ENGINEERING
ARCHITECTURE
ENVIRONMENTAL
PLANNING

OMNNI ASSOCIATES

Transmittal Memorandum

ONE SYSTEMS DRIVE
APPLETON, WI 54914
920-735-6900
FAX 920-830-6110

To: Tauren Beggs
Address: Wisconsin DNR, 2984 Shawano Ave., Green Bay, WI 54313-6727
From: Don Brittnacher

Date: March 23, 2016
Project No.: BRRTS 02-31-564071; OMNNI N2162C15
Project: Allyn's LLC investigation

Last Dated	Item Description	Last Dated	Item Description
3/23/2016	Preliminary investigation report		

Dear Tauren,

I'm sending the preliminary investigation report for the site. The results of the investigation show that a release has occurred at the former dry cleaner, which ceased operations in 1981.

Chlorinated solvents are present in the groundwater in exceedance of enforcement standards. Clean endpoints were not found; the plume is not confined to the site.

The assets of the responsible party are limited, and this first mobilization was a hardship. I would like to meet with you to discuss options for continued investigation. Please give me a call when you have a chance. Thanks.

Don Brittnacher

Don Brittnacher

Preliminary Soil and Groundwater Investigation

at

Allyn's LLC Property (Former Algoma Cleaners)
111 Steele St.
Algoma, Kewaunee County, WI

March 23, 2016

BRRTS #02-31-564071
OMNNI Project #N2162C15

Don Brittnacher
OMNNI Associates
One Systems Dr.
Appleton, WI 54914

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EXECUTIVE SUMMARY

OMNNI Associates has performed a preliminary subsurface investigation at the Allyn property located at 111 Steele St., Algoma, WI.

A dry-cleaning business operated at the site from 1948 until the early 1980's. A Phase I environmental site assessment identified a past discharge from the dry-cleaner unit at the site, and the former practice of outside storage of drums of dry-cleaning fluid. The dry-cleaner unit and outside drum storage area were located next to each other, separated by a building wall.

A Phase II boring investigation found chlorinated solvent contamination in the soil and groundwater at the site. The dry-cleaner room was inaccessible, but the boring placed in the drum storage area identified the area as a potential source of contamination.

The present project investigated the suspected source area, as well as upgradient and downgradient areas. Groundwater is approximately 19 feet below the ground surface, and flows to the northeast towards the Ahnapee River. The underlying soils are well-sorted sands with some gravel. Dolomite bedrock is located 25 feet below the site.

Tetrachloroethene was detected above the enforcement standard in each of the wells, at 310 ug/L in the drum storage area, and ranging from 39 ug/L – 54 ug/L in the other wells. The daughter products trichloroethene, cis-1,2-dichloroethene, and vinyl chloride were found in locations downgradient of the source area. The source of the contamination appears to be the drum storage/dry-cleaner room area.

The limits of groundwater contamination were not identified during the present investigation. Because of the proximity of the project area to the Ahnapee River and the porous nature of the intervening soils, the water table in the area is expected to undergo rapid elevation changes and mini-flow reversals as the river rises and falls. This flushing over the years has resulted in the present conditions.

Based on the field and laboratory results, additional investigation is necessary. Options for drilling are limited, due to the commercial buildings in the area, and the financial condition of the responsible party. OMNNI recommends that a meeting be held with the DNR to discuss further investigative options.

INTRODUCTION/BACKGROUND

The subject property is located at 111 Steele St., Algoma, in the NW ¼ of the SW ¼ of section 26, T25N, R25E, Kewaunee County, WI. (See Site Location Map, Appendix 1.) The property consists of tax parcel 201-00330-0720 (a.k.a. 31-201-Y&S-32).

A dry-cleaning business operated at the site from 1948 until approximately 1981. (See Site Detail Map, Appendix 1.) According to the owner, a spill occurred from the dry-cleaning unit, located in a room on the west side of the building. The concrete floor in the room is cracked and stained. Immediately outside the building to the west of this area, dry-cleaning fluids were stored in 55-gallon drums. The fluids were transferred to the inside dry-cleaning unit by hose through a hole in the building wall. Spills may have also occurred in the outside drum storage area.

A 200-gallon fuel oil aboveground storage tank was used to fuel the site's boiler from 1948 until 1955. It was located outside and to the north of the original building section. The tank was replaced with a 6,000-gallon fuel oil underground storage tank, also located to

the north of the original building section. A building addition was subsequently constructed over this area. The 6,000-gallon tank was closed in place in 1998. Soil testing did not reveal contamination above DNR reporting levels.

As part of a Phase II environmental investigation in 2015, OMNNI installed a boring west of the building in the former drum storage area, and east of the building addition overlying the abandoned fuel oil tank. The dry-cleaner room was inaccessible. Temporary wells were installed in the borings.

Chlorinated solvents were found in the soil in the dry-cleaning fluid storage area, and in the groundwater in both locations. In the soil, tetrachloroethene, trichloroethene, and the trimethylbenzenes were detected above their respective groundwater pathway residual contaminant levels in the drum storage area. In the groundwater, tetrachloroethene and trichloroethene were detected above enforcement standards in both locations, and vinyl chloride was identified above the enforcement standard east of the building.

The DNR was notified, resulting in this investigation.

The following are the primary contacts for the project:

Client: Allyn's LLC, 111 Steele St., Algoma, WI 54201. Contact: John Emery, 2448 Robin Ln, Green Bay, WI 54303; (920) 360-5050; emery.ja@gmail.com.

Consultant: OMNNI Associates, One Systems Drive, Appleton, WI 54914. Contact: Don Brittnacher; (920) 735-6900; don.brittnacher@omnni.com.

Driller: Horizon Construction and Exploration, 764 Tower Dr., Fredonia, WI 53024. Contact: Adam Sweet; (262) 692-3347; adam@hcexploration.com.

Laboratory: Synergy Environmental Lab, 1990 Prospect Ct., Appleton, WI 54914. Contact: Mike Ricker; (920) 830-2455; mrsynergy@wi.twcbc.com.

GEOLOGY AND HYDROGEOLOGY

The geology and hydrogeology of the area were determined by studying existing geologic, topographic, hydrogeologic, and soil maps, and by obtaining information during the present and prior investigations.

Based on maps and information included in "*Water Resources of Wisconsin – Lake Michigan Basin*" by E. L. Skinner and R. G. Borman (1973), the surface soils in the area consist of glacial till. Subsurface borings performed during the present investigation at the site revealed well-sorted sand to 25 feet below the ground surface, with minor amounts of gravel in the upper ten feet. Dolomite bedrock was encountered at 25 feet below the ground surface at the site.

The topography at the site is flat. (See Topographic Map, Appendix 1.) In the area, the topography slopes to the east-northeast to the Ahnapee River, located 250 feet from the subject property.

The depth to groundwater at the site was measured to be approximately 19 feet below the ground surface. The groundwater flow direction is assumed to be to the northeast toward the Ahnapee River, with an easterly component in the direction of river flow. Due to the high porosity of the soils in the area and the close proximity of the site to the river, it is likely that the groundwater flow direction reverses on a temporary basis when river levels rise due to high precipitation or snow melt events.

The soil at the site consists of Udorthents, which are disturbed urban soils.

FIELD ACTIVITIES

On November 23, 2015, OMNNI coordinated the installation of four soil borings (B3 – B6) on the subject property. (See Site Detail Map, Appendix 1.)

Boring B3 was placed west of the building in the outside dry-cleaning fluid storage area, adjacent to the dry-cleaning room inside the building. Boring B4 was installed to the west-southwest of boring B3 in a location anticipated to be upgradient of boring B3. Boring B5 was placed east of the building in a location expected to be sidegradient or downgradient of the dry-cleaning fluid storage area, the dry-cleaning room, and the locations of the former fuel oil tanks. Boring B6 was installed east of the building and downgradient of those locations.

A 40-foot piezometer was planned in the dry-cleaning fluid storage area, but bedrock was encountered at 25 feet below the ground surface, which is the depth of the observation well borehole.

The four borings were installed to a depth of 25 feet. (See Soil Boring Log Information Forms, Appendix 3.) Groundwater was encountered at approximately 19 feet below the ground surface.

Soil samples were obtained continuously from the borings for field screening with a photoionization detector (PID). At each sampling interval, a representative portion of the soil was also collected for possible laboratory analysis. (See Handbook of Field Procedures, Appendix 4.) Boring B3 was blind drilled, as soils in close proximity were assessed during the earlier Phase II investigation.

Soil analytical samples were taken from each boring at the interval of strongest field evidence of contamination. Soil samples were taken from boring B4 from the 20 – 22.5 foot interval, from boring B5 from the 7.5 – 10 foot interval, and from boring B6 from the 20 – 22.5 foot interval. Since boring B3 was installed in the approximate area of boring B1, the suspected source area, which was placed during the earlier Phase II investigation, soil sampling was carried out in the 1.0 – 3.0 and 22.5 – 25 foot intervals in boring B3 to augment the earlier soil testing.

Soil samples were delivered to a certified laboratory for analysis of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and total lead.

Permanent groundwater monitoring wells MW1 – MW4 were constructed in the borings to identify the extent of groundwater contamination. The monitoring wells were installed and developed according to ch. NR 141 Wis. Admin. Code requirements. (See monitoring well construction forms, Appendix 3.) Ten-foot screens were placed in the wells to intersect the water table at the site.

OMNNI surveyed the monitoring wells. Elevations are based on the USGS datum, and were surveyed to the nearest 0.01 foot. (See the groundwater monitoring well information form, Appendix 3.)

Monitoring well MW4 was developed on January 8, 2016. Due to an equipment malfunction, a second mobilization was made on February 16, 2016, to develop monitoring wells MW1 – MW3. (See the monitoring well development forms, Appendix 3.) Groundwater samples were obtained from the monitoring wells on February 24, 2016.

(See the well specific field sheets, Appendix 3.) The samples were analyzed for VOCs, PAHs, and dissolved lead.

FIELD AND ANALYTICAL RESULTS

The soils in borings B4 – B6 consisted mostly of well-sorted sand, with minor gravel concentrations in the upper ten feet. No petroleum odors or discoloration were observed. The only elevated headspace reading in these locations was detected in boring B5 in the 7.5 – 10 foot interval. (See soil boring logs for headspace data, Appendix 3.) No headspaces were observed above or below that interval in that boring. The cause of the headspace reading is unknown, as the sampled interval is ten feet above the water table at that location. Boring B3 was blind drilled.

Soil contamination was found in the borings. (See Table 1 – Summary of Laboratory Analysis, Soil Samples, Appendix 2, and Laboratory Analysis Results and Chain of Custody Documentation, Appendix 5.) Tetrachloroethene was detected above the groundwater pathway residual contaminant level in borings B3, B4, and B5. Benzo(a)pyrene was detected above the non-industrial direct contact residual contaminant level (RCL), although the depth of the sample (20 – 22.5 feet) would preempt direct contact.

Groundwater contamination was found in the monitoring wells. (See Table 2 – Summary of Laboratory Analysis, Groundwater Samples, Appendix 2, and Laboratory Analysis Results and Chain of Custody Documentation, Appendix 5.) Tetrachloroethene was detected above the enforcement standard in each well. In monitoring well MW4, trichloroethene and vinyl chloride were also detected above enforcement standards, and cis-1,2-dichloroethene was found above the preventive action limit. In well MW3, trichloroethene was detected above the preventive action limit.

Laboratory analysis did not reveal other VOCs or dissolved lead in the groundwater at the site. PAHs were not found above preventive action limits in the groundwater.

The water table on-site was observed on February 24, 2016, to be 18.6 – 19.6 feet below the ground surface. (See Groundwater Elevation Map, Appendix 1.) The elevation of the water table was observed to vary slightly across the site, with no clear flow direction. The soils are sandy and the Ahnapee River is located 250 feet to the north, flowing in a southeasterly direction. Due to the high porosity of the soils in the area and the close proximity of the site to the river, it is likely that water table elevations in the project location respond fairly quickly to fluctuating river levels. The typical flow direction towards the river may reverse on a temporary basis when the river rises due to high precipitation or snowmelt events. Contamination may have impacted soils in areas that are normally upgradient of the expected source area.

