DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
US ARMY ENVIRONMENTAL COMMAND
2455 REYNOLDS ROAD
JOINT BASE SAN ANTONIO FORT SAM HOUSTON, TX 78234-7588

AMIM-AEC-M (1200C) November 19, 2024

SUBJECT: September 2024 Monitoring Well Groundwater Data
WDNR BRRTS #02-57-001002
Badger Army Ammunition Plant

Mr. Luke Lampo
Wisconsin Department of Natural Resources
South Central Region
3911 Fish Hatchery Road
Fitchburg, WI 53711-5397

Dear Mr. Lampo:

Enclosed is the Badger Army Ammunition Plant (BAAP) September 2024 Monitoring Well Groundwater Data. This was a biennial (every two years), annual, semi-annual, and quarterly sampling event. Between September 9 and 25, 2024, SpecPro Professional Services, LLC (SPS) collected groundwater samples from 141 monitoring wells associated with the Central Plume, Deterrent Burning Ground (DBG) Plume, Nitrocellulose Production Area (NC) Plume, and Propellant Burning Ground (PBG) Plume.

The attached files contain the signed Environmental Monitoring Data Certification Forms, groundwater monitoring exceedance reports, groundwater monitoring all hits reports, a sampled wells list, a map showing the well locations (Figure 1), DBG Plume dinitrotoluene (DNT) results map (Figure 2), NC Plume DNT results map (Figure 3), PBG Plume DNT results map (Figure 4), and a concentration graph. Also attached are DNT data summary tables for selective wells associated with the DBG and PBG Plumes.

<u>Deterrent Burning Ground Plume</u>

Based on the WDNR 2014 Monitoring Well Optimization Plan email approval dated May 27, 2014 and a subsequent modification dated July 15, 2016, 48 monitoring wells associated with the DBG Plume were sampled between September 9 and 11, 2024. No water was present in ELN-9402AR (TD: 145-ft bgs); therefore, it could not be sampled. The following wells were sampled as part of the biennial sampling schedule: ELN-0802A and ELN-0802C.

The DBG Plume boundary depicted on Figures 1 and 2 is based on the total DNT concentrations reported during 2023 and 2024. The plume boundary outlines where total DNT was detected above the NR 140 Enforcement Standard (ES) or NR 140 Preventive Action Limit (PAL). Figure 2 is a DBG Plume map showing the total DNT concentrations per well from the September 2024 sampling round. The NR 140 ES and PAL for total DNT are 0.05 and 0.005 micrograms per liter (µg/l), respectively.

The groundwater results indicate that DNT concentrations in the DBG Plume have continued to decrease over the past six years, except in two monitoring wells: ELN-1502A and ELN-1503A. Over the past two years, DNT concentrations in ELN-1003B and ELN-1003C been decreasing. The attached Table 1 compares the DNT results from ELN-1003B, ELN-1003C, and ELN-1502A from September 2016 through September 2024 and ELN-1503A from April 2021 through September 2024. The DNT isomers consistently found in monitoring wells within the DBG Plume are 2,3-DNT, 2,5-DNT, and 3,4-DNT.

The total DNT concentration in ELN-1003B increased from <0.008 µg/l (below the detection limit) during September 2016 to 0.223 µg/l during November 2019 but has now dropped to 0.028 µg/l in September 2024. The total DNT concentration in ELN-1003C increased from <0.0081 µg/l during September 2016 to 0.218 µg/l during November 2022 but has now dropped to 0.079 µg/l in September 2024. Both ELN-1003B and ELN-1003C are located 0.5 miles southeast of ELN-1502A. Both ELN-1003B and ELN-1003C will be sampled again during November 2024.

The total DNT concentration in ELN-1502A increased from 0.195 µg/l during September 2016 to 0.801 µg/l during September 2018 and dropped to 0.177 µg/l in April 2022. Since April 2022, the total DNT concentration in ELN-1502A has been slowly increasing. During September 2024, total DNT concentration in ELN-1502A was 0.338 µg/l. ELN-1502A is located at the eastern BAAP boundary and 0.7 miles southeast of the DBG source area. ELN-1502A will be sampled again during April 2025.

