

RECEIVED

OCT 01 2018

WI DNR - GREEN BAY



Warren Hohn <whohntesting@gmail.com>

WDNR NR700 Semi-Annual Report Confirmation

1 message

DNRNR700Reporting@wisconsin.gov <DNRNR700Reporting@wisconsin.gov>

Wed, Sep 26, 2018 at 11:19 AM

To: WHOHNTESTING@gmail.com

Cc: tauren.beggs@wisconsin.gov

Thank you for submitting your NR700 semi-annual progress report. The DNR Project Manager for this site has been notified of your report submittal. If final case closure has not been granted for this Activity before the next reporting period, you will receive a system-generated email reminder and link to report for the next period.

The contents of your report is included below for your records:

Report ID: 180733510016343

BRRTS No.: 02-59-000198

PECFA No: --

Activity Name: ANIWA ARSENIC SITE

Address: MARSH RD NEAR CHICAGO & NW RR, ANIWA

Reporting Period: 1/1/2018 - 6/30/2018

Submitted On: 09/26/2018

Submitter Role: Consultant

Status: Site Investigation: Field Sampling/Monitoring

Comments:

EXISTING MONITORING WELLS WERE SAMPLED ON 3/13/18 (B-12,B-21,B-13R) ON 4/14/18 (B21,B-13R,B-12) ON 6/10/18 (B-13R,B-19,B-11,B-21 & TIMM WELL) ON 7/22/18 (B-12, B-13R,B-21) ON 8/31/18 (B-21,B-13R,B-12) AND WILL BE FORWARDED TO TAUREN BEGGS.tauren.beggs@wisconsin.gov

PECFA Eligible? No

Tauren Beggs:

Here is the results of the monitoring wells for 2018. Well B-13R is still high but not as high as before cleanup. W-12 ranges from 200-400 ug/L. Well B-21 is below 50.0 ug/L (by road row to south) B-11 & B-19 tested this year below 50.0 ug/L. The Timm Well was 6.1 ug/L. We will need to discuss future monitoring & possibly closer on some of the wells

Warren Hohn

NORTHERN LAKE SERVICE, INC.
 Analytical Laboratory and Environmental Services
 400 North Lake Avenue - Crandon, WI 54520
 Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 04/27/18 Page 1 of 1

Client: Township of Aniwa
 Attn: Warren Hohn
 1201 Lake St
 Merrill, WI 54452

NLS Project: 297930

NLS Customer: 104168

Fax: 715 536 1277 Phone: 715 551 9080

Project: Arsenic Dump

B-12 NLS ID: 1050382

COC: 195457:1 Matrix: GW
 Collected: 03/13/18 10:45 Received: 04/18/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	310	ug/L	1	1.0*	2.0*	04/22/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					04/21/18	EPA 200.8M, Rev 5.4	721026460

B-13 R NLS ID: 1050383

COC: 195457:2 Matrix: GW
 Collected: 03/13/18 10:40 Received: 04/18/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	1000	ug/L	1	1.0*	2.0*	04/22/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					04/21/18	EPA 200.8M, Rev 5.4	721026460

B-21 NLS ID: 1050384

COC: 195457:3 Matrix: GW
 Collected: 03/13/18 10:15 Received: 04/18/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	7.1	ug/L	1	0.50*	1.0*	04/21/18	EPA 200.8, Rev 5.4	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

Sample #	Depth to Water	GW. Ht.	Well Top Elev.
B-21 (10:18 Am)	9.50'	84.17'	93.67'
B-12 (10:30 Am)	13.16'	84.48'	97.64'
B-13R (10:40 Am)	14.32'	84.96'	99.28'

NORTHERN LAKE SERVICE, INC.
 Analytical Laboratory and Environmental Services
 400 North Lake Avenue - Crandon, WI 54520
 Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 07/10/18 Page 1 of 2

Client: Township of Aniwa
 Attn: Warren Hohn
 1201 Lake St
 Merrill, WI 54452

NLS Project: 301822

NLS Customer: 104168

Fax: 715 536 1277 Phone: 715 551 9080

Project: Arsenic Dump

B-21 NLS ID: 1062438

COC: 212567:1 Matrix: GW
 Collected: 04/14/18 12:00 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	7.8	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					06/30/18	EPA 200.8M, Rev 5.4	721026460

