

April 13, 2018

Ms. Jennifer Borski Wisconsin Department of Natural Resources 625 East County Road Y, STE 700 Oshkosh, Wisconsin 54901-9731

RE: Supplemental Site Investigation (SSIR) Work Scope Appleton Wire (Former) 908 N. Lawe Street Appleton, Wisconsin 54911 WDNR BRRTS #: 02-45-000015

Dear Ms. Borski:

On behalf of Albany International Corporation (Albany), EnviroForensics, LLC (EnviroForensics) is providing you with this work scope designed to address the further investigative actions that the Wisconsin Department of Natural Resources (WDNR) has requested in their letter dated January 24, 2018. We are not requesting a technical review of this document from the WDNR.

In general, the additional sampling requested by the WDNR is to better determine the extent of subsurface chromium impacts where adequate concentration control has not yet been established. In addition, further investigations have been deemed necessary to determine if there is a greater source of chlorinated volatile organic compound (CVOC) impacts within the active manufacturing area that have resulted in the low levels of chlorinated solvents detected within the warehouse area, and if those solvents pose a potential for vapor intrusion to indoor air.

Further Investigations to Better Define Chromium Impacts

Additional soil borings UB-3, UB-4, GP-29 through GP-36, and GP-41 will be completed using direct-push technology as located on attached **Figures 1** and **2**. Soil samples will be collected from these borings and analyzed for chromium as follows:

- At UB-3 and UB-4, discrete soil samples will be collected from depth intervals of 1.0-1.5 and 3.5-4.0 feet below ground surface and analyzed for total and hexavalent chromium to determine the extent of shallow soil impacts detected in Meade Street. Since total chromium and hexavalent chromium concentrations in soil have not shown a consistent correlation during past investigations, these samples will be split for analysis at two different analytical laboratories;
- One (1) soil sample will be collect from the 0-5 feet depth interval at GP-29 using interval sampling methods to produce a composite sample representative of this depth interval. The sample will be analyzed for hexavalent chromium. This sample will close a gap, where a shallow soil sample was not collected at nearby boring GP-1;



- Soil samples will be collected at GP-30 through GP-32 to better define the lateral and vertical distribution of chromium impacts in soil located outside the facility that may require remedial treatment. Soil samples at each boring location will be collected from the depth intervals of 0-5 feet, 5-10 feet, 10-15 feet, and 15-20 feet using interval sampling methods to produce a composite sample for each depth interval. The samples will be analyzed for both total chromium and hexavalent chromium;
- Soil samples will be collected at GP-36 and GP-41 located within the active warehouse area (**Figure 2**) to determine if shallow chromium impacts have spread to the west within the warehouse area. A composite sample will be collected from a depth of 0-5 feet at each location and analyzed for hexavalent chromium;
- Soil samples will be collected at GP-33 through GP-35 to determine if chromium impacts have spread to the Russel Metals property located adjacent to the north. At each location, discrete soil samples will be collected from depths of 1.0-1.5 feet and 3.5-4.0 feet. These samples will be split, sent to two different analytical laboratories, and analyzed for hexavalent chromium; and
- Groundwater samples collected from temporary wells TW-1 and TW-6 (**Figure 2**) will be analyzed for total chromium to determine if groundwater impacts associated with the warehouse area have spread further to the west. Groundwater samples collected for total chromium analysis will be filtered and preserved with nitric acid in the field.

Further Investigations of Chlorinated Solvent Impacts

Soil and groundwater samples for CVOC analysis will be collected from the locations shown on attached **Figure 2** as follows:

- Soil samples will be collected at GP-36 through GP-41 to determine if there is a source of CVOC impacts within the manufacturing area. Soil samples at each boring location will be collected from the depth intervals of 0-5 feet and 5-10 feet using interval sampling methods to produce a composite sample for each depth interval. The samples will be analyzed for CVOCs according to EPA Method 8260; and
- A groundwater sample will be collected from each of the temporary wells TW-1 through TW-6 to determine the presence of CVOC impacts in groundwater. The samples for CVOC analysis will be preserved with hydrochloric acid. The samples will be analyzed according to EPA Method 8260. All well development and purge water that is produced will be processed through the existing on-site groundwater treatment system.

Monitoring Well Construction and Variance Request

EnviroForensics is proposing to utilize temporary wells to collect initial groundwater samples. Therefore, we are requesting a variance to conventional well construction presented in NR-141. The temporary groundwater monitoring wells will be installed in soil borings GP-36 through GP-41 to allow an assessment of subsurface CVOC impacts. An example well construction log has been attached to visually depict the construction specifics of the temporary wells.