The total DNT concentration in ELN-1503A exceeded the NR 140 ES for the first time in November 2021. In April 2023, the total DNT concentration in ELN-1503A exceeded the NR 140 ES for a third time. In September 2024, the total DNT concentration in ELN-1503A was 0.049 µg/l (above the NR 140 PAL). Between 2015 and September 2021, none of the six DNT isomers had been detected in ELN-1503A. ELN-1503A is located approximately 800 feet east of ELN-1502A. The Army has increased the sampling frequency of ELN-1503A and ELN-1503C from semi-annual to quarterly; therefore, both wells will be sampled again during November 2024.

<u>Nitrocellulose Production Area Plume</u>

Per the WDNR's October 3, 2014 request, we have included DNT groundwater data from seven monitoring wells located near the former DNT Screen House. These monitoring wells are used to track DNT contamination in the NC Plume. The NC Plume boundary depicted on Figures 1 and 3 is based on the total DNT concentrations reported during 2023 and 2024. The plume boundary outlines where total DNT was detected above the NR 140 ES or PAL. Figure 3 is a NC Plume map showing the total DNT concentrations per monitoring well from the September 2024 sampling round. The following wells were sampled as part of the annual sampling schedule: RIM-0703, RIN-1007C and RIN-1001C.

The groundwater results indicate that DNT concentrations in the NC Plume have remained stable. Total DNT was detected above the NR 140 PAL in all four of the sampled wells. Seven wells associated with the NC Plume will be sampled during September 2024.

Propellant Burning Ground Plume

Based on the WDNR Propellant Burning Ground Monitoring Requirements dated January 5, 2015, 85 monitoring wells associated with the PBG Plume were sampled between September 12 and 25, 2024. The following wells were sampled as part of the biennial sampling schedule: PBM-8909, PBN-1405F, PBM-9002D, PBN-9102B, and PBN-9102C. The following wells were sampled as part of the annual sampling schedule: PBN-1003C, PBM-8907, SWN-9102C, SWN-9102D, SWN-9105B, SWN-9105C, and SWN-9105D.

The PBG Plume boundary depicted on Figures 1 and 4 is based on groundwater data collected during 2023 and 2024. The plume boundary outlines where either VOCs or total DNT were detected above the NR 140 ES or NR 140 PAL. Figure 4 is a PBG Plume map showing the total DNT concentrations per monitoring well from the September 2024 sampling round.

During September 2024, CTET and ethyl ether were the only VOCs detected above the NR 140 ES in the PBG Plume. The NR 140 ES for CTET and ethyl ether are 5 and 1,000 µg/l, respectively. CTET was detected above the NR 140 ES in four monitoring wells: PBN-8502A (located on-site and center of PBG Plume), PBN-9903C (located 700 feet south of the BAAP boundary and center of PBG Plume) and PBN-9101C & PBM-9001D (both located off-site and near the Wisconsin River). The groundwater results indicate that VOC concentrations in the PBG Plume have decreased in concentration since September 2017 except in SWN-9103D. In September 2024, ethyl ether was detected at 1,400 µg/l in SWN-9103D; above the NR 140 ES. Monitoring well SWN-9103D is located one mile south of the BAAP boundary. Since 2021, the ethyl ether concentration in SWN-9103D has been increasing. The

ethyl ether concentration in SWN-9103D increased from 0.19 µg/l during April 2021 to 9.7 µg/l during April 2022 to 1,200 µg/l during April 2023. Prior to 2020, ethyl ether was not detected in SWN-9103D.

CTET concentrations in well nest PBN-1304A, PBN-1304B, and PBN-1304C have been slowly increasing towards the NR 140 PAL of 0.5 µg/l. The PBN-1304 well nest is located at the BAAP boundary and on the eastern edge of the PBG Plume. The CTET concentration in PBN-1304A increased from 0.13 µg/l during April 2021 to 0.44 µg/l during September 2024. The CTET concentration in PBN-1304B increased from 0.1 µg/l during April 2017 to 0.54 µg/l (above the NR 140 PAL) during September 2024. The CTET concentration in PBN-1304C increased from 0.16 µg/l during April 2017 to 0.86 µg/l (above the NR 140 PAL) during September 2024.

DNT concentrations near the PBG source area have increased since September 2017. The attached Table 2 compares the DNT results from PBM-9801, PBM-0001, PBM-0006, PBN-8202A, PBN-8202B, and PBN-8202C from September 2017 through September 2024. PBM-9801 and PBM-0001 are located within the PBG source area. PBN-8202A, PBN-8202B, PBN-8202C and PBM-0006 are located adjacent to and downgradient of the PBG source area. PBM-9801, PBM-0001, PBM-0006, PBN-8202A, PBN-8202B, and PBN-8202C will be sampled again during April 2025.