POTENTIAL FOR VAPOR INTRUSION

The potential for vapor intrusion into buildings was not evaluated at this time, since the soil and groundwater investigation is not yet complete. Factors to be evaluated are solvent concentrations in the groundwater, building basement depths in relation to the depth to groundwater, and the nature of vapor movement in the intervening vadose zone. The 65-year period since dry-cleaning operations ceased would presage a stable or receding contaminant plume.

CONCLUSIONS AND RECOMMENDATIONS

A dry-cleaning business operated at the site from 1948 until the early 1980's. A Phase I environmental site assessment identified a past discharge from the dry-cleaner unit at the site, and the former practice of outside storage of drums of dry-cleaning fluid. The dry-cleaner unit and outside drum storage area were located next to each other, separated by a building wall.

A Phase II boring investigation found chlorinated solvent contamination in the soil and groundwater at the site. The dry-cleaner room was inaccessible, but the boring placed in the drum storage area identified the area as a potential source of contamination.

The present project investigated the suspected source area, as well as upgradient and downgradient areas. The project area is an old commercial district near the Ahnapee River. Groundwater is approximately 19 feet below the ground surface, and flows to the northeast towards the Ahnapee River. The underlying soils are well-sorted sands with some gravel. Dolomite bedrock is located 25 feet below the site.

Tetrachloroethene was detected above the enforcement standard in each of the wells, at 310 ug/L in the drum storage area, and ranging from 39 ug/L – 54 ug/L in the other wells. The daughter products trichloroethene, cis-1,2-dichloroethene, and vinyl chloride were found in locations downgradient of the source area. The source of the contamination appears to be the drum storage/dry-cleaner room area.

The limits of groundwater contamination were not identified during the present investigation. Because of the proximity of the project area to the Ahnapee River and the porous nature of the intervening soils, the water table in the area is expected to undergo rapid elevation changes and mini-flow reversals as the river rises and falls. This flushing over the years has resulted in the present conditions.

Based on the field and laboratory results, additional investigation is necessary. Options for drilling are limited, due to the commercial buildings in the area, and the financial condition of the responsible party. OMNNI recommends that a meeting be held with the DNR to discuss further investigative options.

STANDARD OF CARE

The conclusions presented in this investigation were arrived at using generally accepted hydrogeologic and engineering practices. The conclusions presented herein represent our professional opinions, based on the data collected at the time of the investigation, at the specific boring and sampling locations discussed in this report. Conditions at other locations on the property may be different than described in this investigation. The scope of this report is limited to the specific project and location described herein.

Prepared By: Don Brittnacher

Don Brittnacher, P.G., P.E.
Hydrogeologist

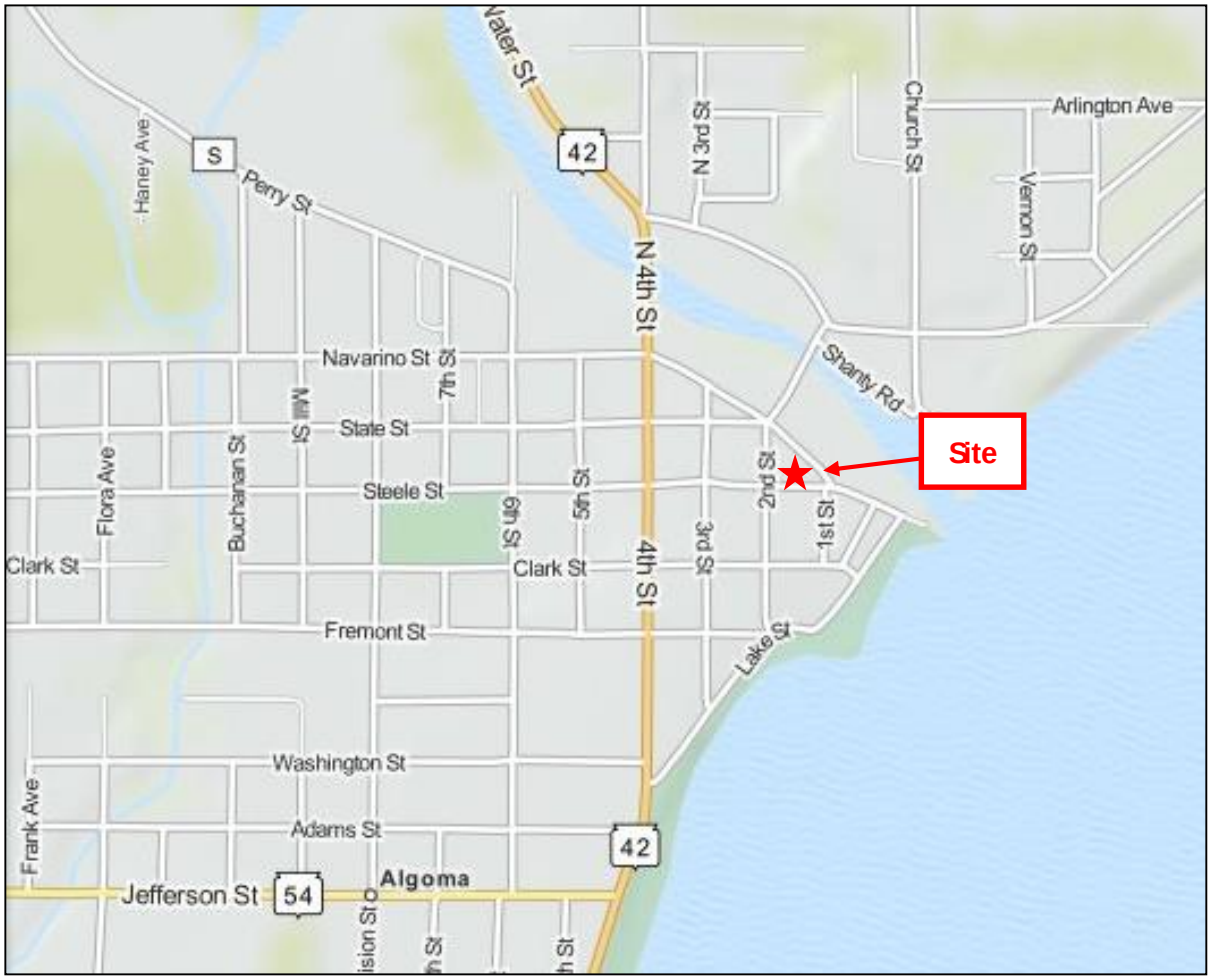
"I, Don Brittnacher, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Don Brittnacher

(Professional Geologist)

APPENDIX 1

FIGURES



Source: Mapquest, reviewed 3/1/2016.

N

Site Location Map	
Allyn's LLC Property 111 Steele St. Algoma, WI	
OMNI ASSOCIATES	Project Number: N2162C15
	Date: March 1, 2016
One Systems Drive, Appleton, Wisconsin 54914-1654 Phone: (920) 735-6900 Fax: (920) 830-6100	

OMNI ASSOCIATES
ONE SYSTEMS DRIVE PHONE (920) 735-6900
APPLETON, WI 54914 FAX (920) 830-6100

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W E
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ALLYN PROPERTY INVESTIGATION

SITE DETAIL MAP

111 STEELE STREET
CITY OF ALGOMA, KEWAUNEE COUNTY, WISCONSIN

Project Manager:	DJB
Project Engineer:	DJB
Drawn By:	JCW
Checked By:	DJB
Date:	3/1/2016

SCALE: 1 " = 20 '

PROJECT NO. **N2162C15**

FIGURE NO. **A-1**

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Topographic Map

Note: Contour interval is two feet.

OMNI ASSOCIATES
ONE SYSTEMS DRIVE PHONE (920) 735-6900
APPLETON, WI 54914 FAX (920) 830-6100

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ALLYN PROPERTY INVESTIGATION

GROUNDWATER ELEVATION MAP (2/24/2016)

111 STEELE STREET
CITY OF ALGOMA, KEWAUNEE COUNTY, WISCONSIN

Project Manager:	DJB
Project Engineer:	DJB
Drawn By:	JCW
Checked By:	DJB
Date:	3/1/2016

SCALE: 1 " = 20 '

PROJECT NO. **N2162C15**

FIGURE NO. **A-2**

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APPENDIX 2

TABLES

Table 1 - Summary of Laboratory Analysis - Soil Samples

Boring & Sample	Sample Date	Depth (feet)	Detected VOCs (mg/kg)									Lead (mg/kg)	DRO (mg/kg)	GRO (mg/kg)
			tert-Burylbenzene	sec-Butylbenzene	n-Butylbenzene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene			
Groundwater Pathway RCLs			-	-	-	-	0.0045	1.1072	0.0036	1.3821		27	-	-
Direct Contact Non-Industrial RCLs			-	-	-	-	30.7	818	1.26	89.8	182	400	-	-
B1-10	02/12/15	22.5 - 25	0.36 "J"	1.72	8.0	7.0	**106**	0.33 "J"	***0.46 "J"***	***6.0***	***4.5***	5.92	5,040	2,980
B2-9	02/12/15	20 - 22.5	< 0.035	< 0.036	< 0.086	< 0.056	< 0.054	< 0.031	< 0.042	< 0.078	< 0.089	1.44	129	22.8
B3-1	11/23/15	1 - 3	< 0.035	< 0.036	< 0.086	< 0.056	***0.087 "J"***	< 0.031	< 0.042	< 0.078	< 0.089	6.13	NA	NA
B3-10	11/23/15	21 - 23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B4-9	11/23/15	20 - 22.5	< 0.035	< 0.036	< 0.086	< 0.056	***0.108 "J"***	< 0.031	< 0.042	< 0.078	< 0.089	2.46	NA	NA
B5-4	11/23/15	7.5 - 10	< 0.035	< 0.036	< 0.086	< 0.056	***0.182***	< 0.031	< 0.042	< 0.078	< 0.089	1.64 "J"	NA	NA
B6-9	11/23/15	20 - 22.5	< 0.035	< 0.036	< 0.086	< 0.056	< 0.054	< 0.031	< 0.042	< 0.078	< 0.089	2.16	NA	NA

Boring & Sample	Sample Date	Depth (feet)	Detected PAHs (mg/kg)													
			Acenapthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Fluoranthene	Fluorene	1-Methyl naphthalene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene
Groundwater Pathway RCLs			-	197.7273	-	0.47	0.4793	-	0.1446	88.8778	14.8027	-	-	0.6582	-	54.1322
Direct Contact Non-Industrial RCLs			3440	17200	0.148	0.015	0.148	-	14.8	2290	2290	15.6	229	5.15	-	1720
B1-10	02/12/15	22.5 - 25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B2-9	02/12/15	20 - 22.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3-1	11/23/15	1 - 3	< 0.0201	< 0.0171	< 0.0191	< 0.0143	< 0.019	< 0.02	< 0.0192	< 0.0192	< 0.0184	< 0.0205	< 0.0199	< 0.0203	< 0.0198	< 0.0192
B3-10	11/23/15	21 - 23	0.0287 "J"	0.0257 "J"	< 0.0191	< 0.0143	< 0.019	< 0.02	< 0.0192	< 0.0192	0.053 "J"	0.061 "J"	0.107	0.053 "J"	0.145	< 0.0192
B4-9	11/23/15	20 - 22.5	< 0.0201	< 0.0171	< 0.0191	< 0.0143	< 0.019	< 0.02	< 0.0192	< 0.0192	< 0.0184	< 0.0205	< 0.0199	< 0.0203	< 0.0198	< 0.0192
B5-4	11/23/15	7.5 - 10	< 0.0201	< 0.0171	< 0.0191	< 0.0143	0.0209 "J"	0.041 "J"	< 0.0192	0.023 "J"	< 0.0184	< 0.0205	< 0.0199	< 0.0203	0.0231 "J"	0.0237 "J"
B6-9	11/23/15	20 - 22.5	< 0.0201	< 0.0171	0.0201 "J"	**0.0214 "J"**	0.0194 "J"	0.068	0.0235 "J"	0.023 "J"	< 0.0184	< 0.0205	< 0.0199	< 0.0203	< 0.0198	0.043 "J"

RCL = residual contaminant level

"J" = Analyte detected between the limit of detection and the limit of quantification

6.0 = detected above the groundwater pathway RCL.

