100% upcharge) <input type="checkbox"/> Two Day Turnaround (50% upcharge) <input type="checkbox"/> Three Day Turnaround (25% upcharge) <input checked="" type="checkbox"/> Normal turnaround				Project #: 70631.01 Project Name: Former Crown Machinery Town/Site: Manchester, NH Sampler: DHB Company: Nobis Engineering, Inc. BID Reference:							Project Manager: Jim Ricker Report to: Jim Ricker Invoice to: A/P Phone: 603-224-4182 E-Mail: jricker@nobiseng.com																				
Sample Information			VOC'S/SVOC'S					TPH	Metals	TCEP	Other (list)																				
AAI Work Order #	Sample ID	Sample Collection Time	Sample Matrix	Number of Containers	EPA 8260 w/oxygenates	BTEX / MTBE	BTEX+MTBE+Naphthalene Chlorinated only	EPA 524.2 Drinking Water ELDB	1,4 Dioxane	EPA 8270 A-BM	EPA 8270 PAH	EPA 8015M Gasoline	EPA 8100M Fuel Oil	Finger Print	RCRA 8	Field Filtered: Lab Filtered:	Total:	Zero Headspace Extraction (ZHE)	TCLP Pesticides	TCLP Herbicides	TCLP Metals	PCB	EPA SW846-7 Reactivity	EPA 1010 Flashpoint / Ignitab	EPA 160.1 / 9045 pH	Alkalinity	Nitrate	Sulfate	Chloride	Arsenic	
1801691-01	GP-2 @ 12'-13.5'	1/9/18 / 1055	S	3	X						X	X	X	X	X							X									
-02	GP-3 @ 16'	1/9/18 / 1230	S	3																											
-03	GP-4 @ 12'-14'	1/9/18 / 1400	S	3																											
-04	GP-5 @ 18'	1/9/18 / 1610	S	3																											
-05	GP-7 @ 20'-21'	1/10/18 / 1200	S	3																											
-06	SS-3 @ 0'-2'	1/10/18 / 1300	S	1																											
-07	SS-3 4'-8' COMP	1/10/18 / 1310	S	1																											
-08	SS-4 @ 0'-2'	1/10/18 / 1325	S	1																											
-09	SS-2 @ 0'-2'	1/10/18 / 1335	S	1																											
Relinquished by: <i>Randy B...</i>		Date: 1/15/18 9:00	Received by: <i>[Signature]</i>		Notes: PLEASE INVOICE VOC'S + TPH-GRO SEPARATELY FROM OTHER ANALYSES																										
Relinquished by: <i>[Signature]</i>		Date: 1/18/18 9:25	Received by: <i>Alli Wheeler</i>		Temperature <u>10</u> °C																										
Relinquished by:		Date:	Received by:		Is this N.H. "ODD Fund" related? <u>Y</u> <u>X</u> <u>N</u>																										

Aquarian Analytical will subcontract those tests we do not perform with your prior approval

Please keep samples on ice from the time of collection



Aquarian Analytical, Inc.

Laboratory Services

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 E-Mail: aquarianlab@comcast.net

P 3 of 3

Turnaround Requirements (check one)			Project Information																																
RUSH SAMPLES NEED PRIOR APPROVAL <input type="checkbox"/> Same Day Turnaround (150% upcharge) <input type="checkbox"/> One Day Turnaround (100% upcharge) <input type="checkbox"/> Two Day Turnaround (50% upcharge) <input type="checkbox"/> Three Day Turnaround (25% upcharge) <input checked="" type="checkbox"/> Normal turnaround			Project #: 70631.01 Project Name: Former Crown Machinery Town/Site: Manchester, NH Sampler: DHB Company: Nobis Engineering, Inc. BID Reference:				Project Manager: Jim Ricker Report to: Jim Ricker Invoice to: A/P Phone: 603-224-4182 E-Mail: jricker@nobiseng.com																												
Sample Information			VOC's			SVOC's			TPH		Metals		TCRP		Other (list)																				
AAI Work Order #	Sample ID	Sample Collection Time	Sample Matrix	Number of Containers	AP/AC/g N	EPA 8260 w/ oxygenates	BTEX+MTBE	BTEX+MTBE+Naphthalene	Chlorinated only	EPA 824.2 Drinking Water	EDB	1,4 Dioxane	EPA 8270 A-BIN	EPA 8270 PAH	EPA 8015M Gasoline	EPA 8100M Fuel Oil	Fingerprint	RCRA 8	Field Filled:	Lab Filtered:	Total:	Zero Headspace Extraction (ZHE)	TCRP Pesticides	TCRP Herbicides	TCRP Metals	PCB	EPA SW846-7 Reactivity	EPA 1010 Flashpoint / Ignitab	EPA 100.1 / 8045 pH	Alkalinity	Nitrate	Sulfate	Chloride		
1801091-19	GP-9 @ 16'-18'	1/11/18 / 1145	S	3	X								X	X	X		X									X									
↓ -20	GP-8 @ 18'-20'	1/11/18 / 1400	S	3	X								X	X	X		X									X									
Relinquished by: <i>DHB</i>			Date: 1/15/18 800			Received by: <i>[Signature]</i>			Notes: ALWAYS INVOICE VOC'S + TPH-GRO SEPARATELY FROM OTHER ANALYSES																										
Relinquished by: <i>[Signature]</i>			Date: 1/15/18 825			Received by: <i>[Signature]</i>																													
Relinquished by:			Date:			Received by:																													
Temperature: 10 °C																					Is this N.H. "ODD Fund" related? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>														

Aquarian Analytical will subcontract those tests we do not perform with your prior approval

Please keep samples on ice from the time of collection

AQUARIAN ANALYTICAL LAB

A Division of Nelson Analytical, LLC

153 West Road
Canterbury, NH 03224
www.aquarianlabs.com
(603) 783-9097

16 February 2018

Nobis Engineering

18 Chenell Drive

Concord, NH 03301

RE: Former Crown Machinery - Manchester, NH

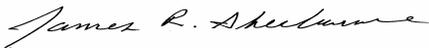
Dear Mr. Ricker:

Enclosed are the results of analytical testing performed on the following samples, which were received at 4.2 degrees C.