The total DNT concentration in PBM-9801 increased from 0.548 µg/l during September 2017 to 112.65 µg/l during September 2020. In September 2024, the total DNT concentration in PBM-9801 dropped to 0.699 µg/l.

The total DNT concentration in PBM-0001 increased from 0.701 µg/l during September 2017 to 22.178 µg/l during April 2019. Between September 2019 and May 2022, the total DNT concentration in PBM-0001 fluctuated between 2.249 to 11.05 µg/l. In September 2022, the total DNT concentration in PBM-0001 increased to 280.259 µg/l. In September 2024, the total DNT concentration in PBM-0001 dropped to 0.719 µg/l.

The total DNT concentration in PBM-0006 from September 2017 to September 2022 averaged near 1 µg/l. During that time period, the maximum total DNT concentration in PBM-0006 was 2.068 µg/l in April 2020. In April 2023, the total DNT concentration in PBM-0006 increased to 10.398 µg/l. In September 2024, the total DNT concentration in PBM-0006 dropped to 0.608 µg/l.

The total DNT concentration in PBN-8202A increased from 1.469 µg/l during September 2017 to 420.294 µg/l during May 2018. Since May 2018, the total DNT concentration in PBN-8202A has fluctuated. During April 2019, the total DNT concentration in PBN-8202A dropped to 30.49 µg/l. In April 2020, the total DNT concentration in PBN-8202A increased to 1,286.9 µg/l. During September 2020, the

total DNT concentration in PBN-8202A dropped to 14.118 µg/l. In May 2022, the total DNT concentration in PBN-8202A increased to 53.951 µg/l. In September 2024, the total DNT concentration in PBN-8202A dropped to 1.582 µg/l.

The total DNT concentration in PBN-8202B increased from 0.881 µg/l during September 2017 to 85.1 µg/l during April 2019. During September 2021, the total DNT concentration in PBN-8202B dropped to 3.179 µg/l. During September 2022, the total DNT concentration in PBN-8202B increased to 26.333 µg/l. In September 2024, the total DNT concentration in PBN-8202B dropped to 1.997 µg/l.

The total DNT concentration in PBN-8202C from September 2017 to September 2022 ranged between 0.377 and 1.21 µg/l. In April 2023, the total DNT concentration in PBN-8202C increased to 10.77 µg/l. In September 2024, the total DNT concentration in PBN-8202C dropped to 0.262 µg/l.

The total DNT concentration in PBM-0002 has also recently increased. PBM-0002 is located adjacent to and downgradient of the PBG source area. The total DNT concentration in PBM-0002 increased from 6.317 µg/l during April 2024 to 46.29 µg/l during September 2024. The concentration of 2,4-DNT in PBM-0002 was 31 µg/l during September 2024. The 2,4-DNT concentration in PBM-0002 has not been above 2 µg/l since March 2012.

These are unexpected increases in DNT concentrations over the past seven years. The recent increase in DNT concentrations near the source area may be related to the rise in groundwater levels at the PBG source area. Between 2016 and 2020, the groundwater table at the PBG source area had risen nine feet (114.4-ft to 105.3-ft bgs) and above the estimated depth (107.3-ft bgs) of DNT contaminated soil remaining beneath the PBG cap. Since 2020, the groundwater table at the PBG source area has dropped seven feet (105.3-ft to 112-ft bgs) and below the estimated depth (107.3-ft bgs) of DNT contaminated soil. The attached graph compares the total DNT concentration in PBN-8202A versus the groundwater elevation from 2007 to 2024. The graph shows that as the groundwater elevation in PBN-8202A has dropped over the past four years, the total DNT concentration has also dropped.

Quality Review

SPS conducted an internal quality control review of the groundwater data. The internal review did not find any issues with the groundwater data. All groundwater samples were analyzed by CT Laboratories, LLC (CT Lab) in Baraboo, Wisconsin. CT Lab is a WDNR Chapter NR 149 certified laboratory and accredited by the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP).

Please do not hesitate to contact me at laura.z.powell2.civ@army.mil or 210-834-5626 if you have any questions.

