# Letter of Transmittal

Submitted to:

#### Lee Delcore

WI. Dept. of Natural Resources

1155 Pilgrim Parkway PlymouthWI5 3073

\_\_\_\_

Date:

5/8/2017

Attached

Job:

Kewaskum Living Waters Church

**O**Under Separate Cover

## Contents:

Well Abandonment Forms and revised pages 4 & 6 of the Case Closure - GIS Registry Form which now gives an estimated volume of the direct contact Lead found in soil boring G-6.

BRRTS #: 03-67-152319

## Remarks:

Attached are the well abandonment forms as requested in your email correspondence dated 4/17/17. No investigative waste remains on-site. Pages 4 and 6 of the Case Closure - GIS Registry Form have been revised and are also included. Once you have reviewed this information please forward the "Final Closure" letter to the RP and METCO.

If you have any questions please call or email.

Signed: Jason Powell

cc: Joan Brath - Kewaskum Living Waters Church

> METCO 709 Gillette St., Ste 3 La Crosse, WI 54603-2382 (608)781-8879 fax (608)781-8893

Activity (Site) Name

Form 4400-202 (R 8/16)

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air sample to be collected over a 24 hour period for VOC analysis. (Letter Report - January 14, 2016)

On June 23, 2015, and September 15, 2015, METCO personnel collected groundwater samples from the three monitoring wells for laboratory analysis. Field measurements for Water Level, Dissolved Oxygen, pH, ORP, Specific Conductivity and Temperature were collected from all sampled wells. (Letter Report - January 14, 2016)

On May 12, 2016, and August 24, 2016, METCO personnel collected groundwater samples from the three monitoring wells for laboratory analysis. Field measurements for Water Level, Dissolved Oxygen, pH, ORP, Specific Conductivity and Temperature were collected from all sampled wells. (Groundwater Monitoring Report - October 4, 2016)

On November 3, 2016, METCO collected soil samples from two hand auger borings. One soil sample was collected from each boring to be analyzed for Lead. (Activity undertaken since the last submittal)

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.
  Based on historical and current data, soil contamination exceeding the NR720 Groundwater RCL's and groundwater contamination exceeding the NR140 Enforcement Standards (ES) does not appear to extend beyond the source property boundary.
- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

No structural impediments interfered with the completion of the site investigation.

#### B. Soil

 Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.

An area of unsaturated soil contamination, which exceeds the NR720 Groundwater RCL's, exists in the area of the removed UST system. This consists of an irregular shaped area, which appears to measure up to 34 feet long, up to 22 feet wide (depending on location), and up to 3 feet thick.

Additionally, an area of unsaturated soil contamination, which exceeds the NR720 Non-Industrial Direct Contact values for Lead (showed no detects for any PVOC/Naphthalene contaminants), exists near the east central corner of the building (G-6), close to the drip line of the building. This contamination appears to be located specifically around the location of Geoprobe G-6, which is approximately 20 feet southwest of the removed UST. This value does not reflect the Lead levels that were encountered near the removed UST area. This contamination is likely from a separate source, most likely something from the roof as this contamination is below the roof drip line. Two hand auger soil samples were collected within 10 feet of this location and also do not reflect the Lead values that were shown in G-6. Therefore, this direct contact for Lead contamination is very limited in its horizontal and vertical extent and its estimated volume is approximately 5 cubic yards (7 tons).

The extent of petroleum contamination in soil exceeding the NR720 Groundwater RCL's does come into contact with a sewer lateral line and a natural gas line which extend from Clinton Street to the on-site building. However, soil contamination in the areas of these laterals are from Lead exceedances (G-5 and G-6). Therefore, these utilities do not appear to be preferential contaminant migration pathways.

ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column. Soil samples collected within the upper four feet of the soil column exceeding the NR720 Groundwater or Direct Contact RCL's include:

G-1-1: Lead (40.9 ppm) and Benzene (0.053 ppm) at 3.5 feet bgs

G-5-1: Lead (41.4 ppm) at 3.5 feet bgs G-6-1: Lead (617 ppm) at 3.5 feet bgs

HA-2: Lead (101 ppm) at 2.5 feet bgs

iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.

The method used to establish the soil cleanup standards for this site were the NR720 RCL's. The property is zoned "B-3, Central Business", therefore non-industrial standards were used for this site.

# C. Groundwater

BRRTS No.

Activity (Site) Name

Form 4400-202 (R 8/16)

### Remedial Actions Implemented and Residual Levels at Closure

A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

No remedial actions were completed.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code. No interim actions were completed.
- C. Describe the active remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.