Laboratory ID	Sample ID	Sample matrix	Date sampled	Date received
1802036-01	Trip Blank	Water	06-Feb-18 08:00	07-Feb-18 08:25
1802036-02	GP-8	Water	06-Feb-18 10:50	07-Feb-18 08:25
1802036-03	GP-9	Water	06-Feb-18 11:35	07-Feb-18 08:25
1802036-04	GP-7	Water	06-Feb-18 12:05	07-Feb-18 08:25
1802036-05	GP-6	Water	06-Feb-18 12:20	07-Feb-18 08:25
1802036-06	GP-5	Water	06-Feb-18 12:35	07-Feb-18 08:25

The results in this report relate only to the submitted samples. Please refer to our website listed above for a complete list of accredited parameters. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James R. Sherburne

Laboratory Director

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frontdesk@aquarianlabs.com

Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

Trip Blank 1802036-01 (Water)

Sampled: 06-Feb-2018 8:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	50	ug/L	07-Feb-18 16:46	MWB	
Benzene	BD	0.8	ug/L	07-Feb-18 16:46	MWB	
Bromobenzene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Bromochloromethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Bromodichloromethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Bromoform	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Bromomethane	BD	5.0	ug/L	07-Feb-18 16:46	MWB	
Butylbenzene, n-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Butylbenzene, sec-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Butylbenzene, tert-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Carbon disulfide	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Carbon Tetrachloride	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Chloroethane	BD	5.0	ug/L	07-Feb-18 16:46	MWB	
Chloromethane	BD	5.0	ug/L	07-Feb-18 16:46	MWB	
Chlorotoluene, 2	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Chlorotoluene, 4	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dibromochloromethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dibromochloropropane	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Dibromomethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichlorobenzene, 1,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichlorobenzene, 1,3-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichlorobenzene, 1,4-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichlorodifluoromethane	BD	5.0	ug/L	07-Feb-18 16:46	MWB	
Dichloroethane, 1,1-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloroethane, 1,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloroethylene, 1,1-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloroethylene, cis-1,2-	BD	0.8	ug/L	07-Feb-18 16:46	MWB	
Dichloroethylene, trans-1,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloromethane	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Dichloropropane, 1,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloropropane, 1,3-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloropropane, 2,2-	BD	5.0	ug/L	07-Feb-18 16:46	MWB	
Dichloropropene, 1,1-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloropropene, cis-1,3-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Dichloropropene, trans-1,3-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Diethyl Ether	BD	25	ug/L	07-Feb-18 16:46	MWB	
Diisopropyl Ether	BD	2.0	ug/L	07-Feb-18 16:46	MWB	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

Trip Blank 1802036-01 (Water)

Sampled: 06-Feb-2018 8:00

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Ethylene dibromide	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Ethyl tert-Butyl Ether	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Hexachlorobutadiene	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Isopropylbenzene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Isopropyltoluene, p-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	50	ug/L	07-Feb-18 16:46	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	50	ug/L	07-Feb-18 16:46	MWB	
Methyl Isobutyl Ketone	BD	50	ug/L	07-Feb-18 16:46	MWB	
Methyl-tert-Butyl Ether	BD	0.8	ug/L	07-Feb-18 16:46	MWB	
Monochlorobenzene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Naphthalene	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
n-Propylbenzene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Styrene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
tert-Amyl Methyl Ether	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
tert-Butyl alcohol	BD	10	ug/L	07-Feb-18 16:46	MWB	
Tetrachloroethane, 1,1,1,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Tetrachloroethane, 1,1,2,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Tetrachloroethylene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Tetrahydrofuran	BD	50	ug/L	07-Feb-18 16:46	MWB	
Toluene	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trichlorobenzene, 1,2,3-	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Trichlorobenzene, 1,2,4-	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Trichlorobenzene, 1,3,5-	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Trichloroethane, 1,1,1-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trichloroethane, 1,1,2-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trichloroethylene	BD	0.8	ug/L	07-Feb-18 16:46	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trichlorofluoromethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trichloromethane	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trichloropropane, 1,2,3-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trimethylbenzene, 1,2,4-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Trimethylbenzene, 1,3,5-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	
Vinyl chloride	BD	0.8	ug/L	07-Feb-18 16:46	MWB	
Xylenes, m & p-	BD	4.0	ug/L	07-Feb-18 16:46	MWB	
Xylenes, o-	BD	2.0	ug/L	07-Feb-18 16:46	MWB	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-8 1802036-02 (Water)

Sampled: 06-Feb-2018 10:50

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	50	ug/L	07-Feb-18 17:23	MWB	
Benzene	BD	0.8	ug/L	07-Feb-18 17:23	MWB	
Bromobenzene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Bromochloromethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Bromodichloromethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Bromoform	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Bromomethane	BD	5.0	ug/L	07-Feb-18 17:23	MWB	
Butylbenzene, n-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Butylbenzene, sec-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Butylbenzene, tert-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Carbon disulfide	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Carbon Tetrachloride	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Chloroethane	BD	5.0	ug/L	07-Feb-18 17:23	MWB	
Chloromethane	BD	5.0	ug/L	07-Feb-18 17:23	MWB	
Chlorotoluene, 2	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Chlorotoluene, 4	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dibromochloromethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dibromochloropropane	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Dibromomethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichlorobenzene, 1,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichlorobenzene, 1,3-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichlorobenzene, 1,4-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichlorodifluoromethane	BD	5.0	ug/L	07-Feb-18 17:23	MWB	
Dichloroethane, 1,1-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloroethane, 1,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloroethylene, 1,1-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloroethylene, cis-1,2-	BD	0.8	ug/L	07-Feb-18 17:23	MWB	
Dichloroethylene, trans-1,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloromethane	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Dichloropropane, 1,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloropropane, 1,3-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloropropane, 2,2-	BD	5.0	ug/L	07-Feb-18 17:23	MWB	
Dichloropropene, 1,1-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloropropene, cis-1,3-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Dichloropropene, trans-1,3-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Diethyl Ether	BD	25	ug/L	07-Feb-18 17:23	MWB	
Diisopropyl Ether	BD	2.0	ug/L	07-Feb-18 17:23	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-8 1802036-02 (Water)

Sampled: 06-Feb-2018 10:50

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Ethylene dibromide	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Ethyl tert-Butyl Ether	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Hexachlorobutadiene	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Isopropylbenzene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Isopropyltoluene, p-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	50	ug/L	07-Feb-18 17:23	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	50	ug/L	07-Feb-18 17:23	MWB	
Methyl Isobutyl Ketone	BD	50	ug/L	07-Feb-18 17:23	MWB	
Methyl-tert-Butyl Ether	BD	0.8	ug/L	07-Feb-18 17:23	MWB	
Monochlorobenzene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Naphthalene	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
n-Propylbenzene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Styrene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
tert-Amyl Methyl Ether	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
tert-Butyl alcohol	BD	10	ug/L	07-Feb-18 17:23	MWB	
Tetrachloroethane, 1,1,1,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Tetrachloroethane, 1,1,2,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Tetrachloroethylene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Tetrahydrofuran	BD	50	ug/L	07-Feb-18 17:23	MWB	
Toluene	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trichlorobenzene, 1,2,3-	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Trichlorobenzene, 1,2,4-	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Trichlorobenzene, 1,3,5-	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Trichloroethane, 1,1,1-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trichloroethane, 1,1,2-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trichloroethylene	BD	0.8	ug/L	07-Feb-18 17:23	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trichlorofluoromethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trichloromethane	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trichloropropane, 1,2,3-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trimethylbenzene, 1,2,4-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Trimethylbenzene, 1,3,5-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	
Vinyl chloride	BD	0.8	ug/L	07-Feb-18 17:23	MWB	
Xylenes, m & p-	BD	4.0	ug/L	07-Feb-18 17:23	MWB	
Xylenes, o-	BD	2.0	ug/L	07-Feb-18 17:23	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-8 1802036-02 (Water)

