

April 29, 2019

Jennifer Borski Wisconsin Department of Natural Resources 625 East County Road Y, Suite 700 Oshkosh, WI 54901-9731

Re: Amendment to the Remedial Action Plan Appleton Wire (Former) 908 N. Lawe Street Appleton, Wisconsin 54911 BRRTS# 02-45-000015

Dear Ms. Borski:

This letter presents an amendment to the Remedial Action Plan (RAP) submitted to the department on April 11, 2019. As described in the RAP, the plan for remediation outside the warehouse to the north included soil blending to 15 feet below ground surface (bgs) starting at a distance of 5 feet from the north wall. A line of injection points just outside and parallel to the wall was proposed to treat contaminated soil and groundwater around the footing(s).

After the RAP was submitted, the soil blending subcontractor disclosed their protocol to establish a 1:1 slope ratio away from building footings in order to avoid structural support concerns. To avoid any issues related to structural impairment or having to go through a structural engineering assessment, the proposed remediation plan for the area north of the warehouse is amended as follows:

- Additional injection points have been added further north of the warehouse wall, and this area has been designated injection Area F as depicted on revised Figure 15 (attached). The remedial solution will be injected from 6 to 20 feet bgs in the Area F injection points at the same mixing ratio and volume prescribed for the other injection points.
- 2. Soil blending operations in Area C (see RAP **Figure 16**, attached for reference) will start 6 feet north of the building wall, and the blending depth will be restricted to 6 feet bgs across the entire area.

In summary, the amended RAP changes the treatment approach for the area north of the warehouse only. Treatment in that area will be accomplished using a combination of shallow soil blending and deeper injections, which is the same approach proposed for treatment of the interior areas. The overall proposed treatment zone remains unchanged.



If you have any questions regarding this submittal, feel free to contact me at 414-982-3988 or by email at <u>wfassbender@enviroforensics.com</u>.

Sincerely, **EnviroForensics, LLC**

Wayer P. Fashel

Wayne Fassbender, PG, PMP Senior Project Manager

enclosures

cc: JP Hammerton, Albany International Joe Gaug, Albany International



Certifications

I, Andrew Horwath, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all 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.

Senior Engineer, PE Lic. No. E-43831-6

Signature, title and P.E. number

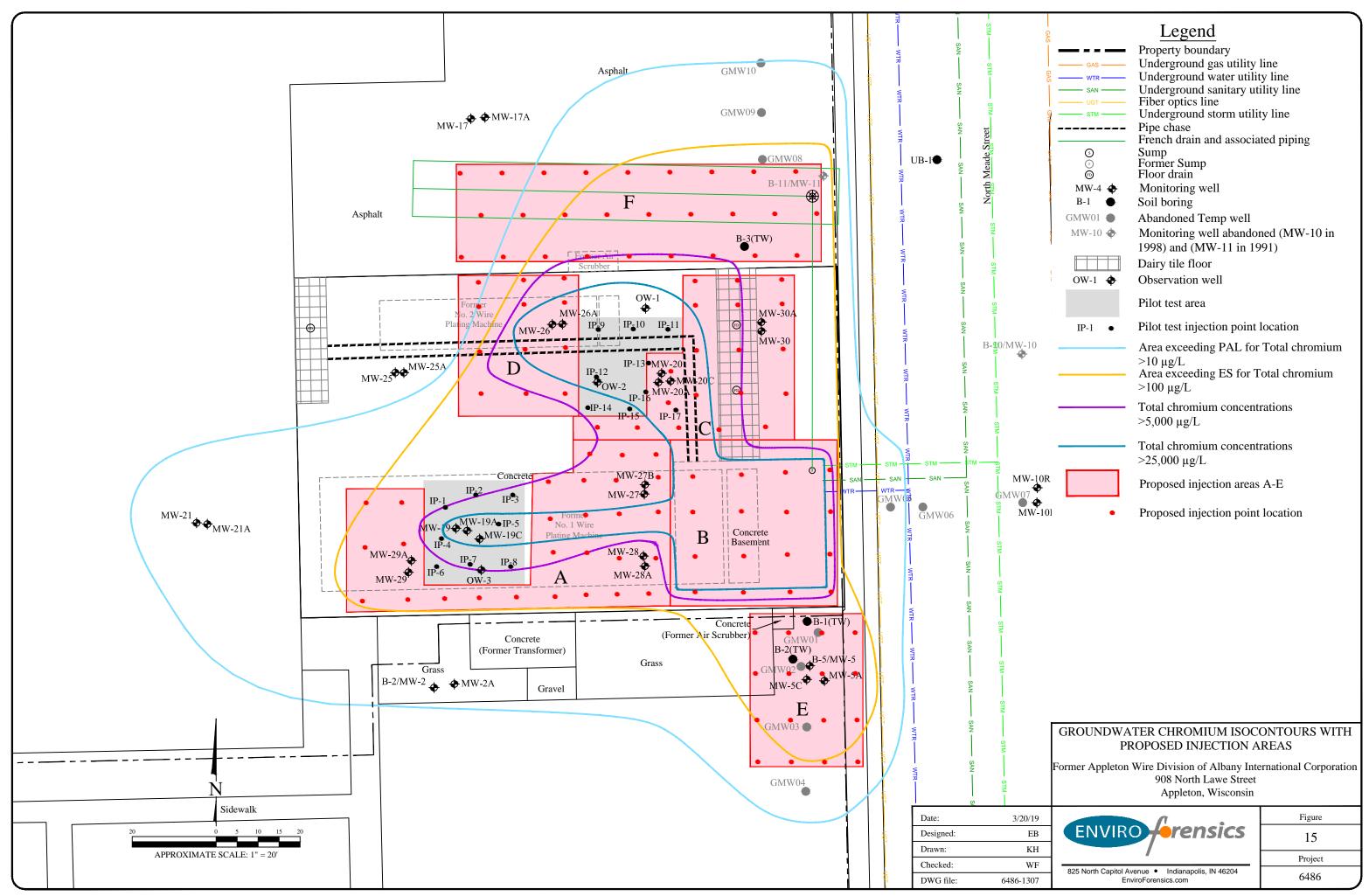
I, Wayne Fassbender, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the 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.