B-13R NLS ID: 1062439

COC: 212567:2 Matrix: GW
 Collected: 04/14/18 13:00 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	3200	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

B-12 NLS ID: 1062440

COC: 212567:3 Matrix: GW
 Collected: 04/14/18 13:15 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	220	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

B-13R NLS ID: 1062441

COC: 212567:4 Matrix: GW
 Collected: 06/10/18 10:05 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	5300	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

B-19 NLS ID: 1062442

COC: 212567:5 Matrix: GW
 Collected: 06/10/18 09:50 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	4.4	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

B-11 NLS ID: 1062443

COC: 212567:6 Matrix: GW
 Collected: 06/10/18 09:00 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	3.8	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

B-21 NLS ID: 1062444

COC: 212567:7 Matrix: GW
 Collected: 06/10/18 10:15 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	11	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

Page 2

ANALYTICAL REPORT

Client: Township of Aniwa
 Attn: Warren Hohn
 1201 Lake St
 Merrill, WI 54452

Project: Arsenic Dump

Blank NLS ID: 1062445

COC: 212567:8 Matrix: GW
 Collected: 06/10/18 11:10 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	ND	ug/L	1	1.0*	2.0*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

Timm W19146 NLS ID: 1062446

COC: 212567:9 Matrix: DW
 Collected: 06/10/18 11:00 Received: 06/20/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	6.1	ug/L	1	1.0*	2.0 / 10*	07/04/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					07/01/18	EPA 200.8M, Rev 5.4	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

Date / Sample #	Time	Depth To Water	GW HT	Well Top Elev.	Diss. Arsenic
4-14-18 B-12	12:04 PM	10.16'	87.48'	97.64'	220.0 ug/L
4-14-18 B-13R	12:30 PM	11.40'	87.88'	99.28'	3200.0 ug/L
4-14-18 B-21	11:16 AM	6.56'	87.11'	93.67'	7.8 ug/L
6-10-18 B-11	9:05 AM	12.24'	87.53'	99.77'	3.8 ug/L
6-10-18 B-13R	9:42 AM	12.24'	87.64'	99.28'	5300.0 ug/L
6-10-18 B-19	9:54 AM	12.40'	87.04'	99.44'	4.4 ug/L
6-10-18 B-21	10:15 AM	7.64'	86.03'	93.67'	11.0 ug/L
6-10-18 Timm W19146	10:25 AM	Drinking Water Well			6.1 ug/L
2017 Timm Well					1.5 ug/L AS 3.5 ug/L AS

Lab-Tech Services
 WDNR Cert # 734044960
 Data Report Sheet

Month: July Facility: Town of
 2018 Aniwa

Sample Date	Sample Location	Arsenic ug/l
22-Jul	B-12	446
22-Jul	B-13R	4400
22-Jul	B-21	11.9

* Samples not correctly preserved (not 4C or acid preserved)
 # Quality Assurance Failures
 Please contact us at 715-623-6281, if you have any questions regarding your results.

Parameter	LOD	LOQ
Arsenic	0.6	2

Well #	Depth to Water	GW Ht.	Well Top Elev.
B-12 (2:07 PM)	11.10'	86.54'	97.64'
B-13R (2:25 PM)	12.30'	86.98'	99.28'
B-21 (1:45 PM)	7.60'	86.98'	93.67'

ANALYTICAL REPORT

Client: Township of Aniwa
 Attn: Warren Hohn
 1201 Lake St
 Merrill, WI 54452

Project: Arsenic Dump

B-21 NLS ID: 1078246

COC: 221127:1 Matrix: GW
 Collected: 08/31/18 11:45 Received: 09/06/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	13	ug/L	1	1.0*	2.0*	09/16/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					09/15/18	EPA 200.8M, Rev 5.4	721026460