Sampled: 06-Feb-2018 10:50

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Acenaphthylene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Anthracene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Benzo(a)anthracene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Benzo(a)pyrene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Benzo(b)fluoranthene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Benzo(k)fluoranthene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Chrysene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Fluoranthene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Fluorene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Methylnaphthalene, 2-	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Naphthalene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Phenanthrene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	
Pyrene	BD	0.08	ug/L	14-Feb-18 13:33	8270C	MWB	

Dissolved Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Barium	28	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Cadmium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Chromium	12	10	ug/L	07-Feb-18	200.8	SUBL	Sub
Lead	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Mercury	BD	0.4	ug/L	07-Feb-18	200.8	SUBL	Sub
Selenium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Silver	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-9 1802036-03 (Water)

Sampled: 06-Feb-2018 11:35

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	50	ug/L	07-Feb-18 18:01	MWB	
Benzene	BD	0.8	ug/L	07-Feb-18 18:01	MWB	
Bromobenzene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Bromochloromethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Bromodichloromethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Bromoform	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Bromomethane	BD	5.0	ug/L	07-Feb-18 18:01	MWB	
Butylbenzene, n-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Butylbenzene, sec-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Butylbenzene, tert-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Carbon disulfide	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Carbon Tetrachloride	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Chloroethane	BD	5.0	ug/L	07-Feb-18 18:01	MWB	
Chloromethane	BD	5.0	ug/L	07-Feb-18 18:01	MWB	
Chlorotoluene, 2	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Chlorotoluene, 4	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dibromochloromethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dibromochloropropane	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Dibromomethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichlorobenzene, 1,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichlorobenzene, 1,3-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichlorobenzene, 1,4-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichlorodifluoromethane	BD	5.0	ug/L	07-Feb-18 18:01	MWB	
Dichloroethane, 1,1-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloroethane, 1,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloroethylene, 1,1-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloroethylene, cis-1,2-	BD	0.8	ug/L	07-Feb-18 18:01	MWB	
Dichloroethylene, trans-1,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloromethane	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Dichloropropane, 1,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloropropane, 1,3-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloropropane, 2,2-	BD	5.0	ug/L	07-Feb-18 18:01	MWB	
Dichloropropene, 1,1-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloropropene, cis-1,3-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Dichloropropene, trans-1,3-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Diethyl Ether	BD	25	ug/L	07-Feb-18 18:01	MWB	
Diisopropyl Ether	BD	2.0	ug/L	07-Feb-18 18:01	MWB	

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Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-9 1802036-03 (Water)

Sampled: 06-Feb-2018 11:35

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Ethylene dibromide	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Ethyl tert-Butyl Ether	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Hexachlorobutadiene	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Isopropylbenzene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Isopropyltoluene, p-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	50	ug/L	07-Feb-18 18:01	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	50	ug/L	07-Feb-18 18:01	MWB	
Methyl Isobutyl Ketone	BD	50	ug/L	07-Feb-18 18:01	MWB	
Methyl-tert-Butyl Ether	BD	0.8	ug/L	07-Feb-18 18:01	MWB	
Monochlorobenzene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Naphthalene	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
n-Propylbenzene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Styrene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
tert-Amyl Methyl Ether	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
tert-Butyl alcohol	BD	10	ug/L	07-Feb-18 18:01	MWB	
Tetrachloroethane, 1,1,1,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Tetrachloroethane, 1,1,2,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Tetrachloroethylene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Tetrahydrofuran	BD	50	ug/L	07-Feb-18 18:01	MWB	
Toluene	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trichlorobenzene, 1,2,3-	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Trichlorobenzene, 1,2,4-	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Trichlorobenzene, 1,3,5-	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Trichloroethane, 1,1,1-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trichloroethane, 1,1,2-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trichloroethylene	BD	0.8	ug/L	07-Feb-18 18:01	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trichlorofluoromethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trichloromethane	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trichloropropane, 1,2,3-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trimethylbenzene, 1,2,4-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Trimethylbenzene, 1,3,5-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	
Vinyl chloride	BD	0.8	ug/L	07-Feb-18 18:01	MWB	
Xylenes, m & p-	BD	4.0	ug/L	07-Feb-18 18:01	MWB	
Xylenes, o-	BD	2.0	ug/L	07-Feb-18 18:01	MWB	

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Project Number: 70631.01
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Reported:
16-Feb-18 14:42

GP-9 1802036-03 (Water)

Sampled: 06-Feb-2018 11:35

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Acenaphthylene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Anthracene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Benzo(a)anthracene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Benzo(a)pyrene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Benzo(b)fluoranthene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Benzo(k)fluoranthene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Chrysene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Fluoranthene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Fluorene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Methylnaphthalene, 2-	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Naphthalene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Phenanthrene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	
Pyrene	BD	0.08	ug/L	14-Feb-18 13:59	8270C	MWB	

Dissolved Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	1	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Barium	35	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Cadmium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Chromium	13	10	ug/L	07-Feb-18	200.8	SUBL	Sub
Lead	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Mercury	BD	0.4	ug/L	07-Feb-18	200.8	SUBL	Sub
Selenium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Silver	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub

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Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-7 1802036-04 (Water)

Sampled: 06-Feb-2018 12:05

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	50	ug/L	07-Feb-18 18:39	MWB	
Benzene	BD	0.8	ug/L	07-Feb-18 18:39	MWB	
Bromobenzene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Bromochloromethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Bromodichloromethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Bromoform	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Bromomethane	BD	5.0	ug/L	07-Feb-18 18:39	MWB	
Butylbenzene, n-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Butylbenzene, sec-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Butylbenzene, tert-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Carbon disulfide	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Carbon Tetrachloride	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Chloroethane	BD	5.0	ug/L	07-Feb-18 18:39	MWB	
Chloromethane	BD	5.0	ug/L	07-Feb-18 18:39	MWB	
Chlorotoluene, 2	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Chlorotoluene, 4	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dibromochloromethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dibromochloropropane	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Dibromomethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichlorobenzene, 1,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichlorobenzene, 1,3-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichlorobenzene, 1,4-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichlorodifluoromethane	BD	5.0	ug/L	07-Feb-18 18:39	MWB	
Dichloroethane, 1,1-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloroethane, 1,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloroethylene, 1,1-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloroethylene, cis-1,2-	BD	0.8	ug/L	07-Feb-18 18:39	MWB	
Dichloroethylene, trans-1,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloromethane	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Dichloropropane, 1,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloropropane, 1,3-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloropropane, 2,2-	BD	5.0	ug/L	07-Feb-18 18:39	MWB	
Dichloropropene, 1,1-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloropropene, cis-1,3-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Dichloropropene, trans-1,3-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Diethyl Ether	BD	25	ug/L	07-Feb-18 18:39	MWB	
Diisopropyl Ether	BD	2.0	ug/L	07-Feb-18 18:39	MWB	

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16-Feb-18 14:42

GP-7 1802036-04 (Water)