106 = detected above the direct contact non-industrial RCL.

TABLE 2
SUMMARY OF LABORATORY ANALYSIS
GROUNDWATER SAMPLES

PARAMETER (µg/L)	ES	PAL	TW1	TW2	MW1	MW2	MW3	MW4
SAMPLE DATE			2/12/15		2/24/16			
DETECTED VOCs (ug/l)								
CIS-1,2-DICHLOROETHENE	70	7	**142**	***32***	9.6 "J"	< 0.45	< 0.45	***24.8***
TETRACHLOROETHENE	5	0.5	**1,280**	**35**	**310**	**39**	**54**	**44**
TRICHLOROETHENE	5	0.5	41 "J"	6.4 "J"	< 4.7	< 0.47	***1.55***	**6.5**
1,2,4-TRIMETHYLBENZENE	480	96	< 80	24 "J"	< 16	< 1.6	< 1.6	< 1.6
1,3,5-TRIMETHYLBENZENE			< 75	< 15	< 15	< 1.5	< 1.5	< 1.5
VINYL CHLORIDE	0.2	0.02	< 8.5	**30.5**	< 1.7	< 0.17	< 0.17	**23.2**
DETECTED PAHs (ug/l)								
ACENAPHTHENE	-	-	< 0.2	0.059 "J"	0.037 "J"	< 0.016	< 0.016	< 0.016
ACENAPHTHLYNE	-	-	< 0.21	0.08	< 0.019	< 0.019	< 0.019	< 0.019
BENZO(A)ANTHRACENE	-	-	< 0.19	0.019 "J"	< 0.017	< 0.017	< 0.017	< 0.017
FLUORENE	400	80	0.249 "J"	0.033 "J"	0.038 "J"	< 0.021	< 0.021	< 0.021
1-METHYLNAPHTHALENE	-	-	2.44	0.4	0.094	< 0.024	< 0.024	< 0.024
2-METHYLNAPHTHALENE	-	-	4.3	0.078	0.033 "J"	< 0.024	< 0.024	0.027 "J"
NAPHTHALENE	100	10	4.2	0.098	0.11	< 0.019	< 0.019	< 0.019
PHENANTHRENE	-	-	0.43 "J"	< 0.017	0.073	< 0.017	< 0.017	< 0.017
LEAD (ug/l)	15	1.5	***6.8***	***3.6***	< 0.7*	< 0.7*	< 0.7*	< 0.7*

ES = enforcement standard
PAL = preventive action limit
"J" = Analyte detected between the limit of detection and the limit of quantification
Note: Trichloroethene concentrations in TW1 and TW2 and cis-1,2-dichloroethene concentration in MW1 are not exceedances due to NR 140.14(b).
142 = sample concentration detected above the enforcement standard
6.8 = sample concentration detected above the preventive action limit
* filtered sample

APPENDIX 3

DNR FORMS

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☒ Other ☐ _____

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Allyn's LLC	_ _ _ _ _ _ _	B3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Adam Last Name: Sweet Firm: Horizon	11/23/2015 (m m d d y y y y)	11/23/2015 (m m d d y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
PM373	_ _ _	MW1	_____ Feet MSL	_____ Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
NW 1/4 of SW 1/4 of Section 26, T 25 N, R 25 E/W
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Kewaunee	31	Algoma

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
B3-1 *(1'-3') 10:00			1	Blind drilled										
			2											
B3-2			3											
			4											
			5											
B3-3			6											
			7											
			8											
B3-4			9											
			10											
B3-5			11											
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Don Brittnacher	OMNNI Associates

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			13	"										
B3-6			14											
			15											
B3-7			16											
			17											
B3-8			18											
			19											
B3-9			20											
			21											
			22											
B3-10 * 10:50			23											
			24											
			25	EOB at 25 Ft. (Bedrock encountered.)										
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☒ Other ☐ _____

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Allyn's LLC	_ _ _ _ _ _ _ _	B4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Adam Last Name: Sweet Firm: Horizon	11/23/2015 (m m d d y y y y)	11/23/2015 (m m d d y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
PM374	_ _ _	MW2	_____ Feet MSL	_____ Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
NW 1/4 of SW 1/4 of Section 26, T 25 N, R 25 E/W
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Kewaunee	31	Algoma

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
B4-1			1	topsoil lt. brown sand & gravel gray sand & gravel				0		D				
			2	brown sand										
B4-2			3	no sample				-		-				
			4											
B4-3			5	brown sand & gravel				0		M				
			6											
			7	lt. brown sand										
B4-4			8	no sample				-		-				
			9											
			10	lt. brown sand										
B4-5			11					0		M				
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Don Buttnacher	OMNNI Associates

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			13	"										
B4-6			14					0		M				
			15											
B4-7			16					0		M				
			17											
			18							M				
B4-8			19					0		W	∇ at 18.5'			
			20											
B4-9 * 2:50			21					0		W				
			22											
			23											
B4-10			24					0		W				
			25	EOB at 25 ft.										
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☒ Other ☐ _____

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Allyn's LLC	_ _ _ _ _ _ _	B5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Adam Last Name: Sweet Firm: Horizon	11/23/2015 (m m d d y y y y)	11/23/2015 (m m d d y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
PM378	_ _ _	MW3	_____ Feet MSL	_____ Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
NW 1/4 of SW 1/4 of Section 26, T 25 N, R 25 E/W
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village
	Kewaunee	31	Algoma

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
B5-1			1	asphalt base coarse				0		D				
			2	dk. gray loamy sand w/ gravel										
B5-2			3	brown sand				0		M				
			4											
			5											
B5-3			6					0		M				
			7	lt. tan sand & gravel mixture										
			8											
B5-4 * 11:40			9	tan sand w/ gravel				31		M				
			10											
B5-5			11					0		M				
			12	lt. grey sand										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Don Buttmacher	OMNNI Associates

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Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			13	lt. brown sand										
B5-6			14					0		M				
			15											
B5-7			16					0		M				
			17											
B5-8			18					0		M/W	▽ at	18'		
			19											
B5-9			20	no sample				0		W				
			21											
			22											
B5-10			23	brown sand				0		W				
			24											
			25	EOB at 25 ft.										
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☒ Other ☐ _____

Page 1 of 2

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Allyn's LLC	_ _ _ _ _ _ _	B6

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Adam Last Name: Sweet Firm: Horizon	11/23/2015 (m m d d y y y y)	11/23/2015 (m m d d y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
PM379	_ _ _	MW4	_____ Feet MSL	_____ Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
NW 1/4 of SW 1/4 of Section 26, T 25 N, R 25 E/W
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village
	Kewaunee	31	Algoma

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
B6-1			1	asphalt base coarse				0		D				
			2	brown sand w/gravel										
B6-2			3					0		M				
			4	dk. brown sand w/gravel										
			5											
B6-3			6					0		M				
			7											
			8											
B6-4			9	lt. brown sand				0		M				
			10											
B6-5			11					0		M				
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Don Buttnacher	OMNNI Associates

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Sample Number and Type	Sample Length Att. & Recovered (in.)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			13	lt. gray sand										
B6-6			14					0		M				
			15	lt. brown sand										
B6-7			16	lt. gray sand				0		M				
			17	lt. brown sand										
B6-8			18					0		M/W	Sat	18.5'		
			19											
			20	lt. gray sand										
B6-9 * 12:40			21					0		W				
			22	lt. brown sand										
B6-10			23					0		W				
			24											
			25	EOB at 25 ft.										
			26											
			27											
			28											
			29											
			30											
			31											
			32											

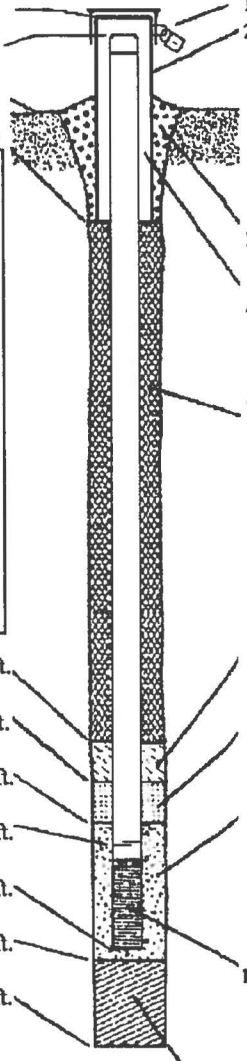
State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Allyn's LLC	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW1	
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	Wis. Unique Well No.: PM373	DNR Well ID No.: ____
Facility ID: ____	St. Plane ____ ft. N. ____ ft. E. S/C/N	Date Well Installed: 11/23/2015 (m m d d y y y y)	
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NW 1/4 of SW 1/4 of Sec. 26 T. 25 N, R. 25 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Adam Sweet / Horizon	
Distance from Waste/Source: 0 ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: ____



A. Protective pipe, top elevation 603.13 ft. MSL

B. Well casing, top elevation 602.05 ft. MSL

C. Land surface elevation 600.34 ft. MSL

D. Surface seal, bottom ____ ft. MSL or 0.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 Other ☐ ___

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 0.5 ft.

F. Fine sand, top ____ ft. MSL or 12.0 ft.

G. Filter pack, top ____ ft. MSL or 13.0 ft.

H. Screen joint, top ____ ft. MSL or 15.0 ft.

I. Well bottom ____ ft. MSL or 25.0 ft.

J. Filter pack, bottom ____ ft. MSL or 25.0 ft.

K. Borehole, bottom ____ ft. MSL or 25.0 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.07 in.

N. I.D. well casing 1.93 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 3.5 in.
b. Length: 4.9 ft.
c. Material: ____ Steel ☒ 04 Other ☐ ___
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____

3. Surface seal: ____ Bentonite ☐ 30 Concrete ☐ 01 Other ☐ ___

4. Material between well casing and protective pipe: ____ Bentonite ☐ 30 Other ☐ ___

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 8 bags Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐ ___

7. Fine sand material: Manufacturer, product name & mesh size
a. Sidley ____
b. Volume added ½ bag ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. Sidley ____
b. Volume added 7 bags ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ ___

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐ ___
b. Manufacturer Diedrich
c. Slot size: 0.01 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): ____ None ☒ 14 Other ☐ ___

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Don Brittnacher Firm: OMNNI Associates

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Allyn's LLC	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW2
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	Wis. Unique Well No.: PM374 / DNR Well ID No.: ____
Facility ID: ____	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 11/23/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NW 1/4 of SW 1/4 of Sec. 26, T. 25 N, R. 25 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Adam Sweet / Horizon
Distance from Waste/Source: 20 ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☒ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: ____

A. Protective pipe, top elevation 602.43 ft. MSL
B. Well casing, top elevation 602.08 ft. MSL
C. Land surface elevation 600.28 ft. MSL
D. Surface seal, bottom ____ ft. MSL or 0.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

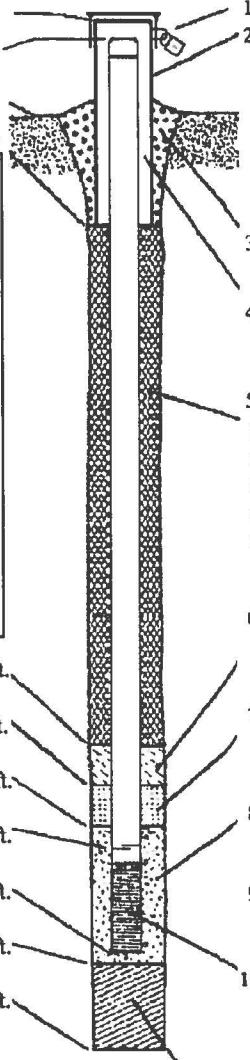
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ ____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis, if required):
____