B-12 NLS ID: 1078247

COC: 221127:2 Matrix: GW
 Collected: 08/31/18 12:10 Received: 09/06/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	510	ug/L	1	1.0*	2.0*	09/16/18	EPA 200.8, Rev 5.4	721026460
Metals digestion - dissolved ICP-MS	yes					09/15/18	EPA 200.8M, Rev 5.4	721026460

B-13R NLS ID: 1078248

COC: 221127:3 Matrix: GW
 Collected: 08/31/18 12:28 Received: 09/06/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	3200	ug/L	1	0.50*	1.0*	09/10/18	EPA 200.8, Rev 5.4	721026460

Blank NLS ID: 1078249

COC: 221127:4 Matrix: FB
 Collected: 08/31/18 13:00 Received: 09/06/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, dis. as As by ICP-MS	ND	ug/L	1	0.50*	1.0*	09/10/18	EPA 200.8, Rev 5.4	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

Well #	Depth to Water	GW Ht.	Well Top Elev.
B-12 (12:10 PM)	12.54'	85.10'	97.64'
B-13R (12:28 PM)	13.79'	85.49'	99.28'
B-21 (11:45 AM)	9.16'	84.51'	93.67'

TOWN OF ANIWA ARSENIC DISPOSAL SITE GROUNDWATER MONITORING PLAN
FOR THE YEARS 2016 THRU 2018

The site is located in northwestern Wisconsin in Shawano County on the north side of Marsh Rd. ½ mile west of US Highway 45 on approx. 4.35 acres. It is a former arsenic pesticide storage and disposal facility to control grasshoppers in potato fields during the droughts in the 1930-1940s. Rusty steel barrels and wood barrels were buried in a shallow pit next to a small wood storage shed in the late 1970s. In 1984, the Wisconsin DNR (WDNR) conducted a limited removal of rusted steel and wood barrels and arsenic contaminated soils. The contaminants were transported to a hazardous waste landfill in the state of Alabama.

Groundwater and soil monitoring done by the Town of Aniwa in the years 1989-2013 indicated groundwater dissolved arsenic levels were increasing especially during high water events in the monitoring wells found at the disposal site. Levels of dissolved arsenic were extremely high in monitoring wells next to the pit and down gradient to the southeast. The Town of Aniwa did not have the resources to clean up the site and applied to the Wisconsin DNR for remediation and closure assistance. Closure was denied by the WDNR. WDNR and the Town of Aniwa requested assistance from the Environmental Protection Agency (EPA) Emergency Response Branch in September 2014. From June 1-19, 2015 the EPA supervised/assisted the removal of 1,019 tons of pretreated arsenic contaminated soil to an EPA non-hazardous approved landfill in central Wisconsin.

A condition of the removal was the Town of Aniwa develop a groundwater monitoring plan for the years 2016-2018 for the 7 monitoring wells currently found at the site (B-10, B-11, B-12, B-13R, B-19R, B-20 and B-21) and the TIMM private drinking water well 300 ft. northwest of the burial pit. Monitoring done in 2016 indicated the wells of most concern were B-12, B-13R and B-21 because of arsenic levels above 10 ug/L As. The TIMM private well was supplied with a arsenic treatment unit and is also monitored to make sure it is working properly. All of the monitoring wells were sampled for the year 2016 including the TIMM private well on 7-14-2016. Wells were sampled for dissolved arsenic, field filtered and acidified the HNO₃. Additionally all wells were monitored for depth to water, field pH, specific conductance, field temperature and the amount of water bailed from the wells. The bailings are put in a barrel in a secured small shed on site and will be disposed of properly. The samples were analyzed by Northern Lake Service, Inc., Crandon,WI., a WDNR and EPA certified water and wastewater Lab.

For the years 2017-2018 the wells of major concern are wells B-12, B-13R and B-21 showing the highest dissolved arsenic levels. The sampling will be done in late May or early June after spring runoff when water levels are highest. Additionally, in 2017 wells B-10 and B-20 will be sampled as well as the TIMM well. In the year 2018, wells B-12, B-13R and B-21 as well as B-11 and B-19R will be sampled as well as the TIMM well to monitor the arsenic treatment unit performance. Results will be sent to Tauren Beggs, WDNR Northeast region hydrogeologist, Remediation and Redevelopment Division.