The wells will be installed within the 2.3-inch diameter geoprobe borehole. These wells will be constructed of 1-inch diameter polyvinyl chloride (PVC) screens and risers. The screened sections will be ten feet long and situated to intersect the groundwater table. The screens will be set at a depth between 4-14 feet below slab grade. The shortened annual space will be sealed

SSIR Work Scope Albany International



with bentonite granules which will be hydrated in place to form a competent seal. These wells will be fitted with flush mount protectors to prevent damage from active operations within the manufacturing area. The wells will be developed prior to normal purging and sampling. Depending on the initial laboratory results, these wells may be sampled more than once. However, the temporary wells will be abandoned properly according to NR 141 within 60 days from the date of installation.

Additional Actions

Per WDNR request, deep piezometers MW-5C, MW-19C, and MW-20C will be abandoned properly. The PVC riser will be cut off at least 30-inches below grade and the well will be filled with bentonite grout to just below the floor slab level. If the grout settles, it will be topped off. The flush mount well protector will be removed from the floor slab, and the slab will be repaired with cement.

Upon completing these investigations and after performing site remediation, sub-slab vapor samples will be collected from the warehouse area and the manufacturing area to determine whether there is a vapor intrusion risk from CVOC impacts. This sampling will be done in general accordance with the WDNR guidance document PUB-RR-800. It is expected that large volume purge sampling methods will be employed.

If you have any questions regarding the contents of this SSIR work scope, please feel free to contact me at (414) 982-3988 or <u>wfassbender@enviroforensics.com</u>.

Sincerely,

Wayer P. La

Wayne P. Fassbender, P.G., PMP Senior Project Manager

Attachments: Figure 1 Figure 2 Example Well Construction Log for Temporary Wells Hydrogeologist Certification Statement

cc (via email): JP Hammerton, Albany International Joseph Gaug, Albany International Sam Edwards, Luvata Michael Boozer, Chem Reports



Legend

Property boundary Underground gas utility line Underground water utility line Underground sanitary utility line Fiber optics line Underground storm utility line Pipe chase French drain and associated piping Sump Floor drain Manhole Monitoring well Soil sample from 0-5' and

temporary water table well

Dairy tile floor				
Analyte	Public Health	Public Health		
	Preventive Action	Enforcement		
	Limit	Standard		
Chloromethane	3	30		
1,1-DCA	85	850		
cis-1,2-DCE	7	70		
trans-1,2-DCE	10	100		
PCE	0.5	5		
1,1,1-TCA	20	200		
TCE	0.5	5		
Vinyl Chloride	0.02	0.2		
MC	0.5	5		

Note:

- 1. Bolded and orange shaded values exceed the Public Health Enforcement Standard
- 2. Bolded and blue shaded values exceed the Public Health Preventive Action Limit
- 3. Bolded values are above detection limits
- 4. J = Analyte concentration less that laboratory detection limits
- 5. Samples analyzed using EPA SW-846 Method 8260
- 6. All results reported in units of micrograms per liter (μ g/L)
- 7. PCE = Tetrachloroethene
- 8. TCE = Trichloroethene
- 9. 1,1-DCA = 1,1-Dichloroethane
- 10. cis-1,2-DCE = cis-1,2-Dichloroethene
- 11. trans-1,2-DCE = trans-1,2-Dichloroethene
- 12. 1,1,1-TCA = 1,1,1-Tichloroethane
- 13. MC = Methylene Chloride
- 14. VOCs = Volatile Organic Compounds
- 15. ND = Not detected
- NA = Not analyzed
 WW-19

 Water table observation well (with 10 foot screen length)
 Piezometer (with 5 foot screen length set within the 30-40' depth interval)
 Piezometer (with 5 foot screen length set within the 40-50' depth interval)
 Piezometer (with 5 foot screen length set within the 50-60' depth interval)

PROPOSED LOCATIONS OF TEMPORARY WELLS Albany International - Luvata Site 908 North Lawe Street Appleton, Wisconsin 4/12/18 Figure **ENVIRO** rensics EB 2 KH Project WF 825 North Capitol Avenue Indianapolis, IN 46204 6486 EnviroForensics.com