E. Bentonite seal, top ____ ft. MSL or 0.5 ft.
F. Fine sand, top ____ ft. MSL or 12.0 ft.
G. Filter pack, top ____ ft. MSL or 13.0 ft.
H. Screen joint, top ____ ft. MSL or 15.0 ft.
I. Well bottom ____ ft. MSL or 25.0 ft.
J. Filter pack, bottom ____ ft. MSL or 25.0 ft.
K. Borehole, bottom ____ ft. MSL or 25.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.07 in.
N. I.D. well casing 1.93 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 3.5 in.
b. Length: 4.9 ft.
c. Material: ____ Steel ☒ 04 / Other ☐ ____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____
3. Surface seal: ____ Bentonite ☐ 30 / Concrete ☐ 01 / Other ☐ ____
4. Material between well casing and protective pipe: ____ Bentonite ☐ 30 / Other ☐ ____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 5 bags Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐ ____
7. Fine sand material: Manufacturer, product name & mesh size
a. Sidley
b. Volume added ½ bag ft³
8. Filter pack material: Manufacturer, product name & mesh size
a. Sidley
b. Volume added 7 bags ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ ____
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ ____
b. Manufacturer Diedrich
c. Slot size: 0.01 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): ____ None ☒ 14 / Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Don Brittnacher | Firm: OMNNI Associates

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Allyn's LLC	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW3	
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: PM378	DNR Well ID No.:
Facility ID	St. Plane ____ ft. N. ____ ft. E. S/C/N	Date Well Installed: 11/23/2015 (m m d d y y y y)	
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NW 1/4 of SW 1/4 of Sec. 26, T. 25 N, R. 25 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Adam Sweet / Horizon	
Distance from Waste/Source: 35 ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☒ Sidegradient d ☒ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation 599.83 ft. MSL

B. Well casing, top elevation 599.07 ft. MSL

C. Land surface elevation 599.76 ft. MSL

D. Surface seal, bottom _____ ft. MSL or 0.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 Other ☐ ___

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

_____

E. Bentonite seal, top _____ ft. MSL or 0.5 ft.

F. Fine sand, top _____ ft. MSL or 12.0 ft.

G. Filter pack, top _____ ft. MSL or 13.0 ft.

H. Screen joint, top _____ ft. MSL or 15.0 ft.

I. Well bottom _____ ft. MSL or 25.0 ft.

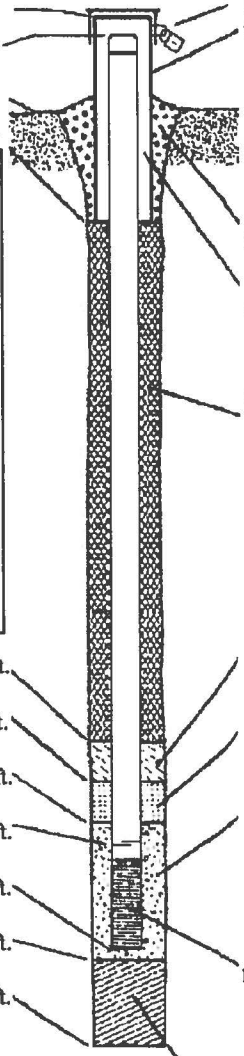
J. Filter pack, bottom _____ ft. MSL or 25.0 ft.

K. Borehole, bottom _____ ft. MSL or 25.0 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.07 in.

N. I.D. well casing 1.93 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04 Other ☐ ___
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 Concrete ☐ 01 Other ☐ ___

4. Material between well casing and protective pipe: Bentonite ☐ 30 Other ☐ ___

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 5 bags Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ ___

7. Fine sand material: Manufacturer, product name & mesh size
a. Sidley
b. Volume added ½ bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Sidley
b. Volume added 7 bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ ___

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐ ___
b. Manufacturer Diedrich
c. Slot size: 0.01 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ☒ 14 Other ☐ ___

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Don Brittnacher | Firm: OMNNI Associates

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Allyn's LLC	Local Grid Location of Well: ☐N. ☐S. _____ ft. ☐E. ☐W. _____ ft.	Well Name: MW4
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: PM379 / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 11/23/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NW 1/4 of SW 1/4 of Sec. 26 T. 25 N, R. 25 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Adam Sweet / Horizon
Distance from Waste/Source: 55 ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☒ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation 599.57 ft. MSL
B. Well casing, top elevation 599.18 ft. MSL
C. Land surface elevation 599.55 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 0.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

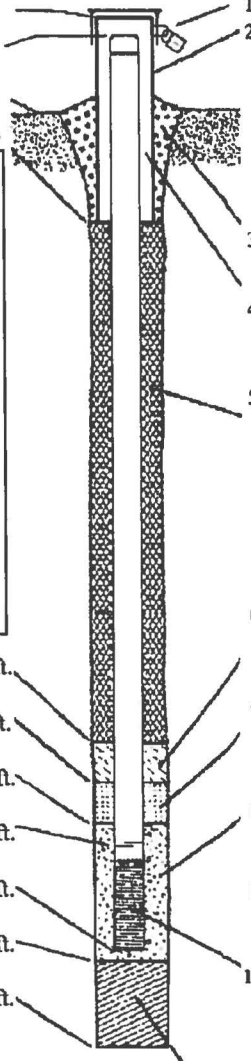
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ ___

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or 0.5 ft.
F. Fine sand, top _____ ft. MSL or 12.0 ft.
G. Filter pack, top _____ ft. MSL or 13.0 ft.
H. Screen joint, top _____ ft. MSL or 15.0 ft.
I. Well bottom _____ ft. MSL or 25.0 ft.
J. Filter pack, bottom _____ ft. MSL or 25.0 ft.
K. Borehole, bottom _____ ft. MSL or 25.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.07 in.
N. I.D. well casing 1.93 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04 / Other ☐ ___
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 / Concrete ☐ 01 / Other ☐ ___
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☐ ___
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 5 bags Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ ___
7. Fine sand material: Manufacturer, product name & mesh size
a. Sidley
b. Volume added ½ bag Ft³
8. Filter pack material: Manufacturer, product name & mesh size
a. Sidley
b. Volume added 7 bags Ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ ___
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ ___
b. Manufacturer Diedrich
c. Slot size: 0.01 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐ ___

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Don Brittnacher	OMNNI Associates

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Allyn's LLC	Kewaunee	MW1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	31	PM373	___

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☒ 51
pumped slowly	☐ 50
Other _____	☐ __

3. Time spent developing well ___26 min.

4. Depth of well (from top of well casisng) __25.__ ft.

5. Inside diameter of well __1.93 in.

6. Volume of water in filter pack and well casing ___2.9 gal.

7. Volume of water removed from well __50.0 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. __21.28 ft.	__21.38 ft.
Date	b. 02/16/2016 (m m d d y y y y)	02/16/2016 (m m d d y y y y)
Time	c. 12:12 ☐ a.m. ☒ p.m.	12:38 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) light brown	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Don Last Name: Brittnacher
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Harmon Last Name: Allyn
Facility/Firm: Allen's LLC
Street: 111 Steele St.
City/State/Zip: Algoma, WI 54201

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Don Brittnacher
Print Name: Don Brittnacher
Firm: OMNNI Associates

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Allyn's LLC	Kewaunee	MW2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	31	PM374	___

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☒	51
pumped slowly	☐	50
Other _____	☐	__

3. Time spent developing well __40 min.

4. Depth of well (from top of well casisng) __25.__ ft.

5. Inside diameter of well __1.98 in.

6. Volume of water in filter pack and well casing ___3.3 gal.

7. Volume of water removed from well __50.0 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. __20.75 ft.	__20.82 ft.
Date	b. 02/16/2016 (m m d d y y y y)	02/16/2016 (m m d d y y y y)
Time	c. 11:30 ☒ a.m. ☐ p.m.	12:10 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
	(Describe) light brown	(Describe)
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Don Last Name: Brittnacher
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Harmon Last Name: Allyn
Facility/Firm: Allyn's LLC
Street: 111 Steele St.
City/State/Zip: Algoma, WI 54201

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Don Brittnacher
Print Name: Don Brittnacher
Firm: OMNNI Associates

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Allyn's LLC	Kewaunee	MW3

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	31	PM378	___

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☒ 51
pumped slowly	☐ 50
Other _____	☐ __

3. Time spent developing well ___55 min.

4. Depth of well (from top of well casisng) __25.__ ft.

5. Inside diameter of well __1.93 in.

6. Volume of water in filter pack and well casing ___5.4 gal.

7. Volume of water removed from well __50.0 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. __18.12 ft.	__18.24 ft.
Date	b. 02/16/2016 (m m d d y y y y)	02/16/2016 (m m d d y y y y)
Time	c. 10:30 ☒ a.m. ☐ p.m.	11:25 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
	(Describe) light brown	(Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Don Last Name: Brittnacher
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Harmon Last Name: Allyn
Facility/Firm: Allyn's LLC
Street: 111 Steele St.
City/State/Zip: Algoma, WI 54201

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Don Brittnacher
Print Name: Don Brittnacher
Firm: OMNNI Associates

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Allyn's LLC	Kewaunee	MW4

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	31	PM379	___

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☒ 51
pumped slowly	☐ 50
Other _____	☐ __

3. Time spent developing well ___40 min.

4. Depth of well (from top of well casisng) __25.__ ft.

5. Inside diameter of well __1.93 in.

6. Volume of water in filter pack and well casing ___5.6 gal.

7. Volume of water removed from well __50.0 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. __17.88 ft.	__17.98 ft.
Date	b. 01/08/2016 (m m d d y y y y)	01/08/2016 (m m d d y y y y)
Time	c. 11:05 ☒ a.m. ☐ p.m.	11:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☑ 20 Turbid ☐ 25
(Describe)	light brown	
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Don Last Name: Brittnacher
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Harmon Last Name: Allyn
Facility/Firm: Allyn's LLC
Street: 111 Steele St.
City/State/Zip: Algoma, WI 54201

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Don Brittnacher
Print Name: Don Brittnacher
Firm: OMNNI Associates

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

GROUNDWATER MONITORING WELL INFORMATION FORM
Chapter 281 and 289, Wis. Stats.
Form 4400-89 Rev. 7-98

Facility Name	Facility ID Number	License, Permit or Monitoring No.	Date	Completed By (Name and Firm)
Allyn's LLC			11/24/15	Don Brithacher, OMNNI Associates

WI Unique Well No	Well Name	DNR Well ID Number	Well Location	Dir. N/E	Dir. S/W	Date Established	Well Casing Diam.	Well Casing Type	Elevations Top of Well Casing	Elevations Ground Surface	Reference MSL (Y)	Reference Site Datum (Y)	Depths Screen Top	Depths Initial Groundwater	Depths Well Depth	Screen Length	Well Type	Well Status	Enf. Stds.	Grad-ient	Distance to Waste
PM373	MW1		489366.4 291706.7	X X		11/23/15	2	PVC	602.05	600.34	✓		15'	19.56'	25'	10'	II/mw	A	✓	IN	0'
PM374	MW2		489347.7 291697.8	X X		11/23/15	2	PVC	602.08	600.28	✓		15'	18.96'	25'	10'	II/mw	A	✓	U	20'
PM378	MW3		489,350.8 291754.7	X X		11/23/15	2	PVC	599.07	599.76	✓		15'	18.81'	25'	10'	II/mw	A	✓	S	35'
PM379	MW4		489403.5 291761.8	X X		11/23/15	2	PVC	599.18	599.55	✓		15'	18.55'	25'	10'	II/mw	A	✓	D	55'

Location Coordinates Are: Kewaunee Co
☐ State Plane Coordinate ☐ Local Grid System
☐ Northern
☐ Central
☐ Southern

Grid Origin Location: (Check if estimated: ☐)
Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or
St. Plane ____ ft. N. ____ ft. E. S/C/N Zone

Remarks:

Completion of this form is mandatory under s. NR 507.14 and NR 110.25 Wis. Adm. Code. Failure to file this form may result in forfeiture of not less than $10 nor more than $5,000 for each day of violation. Personally identifiable information provided is intended to be used by the Department for the purposes related to the waste management program.