Sampled: 06-Feb-2018 12:05

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Ethylene dibromide	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Ethyl tert-Butyl Ether	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Hexachlorobutadiene	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Isopropylbenzene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Isopropyltoluene, p-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	50	ug/L	07-Feb-18 18:39	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	50	ug/L	07-Feb-18 18:39	MWB	
Methyl Isobutyl Ketone	BD	50	ug/L	07-Feb-18 18:39	MWB	
Methyl-tert-Butyl Ether	BD	0.8	ug/L	07-Feb-18 18:39	MWB	
Monochlorobenzene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Naphthalene	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
n-Propylbenzene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Styrene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
tert-Amyl Methyl Ether	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
tert-Butyl alcohol	BD	10	ug/L	07-Feb-18 18:39	MWB	
Tetrachloroethane, 1,1,1,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Tetrachloroethane, 1,1,2,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Tetrachloroethylene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Tetrahydrofuran	BD	50	ug/L	07-Feb-18 18:39	MWB	
Toluene	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trichlorobenzene, 1,2,3-	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Trichlorobenzene, 1,2,4-	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Trichlorobenzene, 1,3,5-	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Trichloroethane, 1,1,1-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trichloroethane, 1,1,2-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trichloroethylene	BD	0.8	ug/L	07-Feb-18 18:39	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trichlorofluoromethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trichloromethane	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trichloropropane, 1,2,3-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trimethylbenzene, 1,2,4-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Trimethylbenzene, 1,3,5-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	
Vinyl chloride	BD	0.8	ug/L	07-Feb-18 18:39	MWB	
Xylenes, m & p-	BD	4.0	ug/L	07-Feb-18 18:39	MWB	
Xylenes, o-	BD	2.0	ug/L	07-Feb-18 18:39	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-7 1802036-04 (Water)

Sampled: 06-Feb-2018 12:05

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Acenaphthylene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Anthracene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Benzo(a)anthracene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Benzo(a)pyrene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Benzo(b)fluoranthene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Benzo(k)fluoranthene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Chrysene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Fluoranthene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Fluorene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Methylnaphthalene, 2-	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Naphthalene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Phenanthrene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	
Pyrene	BD	0.09	ug/L	14-Feb-18 14:25	8270C	MWB	

Dissolved Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Barium	63	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Cadmium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Chromium	BD	10	ug/L	07-Feb-18	200.8	SUBL	Sub
Lead	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Mercury	BD	0.4	ug/L	07-Feb-18	200.8	SUBL	Sub
Selenium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Silver	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-6 1802036-05 (Water)

Sampled: 06-Feb-2018 12:20

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	50	ug/L	07-Feb-18 19:16	MWB	
Benzene	BD	0.8	ug/L	07-Feb-18 19:16	MWB	
Bromobenzene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Bromochloromethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Bromodichloromethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Bromoform	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Bromomethane	BD	5.0	ug/L	07-Feb-18 19:16	MWB	
Butylbenzene, n-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Butylbenzene, sec-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Butylbenzene, tert-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Carbon disulfide	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Carbon Tetrachloride	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Chloroethane	BD	5.0	ug/L	07-Feb-18 19:16	MWB	
Chloromethane	BD	5.0	ug/L	07-Feb-18 19:16	MWB	
Chlorotoluene, 2	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Chlorotoluene, 4	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dibromochloromethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dibromochloropropane	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Dibromomethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichlorobenzene, 1,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichlorobenzene, 1,3-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichlorobenzene, 1,4-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichlorodifluoromethane	BD	5.0	ug/L	07-Feb-18 19:16	MWB	
Dichloroethane, 1,1-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloroethane, 1,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloroethylene, 1,1-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloroethylene, cis-1,2-	BD	0.8	ug/L	07-Feb-18 19:16	MWB	
Dichloroethylene, trans-1,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloromethane	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Dichloropropane, 1,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloropropane, 1,3-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloropropane, 2,2-	BD	5.0	ug/L	07-Feb-18 19:16	MWB	
Dichloropropene, 1,1-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloropropene, cis-1,3-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Dichloropropene, trans-1,3-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Diethyl Ether	BD	25	ug/L	07-Feb-18 19:16	MWB	
Diisopropyl Ether	BD	2.0	ug/L	07-Feb-18 19:16	MWB	

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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-6 1802036-05 (Water)

Sampled: 06-Feb-2018 12:20

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Ethylene dibromide	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Ethyl tert-Butyl Ether	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Hexachlorobutadiene	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Isopropylbenzene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Isopropyltoluene, p-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	50	ug/L	07-Feb-18 19:16	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	50	ug/L	07-Feb-18 19:16	MWB	
Methyl Isobutyl Ketone	BD	50	ug/L	07-Feb-18 19:16	MWB	
Methyl-tert-Butyl Ether	BD	0.8	ug/L	07-Feb-18 19:16	MWB	
Monochlorobenzene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Naphthalene	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
n-Propylbenzene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Styrene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
tert-Amyl Methyl Ether	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
tert-Butyl alcohol	BD	10	ug/L	07-Feb-18 19:16	MWB	
Tetrachloroethane, 1,1,1,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Tetrachloroethane, 1,1,2,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Tetrachloroethylene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Tetrahydrofuran	BD	50	ug/L	07-Feb-18 19:16	MWB	
Toluene	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trichlorobenzene, 1,2,3-	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Trichlorobenzene, 1,2,4-	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Trichlorobenzene, 1,3,5-	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Trichloroethane, 1,1,1-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trichloroethane, 1,1,2-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trichloroethylene	BD	0.8	ug/L	07-Feb-18 19:16	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trichlorofluoromethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trichloromethane	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trichloropropane, 1,2,3-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trimethylbenzene, 1,2,4-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Trimethylbenzene, 1,3,5-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	
Vinyl chloride	BD	0.8	ug/L	07-Feb-18 19:16	MWB	
Xylenes, m & p-	BD	4.0	ug/L	07-Feb-18 19:16	MWB	
Xylenes, o-	BD	2.0	ug/L	07-Feb-18 19:16	MWB	

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-6 1802036-05 (Water)

Sampled: 06-Feb-2018 12:20

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Acenaphthylene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Anthracene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Benzo(a)anthracene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Benzo(a)pyrene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Benzo(b)fluoranthene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Benzo(k)fluoranthene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Chrysene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Fluoranthene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Fluorene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Methylnaphthalene, 2-	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Naphthalene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Phenanthrene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	
Pyrene	BD	0.08	ug/L	14-Feb-18 14:51	8270C	MWB	

Dissolved Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Barium	93	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Cadmium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Chromium	BD	10	ug/L	07-Feb-18	200.8	SUBL	Sub
Lead	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Mercury	BD	0.4	ug/L	07-Feb-18	200.8	SUBL	Sub
Selenium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Silver	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub

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Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-5 1802036-06 (Water)