Sincerely,

POWELL.LAURA.ZOGRAPHOS.1543691506
Digitally signed by POWELL.LAURA.ZOGRAPHOS.1543691506
Date: 2024.11.19 16:37:08 -06'00'

Laura Powell
Environmental Support Manager
U.S. Army Environmental Command

Attachments
Copy furn: Joel Janssen, SpecPro Professional Services, LLC

September 2024

Monitoring Well Groundwater Data Attachments

Badger Army Ammunition Plant

Central Plume

Deterrent Burning Ground Plume

Nitrocellulose Production Area Plume

Propellant Burning Ground Plume

List of Attachments

Figure 1 September 2024 Sampled Wells

Figure 2 Total DNT September 2024 DBG Plume

Figure 3 Total DNT September 2024 NC Plume

Figure 4 Total DNT September 2024 PBG Plume

Table 1 DNT Summary Table DBG Plume

Table 2 DNT Summary Table PBG Plume

Graph of Total DNT vs Groundwater Elevation in PBN-8202A

September 2024 Sampled Wells List

Environmental Monitoring Data Certification Forms per License Area

Groundwater Monitoring Exceedance & Hits Reports per License Area

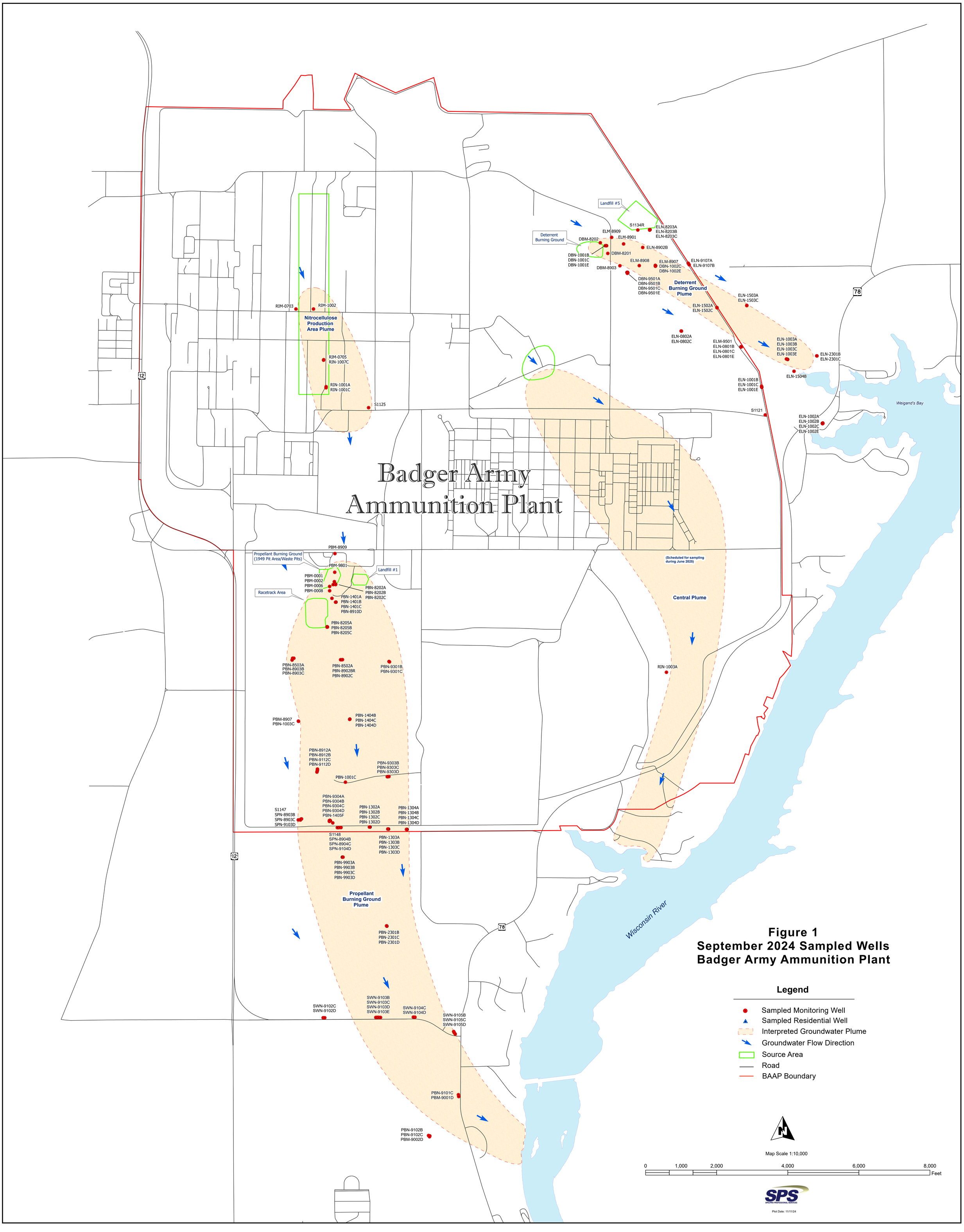
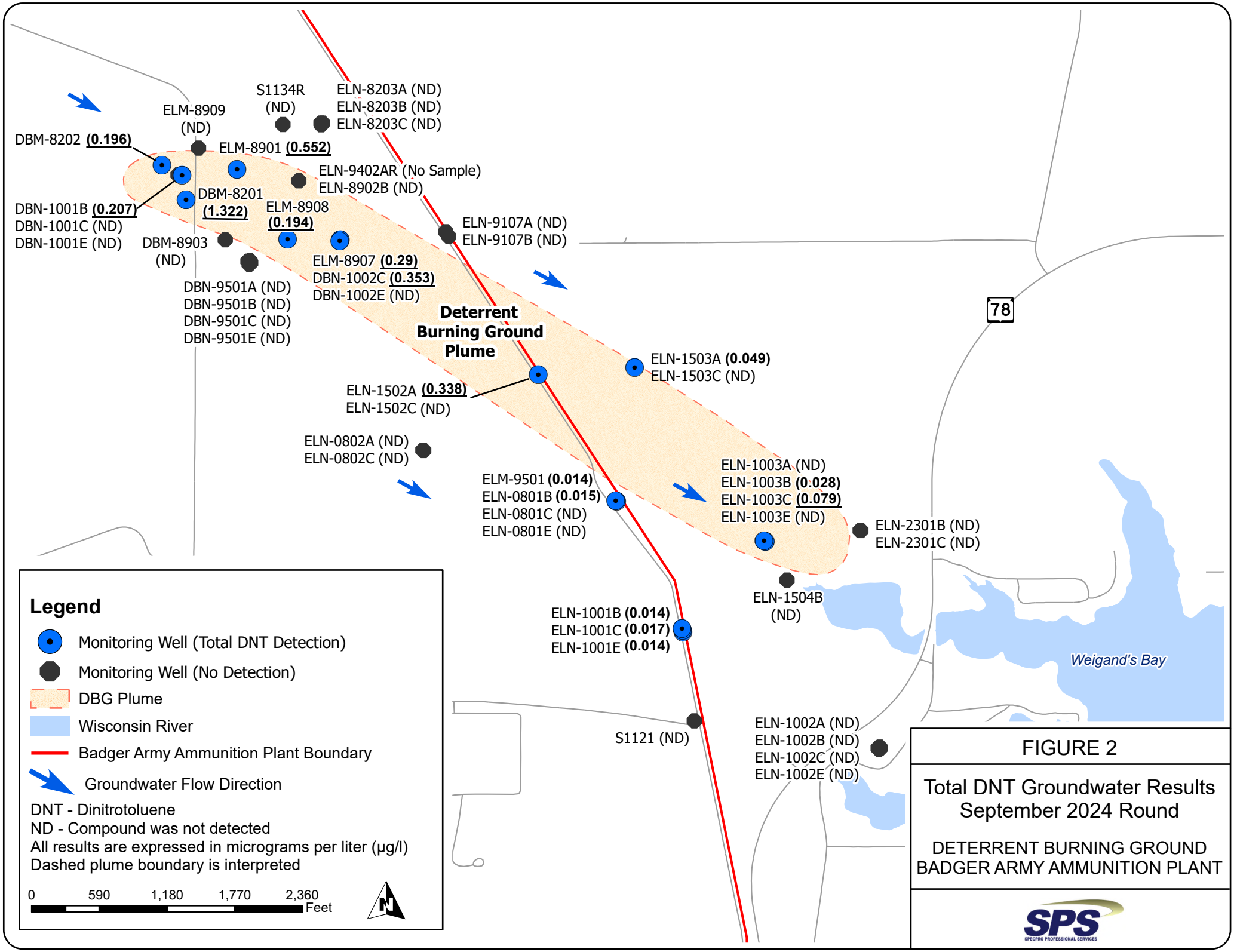
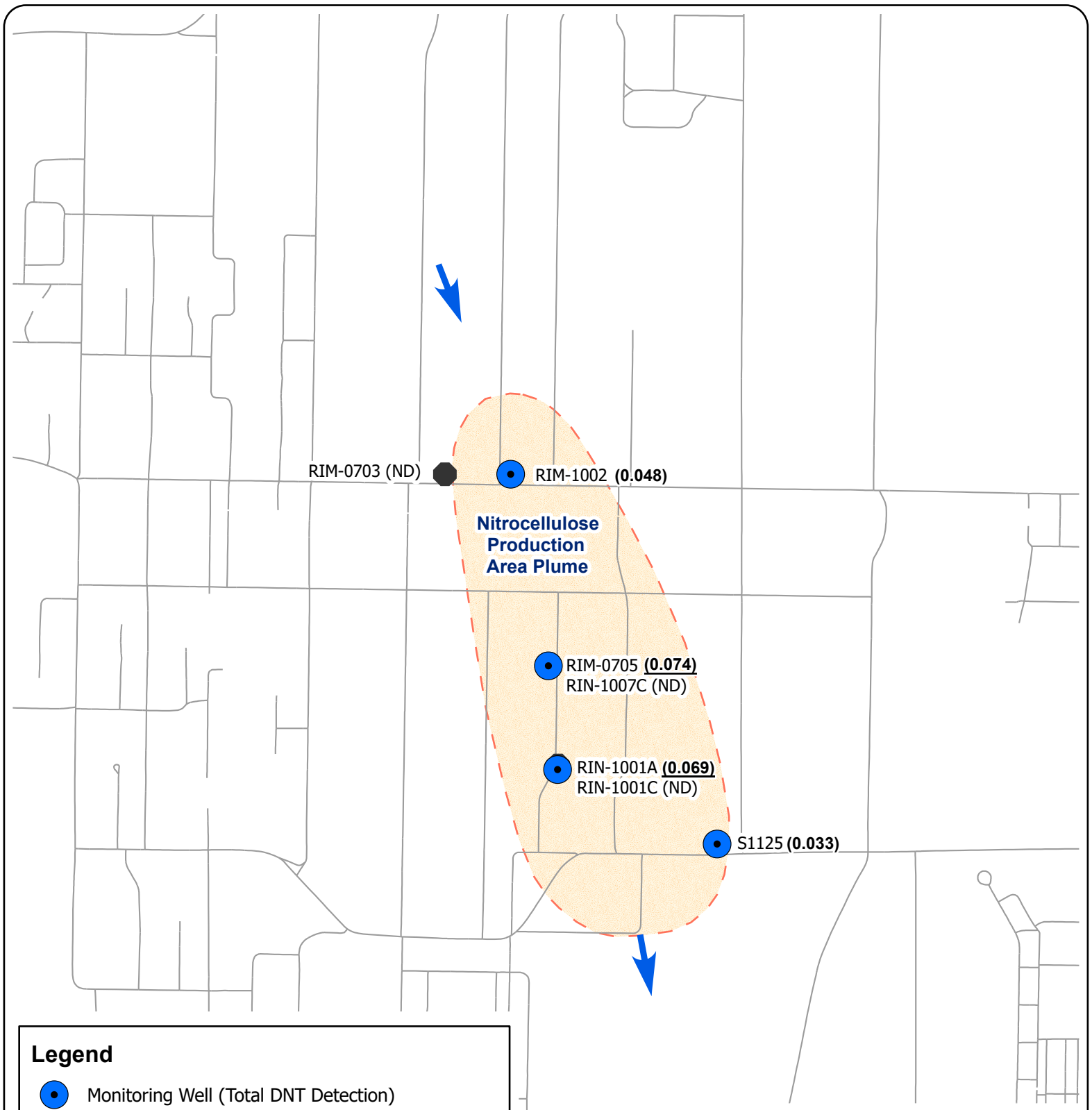