Well Specific Field Sheets

Facility Name: Allyn's LLC
Date: February 24, 2016
Weather Conditions: 33° F, 25 mph wind
Person(s) Sampling: Don Brittnacher

Sampling Equipment: Enviroline disposable bailers, Solonist 101 water level meter, peristaltic pump-micro purge, DO probe, pH/Conductivity (Oakton pH/Con. 10 meter).

Well Name	MW1	MW2	MW3	MW4
WI Unique Well No.	PM373	PM374	PM378	PM379
Top of PVC Casing Elevation (MSL)	602.05	602.08	599.07	599.18
Ground Surface Elevation (MSL)	600.34	600.28	599.76	599.55
Depth to Bottom of Well (ft)	13.50	13.50	13.50	13.50
Screen Top (MSL)	598.55	598.58	595.57	595.68
Screen Bottom (MSL)	588.55	588.58	585.57	585.68
Screen Length (ft)	10	10	10	10
Water Elevation (MSL)	580.78	581.31	580.94	581.00
Water Elevation (ft from ground surface)	19.56	18.96	18.81	18.55
Measured Depth to Water (ft)	21.27	20.77	18.13	18.18
Micro Purge Pump Setting	3.0	3.0	3.0	3.0
Time Purging Begun	1:05	12:30	11:01	10:15
Time Purging Completed	1:20	12:45	11:16	10:30
Amount Purged (gal)	2.0	2.0	2.0	2.0
Purged Dry? (Y/N)	N	N	N	N
Temperature (°C)	9.2	9.1	10.7	10.6
Conductivity (µS)	497	1771	1924	1169
pH (std. units)	7.28	7.47	7.35	7.21
Dissolved Oxygen (mg/L)	probe not working			
ORP (mV)	-	-	-	-
Color (Y/N)	N	N	N	N
Odor (Y/N)	Y, very slight	N	N	N
Turbidity (Y/N)	N	N	N	N
Sampling Parameters	VOCs, PAHs, Pb			
Sample field filtered? (Y/N)	Y - Pb; N - VOCs, PAHs			
Time Sample Withdrawn	1:22	12:47	11:18	10:32
Well secured? (Y/N)	Y	Y	Y	Y

APPENDIX 4

HANDBOOK OF FIELD PROCEDURES

HANDBOOK OF FIELD PROCEDURES

TABLE OF CONTENTS

PERSONNEL QUALIFICATIONS

Brian D. Wayner:	Completed 40-hour hazardous waste training. Bachelors Degree in Electrical Engineering from University of Wisconsin-Milwaukee. Masters Degree in Environmental Engineering from University of New Haven. PECFA Consultant Registration #47551. Licensed Professional Engineer (no. 35304), State of Wisconsin
Don Brittnacher:	Completed 40-hour hazardous waste training. Bachelors Degree in Geology from University of Notre Dame. Masters Degree in Environmental Health Engineering from University of Notre Dame. Licensed Professional Geologist (no. 462), State of Wisconsin Licensed Professional Engineer (no. 30286), State of Wisconsin PECFA Consultant Registration/Certified Site Assessor-42127.
Jason C. Weis:	Completed 40-hour hazardous waste training. Bachelors Degree in Civil Engineering from University of Wisconsin-Platteville. Masters Degree in Environmental Engineering from University of Wyoming. Licensed Professional Engineer (no. 36681), State of Wisconsin
Deanna L. Drum:	Completed 40-hour hazardous waste training. Associate Degree in Mechanical Design, Fox Valley Technical College.

SOIL BORING INSTALLATION PROCEDURES

A number of different drilling and Geoprobing®firms are used for environmental investigations. Borings intended to be converted to monitoring wells are advanced using 7 5/8" outside diameter (O.D.) x 4.5" inside diameter (I.D.) hollow stem augers or 6.25" O.D. solid stem augers powered by a truck-mounted drill rig. If bedrock drilling is required, borings are advanced using either air or mud-rotary drilling techniques. Soil borings not intended for monitoring wells are typically advanced using 4" O.D. solid stem augers. The Geoprobe®typically advances a 2" diameter hole. All soil borings that are not converted to permanent or temporary groundwater monitoring wells are properly abandoned per chapter NR 141, Wisconsin Administrative Code.

Samples are typically obtained from each boring at 2.5' intervals by split-spoon sampling according to American Society for Testing and Materials (ASTM) Standard D 1586. A portion of each sample is screened with a photoionization detector (PID). At each sampling interval, a representative portion of the soil is also collected for possible laboratory analysis. Soil samples are chosen from each boring for laboratory analysis based on headspace screening data, and visual and olfactory observations. In general, the sample from each boring that exhibits the highest PID reading is chosen for analysis. See the Soil Sampling Procedures below for further information pertaining to field headspace analysis and sample collection procedures.

SOIL SAMPLING PROCEDURES

All soil sampling is performed in accordance with the Wisconsin Department of Natural Resources (WDNR) publication PUBL-SW-127, Soil Sampling Requirements for LUST Site Investigations and Excavations and chapter COMM 10, Flammable and Combustible Liquids, Wis. Adm. Code. The soil samples are collected and analyzed in accordance with methods described in Table C-3 in Appendix C of WDNR PUBL-RR-614, Interim Guidance On Natural Attenuation For Petroleum Releases, 1999. Our standard instruments and sample collection procedures are as follows:

1. Soil samples are collected from a split-spoon sampler or a polyethylene tube during environmental drilling.

2. Sample collector wears new latex exam gloves when collecting samples to decrease the risk of personal exposure and cross contamination.

3. A portion of the sample is collected in a sampling syringe and placed in an appropriate container (see Table 1), immediately placed on ice, and later delivered to a WDNR-certified laboratory for analysis. This procedure is discussed in more detail later in this report.

4. The remaining portion of the sample is placed in a clean 4 oz. jar (approx. half-filled), and sealed with aluminum foil and a teflon-lined lid. The headspace sample is then agitated for a minimum of 30 seconds and allowed to equilibrate. Minimum equilibration time will correspond to the following specifications:

Minimum Sample Headspace Equilibration Time

Ambient Outside Air Temperature at the Time of Sample Collection:	Minimum Amount of Time Sample Must equilibrate at 70° F or Greater Temperature:
< 40 ° F	40 minutes
41 – 55 ° F	20 minutes
56 – 69 °F	10 minutes
> 70 °F	5 minutes

Instrument Specifications

When the sample has completed equilibration, it is promptly field analyzed with a portable PID. OMNNI uses either a Photovac Inc. Microtip HL-200 or ML-1000 or a Thermo Environmental Instruments Model 580A organic vapor monitor (OVM), both equipped with an 11.2 ev lamp. A background reading is first taken. The PID probe is then inserted into the jar through a single hole in the aluminum foil. The instrument reading is measured at one-half the distance between the foil seal and the sample surface. The measured reading is then recorded.

Isobutylene at a concentration of 100 ppm is used for field calibration gas. The PID meter is field calibrated at the following times:

- At the beginning of each day
- After any significant change in temperature or humidity
- Every three hours
- After any repairs to the instrument are performed

All samples are returned to the laboratory as soon as possible, usually the day the sample was collected. All samples are returned to the laboratory under chain-of-custody protocol, using form #4400-151. Time of sample collection and sample PID reading are listed. Care is taken to ensure that the chain-of-custody form is properly and fully completed before submitting to the laboratory. The samples are sent to a laboratory certified by the WDNR.

Table 2 on page 9 outlines the required WDNR laboratory analysis for specific contaminants. Soil analyses, other than those in Table 2, will be conducted in accordance with methods approved by the WDNR.

MONITORING WELL INSTALLATION AND DEVELOPMENT PROCEDURES

The permanent monitoring wells are typically constructed of two-inch, schedule 40, flush-thread polyvinyl chloride (PVC) casings and slotted well screens. Temporary wells are constructed of one-inch diameter, schedule 40 PVC casings and slotted screens. Prior to use, well parts are individually wrapped in plastic.

Permanent wells are installed and developed according to chapter NR 141, Wis. Adm. Code. The monitoring wells are installed with five to fifteen-foot screens which are placed in the borings to intersect the water table. Piezometers are installed with five-foot screens sealed beneath the water table. Filter pack and annular space seal material are installed by gravity as the augers are withdrawn from the hole. Wells are cut to the required height using a PVC pipe cutter.

An as-constructed well and boring survey is performed by OMNNI once field work is complete. Elevations are either based on a local datum of 100 feet, or a United States Geological Survey (USGS) elevation, assigned to a mark on a reference point located at the site. Ground elevation is surveyed to the nearest 0.1 foot, and the top of the well casing to the nearest 0.01 foot.

A horizontal grid system is established at the site with the origin of the grid set on the reference point. Wells and borings are located with respect to this grid system.

To properly develop each permanent monitoring well, water is removed until a consistent water quality is obtained. This is done by removing 10 times the water volume in the well and filter pack, removing water until it is free of sediment, or removing the water until the well is purged dry. Water is removed from the wells by bailing the water with as little agitation as possible. If the water level is unaffected by bailing and large amounts of water are to be removed, the well is developed by using the surge and purge method with a centrifugal pump. No water is added to the well during development. Temporary wells may be developed by allowing the peristaltic pump to run until the water is as clear as possible.

The development water is drummed, pending the results of analytical testing. If the well is suspected to be clean and small volumes of water are to be removed, the water may be spread on pavement to volatilize any possible contaminants. If the water is contaminated, it is properly disposed.

GROUNDWATER SAMPLING PROCEDURES AND VOLATILE ORGANIC COMPOUND (VOC) SAMPLING NOTES

A. Devices used to measure water elevation, purge wells and retrieve samples:

1. Groundwater levels are measured with a fiberglass reel tape with a weighted stainless steel "sounder" at the end.

2. In wells that have free product on top of the water surface, depth to water and depth to product are measured with a fiberglass reel tape with an interface probe at the end.

3. Wells are purged and samples are collected by one of the following methods:

   a) Wells are purged with a disposable bailer.

   b) Alternate purging and sampling equipment consisting of a peristaltic groundwater sampling pump.

B. Procedures for calculating purge volumes, purging wells and sampling:

1. Wells are normally sampled starting from the upgradient area and progressing toward the downgradient area of the site. When the degree of contamination is known, least contaminated wells are sampled first, the more contaminated wells sampled last.

2. All the wells are opened before the depth to groundwater is determined to allow groundwater to equilibrate.

3. Wells are purged with a bailer by removing four water volumes within a casing or all the water until the well runs dry. When using a peristaltic pump, water is removed for 10 to 20 minutes.

4. Once all the wells have been purged, the samples are drawn using equipment mentioned above. (See Table 3 - Water Sample Preparation Guide)

5. Sample odor, turbidity, temperature, conductivity, dissolved oxygen (DO) and pH are determined on the unfiltered portions of the sample and recorded on the well specific field sheet.

6. When the sample requires filtering, the sample is filtered with a hand pump or an in-line pump (as soon after collection as possible).

7. Quality Assurance/Quality Control Samples

a) Trip and field blanks each consist of three new 40 milliliter (ml) vials filled with deionized water. These are sent to the laboratory for petroleum volatile organic compound (PVOC) or VOC analysis.

b) One field blank should be analyzed for every 10 samples collected. At least one trip blank is taken per site visit. Trip blanks are poured, labeled, and sealed, then taken out in the field. Field blanks are poured, labeled, and sealed at the site. Trip blanks are kept with all samples collected until reaching the field. If there is a possibility for field cross-contamination of samples, field blanks may be taken at the sample collector's discretion.

c) One temperature blank may be collected per batch of samples.

d) One duplicate sample may be collected with every 10 samples.

8. Samples are refrigerated, then transported to a WDNR-certified laboratory for testing as soon as possible.

9. A chain-of-custody form is filled out, listing all samples collected, requested laboratory analysis, date and time of collection, and the name of the sample collector. This document remains with the samples at all times and bears the names of all persons handling the samples until they are received at the laboratory.

C. Procedures for cleaning equipment:

1. In the field, sampling equipment is rinsed with a 10% methanol solution and then flushed three times with deionized water between each well sampled.