Sampled: 06-Feb-2018 12:35

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Acetone	BD	50	ug/L	07-Feb-18 19:51	MWB	
Benzene	BD	0.8	ug/L	07-Feb-18 19:51	MWB	
Bromobenzene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Bromochloromethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Bromodichloromethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Bromoform	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Bromomethane	BD	5.0	ug/L	07-Feb-18 19:51	MWB	
Butylbenzene, n-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Butylbenzene, sec-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Butylbenzene, tert-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Carbon disulfide	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Carbon Tetrachloride	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Chloroethane	BD	5.0	ug/L	07-Feb-18 19:51	MWB	
Chloromethane	BD	5.0	ug/L	07-Feb-18 19:51	MWB	
Chlorotoluene, 2	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Chlorotoluene, 4	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dibromochloromethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dibromochloropropane	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Dibromomethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichlorobenzene, 1,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichlorobenzene, 1,3-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichlorobenzene, 1,4-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichlorodifluoromethane	BD	5.0	ug/L	07-Feb-18 19:51	MWB	
Dichloroethane, 1,1-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloroethane, 1,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloroethylene, 1,1-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloroethylene, cis-1,2-	BD	0.8	ug/L	07-Feb-18 19:51	MWB	
Dichloroethylene, trans-1,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloromethane	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Dichloropropane, 1,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloropropane, 1,3-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloropropane, 2,2-	BD	5.0	ug/L	07-Feb-18 19:51	MWB	
Dichloropropene, 1,1-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloropropene, cis-1,3-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Dichloropropene, trans-1,3-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Diethyl Ether	BD	25	ug/L	07-Feb-18 19:51	MWB	
Diisopropyl Ether	BD	2.0	ug/L	07-Feb-18 19:51	MWB	

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Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-5 1802036-06 (Water)

Sampled: 06-Feb-2018 12:35

Volatile Organic Compounds by EPA 8260B

Analyte	Result	Rpt Limit	Units	Analyzed	Analyst	Notes
Ethylbenzene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Ethylene dibromide	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Ethyl tert-Butyl Ether	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Hexachlorobutadiene	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Isopropylbenzene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Isopropyltoluene, p-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Methyl Butyl Ketone (2-Hexanone)	BD	50	ug/L	07-Feb-18 19:51	MWB	
Methyl Ethyl Ketone (2-Butanone)	BD	50	ug/L	07-Feb-18 19:51	MWB	
Methyl Isobutyl Ketone	BD	50	ug/L	07-Feb-18 19:51	MWB	
Methyl-tert-Butyl Ether	BD	0.8	ug/L	07-Feb-18 19:51	MWB	
Monochlorobenzene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Naphthalene	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
n-Propylbenzene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Styrene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
tert-Amyl Methyl Ether	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
tert-Butyl alcohol	BD	10	ug/L	07-Feb-18 19:51	MWB	
Tetrachloroethane, 1,1,1,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Tetrachloroethane, 1,1,2,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Tetrachloroethylene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Tetrahydrofuran	BD	50	ug/L	07-Feb-18 19:51	MWB	
Toluene	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trichlorobenzene, 1,2,3-	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Trichlorobenzene, 1,2,4-	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Trichlorobenzene, 1,3,5-	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Trichloroethane, 1,1,1-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trichloroethane, 1,1,2-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trichloroethylene	BD	0.8	ug/L	07-Feb-18 19:51	MWB	
Trichloro 1,1,2-, trifluoro 1,2,2-, ethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trichlorofluoromethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trichloromethane	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trichloropropane, 1,2,3-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trimethylbenzene, 1,2,4-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Trimethylbenzene, 1,3,5-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	
Vinyl chloride	BD	0.8	ug/L	07-Feb-18 19:51	MWB	
Xylenes, m & p-	BD	4.0	ug/L	07-Feb-18 19:51	MWB	
Xylenes, o-	BD	2.0	ug/L	07-Feb-18 19:51	MWB	

NOTES: mg/l = ppm, ug/l = ppb. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Aquarian Analytical. Results as reported above relate only to samples as submitted, unless specifically noted otherwise. Aquarian Analytical is accredited by the New Hampshire Environmental Lab Accreditation Program. For a current list of accredited tests, please visit the New Hampshire DES web site at the following link:
<http://www2.des.nh.gov/CertifiedLabs/Certified-Method-Result.aspx?matrix=%&cat1=&method=%&analyte=%&labstate=%&labcity=%&labname=1004>



AQUARIAN ANALYTICAL LAB

A Division of Nelson Analytical, LLC



153 West Road
Canterbury, NH 03224
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National Environmental Lab Accreditation Program
NELAP Accreditation #NH1004, VT1004, NH00035(ME)
MADEP Accreditation #M-NH035

(603) 783-9097
frontdesk@aquarianlabs.com

Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

GP-5 1802036-06 (Water)

Sampled: 06-Feb-2018 12:35

Polycyclic Aromatic Hydrocarbons

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Acenaphthene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Acenaphthylene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Anthracene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Benzo(a)anthracene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Benzo(a)pyrene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Benzo(b)fluoranthene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Benzo(g,h,i)perylene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Benzo(k)fluoranthene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Chrysene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Dibenz (a,h) anthracene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Fluoranthene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Fluorene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Indeno(1,2,3-cd)pyrene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Methylnaphthalene, 2-	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Naphthalene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Phenanthrene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	
Pyrene	BD	0.08	ug/L	14-Feb-18 15:18	8270C	MWB	

Dissolved Metals by ICPMS

Analyte	Result	Rpt Limit	Units	Analyzed	Method	Analyst	Notes
Arsenic	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Barium	150	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Cadmium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Chromium	BD	10	ug/L	07-Feb-18	200.8	SUBL	Sub
Lead	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Mercury	BD	0.4	ug/L	07-Feb-18	200.8	SUBL	Sub
Selenium	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub
Silver	BD	1	ug/L	07-Feb-18	200.8	SUBL	Sub

AQUARIAN ANALYTICAL LAB



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Nobis Engineering
18 Chenell Drive
Concord NH, 03301

Project: Former Crown Machinery - Manchester, NH
Project Number: 70631.01
Project Manager: Mr. Jim Ricker

Reported:
16-Feb-18 14:42

Notes and Definitions

Sub Analysis subcontracted to Nelson Analytical Lab - Manchester, NH.

BD - Analyte result is below the method reporting limit.

NR - Not reported.

Soil sample results are reported on a dry weight basis.

The reporting limit is the lowest value at which reliable quantitation has been demonstrated and verified.

Analytes in **bold** are values above the reporting limit.

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Turnaround Requirements (check one) Rush Samples Need Prior Approval <input type="checkbox"/> Same Day Turnaround <input type="checkbox"/> One Day Turnaround <input type="checkbox"/> Two Day Turnaround <input type="checkbox"/> Three Day Turnaround <input checked="" type="checkbox"/> Normal Turnaround Please inquire about rush service. If we are able to meet your rush needs with reasonable effort, we will not charge a rush fee. Please call ahead.	Project Information Project #: <u>7063101</u> Project Name: <u>Former Crown Machinery</u> Town/Site: <u>Manchester, NH</u> Sampler: <u>N. Zanchi</u> Company: <u>Nobis Engineering</u> Bid Reference: _____	Project Manager: <u>Jim Ricker</u> Report To: _____ Invoice To: <u>Kathy Cassio</u> Phone: <u>(603) 224-4182</u> E-mail: <u>JRicker@nobiseng.com</u> * Invoice VOCs separate from PAHs and metals
---	--	--