Figure 1
September 2024 Sampled Wells
Badger Army Ammunition Plant


S1134R
(ND)
ELN-8203A (ND)
ELN-8203B (ND)
ELN-8203C (ND)
ELM-8909
(ND)
DBM-8202 (0.196)
ELM-8901 (0.552)
ELN-9402AR (No Sample)
ELN-8902B (ND)
DBM-8201
(1.322)
DBN-1001B (0.207)
DBN-1001C (ND)
DBN-1001E (ND)
ELM-8908
(0.194)
ELN-9107A (ND)
ELN-9107B (ND)
DBM-8903
(ND)
ELM-8907 (0.29)
DBN-1002C (0.353)
DBN-1002E (ND)
DBN-9501A (ND)
DBN-9501B (ND)
DBN-9501C (ND)
DBN-9501E (ND)
Deterrent
Burning Ground
Plume
78
ELN-1503A (0.049)
ELN-1503C (ND)
ELN-1502A (0.338)
ELN-1502C (ND)
ELN-0802A (ND)
ELN-0802C (ND)
ELN-1003A (ND)
ELN-1003B (0.028)
ELN-1003C (0.079)
ELN-1003E (ND)
ELM-9501 (0.014)
ELN-0801B (0.015)
ELN-0801C (ND)
ELN-0801E (ND)
ELN-2301B (ND)
ELN-2301C (ND)
ELN-1504B
(ND)
ELN-1001B (0.014)
ELN-1001C (0.017)
ELN-1001E (0.014)
Weigand's Bay
S1121 (ND)
ELN-1002A (ND)
ELN-1002B (ND)
ELN-1002C (ND)
ELN-1002E (ND)
Legend
Monitoring Well (Total DNT Detection)
Monitoring Well (No Detection)
DBG Plume
Wisconsin River
Badger Army Ammunition Plant Boundary
Groundwater Flow Direction
DNT - Dinitrotoluene
ND - Compound was not detected
All results are expressed in micrograms per liter (µg/l)
Dashed plume boundary is interpreted
0
590
1,180
1,770
2,360
Feet
N
FIGURE 2
Total DNT Groundwater Results
September 2024 Round
DETERRENT BURNING GROUND
BADGER ARMY AMMUNITION PLANT
SPS
SPECPRO PROFESSIONAL SERVICES



Legend

- Monitoring Well (Total DNT Detection)
- Monitoring Well (No Detection)
- NC Plume
- Groundwater Flow Direction

DNT - Dinitrotoluene
ND - Compound was not detected
All results are expressed in micrograms per liter (µg/l)
Dashed plume boundary is interpreted