DANIEL LEX: _____

TOWN CHAIRMAN, TOWN OF ANIWA

JANUARY 9, 2017

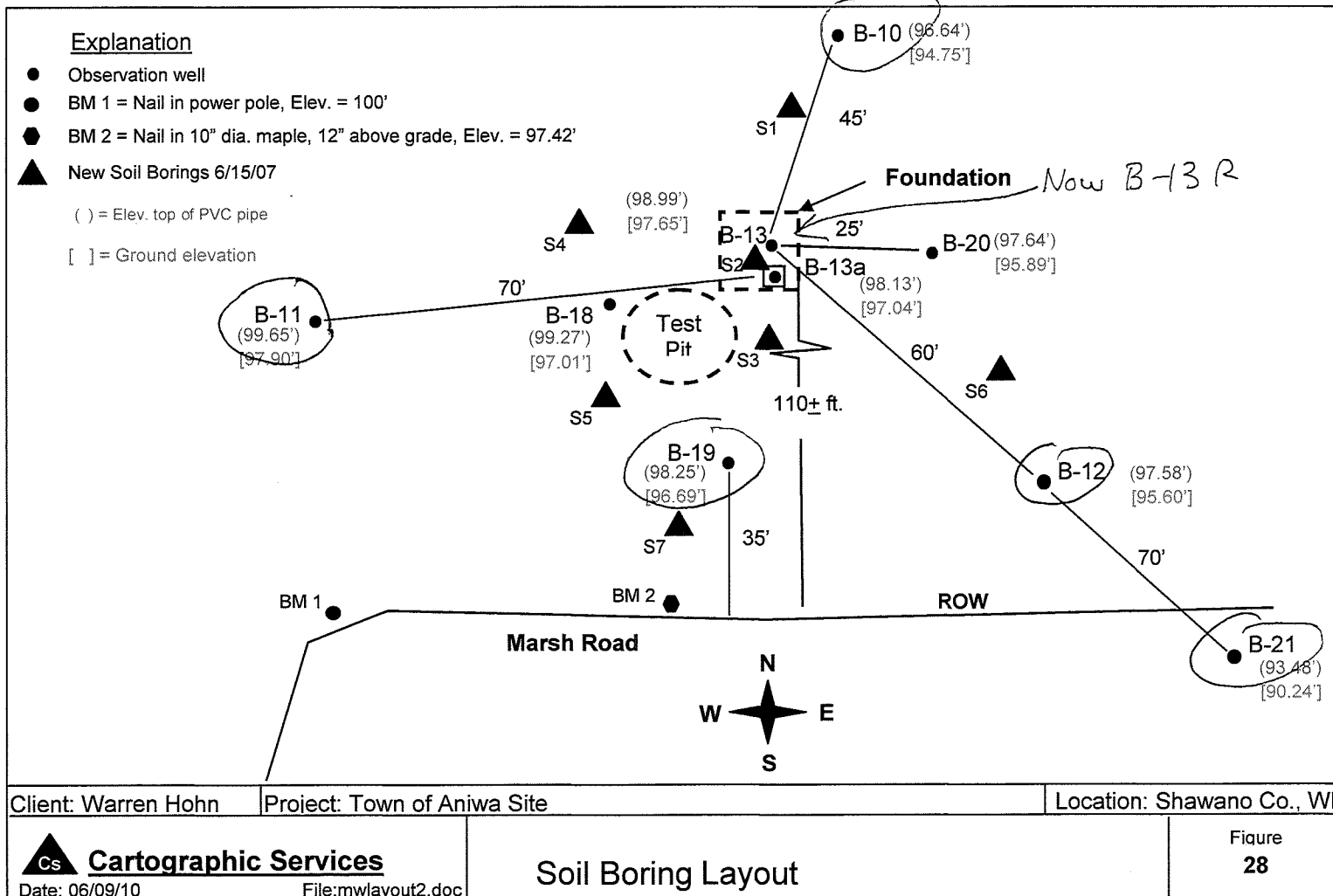


Figure 28. Township of Aniwa soil boring layout adapted from (Becher-Hoppe, 1983) boring completed on July 6, 2007.