Signature and title

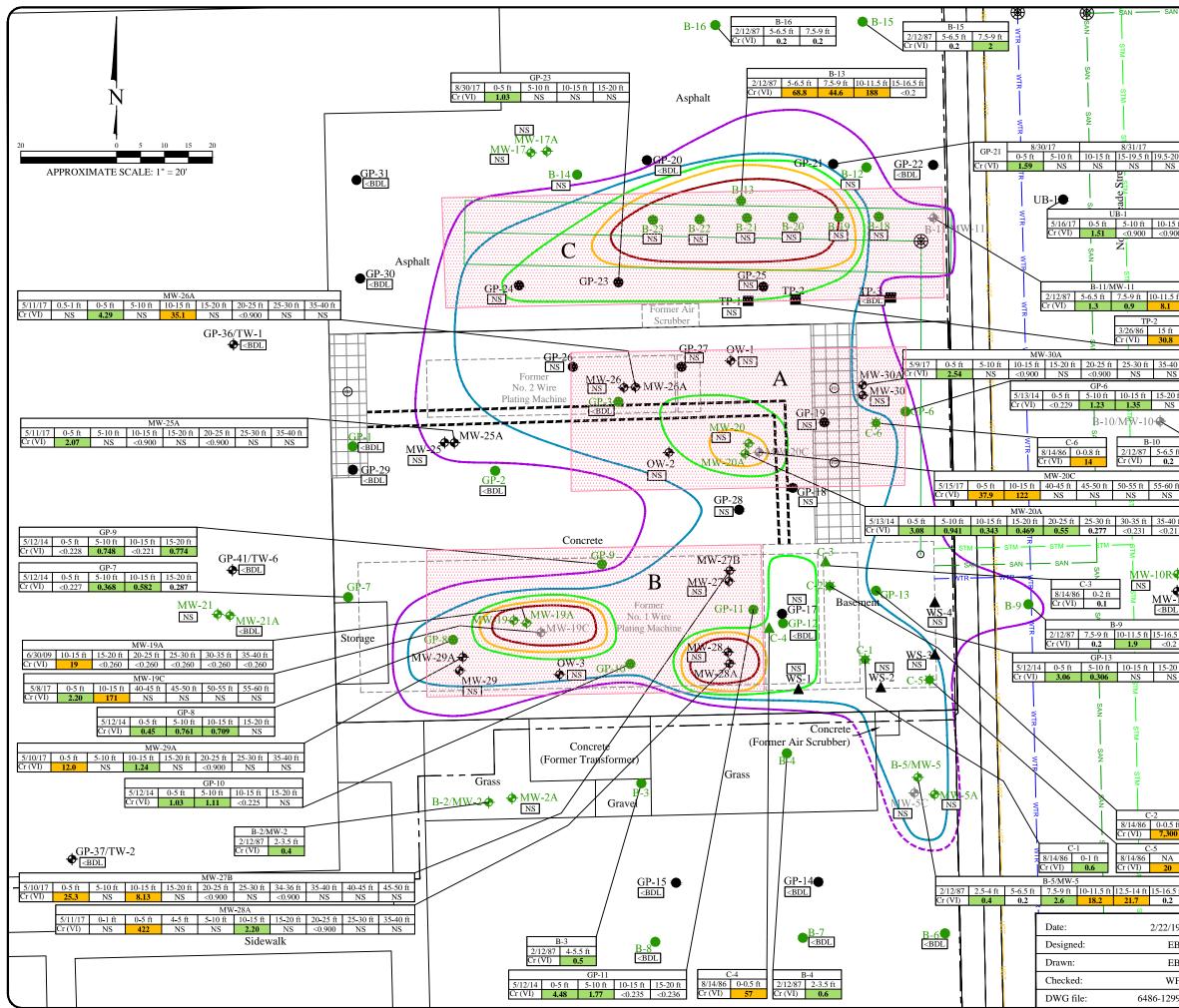
Senior Project Manager

<u>4/29/19</u> Date

P.E. stamp



GAS		Legend
。 =		Property boundary
	GAS	Underground gas utility line
GAS -	WTR	Underground water utility line
-	SAN	Underground sanitary utility line
-	UGT STM	Fiber optics line Underground storm utility line
8	311	Pipe chase
		French drain and associated piping
ţ.	3	Sump
Ĩ	(3)	Former Sump Floor drain
	тэ MW-4 🕁	Monitoring well
1	B-1	Soil boring
	GMW01	Abandoned Temp well
	MW-10 🔶	Monitoring well abandoned (MW-10 in
	1010 IV IV	1998) and (MW-11 in 1991)
		Dairy tile floor
(OW-1 🕁	Observation well
	0w-1 🗣	
		Pilot test area
	IP-1 ●	Pilot test injection point location
-		Area exceeding PAL for Total chromium
		>10 µg/L
-		Area exceeding ES for Total chromium
		>100 µg/L
-		Total chromium concentrations
		>5,000 µg/L
_		Total chromium concentrations
		>25,000 μ g/L
R		
		Proposed injection areas A-E
01		Drop good injection point location
101	•	Proposed injection point location



0.000								
SAN -		Legend						
	Property boundary							
GAS -	GAS Underground gas utility line							
	<u>Underground water utility line</u>							
	san Underground sanitary utility line							
GAS	— ugt — Fiber optics line							
	Pipe chase							
9.5-20 ft	———— French drain and associated piping							
NS	③ Sump							
	S Former Sump							
E.	Floor drain							
	B-1 🔴	Soil boring (STS)						
0-15 ft <0.900	GP-1 🌘	Soil boring (Badger)						
<u><0.700</u>	C-1 🗮	Concrete Floor Core samples (STS)						
	C-3 Concrete Wall Core samples (STS)							
	MW-1							
	MW-18 Monitoring well (McMahon)							
11.5 ft 8.1	MW-19 Monitoring well (Badger) MW-10 Monitoring well abandoned (MW-10 in							
	+							
15 ft 30.8	1998) and (MW-11 in 1991)							