2. Equipment that is still contaminated after field cleaning will be rinsed with tap water, washed off with detergent, rinsed with a 10% methanol solution, and flushed three times with deionized water.

D. Transporting samples to laboratory:

1. Filtered, preserved, labeled, and sealed samples are placed on ice and transported to the laboratory for analysis as soon as possible.

2. The laboratory will be notified by the sample collector when courier service is required.

E. The above procedures constitute normal groundwater sampling procedures for permanent groundwater monitoring wells. Modifications to each of the outlined items may be applicable for site specific conditions or special volatile organic sampling considerations. Methods used are consistent with WDNR's Groundwater

Sampling Field Manual, Publ. DG-038 96, September 1996 and WDNR's Groundwater Sampling Desk Reference, Publ. DG-037 96, September 1996.

DECONTAMINATION PROCEDURES

Decontamination is the process of removing and/or neutralizing contaminants that may have accumulated on personnel protective equipment (PPE) and equipment. Proper decontamination is a critical element in the control of hazards which helps ensure the health and safety of workers. Proper decontamination also contains the contamination to the site, thus preventing further environmental problems.

Drilling

The following decontamination procedures should be used when completing borings, installing monitoring wells, and/or installing remediation systems.

A. Between samples, the split spoon will be cleaned in a multiple rinse, surfactant solution (soap and water or Alconox solution.)

B. The sample will be collected while wearing new latex exam gloves.

C. The surface upon which the sample is collected is cleaned between samples.

D. The latex exam gloves are changed between samples.

E. Soil which has accumulated around the boring will either be stockpiled or drummed. If the soil is stockpiled, it will be placed on and covered with plastic. The stockpiled or drummed soil will later be disposed in compliance with the WDNR regulations.

F. Upon completion of the boring, the augers will be decontaminated by drilling contractors before they are used again. The following procedures will be followed when decontaminating drilling equipment:

1. A decontamination basin lined with plastic is set up near the work area.

2. All contaminated equipment is placed in the decontamination basin.

3. A pressurized steam cleaner is used to clean all contaminated equipment.

4. Following steam cleaning, the auger is removed from the decontamination basin.

5. Upon completion of the job, the accumulated water in the decontamination basin is pumped out and placed in a drum. Wash water used for cleaning the split spoons is also added to the drum. The drum will be disposed in

compliance with all regulatory agencies. The plastic used in the decontamination basin is disposed in compliance with all regulatory agencies.

TABLE 1 – SOIL SAMPLE PREPARATION GUIDE*

TEST	CONTAINER SIZE**	SAMPLE SIZE	PRESERVATIVE	HOLDING TIME
GRO Gasoline Range Organics	2 oz. wide mouth glass jar or 40 ml vial (2 per sample)	25 g – jar 13 g – vial	25 ml Methanol (purge & trap grade) – jar none required – vial	4 days
DRO Diesel Range Organics	2 oz. wide mouth glass jar or 40 ml vial (2 per sample)	25 g – jar 13 g – vial	None	4 days
Total Lead/ or all RCRA Metals	4 oz. wide mouth plastic jar (2 per sample)	4 oz.	None	6 months
VOC / PVOC Volatile Organic Compounds	2 oz. wide mouth glass jar or 40 ml vial (2 per sample)	25 g – jar 13 g – vial	25 ml Methanol (purge & trap grade) – jar none required – vial	4 days preserved , 48 hours non-preserved
PCB Polychlorinated Biphenyls	4 oz. wide mouth glass jar (2 per sample)	4 oz.	None	14 days
PAH Polynuclear Aromatic Hydrocarbons	4 oz. wide mouth glass jar (2 per sample)	4 oz.	None	14 days

* All samples will be sealed, labeled, and placed on ice immediately after collection.

** To ensure a proper seal between the sample container and the cap, no soil shall remain on the jar or cap threads. When samples are collected with the syringe, a 40 ml vial is used and the sample is preserved by the laboratory.

TABLE 2 – SOIL SAMPLE ANALYSIS GUIDE FOR PETROLEUM CONTAMINATION

PETROLEUM SUBSTANCE	CLOSURE ASSESSMENT	SOLID WASTE PRO./LANDFILLS	SITE INVESTIGATIONS
Gasoline Aviation Fuel	GRO	Free Liquids GRO Benzene Haz. Waste Det.	GRO PVOC/VOC Pb
Diesel Jet Fuel No.'s 1, 2, 4 Fuel Oil	DRO	Free Liquids GRO Benzene Haz. Waste Det.	DRO PVOC PAH
Crude Oil Lubricat. Oil No. 6 Fuel Oil	DRO	Free Liquids DRO Haz. Waste Det.	DRO PAH
Unknown Petroleum	GRO and DRO	Free Liquids GRO and DRO Pb, Cd, CN, S Haz Waste Det.	GRO and DRO VOC/PVOC PAH Pb, Cd
Waste Oil	DRO	Free Liquids DRO VOC Pb, Cd, CN, S Haz. Waste Det.	DRO VOC/PVOC PAH PCB Pb, Cd

TABLE 3 – GROUNDWATER SAMPLE PREPARATION GUIDE*

TEST	SAMPLE SIZE / CONTAINER	PRESERVATIVE	HOLDING TIME
VOC / PVOC Volatile Organic Compounds	3 - 40 ml vials filled with no headspace	0.5 ml of 1:1 HC1	14 days
DRO Diesel Range Organics	1 - 1 liter amber glass bottles	5 ml of 1:1 HC1	7 days
GRO Gasoline Range Organics	3 - 40 ml vials filled with no headspace	0.5 ml of 1:1 HC1	14 days
PAH Polynuclear Aromatic Hydrocarbons	1 - 1 liter amber glass bottles	None	7 days
PCB Polychlorinated Biphenyls	1 - 1 liter amber glass bottle	None	7 days
LEAD / RCRA metals**	1 - 250 ml plastic bottle	2 ml of HNO_3 or to a pH of < 2	6 months

* All samples will be sealed, labeled, and placed on ice immediately after collection.

** When testing for dissolved metals, the sample will be field filtered before preservation.

APPENDIX 5

LABORATORY ANALYSIS RESULTS AND CHAIN OF CUSTODY DOCUMENTATION

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DON BRITTNACHER
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Report Date *15-Dec-15*