Sample ID	Collection Date/Time	Sample Matrix	# of Containers	VOCs		SVOCs		Petroleum		Metals		Wet Chemistry / Inorganics		Aquarian ID
				1,1,1-TCE	1,2-DCE	1,1-DCB	1,2-DCB	1,1,2-TCA	1,1,1-TCA	1,1,2-TCA	1,1,1-TCA	1,1,2-TCA	1,1,1-TCA	
Trip Blank	2/6/18 0800	WB	7	X										18020 26-01
GP-8	1650	GW	6	X		X				X				-02
GP-9	1135	GW	4	X		X				X				-03
GP-7	1205	GW	4	X		X				X				-04
GP-6	1220	GW	4	X		X				X				-05
GP-5	1235	GW	4	X		X				X				✓ 06

relinquished by: <u>[Signature]</u> Date/Time: <u>2/7/18 809</u> Received by: <u>[Signature]</u>	Receipt Conditions (laboratory use only): Laboratory Supplied Containers: <input checked="" type="checkbox"/> Yes / No Containers Intact/Property Labelled: <input checked="" type="checkbox"/> Yes / No Were samples delivered on ice?: <input checked="" type="checkbox"/> Yes / No <u>4:20</u>	PROJECT REQUIREMENTS (Please complete): ISO 17025 accreditation required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No EDD required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No MCP Compliance required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is this NH "Old Fund" related? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Does a price quote apply? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
relinquished by: <u>[Signature]</u> Date/Time: <u>2/7/18 805</u> Received by: <u>[Signature]</u>		
relinquished by: _____ Date/Time: _____ Received by: _____		

Your P.O. #: 43407
Your Project #: 43407
Your C.O.C. #: na

Attention: Aaron DeWees

Absolute Resource Associates LLC
124 Heritage Avenue
Unit # 16
Portsmouth, NH
USA 03801

Report Date: 2018/02/26
Report #: R5017923
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B830962

Received: 2018/02/09, 13:35

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date	Date	Laboratory Method	Reference
		Extracted	Analyzed		
Low level PFOS and PFOA by SPE/LCMS (1)	3	2018/02/20	2018/02/22	CAM SOP-00894	EPA 537 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Per- and polyfluoroalkyl substances (PFAS) identified as surrogates on the certificate of analysis represent the extracted internal standard.

U = Undetected at the limit of quantitation.

J = Estimated concentration between the EDL & RDL.

B = Blank Contamination.

Q = One or more quality control criteria failed.

E = Analyte concentration exceeds the maximum concentration level.

K = Estimated maximum possible concentration due to ion abundance ratio failure.

Your P.O. #: 43407
Your Project #: 43407
Your C.O.C. #: na

Attention: Aaron DeWees

Absolute Resource Associates LLC
124 Heritage Avenue
Unit # 16
Portsmouth, NH
USA 03801

Report Date: 2018/02/26
Report #: R5017923
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B830962
Received: 2018/02/09, 13:35

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Stephanie Pollen, Project Manager
Email: SPollen@maxxam.ca
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RESULTS OF ANALYSES OF WATER

Maxxam ID		GBK448	GBK449	GBK450			
Sampling Date		2018/02/06 08:00	2018/02/06 10:50	2018/02/06 11:35			
COC Number		na	na	na			
	UNITS	TRIP BLANK	GP-8	GP-9	RDL	MDL	QC Batch
Miscellaneous Parameters							
6:2 Fluorotelomer sulfonate	ng/L	1.0 U	1.0 U	1.0 U	4.0	1.0	5407401
8:2 Fluorotelomer sulfonate	ng/L	1.2 U	1.2 U	1.2 U	4.0	1.2	5407401
Perfluorobutane Sulfonate (PFBS)	ng/L	0.89 U	48	29	2.0	0.89	5407401
Perfluorobutanoic acid	ng/L	0.86 U	7.6	3.7	2.0	0.86	5407401
Perfluorodecane Sulfonate	ng/L	0.87 U	0.87 U	0.87 U	2.0	0.87	5407401
Perfluorodecanoic Acid (PFDA)	ng/L	0.54 U	0.54 U	0.54 U	2.0	0.54	5407401
Perfluorododecanoic Acid (PFDoA)	ng/L	0.68 U	0.68 U	0.68 U	2.0	0.68	5407401
Perfluoroheptane sulfonate	ng/L	0.77 U	0.77 U	0.77 U	2.0	0.77	5407401
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.47 U	5.6	5.0	2.0	0.47	5407401
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.90 U	4.0	5.2	2.0	0.90	5407401
Perfluorohexanoic Acid (PFHxA)	ng/L	0.41 U	9.5	12	2.0	0.41	5407401
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.60 U	21	17	2.0	0.60	5407401
Perfluorononanoic Acid (PFNA)	ng/L	0.68 U	0.68 U	0.68 U	2.0	0.68	5407401
Perfluorooctane Sulfonamide (PFOSA)	ng/L	1.3 U	1.3 U	1.3 U	4.0	1.3	5407401
Perfluorooctane Sulfonate (PFOS)	ng/L	0.70 U	2.0	0.70 U	2.0	0.70	5407401
Perfluoropentanoic Acid (PFPeA)	ng/L	0.87 U	6.9	14	2.0	0.87	5407401
Perfluorotetradecanoic Acid	ng/L	0.62 U	0.62 U	0.62 U	2.0	0.62	5407401
Perfluorotridecanoic Acid	ng/L	0.74 U	0.74 U	0.74 U	2.0	0.74	5407401
Perfluoroundecanoic Acid (PFUnA)	ng/L	0.72 U	0.72 U	0.72 U	2.0	0.72	5407401
Surrogate Recovery (%)							
13C2-6:2 Fluorotelomer sulfonate	%	70	79	98	N/A	N/A	5407401
13C2-8:2 Fluorotelomer sulfonate	%	72	75	91	N/A	N/A	5407401
13C2-Perfluorodecanoic acid	%	69	71	69	N/A	N/A	5407401
13C2-Perfluorododecanoic acid	%	63	57	57	N/A	N/A	5407401
13C2-Perfluorohexanoic acid	%	79	68	73	N/A	N/A	5407401
13C2-perfluorotetradecanoic acid	%	47 (1)	57	55	N/A	N/A	5407401
13C2-Perfluoroundecanoic acid	%	67	59	64	N/A	N/A	5407401
13C4-Perfluorobutanoic acid	%	76	40 (1)	42 (1)	N/A	N/A	5407401
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable (1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low extracted internal standard analyte recovery.							