	MW-4							
35-40 ft	B-1 • Soil boring (Envirofornesics)							
NS		Dairy tile floor						
5-20 ft		-			, [
NS		Soil to Groundwater	Non-Indust	rial	Industrial Residual			
	Analyte	Residual	Residual		Contaminant Level			
		Contaminant Level	ontaminant l	Level				
-6.5 ft 0.2	Cr (VI)	3.84*	0.301		6.36			
0.2	Note: 1. Bold shaded blue values exceed WDNR Soil to Groundwater Residual							
5-60 ft			INK SOIL IO	Giou	nuwater Kesiduar			
NS		Contaminant Level 2. Bold shaded green values exceed WDNR Non-Industrial Residual						
35-40 ft	Contaminant Level							
<0.211	3. Bold shaded orange values exceed WDNR Industrial Residual							
	Contaminant Level							
	4. Bold values exceed laboratory detection levels							
0R�	 Cr and Cr (VI) standards and analytical results are reported in milligram per kilogram (mg/kg) 							
ıw-10в								
BDL	7. $Cr = Chromium$							
	8. NA = Not analyzed							
-16.5 ft <0.2	9. $NS = Not sampled$							
<0.2		/ laboratory detection using EPA Risk-Base		σΙου	el Calculator			
15-20 ft		boratory limit of deter		5 LCV				
NS	no 200 - Eu		-	ions	1 mg/kg			
	Chromium VI concentrations 1 mg/kg Chromium VI concentrations 5 mg/kg							
	Chromium VI concentrations 50 mg/kg							
	6 6							
	Chromium VI concentrations 100 mg/kg							
	Chromium VI concentrations 150 mg/kg							
	Dashed boundaries are inferred							
		Proposed soil ble	ending zo	ones	A, B, and C			
	and the second s							
-0.5 ft	PROF	OSED SOIL BL	ENDING	ĴΖΩ	NES			
7,300								
NA								
20	Al	bany Internationa	al - Luvat	ta Si	te			
1655	908 North Lawe Street							
-16.5 ft 0.2	Appleton, Wisconsin							
22/19		1			Figure			
EB	ENVIRG) for ens	ICS		16			
EB					10			
WF					Project			
.1299	825 North Capitol Av	enue • Indianapolis, IN	46204		6486			