State of Wisconsin Department of Natural Resources <u>Route to:</u> V	Vatershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name		N. ft. FTW	Well Name
Facility License, Permit or Monitoring No.	Local Grid Origin 🔲 (estimat Lat. ° ''I	ied:) or Well Location or	Wis. Unique Well No. DNR Well ID No.
Facility ID	St. Plane ft. N,	ft. E. S/C/N	Date Well Installed $\overline{m} \overline{m} / d \overline{d} / \overline{y} \overline{y} \overline{y} \overline{y}$
Type of Well			Well Installed By: Name (first, last) and Firm
Well Code/	1/4 of 1/4 of Sec.	asta/Source Cov Lot Number	
Distance from Waste/ Enf. Stds.	u Upgradient s	Sidegradient	
Sourceft. Apply	d 🗆 Downgradient n 🗆	Not Known	
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?	
B. Well casing, top elevation	ft. MSL	a. Inside diameter	r: in.
	6 MCI	b. Length:	0.6 ft.
C. Land surface elevation	IL MISL	c. Material:	Steel 🖾 04
D. Surface seal, bottom ft. MS	SL or ft.		Other 🗆 📖
12. USCS classification of soil near scree	n:	d. Additional pro	nection?
GP GM GM GC GW G		If yes, describ	e:
SM I SC ML MH I			Bentonite D 30
Bedrock		3. Surface seal:	Concrete 0 1
13. Sieve analysis performed?	Yes 🗆 No		Other 🗆
14. Drilling method used: Ro	tary 🗆 50	4. Material between	well casing and protective pipe:
Hollow Stem At	lger 🗆 4 1		Bentonite 🖾 30
Direct-Push 0	ther 🛛 📖	88 1	Other 🗆
		5. Annular space se	al: a. Granular/Chipped Bentonite 🖾 33
15. Drilling fiuid used: Water □ 0 2	Air 🗆 01	h Lbs/gal r	nud weight Bentonite-sand slurry 35
Drilling Mud 🗆 0 3 🛛 1	None 🛛 99	c Lbs/gal r	nud weight Bentonite slurry D 31
Bentonite Bentonite Bentonite cement grout			ite Bentonite-cement grout 50
16. Drilling additives used? \Box Yes \boxtimes No			³ volume added for any of the above
		f How installed	Tremie 🗖 01
Describe	III 🗱		Tremie pumped \Box 0.2
17. Source of water (attach analysis, if requ	ired):	XX	Gravity 🖾 0.8
		6. Bentonite seal:	a. Bentonite granules 🖾 33
		b. □1/4 in. □	$3/8$ in. $\Box 1/2$ in. Bentonite chips $\Box 32$
E. Bentonite seal, topft. MS	Lor <u>3_</u> ft.	C	Other 🗆 🌉
F. Fine sand, top ft. MS	Lor 3 ft	7. Fine sand materia	al: Manufacturer, product name & mesh size
		a	
G. Filter pack, top ft. MS	Lor _ <u>3</u> . <u>S</u> ft.	b. Volume addee	$f_{0,O}$ ft ³
11 A 11 A 11	4	8. Filter pack mater	ial: Manufacturer, product name & mesh size
H. Screen joint, top II. MS	L OF II.	a	
A MC		b. Volume added	
		9. Well casing:	Flush threaded PVC schedule 40 K 23
T There is have fr MS			Flush threaded PVC schedule 80 24
3. Phier pack, boltom IL 1913			Other LI
K Bambala hattam ft MS	Int 14 fts	10. Screen material:	
K. Borenole, Boltom IC 1015		a. Screen type:	Factory cut 🖄 11
L Pershala diamatan 7.3			
L. Borenoie, diameter in.			
MOD well arrive 13.		b. Manufacturer	0.10
INI. U.D. well casing $\frac{1}{2}$ in.		d Slotted length	
N ID well costing 1.0	*	11 Backer and	
it it went casing m.		FI, DECKIM MERCIE	(beave Hacf pack): None 14
I hereby certify that the information on this	form is true and correct to the h	est of my knowledge	
Signature	Firm	set of his money	
0			

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.

HYDROGEOLOGIST CERTIFICATION

"I, Wayne P. Fassbender, hereby certify that I am a Hydrogeologist as that term is defined in s NR 712.03 (1) Wisconsin Administrative Code, am registered in accordance with the requirements of ch. GHSS2, Wisconsin Administrative Code, or licensed in accordance with the requirements of ch. GHSS 3, Wisconsin Administrative 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 of chs. NR 700 to 726, Wisconsin Administrative Code."

Fashel

Wayne P. Fassbender, P.G.

April 13, 2018

Date

Document Reference:

SSIR Work Scope; 908 N. Lawe Street, Appleton, Wisconsin; April 13, 2018