No remedial actions were completed.

D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.

No evaluation of Green and Sustainable Remediation was conducted.

E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.

An area of unsaturated soil contamination, which exceeds the NR720 Groundwater RCL's, exists in the area of the removed UST system. This consists of an irregular shaped area, which appears to measure up to 34 feet long, up to 22 feet wide (depending on location), and up to 3 feet thick.

Additionally, an area of unsaturated soil contamination, which exceeds the NR720 Non-Industrial Direct Contact values for Lead (showed no detects for any PVOC/Naphthalene contaminants), exists near the east central corner of the building (G-6), close to the drip line of the building. This contamination appears to be located specifically around the location of Geoprobe G-6, which is approximately 20 feet southwest of the removed UST. This value does not reflect the Lead levels that were encountered near the removed UST area. This contamination is likely from a separate source, most likely something from the roof as this contamination is below the roof drip line. Two hand auger soil samples were collected within 10 feet of this location and also do not reflect the Lead values that were shown in G-6. Therefore, this direct contact for Lead contamination is very limited in its horizontal and vertical extent and its estimated volume is approximately 5 cubic yards (7

A dissolved phase contaminant plume exceeding the NR140 ES and/or PAL has formed at the watertable in the area of the removed UST system and has migrated toward the southeast. This plume is approximately 53 feet long and 37 feet wide.

Based on historical and current data, soil contamination and groundwater contamination exceeding the NR140 ES does not appear to extend beyond the source property boundary.

- Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.
  - The only residual soil contamination remaining within the upper four feet of the soil column exceeding the NR720 Non-Industrial Direct Contact RCL's is from Geoprobe G-6: Lead (617 ppm) at 3.5 feet bgs.

Its important to note that this contamination is likely from a separate source, most likely something from the roof as this contamination is below the roof drip line (showed no detects for any PVOC/Napthalene contaminants).

G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.

Soil samples above the observed low water table which currently exceed NR720 RCLs include:

G-1-1: Lead (40.9 ppm) and Benzene (0.053 ppm) at 3.5 feet bgs

G-5-1: Lead (41.4 ppm) at 3.5 feet bgs

G-6-1: Lead (617 ppm) at 3.5 feet bgs

HA-2: Lead (101 ppm) at 2.5 feet bgs

H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.

Per conversations with the WDNR, a Cap Maintenance Plan will not be necessary to address the Direct Contact concern at G-6, as this contamination is very limited in its horizontal and vertical extent and its estimated volume is approximately 5 cubic yards (7 tons), which was defined by the hand auger soil samples collected at HA-1 and HA-2. Remaining soil and groundwater contamination will be addressed via natural attenuation.

# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of

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Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Route to:

☐ Verification Only of Fill and Seal			Drinking Waste N	ı Water Managemei	Watershed/Wastewater			[X] Remediation/Redevelopment		
1. Well Location informati	on.				2. Facility	/ Owner In	formation			
County Wi Unique Well # of Removed Well Hicap #					Facility Name  Kewaskum Living Waters Church					
WASHINGTON	VN(	1/6_			Facility ID (F	ID or PWS)				
Lattitude / Longitude (Degrees and Minutes) Method Code (see instructions)					267161620					
43_ • 31.12 · 'N					License/Permit/Monitoring #					
<u>88</u> • <u>13.67</u>	·w						<i>y</i>			
%/% NW % SE	Section	Townshi	ip Rang	e [x] E	Original Wel					
or Gov't Lot #	<b></b>   9	12	N 19	Η̈́w			an Brath	.,		
Well Street Address			111		Present Wel					
							oan Brath			
100 Clinton Street Well City, Village or Town Well ZIP Code					Mailing Address of Present Owner					
Kawashum 52040						100 Clinton Ave.				
					City of Present Owner State				ZIP Code	
Subdivision Name Lot #						Kew	WI	53040-		
Reason For Removal From Service   WI Unique Well # of Replacement Well					4. Pump, Liner, Screen, Casing & Sealing Material					
					Pump and piping removed?					
Sampling Complete										
3. Well / Drillhole / Borehole Information					<u> </u>					
[X] Monitoring Well	Onginal Con	Original Construction Date (mm/dd/yyyy)				[] []				
Water Well	12/11/2013									
	nstruction i	Report is a	wailable,	Was casing cut off below surface?  [X]Yes						
Borehole / Drillhole please attach.					Did sealing material rise to surface?					
Construction Type:  X Drilled Driven (Sandpoint) Dug					Did mater	Did material settle after 24 hours?				
						If yes, was hole retopped?				
Other (specify):					If bentonit	If bentonite chips were used, were they hydrated with water from a known safe source?  [X]Yes \[ \sum_{No} \] \[ \sum_{N/A} \]				
Formation Type:							ng Sealing Material			
[X] Unconsolidated Formation Bedrock					Conductor Pipe-Gravity Conductor Pipe-Pumped					
Total Well Depth From Ground Surface (ft.) Casing Diameter (in.)						Screened & Poured [X] Other (Explain): Gravity				
Total Well Depth From Globin	13	asing Dian	nerei fur'i	2	Sealing Mate	nite Chips)				
Lower Drillhole Diameter (in.)		acina Dani	h (A.)	4		ement Grout	П	Clay Can	d Slurry (11 lb./gal. wt.)	
Lower Drillhole Diameter (in.) Casing Depth (ft.)					Sand-Cement (Concrete) Grout Bentonite-Sand Slurry " "					
					Concre	-			•	
Was well annular space grouted? XYes No Unknown						Concrete Bentonite Chips For Monitoring Wells and Monitoring Well Boreholes Only:				
If yes, to what depth (feet)?	eet)	X Bentonite Chips Bentonite - Cement Grout								
2		3.24	9		Granul	ar Bentonite	Benton			
5. Material Used To Fill Well	/ Drillhole		- Company (1994)		From (ft.)	To (ft.)	Lbs.	ine - Opino	Ciury	
Bentonite chips		1999 1 Sign of 32 14 1.1	73 KO a 471 F. 1448.	distribuit (n. 1816).	Surface	2/17-94-91 Las (\$114.4)				
Bentonne cmps		**************************************			Surface	13	21			
									***	
		raciji dan gove ngag	71 T	A Chagos agains		esta e e e e e		Cale 14 Res		
6. Comments  Monitoring Well MW-1										
7. Supervision of Work								NR Use	Only	
Name of Person or Firm Doing Filling & Sealing License # Date of Fill					ing & Sealing (mm/dd/yyyy) Date Received Noted By					
Jon Jensen/METCO						4/25/2017				
Street or Route Tel					lephone Number Comments					
					608) 781-8879					
City		State ZIP Code				Pepson Doing	g Work	ork Date Signed		
La Crosse .	·	WI	54603-	***************************************	You	afferen			4/25/2017	
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# Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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4/25/2017

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information. Route to: Drinking Water Watershed/Wastewater X Remediation/Redevelopment Verification Only of Fill and Seal Waste Management Other: 1. Well Location information Facility / Owner Information County WI Unique Well # of licap# acility Name Removed Well Kewaskum Living Waters Church VN077 WASHINGTON acility ID (FID or PWS) Lattitude / Longitude (Degrees and Minutes) Method Code (see instructions) 267161620 31.12 icense/Permit/Monitoring# 88 13.67 Original Well Owner Range 14/14 NW Section Township SE χÌΕ Joan Brath or Gov't Lot # 19 12 resent Well Owner Well Street Address Joan Brath 100 Clinton Street Mailing Address of Present Owner Well ZIP Code Well City, Village or Town 100 Clinton Ave. Kewaskum 53040-City of Present Owner State ZIP Code Subdivision Name of # wi 53040-Kewaskum Pump, Liner, Screen, Casing & Sealing Material Reason For Removal From Service WI Unique Well # of Replacement Well JNo. Pump and piping removed? Sampling Complete  $\square_{\mathsf{No}}$ 3. Well / Drillhole / Borehole Information Liner(s) removed?  $]_{Yes} [X]_{No}$ Original Construction Date (mm/dd/yyyy) Screen removed? X Monitoring Well 12/11/2013 Casing left in place? Water Well If a Well Construction Report is available, XIVes LINO Was casing cut off below surface? Borehole / Drillhole nlease attach Xyes ∐<sub>No</sub> Did sealing material rise to surface? Construction Type:  $]_{Yes} [x]_{No}$ Did material settle after 24 hours? X Drilled Driven (Sandpoint) Dug  $\square_{\mathsf{No}}$ If yes, was hole retopped? If bentonite chips were used, were they hydrated with water from a known safe source? Other (specify):  $[x]_{Yes}$ Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped X Unconsolidated Formation Bedrock Screened & Poured (Bentonite Chips) [X] Other (Explain): Gravity Total Well Depth From Ground Surface (ft.) Casing Diameter (in.) 2 13 Sealing Materials Lower Drillhole Diameter (in.) Casing Depth (ft.) Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.) 3 Bentonite-Sand Slurry " " Sand-Cement (Concrete) Grout Bentonite Chips  $[x]_{Yes}$ \_l No Unknown Was well annular space grouted? or Monitoring Wells and Monitoring Well Boreholes Only: If yes, to what depth (feet)? Depth to Water (feet) [X] Bentonite Chips Bentonite - Cement Grout Granular Bentonite Bentonite - Sand Slurry 5. Material Used To Fill Well / Drillhole From (ft.) To (ft.) Lbs. Bentonite chips Surface 13 21 6. Comments Monitoring Well MW-2 7. Supervision of Work **DNR Use Only** Name of Person or Firm Doing Filling & Sealing License # Date of Filling & Sealing (mm/dd/yyyy) Date Received Noted By 4/25/2017 Jon Jensen/METCO Street or Route Telephone Number Comments 709 Gillette Street, Ste. 3 (608) 781-8879 City State ZIP Code Signature of Person)Doing Work Date Signed