RESULTS OF ANALYSES OF WATER

Maxxam ID		GBK448	GBK449	GBK450			
Sampling Date		2018/02/06 08:00	2018/02/06 10:50	2018/02/06 11:35			
COC Number		na	na	na			
	UNITS	TRIP BLANK	GP-8	GP-9	RDL	MDL	QC Batch
13C4-Perfluoroheptanoic acid	%	77	72	70	N/A	N/A	5407401
13C4-Perfluorooctanesulfonate	%	78	69	76	N/A	N/A	5407401
13C4-Perfluorooctanoic acid	%	74	73	72	N/A	N/A	5407401
13C5-Perfluorononanoic acid	%	73	74	72	N/A	N/A	5407401
13C5-Perfluoropentanoic acid	%	79	77	79	N/A	N/A	5407401
13C8-Perfluorooctane Sulfonamide	%	27	44	35	N/A	N/A	5407401
18O2-Perfluorohexanesulfonate	%	68	83	84	N/A	N/A	5407401
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable							

TEST SUMMARY

Maxxam ID: GBK448
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/02/06
Shipped:
Received: 2018/02/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	5407401	2018/02/20	2018/02/22	Kenneth Chu

Maxxam ID: GBK449
Sample ID: GP-8
Matrix: Water

Collected: 2018/02/06
Shipped:
Received: 2018/02/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	5407401	2018/02/20	2018/02/22	Kenneth Chu

Maxxam ID: GBK450
Sample ID: GP-9
Matrix: Water

Collected: 2018/02/06
Shipped:
Received: 2018/02/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	5407401	2018/02/20	2018/02/22	Kenneth Chu

GENERAL COMMENTS

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
	5407401	KC1	Spiked Blank	13C2-6:2 Fluorotelomer sulfonate	2018/02/22		60	%	50 - 150
				13C2-8:2 Fluorotelomer sulfonate	2018/02/22		72	%	50 - 150
				13C2-Perfluorodecanoic acid	2018/02/22		72	%	50 - 150
				13C2-Perfluorododecanoic acid	2018/02/22		62	%	50 - 150
				13C2-Perfluorohexanoic acid	2018/02/22		72	%	50 - 150
				13C2-perfluorotetradecanoic acid	2018/02/22		62	%	50 - 150
				13C2-Perfluoroundecanoic acid	2018/02/22		68	%	50 - 150
				13C4-Perfluorobutanoic acid	2018/02/22		69	%	50 - 150
				13C4-Perfluoroheptanoic acid	2018/02/22		68	%	50 - 150
				13C4-Perfluorooctanesulfonate	2018/02/22		72	%	50 - 150
				13C4-Perfluorooctanoic acid	2018/02/22		68	%	50 - 150
				13C5-Perfluorononanoic acid	2018/02/22		69	%	50 - 150
				13C5-Perfluoropentanoic acid	2018/02/22		72	%	50 - 150
				13C8-Perfluorooctane Sulfonamide	2018/02/22		19 (1)	%	20 - 100
				18O2-Perfluorohexanesulfonate	2018/02/22		62	%	50 - 150
				6:2 Fluorotelomer sulfonate	2018/02/22		109	%	70 - 130
				8:2 Fluorotelomer sulfonate	2018/02/22		98	%	70 - 130
				Perfluorobutane Sulfonate (PFBS)	2018/02/22		115	%	70 - 130
				Perfluorobutanoic acid	2018/02/22		98	%	70 - 130
				Perfluorodecane Sulfonate	2018/02/22		87	%	70 - 130
				Perfluoroheptane sulfonate	2018/02/22		107	%	70 - 130
				Perfluoroheptanoic Acid (PFHpA)	2018/02/22		106	%	70 - 130
				Perfluorohexane Sulfonate (PFHxS)	2018/02/22		113	%	70 - 130
				Perfluorohexanoic Acid (PFHxA)	2018/02/22		95	%	70 - 130
				Perfluorononanoic Acid (PFNA)	2018/02/22		100	%	70 - 130
				Perfluorooctane Sulfonamide (PFOSA)	2018/02/22		91	%	70 - 130
				Perfluoropentanoic Acid (PFPeA)	2018/02/22		96	%	70 - 130
				Perfluorotetradecanoic Acid	2018/02/22		96	%	70 - 130
				Perfluorotridecanoic Acid	2018/02/22		101	%	70 - 130
				Perfluoroundecanoic Acid (PFUnA)	2018/02/22		102	%	70 - 130
				Perfluorodecanoic Acid (PFDA)	2018/02/22		91	%	70 - 130
				Perfluorododecanoic Acid (PFDoA)	2018/02/22		104	%	70 - 130
				Perfluoro-n-Octanoic Acid (PFOA)	2018/02/22		101	%	70 - 130
				Perfluorooctane Sulfonate (PFOS)	2018/02/22		91	%	70 - 130
	5407401	KC1	Spiked Blank DUP	13C2-6:2 Fluorotelomer sulfonate	2018/02/22		72	%	50 - 150
				13C2-8:2 Fluorotelomer sulfonate	2018/02/22		84	%	50 - 150
				13C2-Perfluorodecanoic acid	2018/02/22		86	%	50 - 150
				13C2-Perfluorododecanoic acid	2018/02/22		75	%	50 - 150
				13C2-Perfluorohexanoic acid	2018/02/22		87	%	50 - 150
				13C2-perfluorotetradecanoic acid	2018/02/22		72	%	50 - 150
				13C2-Perfluoroundecanoic acid	2018/02/22		81	%	50 - 150
				13C4-Perfluorobutanoic acid	2018/02/22		75	%	50 - 150
				13C4-Perfluoroheptanoic acid	2018/02/22		80	%	50 - 150
				13C4-Perfluorooctanesulfonate	2018/02/22		89	%	50 - 150
				13C4-Perfluorooctanoic acid	2018/02/22		84	%	50 - 150
				13C5-Perfluorononanoic acid	2018/02/22		87	%	50 - 150
				13C5-Perfluoropentanoic acid	2018/02/22		89	%	50 - 150
				13C8-Perfluorooctane Sulfonamide	2018/02/22		29	%	20 - 100
				18O2-Perfluorohexanesulfonate	2018/02/22		94	%	50 - 150
				6:2 Fluorotelomer sulfonate	2018/02/22		97	%	70 - 130
				8:2 Fluorotelomer sulfonate	2018/02/22		98	%	70 - 130
				Perfluorobutane Sulfonate (PFBS)	2018/02/22		80	%	70 - 130
				Perfluorobutanoic acid	2018/02/22		100	%	70 - 130
				Perfluorodecane Sulfonate	2018/02/22		86	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
				Perfluoroheptane sulfonate	2018/02/22		102	%	70 - 130
				Perfluoroheptanoic Acid (PFHpA)	2018/02/22		97	%	70 - 130
				Perfluorohexane Sulfonate (PFHxS)	2018/02/22		80	%	70 - 130
				Perfluorohexanoic Acid (PFHxA)	2018/02/22		90	%	70 - 130
				Perfluorononanoic Acid (PFNA)	2018/02/22		88	%	70 - 130
				Perfluorooctane Sulfonamide (PFOSA)	2018/02/22		87	%	70 - 130
				Perfluoropentanoic Acid (PFPeA)	2018/02/22		91	%	70 - 130
				Perfluorotetradecanoic Acid	2018/02/22		96	%	70 - 130
				Perfluorotridecanoic Acid	2018/02/22		100	%	70 - 130
				Perfluoroundecanoic Acid (PFUnA)	2018/02/22		96	%	70 - 130
				Perfluorodecanoic Acid (PFDA)	2018/02/22		90	%	70 - 130
				Perfluorododecanoic Acid (PFDoA)	2018/02/22		98	%	70 - 130
				Perfluoro-n-Octanoic Acid (PFOA)	2018/02/22		94	%	70 - 130
				Perfluorooctane Sulfonate (PFOS)	2018/02/22		83	%	70 - 130
5407401	KC1	RPD		6:2 Fluorotelomer sulfonate	2018/02/22	11		%	30
				8:2 Fluorotelomer sulfonate	2018/02/22	0.22		%	30
				Perfluorobutane Sulfonate (PFBS)	2018/02/22	37 (2)		%	30
				Perfluorobutanoic acid	2018/02/22	1.7		%	30
				Perfluorodecane Sulfonate	2018/02/22	1.9		%	30
				Perfluoroheptane sulfonate	2018/02/22	4.3		%	30
				Perfluoroheptanoic Acid (PFHpA)	2018/02/22	9.1		%	30
				Perfluorohexane Sulfonate (PFHxS)	2018/02/22	34 (2)		%	30
				Perfluorohexanoic Acid (PFHxA)	2018/02/22	5.3		%	30
				Perfluorononanoic Acid (PFNA)	2018/02/22	14		%	30
				Perfluorooctane Sulfonamide (PFOSA)	2018/02/22	5.3		%	30
				Perfluoropentanoic Acid (PFPeA)	2018/02/22	4.5		%	30
				Perfluorotetradecanoic Acid	2018/02/22	0.33		%	30
				Perfluorotridecanoic Acid	2018/02/22	1.1		%	30
				Perfluoroundecanoic Acid (PFUnA)	2018/02/22	6.2		%	30
				Perfluorodecanoic Acid (PFDA)	2018/02/22	0.90		%	30
				Perfluorododecanoic Acid (PFDoA)	2018/02/22	6.2		%	30
				Perfluoro-n-Octanoic Acid (PFOA)	2018/02/22	6.6		%	30
				Perfluorooctane Sulfonate (PFOS)	2018/02/22	9.0		%	30
5407401	KC1	Method Blank		13C2-6:2 Fluorotelomer sulfonate	2018/02/22		80	%	50 - 150
				13C2-8:2 Fluorotelomer sulfonate	2018/02/22		75	%	50 - 150
				13C2-Perfluorodecanoic acid	2018/02/22		73	%	50 - 150
				13C2-Perfluorododecanoic acid	2018/02/22		67	%	50 - 150
				13C2-Perfluorohexanoic acid	2018/02/22		80	%	50 - 150
				13C2-perfluorotetradecanoic acid	2018/02/22		64	%	50 - 150
				13C2-Perfluoroundecanoic acid	2018/02/22		73	%	50 - 150
				13C4-Perfluorobutanoic acid	2018/02/22		72	%	50 - 150
				13C4-Perfluoroheptanoic acid	2018/02/22		77	%	50 - 150
				13C4-Perfluorooctanesulfonate	2018/02/22		79	%	50 - 150
				13C4-Perfluorooctanoic acid	2018/02/22		74	%	50 - 150
				13C5-Perfluorononanoic acid	2018/02/22		79	%	50 - 150
				13C5-Perfluoropentanoic acid	2018/02/22		82	%	50 - 150
				13C8-Perfluorooctane Sulfonamide	2018/02/22		7.6 (1)	%	20 - 100
				18O2-Perfluorohexanesulfonate	2018/02/22		71	%	50 - 150
				6:2 Fluorotelomer sulfonate	2018/02/22	1.0 U, MDL=1.0		ng/L	
				8:2 Fluorotelomer sulfonate	2018/02/22	1.2 U, MDL=1.2		ng/L	
				Perfluorobutane Sulfonate (PFBS)	2018/02/22	0.89 U, MDL=0.89		ng/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorobutanoic acid	2018/02/22	0.86 U, MDL=0.86		ng/L	
			Perfluorodecane Sulfonate	2018/02/22	0.87 U, MDL=0.87		ng/L	
			Perfluoroheptane sulfonate	2018/02/22	0.77 U, MDL=0.77		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2018/02/22	0.47 U, MDL=0.47		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2018/02/22	0.90 U, MDL=0.90		ng/L	
			Perfluorohexanoic Acid (PFHxA)	2018/02/22	0.41 U, MDL=0.41		ng/L	
			Perfluorononanoic Acid (PFNA)	2018/02/22	0.68 U, MDL=0.68		ng/L	
			Perfluorooctane Sulfonamide (PFOSA)	2018/02/22	1.3 U, MDL=1.3		ng/L	
			Perfluoropentanoic Acid (PFPeA)	2018/02/22	0.87 U, MDL=0.87		ng/L	
			Perfluorotetradecanoic Acid	2018/02/22	0.62 U, MDL=0.62		ng/L	
			Perfluorotridecanoic Acid	2018/02/22	0.74 U, MDL=0.74		ng/L	
			Perfluoroundecanoic Acid (PFUnA)	2018/02/22	0.72 U, MDL=0.72		ng/L	
			Perfluorodecanoic Acid (PFDA)	2018/02/22	0.54 U, MDL=0.54		ng/L	
			Perfluorododecanoic Acid (PFDoA)	2018/02/22	0.68 U, MDL=0.68		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/22	0.60 U, MDL=0.60		ng/L	
			Perfluorooctane Sulfonate (PFOS)	2018/02/22	0.70 U, MDL=0.70		ng/L	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