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088A
Sample ID B3-1
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	79.1	%			1	5021		11/25/2015	DJL	1
Inorganic										
Metals										
Lead, Total	6.13	mg/Kg	0.52	1.72	2	6010B		12/2/2015	CWT	1 49
Organic										
PAH SIM										
Acenaphthene	< 0.0201	mg/kg	0.0201	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Acenaphthylene	< 0.0198	mg/kg	0.0198	0.062	1	M8270C	12/1/2015	12/2/2015	MDK	1
Anthracene	< 0.0171	mg/kg	0.0171	0.054	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)anthracene	< 0.0191	mg/kg	0.0191	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)pyrene	< 0.0143	mg/kg	0.0143	0.045	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(b)fluoranthene	< 0.019	mg/kg	0.019	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(g,h,i)perylene	< 0.02	mg/kg	0.02	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(k)fluoranthene	< 0.0174	mg/kg	0.0174	0.055	1	M8270C	12/1/2015	12/2/2015	MDK	1
Chrysene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Dibenzo(a,h)anthracene	< 0.015	mg/kg	0.015	0.047	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluoranthene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluorene	< 0.0184	mg/kg	0.0184	0.058	1	M8270C	12/1/2015	12/2/2015	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.0165	mg/kg	0.0165	0.052	1	M8270C	12/1/2015	12/2/2015	MDK	1
1-Methyl naphthalene	< 0.0205	mg/kg	0.0205	0.065	1	M8270C	12/1/2015	12/2/2015	MDK	1
2-Methyl naphthalene	< 0.0199	mg/kg	0.0199	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Naphthalene	< 0.0203	mg/kg	0.0203	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Phenanthrene	< 0.0198	mg/kg	0.0198	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Pyrene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/1/2015	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/1/2015	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/1/2015	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088A
Sample ID B3-1
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/1/2015	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/1/2015	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/1/2015	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/1/2015	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/1/2015	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/1/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/1/2015	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/1/2015	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/1/2015	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/1/2015	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/1/2015	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/1/2015	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/1/2015	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/1/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/1/2015	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/1/2015	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/1/2015	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/1/2015	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/1/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/1/2015	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/1/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
Tetrachloroethene	0.087 "J"	mg/kg	0.054	0.17	1	8260B		12/1/2015	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/1/2015	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/1/2015	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/1/2015	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/1/2015	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/1/2015	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/1/2015	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/1/2015	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/1/2015	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/1/2015	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/1/2015	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/1/2015	CJR	1
SUR - 4-Bromofluorobenzene	102	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Dibromofluoromethane	100	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Toluene-d8	93	Rec %			1	8260B		12/1/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	97	Rec %			1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088B
Sample ID B3-10
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	87.7	%			1	5021		11/25/2015	DJL	1
Organic										
PAH SIM										
Acenaphthene	0.0287 "J"	mg/kg	0.0201	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Acenaphthylene	< 0.0198	mg/kg	0.0198	0.062	1	M8270C	12/1/2015	12/2/2015	MDK	1
Anthracene	0.0257 "J"	mg/kg	0.0171	0.054	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)anthracene	< 0.0191	mg/kg	0.0191	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)pyrene	< 0.0143	mg/kg	0.0143	0.045	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(b)fluoranthene	< 0.019	mg/kg	0.019	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(g,h,i)perylene	< 0.02	mg/kg	0.02	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(k)fluoranthene	< 0.0174	mg/kg	0.0174	0.055	1	M8270C	12/1/2015	12/2/2015	MDK	1
Chrysene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Dibenzo(a,h)anthracene	< 0.015	mg/kg	0.015	0.047	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluoranthene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluorene	0.053 "J"	mg/kg	0.0184	0.058	1	M8270C	12/1/2015	12/2/2015	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.0165	mg/kg	0.0165	0.052	1	M8270C	12/1/2015	12/2/2015	MDK	1
1-Methyl naphthalene	0.061 "J"	mg/kg	0.0205	0.065	1	M8270C	12/1/2015	12/2/2015	MDK	1
2-Methyl naphthalene	0.107	mg/kg	0.0199	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Naphthalene	0.053 "J"	mg/kg	0.0203	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Phenanthrene	0.145	mg/kg	0.0198	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Pyrene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088C
Sample ID B4-9
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	87.4	%			1	5021		11/25/2015	DJL	1
Inorganic										
Metals										
Lead, Total	2.46	mg/Kg	0.52	1.72	2	6010B		12/2/2015	CWT	1 49
Organic										
PAH SIM										
Acenaphthene	< 0.0201	mg/kg	0.0201	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Acenaphthylene	< 0.0198	mg/kg	0.0198	0.062	1	M8270C	12/1/2015	12/2/2015	MDK	1
Anthracene	< 0.0171	mg/kg	0.0171	0.054	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)anthracene	< 0.0191	mg/kg	0.0191	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)pyrene	< 0.0143	mg/kg	0.0143	0.045	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(b)fluoranthene	< 0.019	mg/kg	0.019	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(g,h,i)perylene	< 0.02	mg/kg	0.02	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(k)fluoranthene	< 0.0174	mg/kg	0.0174	0.055	1	M8270C	12/1/2015	12/2/2015	MDK	1
Chrysene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Dibenzo(a,h)anthracene	< 0.015	mg/kg	0.015	0.047	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluoranthene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluorene	< 0.0184	mg/kg	0.0184	0.058	1	M8270C	12/1/2015	12/2/2015	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.0165	mg/kg	0.0165	0.052	1	M8270C	12/1/2015	12/2/2015	MDK	1
1-Methyl naphthalene	< 0.0205	mg/kg	0.0205	0.065	1	M8270C	12/1/2015	12/2/2015	MDK	1
2-Methyl naphthalene	< 0.0199	mg/kg	0.0199	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Naphthalene	< 0.0203	mg/kg	0.0203	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Phenanthrene	< 0.0198	mg/kg	0.0198	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Pyrene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/1/2015	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/1/2015	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/1/2015	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/1/2015	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/1/2015	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/1/2015	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/1/2015	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/1/2015	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/1/2015	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/1/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/1/2015	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/1/2015	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/1/2015	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/1/2015	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/1/2015	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/1/2015	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/1/2015	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/1/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088C
Sample ID B4-9
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/1/2015	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/1/2015	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/1/2015	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/1/2015	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/1/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/1/2015	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/1/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
Tetrachloroethene	0.108 "J"	mg/kg	0.054	0.17	1	8260B		12/1/2015	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/1/2015	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/1/2015	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/1/2015	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/1/2015	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/1/2015	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/1/2015	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/1/2015	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/1/2015	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/1/2015	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/1/2015	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/1/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Dibromofluoromethane	104	Rec %			1	8260B		12/1/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	91	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Toluene-d8	96	Rec %			1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088D
Sample ID B5-4
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	95.7	%			1	5021		11/25/2015	DJL	1
Inorganic										
Metals										
Lead, Total	1.64 "J"	mg/Kg	0.52	1.72	2	6010B		12/2/2015	CWT	1 49
Organic										
PAH SIM										
Acenaphthene	< 0.0201	mg/kg	0.0201	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Acenaphthylene	< 0.0198	mg/kg	0.0198	0.062	1	M8270C	12/1/2015	12/2/2015	MDK	1
Anthracene	< 0.0171	mg/kg	0.0171	0.054	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)anthracene	< 0.0191	mg/kg	0.0191	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)pyrene	< 0.0143	mg/kg	0.0143	0.045	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(b)fluoranthene	0.0209 "J"	mg/kg	0.019	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(g,h,i)perylene	0.041 "J"	mg/kg	0.02	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(k)fluoranthene	< 0.0174	mg/kg	0.0174	0.055	1	M8270C	12/1/2015	12/2/2015	MDK	1
Chrysene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Dibenzo(a,h)anthracene	< 0.015	mg/kg	0.015	0.047	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluoranthene	0.023 "J"	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluorene	< 0.0184	mg/kg	0.0184	0.058	1	M8270C	12/1/2015	12/2/2015	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.0165	mg/kg	0.0165	0.052	1	M8270C	12/1/2015	12/2/2015	MDK	1
1-Methyl naphthalene	< 0.0205	mg/kg	0.0205	0.065	1	M8270C	12/1/2015	12/2/2015	MDK	1
2-Methyl naphthalene	< 0.0199	mg/kg	0.0199	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Naphthalene	< 0.0203	mg/kg	0.0203	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Phenanthrene	0.0231 "J"	mg/kg	0.0198	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Pyrene	0.0237 "J"	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/1/2015	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/1/2015	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/1/2015	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/1/2015	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/1/2015	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/1/2015	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/1/2015	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/1/2015	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/1/2015	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/1/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/1/2015	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/1/2015	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/1/2015	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/1/2015	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/1/2015	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/1/2015	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/1/2015	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/1/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088D
Sample ID B5-4
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/1/2015	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/1/2015	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/1/2015	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/1/2015	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/1/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/1/2015	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/1/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
Tetrachloroethene	0.182	mg/kg	0.054	0.17	1	8260B		12/1/2015	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/1/2015	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/1/2015	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/1/2015	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/1/2015	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/1/2015	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/1/2015	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/1/2015	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/1/2015	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/1/2015	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/1/2015	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/1/2015	CJR	1
SUR - 4-Bromofluorobenzene	104	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Dibromofluoromethane	104	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Toluene-d8	93	Rec %			1	8260B		12/1/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	97	Rec %			1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088E
Sample ID B6-9
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	90.2	%			1	5021		11/25/2015	DJL	1
Inorganic										
Metals										
Lead, Total	2.16	mg/Kg	0.52	1.72	2	6010B		12/2/2015	CWT	1 49
Organic										
PAH SIM										
Acenaphthene	< 0.0201	mg/kg	0.0201	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Acenaphthylene	< 0.0198	mg/kg	0.0198	0.062	1	M8270C	12/1/2015	12/2/2015	MDK	1
Anthracene	< 0.0171	mg/kg	0.0171	0.054	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)anthracene	0.0201 "J"	mg/kg	0.0191	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(a)pyrene	0.0214 "J"	mg/kg	0.0143	0.045	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(b)fluoranthene	0.0194 "J"	mg/kg	0.019	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(g,h,i)perylene	0.068	mg/kg	0.02	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Benzo(k)fluoranthene	< 0.0174	mg/kg	0.0174	0.055	1	M8270C	12/1/2015	12/2/2015	MDK	1
Chrysene	0.0235 "J"	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Dibenzo(a,h)anthracene	< 0.015	mg/kg	0.015	0.047	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluoranthene	< 0.0192	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
Fluorene	< 0.0184	mg/kg	0.0184	0.058	1	M8270C	12/1/2015	12/2/2015	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.0165	mg/kg	0.0165	0.052	1	M8270C	12/1/2015	12/2/2015	MDK	1
1-Methyl naphthalene	< 0.0205	mg/kg	0.0205	0.065	1	M8270C	12/1/2015	12/2/2015	MDK	1
2-Methyl naphthalene	< 0.0199	mg/kg	0.0199	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Naphthalene	< 0.0203	mg/kg	0.0203	0.064	1	M8270C	12/1/2015	12/2/2015	MDK	1
Phenanthrene	< 0.0198	mg/kg	0.0198	0.063	1	M8270C	12/1/2015	12/2/2015	MDK	1
Pyrene	0.043 "J"	mg/kg	0.0192	0.061	1	M8270C	12/1/2015	12/2/2015	MDK	1
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/1/2015	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/1/2015	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/1/2015	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/1/2015	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/1/2015	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/1/2015	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/1/2015	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/1/2015	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/1/2015	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/1/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/1/2015	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/1/2015	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/1/2015	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/1/2015	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/1/2015	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/1/2015	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/1/2015	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/1/2015	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/1/2015	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/1/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1

Project Name ALLYN, ALGOMA **Invoice #** E30088
Project # N2162C15

Lab Code 5030088E
Sample ID B6-9
Sample Matrix Soil
Sample Date 11/23/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/1/2015	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/1/2015	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/1/2015	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/1/2015	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/1/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/1/2015	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/1/2015	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/1/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/1/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/1/2015	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/1/2015	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/1/2015	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/1/2015	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/1/2015	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/1/2015	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/1/2015	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/1/2015	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/1/2015	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/1/2015	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/1/2015	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/1/2015	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/1/2015	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/1/2015	CJR	1
SUR - Toluene-d8	92	Rec %			1	8260B		12/1/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	103	Rec %			1	8260B		12/1/2015	CJR	1
SUR - 4-Bromofluorobenzene	105	Rec %			1	8260B		12/1/2015	CJR	1
SUR - Dibromofluoromethane	103	Rec %			1	8260B		12/1/2015	CJR	1

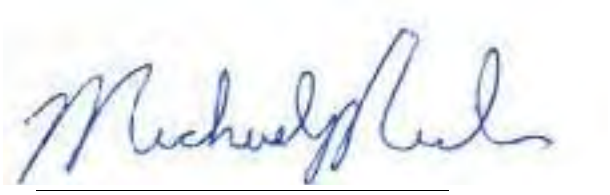
"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.
49	Sample diluted to compensate for matrix interference.

CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # No 279

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | Quote No.:

Project #: N2162C15

Sampler: (signature) Don Brittnacher

Project (Name / Location): Allyn, Algoma

Reports To: Don Brittnacher	Invoice To: Harmon Allyn,
Company OMNNI Associates	Company c/o John Emery
Address One Systems Dr.	Address
City State Zip Appleton, WI 54914	City State Zip - send to OMNNI -
Phone 735-6900	Phone
FAX 830-6100	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
5030088[1]	B3-1	11-23-15	10:00		X		3	S	none			X			X							X		0
B	B3-10	↓	10:50		X		2	S	↓						X									0
C	B4-9		2:50		X		3	S				X			X							X		0
D	B5-4		11:40		X		3	S				X			X							X		0
E	B6-9		12:40		X		3	S				X			X							X		0
	~~B7~~	↓			~~X~~		~~3~~	~~S~~	↓			~~X~~			~~X~~							~~X~~		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

No B7 sample was taken.

Sample Integrity - To be completed by receiving lab.
Method of Shipment: [illegible]
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Don Brittnacher					

Received in Laboratory By: [signature] Time: 11:22 Date: 11/24/15

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DON BRITTNACHER
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Report Date *01-Mar-16*