State of Wis., Dept. of Natural Resources dnr.wi.gov

La Crosse

WI

54603-

# Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

4/25/2017

Page 1 of 2 Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information. Route to: Drinking Water Watershed/Wastewater X Remediation/Redevelopment Verification Only of Fill and Seal Waste Management Other: 1. Well Location Information Facility / Owner Information County WI Unique Well # of Hicao # acility Name Removed Well Kewaskum Living Waters Church VN078 WASHINGTON acility ID (FID or PWS) Lattitude / Longitude (Degrees and Minutes) Method Code (see instructions) 267161620 31.12 icense/Permit/Monitoring# 88 13.67 Original Well Owner 14/14 NW Section Township Range SE χĮΕ Joan Brath or Gov't Lot # 12 19 resent Well Owner Well Street Address Joan Brath 100 Clinton Street Mailing Address of Present Owner Well ZIP Code Well City, Village or Town 100 Clinton Ave. Kewaskum 53040-City of Present Owner State ZIP Code Subdivision Name Kewaskum wı 53040-Pump, Liner, Screen, Casing & Sealing Material WI Unique Well # of Replacement Well Reason For Removal From Service □<sub>No</sub> Pump and piping removed? Sampling Complete J<sub>Yes</sub>  $\square_{No}$ 3. Well / Drillhole / Borehole Information Liner(s) removed?  $Y_{\text{es}}[X]_{\text{No}}$ Original Construction Date (mm/dd/yyyy) Screen removed? X Monitoring Well  $[X]_{Yes} \square_{No}$ 12/11/2013 Casing left in place? Water Well [x]<sub>Yes</sub> If a Well Construction Report is available, Was casing cut off below surface? Borehole / Drillhole please attach. X Yes No Did sealing material rise to surface? Construction Type:  $]_{Yes} [x]_{No}$ Did material settle after 24 hours? Dug X Drilled Driven (Sandpoint)  $\square_{\mathsf{No}}$ If yes, was hole retopped? If bentonite chips were used, were they hydrated with water from a known safe source? Other (specify):  $[X]_{Yes}$ Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped X Unconsolidated Formation Bedrock Screened & Poured [X] Other (Explain): Gravity Total Well Depth From Ground Surface (ft.) Casing Diameter (in.) (Bentonite Chips) 2 13 Sealing Materials Lower Drillhole Diameter (in.) Casing Depth (ft.) Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.) 3 Sand-Cement (Concrete) Grout Bentonite-Sand Slurry " " Bentonite Chips [x]<sub>Yes</sub> Unknown No Was well annular space grouted? or Monitoring Wells and Monitoring Well Boreholes Only: Depth to Water (feet) If yes, to what depth (feet)? [X] Bentonite Chips Bentonite - Cement Grout Granular Bentonite Bentonite - Sand Slurry 5. Material Used To Fill Well / Drillhole From (ft.) To (ft.) Lbs. Bentonite chips Surface 6. Comments Monitoring Well MW-3 7. Supervision of Work **DNR Use Only** Name of Person or Firm Doing Filling & Sealing Date of Filling & Sealing (mm/dd/yyyy) Date Received Noted By Jon Jensen/METCO 4/25/2017 Street or Route Telephone Number Comments 709 Gillette Street, Ste. 3 (608) 781-8879 City State ZIP Code Signature of Penson Doling Work Date Signed