(1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low extracted internal standard analyte recovery.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Sin Chii Chia, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



SUBCONTRACT CHAIN OF CUSTODY DOCUMENTATION

Client: Absolute Resource Associates		Contact: Aaron DeWees		Phone: 603-436-2001 Fax:		Page of			
Report to: Aaron DeWees/Jane Stratton		Address: 124 Heritage Ave, #16		Project Name/Number: 43407					
Invoice to: cathvd@absoluteresourceassociates.com		Portsmouth, NH 03801		Project State: NH MA ME VT					
PO#: 43407 Quote #:		Protocol: RCRA SDWA NPDES MCP NHDES Other							
Lab Number: (assigned by laboratory)	Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Container Size (mL)	Container Type (P/G/T)	Field Preservation	Matrix S=Soil W=Water	Analyses Requested: Special Instructions:
	Trip Blank	2/6/18	8:00		175mLx2	P	None	W	PFAS UL 19
	GP-8	L	10:50		↓	↓	↓	↓	↓
	GP-9	L	11:35		↓	↓	↓	↓	↓
							09-Feb-18 13:35 Stephanie Pollen B830962 MAF ENV-1081		
Subcontract Laboratory: <i>Maxxam</i>									
Relinquished by: <i>[Signature]</i>		Date: 2/8/18	Time: 14:55	Received by: <i>FedEx</i>		Date: 2/8/18	Time: 14:55		
Relinquished by: <i>FedEx</i>		Date:	Time:	Received by: <i>FRANCINE CHONG</i>		Date: 2018/02/09	Time: 13:35		
Relinquished by:		Date:	Time:	Received by:		Date:	Time:		
Reporting Instructions: PDE (Email Address: aarond@absoluteresourceassociates.com ; janes@absoluteresourceassociates.com)							Received on ice? Y N Temp: 4.2/2.6/1.1		
Excel File: Y / N									
TAT Requested: Priority (24hr) Expedited (48hr) 10 Business days Date needed:									
Comments:									

no custody seal.