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553A
Sample ID TRIP
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		2/26/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		2/26/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		2/26/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		2/26/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		2/26/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		2/26/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		2/26/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		2/26/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		2/26/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		2/26/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		2/26/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		2/26/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		2/26/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		2/26/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		2/26/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		2/26/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		2/26/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553A
Sample ID TRIP
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		2/26/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		2/26/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		2/26/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		2/26/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		2/26/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		2/26/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		2/26/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		2/26/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		2/26/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		2/26/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		2/26/2016	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		2/26/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		2/26/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		2/26/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		2/26/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		2/26/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		2/26/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		2/26/2016	CJR	1
SUR - 4-Bromofluorobenzene	102	REC %			1	8260B		2/26/2016	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		2/26/2016	CJR	1
SUR - Toluene-d8	98	REC %			1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553B
Sample ID MW1
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Dissolved	< 0.7	ug/L	0.7	2.5	1	7421		2/26/2016	CWT	1
Organic										
PAH SIM										
Acenaphthene	0.037 "J"	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Acenaphthylene	< 0.019	ug/l	0.019	0.061	1	M8270C	2/29/2016	4/29/2016	MDK	1
Anthracene	< 0.019	ug/l	0.019	0.062	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)pyrene	< 0.021	ug/l	0.021	0.067	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(b)fluoranthene	< 0.018	ug/l	0.018	0.058	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(g,h,i)perylene	< 0.025	ug/l	0.025	0.081	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(k)fluoranthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Chrysene	< 0.02	ug/l	0.02	0.065	1	M8270C	2/29/2016	4/29/2016	MDK	1
Dibenzo(a,h)anthracene	< 0.025	ug/l	0.025	0.078	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluoranthene	< 0.017	ug/l	0.017	0.053	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluorene	0.038 "J"	ug/l	0.021	0.066	1	M8270C	2/29/2016	4/29/2016	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.023	ug/l	0.023	0.074	1	M8270C	2/29/2016	4/29/2016	MDK	1
1-Methyl naphthalene	0.094	ug/l	0.024	0.076	1	M8270C	2/29/2016	4/29/2016	MDK	1
2-Methyl naphthalene	0.033 "J"	ug/l	0.024	0.075	1	M8270C	2/29/2016	4/29/2016	MDK	1
Naphthalene	0.11	ug/l	0.019	0.06	1	M8270C	2/29/2016	4/29/2016	MDK	1
Phenanthrene	0.073	ug/l	0.017	0.055	1	M8270C	2/29/2016	4/29/2016	MDK	1
Pyrene	< 0.02	ug/l	0.02	0.063	1	M8270C	2/29/2016	4/29/2016	MDK	1
VOC's										
Benzene	< 4.4	ug/l	4.4	14	10	8260B		2/26/2016	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		2/26/2016	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		2/26/2016	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		2/26/2016	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		2/26/2016	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		2/26/2016	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		2/26/2016	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		2/26/2016	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		2/26/2016	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		2/26/2016	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		2/26/2016	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		2/26/2016	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		2/26/2016	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		2/26/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		2/26/2016	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		2/26/2016	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		2/26/2016	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		2/26/2016	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		2/26/2016	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		2/26/2016	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		2/26/2016	CJR	1
1,1-Dichloroethane	< 11	ug/l	11	36	10	8260B		2/26/2016	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		2/26/2016	CJR	1
cis-1,2-Dichloroethene	9.6 "J"	ug/l	4.5	14	10	8260B		2/26/2016	CJR	1
trans-1,2-Dichloroethene	< 5.4	ug/l	5.4	17	10	8260B		2/26/2016	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		2/26/2016	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		2/26/2016	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		2/26/2016	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		2/26/2016	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		2/26/2016	CJR	1
Ethylbenzene	< 7.1	ug/l	7.1	23	10	8260B		2/26/2016	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		2/26/2016	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		2/26/2016	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553B
Sample ID MW1
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methylene chloride	< 13	ug/l	13	42	10	8260B		2/26/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		2/26/2016	CJR	1
Naphthalene	< 16	ug/l	16	52	10	8260B		2/26/2016	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		2/26/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		2/26/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		2/26/2016	CJR	1
Tetrachloroethene	310	ug/l	4.9	15	10	8260B		2/26/2016	CJR	1
Toluene	< 4.4	ug/l	4.4	14	10	8260B		2/26/2016	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		2/26/2016	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		2/26/2016	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		2/26/2016	CJR	1
1,1,2-Trichloroethane	< 4.8	ug/l	4.8	15.2	10	8260B		2/26/2016	CJR	1
Trichloroethene (TCE)	< 4.7	ug/l	4.7	15	10	8260B		2/26/2016	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		2/26/2016	CJR	1
1,2,4-Trimethylbenzene	< 16	ug/l	16	50	10	8260B		2/26/2016	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		2/26/2016	CJR	1
Vinyl Chloride	< 1.7	ug/l	1.7	5.4	10	8260B		2/26/2016	CJR	1
m&p-Xylene	< 22	ug/l	22	69	10	8260B		2/26/2016	CJR	1
o-Xylene	< 9	ug/l	9	29	10	8260B		2/26/2016	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			10	8260B		2/26/2016	CJR	1
SUR - Dibromofluoromethane	100	REC %			10	8260B		2/26/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			10	8260B		2/26/2016	CJR	1
SUR - Toluene-d8	100	REC %			10	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553C
Sample ID MW2
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Dissolved	< 0.7	ug/L	0.7	2.5	1	7421		2/26/2016	CWT	1
Organic										
PAH SIM										
Acenaphthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Acenaphthylene	< 0.019	ug/l	0.019	0.061	1	M8270C	2/29/2016	4/29/2016	MDK	1
Anthracene	< 0.019	ug/l	0.019	0.062	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)pyrene	< 0.021	ug/l	0.021	0.067	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(b)fluoranthene	< 0.018	ug/l	0.018	0.058	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(g,h,i)perylene	< 0.025	ug/l	0.025	0.081	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(k)fluoranthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Chrysene	< 0.02	ug/l	0.02	0.065	1	M8270C	2/29/2016	4/29/2016	MDK	1
Dibenzo(a,h)anthracene	< 0.025	ug/l	0.025	0.078	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluoranthene	< 0.017	ug/l	0.017	0.053	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluorene	< 0.021	ug/l	0.021	0.066	1	M8270C	2/29/2016	4/29/2016	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.023	ug/l	0.023	0.074	1	M8270C	2/29/2016	4/29/2016	MDK	1
1-Methyl naphthalene	< 0.024	ug/l	0.024	0.076	1	M8270C	2/29/2016	4/29/2016	MDK	1
2-Methyl naphthalene	< 0.024	ug/l	0.024	0.075	1	M8270C	2/29/2016	4/29/2016	MDK	1
Naphthalene	< 0.019	ug/l	0.019	0.06	1	M8270C	2/29/2016	4/29/2016	MDK	1
Phenanthrene	< 0.017	ug/l	0.017	0.055	1	M8270C	2/29/2016	4/29/2016	MDK	1
Pyrene	< 0.02	ug/l	0.02	0.063	1	M8270C	2/29/2016	4/29/2016	MDK	1
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		2/26/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		2/26/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		2/26/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		2/26/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		2/26/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		2/26/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		2/26/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		2/26/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		2/26/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		2/26/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		2/26/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		2/26/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		2/26/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		2/26/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		2/26/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		2/26/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		2/26/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		2/26/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553C
Sample ID MW2
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		2/26/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		2/26/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		2/26/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		2/26/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		2/26/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Tetrachloroethene	39	ug/l	0.49	1.5	1	8260B		2/26/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		2/26/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		2/26/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		2/26/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		2/26/2016	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		2/26/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		2/26/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		2/26/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		2/26/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		2/26/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		2/26/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			1	8260B		2/26/2016	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1	8260B		2/26/2016	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		2/26/2016	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553D
Sample ID MW3
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Dissolved	< 0.7	ug/L	0.7	2.5	1	7421		2/26/2016	CWT	1
Organic										
PAH SIM										
Acenaphthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Acenaphthylene	< 0.019	ug/l	0.019	0.061	1	M8270C	2/29/2016	4/29/2016	MDK	1
Anthracene	< 0.019	ug/l	0.019	0.062	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)pyrene	< 0.021	ug/l	0.021	0.067	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(b)fluoranthene	< 0.018	ug/l	0.018	0.058	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(g,h,i)perylene	< 0.025	ug/l	0.025	0.081	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(k)fluoranthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Chrysene	< 0.02	ug/l	0.02	0.065	1	M8270C	2/29/2016	4/29/2016	MDK	1
Dibenzo(a,h)anthracene	< 0.025	ug/l	0.025	0.078	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluoranthene	< 0.017	ug/l	0.017	0.053	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluorene	< 0.021	ug/l	0.021	0.066	1	M8270C	2/29/2016	4/29/2016	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.023	ug/l	0.023	0.074	1	M8270C	2/29/2016	4/29/2016	MDK	1
1-Methyl naphthalene	< 0.024	ug/l	0.024	0.076	1	M8270C	2/29/2016	4/29/2016	MDK	1
2-Methyl naphthalene	< 0.024	ug/l	0.024	0.075	1	M8270C	2/29/2016	4/29/2016	MDK	1
Naphthalene	< 0.019	ug/l	0.019	0.06	1	M8270C	2/29/2016	4/29/2016	MDK	1
Phenanthrene	< 0.017	ug/l	0.017	0.055	1	M8270C	2/29/2016	4/29/2016	MDK	1
Pyrene	< 0.02	ug/l	0.02	0.063	1	M8270C	2/29/2016	4/29/2016	MDK	1
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		2/26/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		2/26/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		2/26/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		2/26/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		2/26/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		2/26/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		2/26/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		2/26/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		2/26/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		2/26/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		2/26/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		2/26/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		2/26/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		2/26/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		2/26/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		2/26/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		2/26/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		2/26/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553D
Sample ID MW3
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		2/26/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		2/26/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		2/26/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		2/26/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		2/26/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Tetrachloroethene	54	ug/l	0.49	1.5	1	8260B		2/26/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		2/26/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		2/26/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		2/26/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		2/26/2016	CJR	1
Trichloroethene (TCE)	1.55	ug/l	0.47	1.5	1	8260B		2/26/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		2/26/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		2/26/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		2/26/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		2/26/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		2/26/2016	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		2/26/2016	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		2/26/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		2/26/2016	CJR	1
SUR - 4-Bromofluorobenzene	95	REC %			1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553E
Sample ID MW4
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Dissolved	< 0.7	ug/L	0.7	2.5	1	7421		2/26/2016	CWT	1
Organic										
PAH SIM										
Acenaphthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Acenaphthylene	< 0.019	ug/l	0.019	0.061	1	M8270C	2/29/2016	4/29/2016	MDK	1
Anthracene	< 0.019	ug/l	0.019	0.062	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(a)pyrene	< 0.021	ug/l	0.021	0.067	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(b)fluoranthene	< 0.018	ug/l	0.018	0.058	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(g,h,i)perylene	< 0.025	ug/l	0.025	0.081	1	M8270C	2/29/2016	4/29/2016	MDK	1
Benzo(k)fluoranthene	< 0.016	ug/l	0.016	0.05	1	M8270C	2/29/2016	4/29/2016	MDK	1
Chrysene	< 0.02	ug/l	0.02	0.065	1	M8270C	2/29/2016	4/29/2016	MDK	1
Dibenzo(a,h)anthracene	< 0.025	ug/l	0.025	0.078	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluoranthene	< 0.017	ug/l	0.017	0.053	1	M8270C	2/29/2016	4/29/2016	MDK	1
Fluorene	< 0.021	ug/l	0.021	0.066	1	M8270C	2/29/2016	4/29/2016	MDK	1
Indeno(1,2,3-cd)pyrene	< 0.023	ug/l	0.023	0.074	1	M8270C	2/29/2016	4/29/2016	MDK	1
1-Methyl naphthalene	< 0.024	ug/l	0.024	0.076	1	M8270C	2/29/2016	4/29/2016	MDK	1
2-Methyl naphthalene	0.027 "J"	ug/l	0.024	0.075	1	M8270C	2/29/2016	4/29/2016	MDK	1
Naphthalene	< 0.019	ug/l	0.019	0.06	1	M8270C	2/29/2016	4/29/2016	MDK	1
Phenanthrene	< 0.017	ug/l	0.017	0.055	1	M8270C	2/29/2016	4/29/2016	MDK	1
Pyrene	< 0.02	ug/l	0.02	0.063	1	M8270C	2/29/2016	4/29/2016	MDK	1
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		2/26/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		2/26/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		2/26/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		2/26/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		2/26/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		2/26/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		2/26/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		2/26/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		2/26/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		2/26/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		2/26/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		2/26/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		2/26/2016	CJR	1
1,1-Dichloroethene	0.76 "J"	ug/l	0.65	2.1	1	8260B		2/26/2016	CJR	1
cis-1,2-Dichloroethene	24.8	ug/l	0.45	1.4	1	8260B		2/26/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		2/26/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		2/26/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		2/26/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		2/26/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		2/26/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		2/26/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		2/26/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		2/26/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		2/26/2016	CJR	1

Project Name ALLYNS, ALGOMA **Invoice #** E30553
Project # N2162C15

Lab Code 5030553E
Sample ID MW4
Sample Matrix Water
Sample Date 2/24/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		2/26/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		2/26/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		2/26/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		2/26/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		2/26/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/26/2016	CJR	1
Tetrachloroethene	44	ug/l	0.49	1.5	1	8260B		2/26/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		2/26/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		2/26/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		2/26/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		2/26/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		2/26/2016	CJR	1
Trichloroethene (TCE)	6.5	ug/l	0.47	1.5	1	8260B		2/26/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		2/26/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		2/26/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		2/26/2016	CJR	1
Vinyl Chloride	23.2	ug/l	0.17	0.54	1	8260B		2/26/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		2/26/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		2/26/2016	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		2/26/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		2/26/2016	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1	8260B		2/26/2016	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		2/26/2016	CJR	1

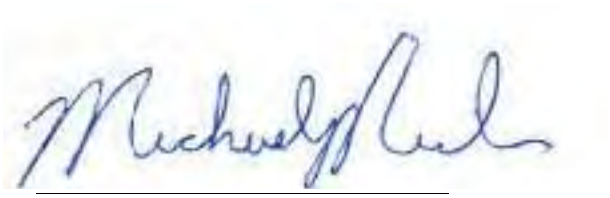
"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # No 279

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : **Quote No.:**

Project #: N2162C15

Sampler: (signature) Don Britthacher

Project (Name / Location): Allyns, Algoma

Reports To: Don Britthacher	Invoice To: Harmon Allyn
Company OMNNI Associates	Company
Address One Systems Dr.	Address -send to OMNNI-
City State Zip Appleton, WI 54914	City State Zip
Phone 735-6900	Phone
FAX 830-6100	FAX

Analysis Requested | **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503055	TRIP	1-14-16	8:30		X	N	3	TRIP	HCl													X		
B	MW1		1:22		X	VOCs/	5	GW	VOCs-HCl			X			X							X		
C	MW2		12:47		X	PAH-	5	GW	Pb-HNO3			X			X							X		
D	MW3		11:18		X	no;	5	GW	PAH-no			X			X							X		
E	MW4	↓	10:32		X	Pb-Y	5	GW				X			X							X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank X °C On Ice: X
Cooler seal intact upon receipt: ____ Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Don Britthacher					

Received in Laboratory By: [signature] Time: 1510 Date: 2/24/16