0 590 1,180 1,770 2,360 Feet

FIGURE 3

Total DNT Groundwater Results
September 2024 Round

NITROCELLULOSE PRODUCTION AREA
BADGER ARMY AMMUNITION PLANT

SPS
SPECPRO PROFESSIONAL SERVICES

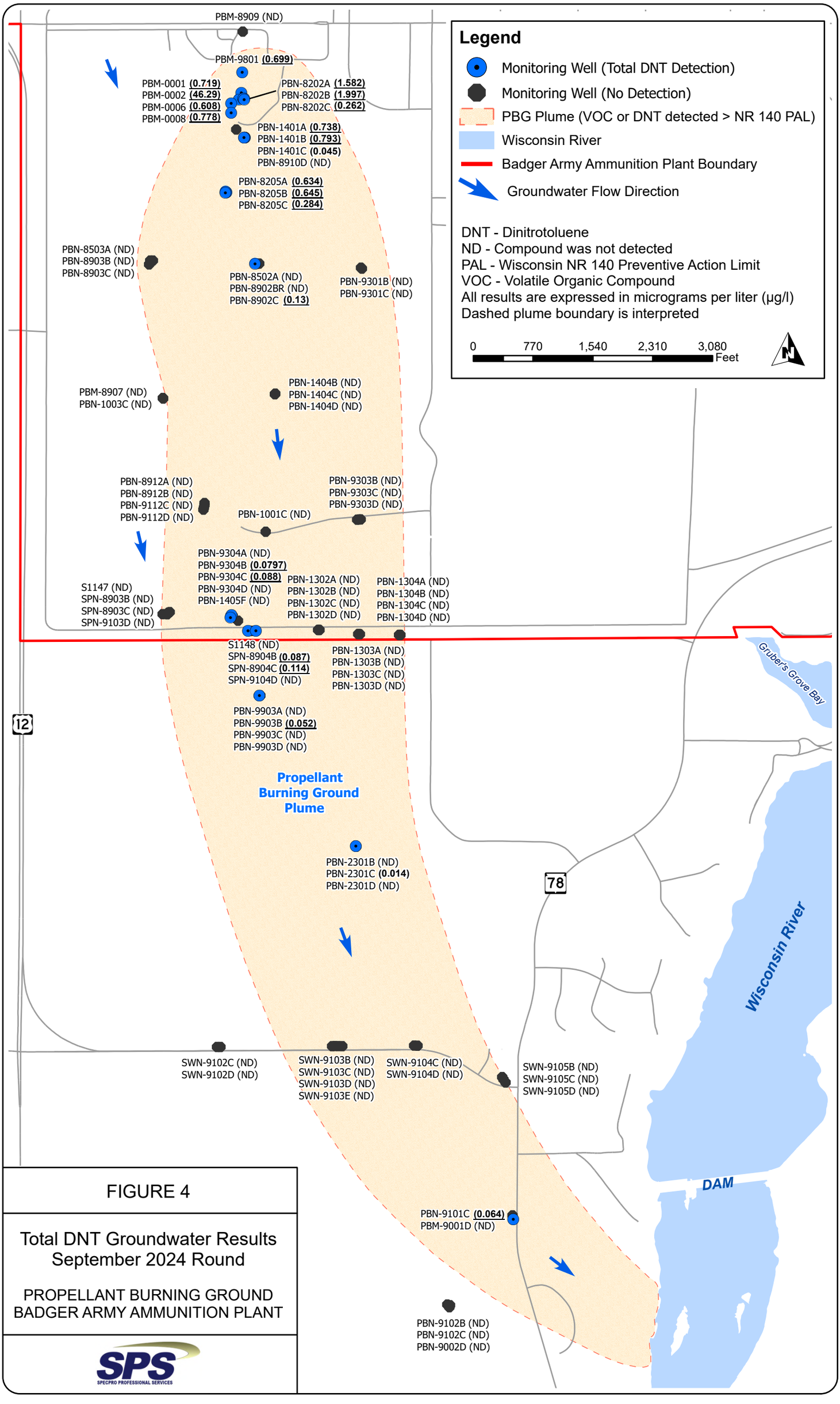


FIGURE 4

Total DNT Groundwater Results
September 2024 Round

PROPELLANT BURNING GROUND
BADGER ARMY AMMUNITION PLANT

SPS
SPECPRO PROFESSIONAL SERVICES

Table 1
2016 - 2024 Summary
Dinitrotoluene Groundwater Results
Deterrent Burning Ground
Badger Army Ammunition Plant

						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
DBG	ELN-1003B	468	2813	B	9/19/16	<0.006	<0.008	<0.003	<0.004	<0.004	<0.004	<0.008
					9/19/16 (D)	<0.006	<0.008	<0.003	<0.004	<0.004	<0.004	<0.008
					4/25/17	<0.006	<0.008	<0.003	<0.004	0.051	<0.004	**0.051**
					9/12/17	0.014 (J)	<0.0082	<0.0031	<0.0041	0.054	<0.0041	**0.068**
					4/26/18	0.029 (J)	**0.026 (J)**	0.028 (J)	**0.024 (J)**	0.1	0.025 (J)	**0.232**
					4/26/18 (D)	0.029 (J)	**0.024 (J)**	0.027 (J)	**0.023 (J)**	0.097	0.025 (J)	**0.225**
					5/14/18	0.03	<0.008	<0.003	**0.036**	0.12	<0.004	**0.186**
					6/28/18	0.059	<0.0076	<0.0029	<0.0038	0.12	<0.0038	**0.179**
					10/3/18	0.032	<0.0078	<0.0029	**0.01 (J)**	0.15	<0.0039	**0.192**
					10/3/18 (D)	0.031	<0.0081	<0.003	**0.01 (J)**	0.13	<0.004	**0.171**
					11/15/18	0.078	<0.0081	<0.003	**0.072**	0.17	<0.004	**0.32**
					4/23/19	0.045	<0.0078	<0.0029	<0.0039	0.12	<0.0039	**0.165**
					6/13/19	0.033	<0.0078	<0.0029	**0.02 (J)**	0.13	<0.0039	**0.183**
					6/13/19 (D)	0.033	<0.0077	<0.0029	**0.019 (J)**	0.13	<0.0038	**0.182**
					9/17/19	0.048	<0.0082	<0.0031	**0.023 (J)**	0.16	<0.0041	**0.231**
					9/17/19 (D)	0.048	<0.0082	<0.0031	**0.022 (J)**	0.15	<0.0041	**0.22**
					11/20/19	0.053	<0.0078	<0.0029	<0.0039	0.17	<0.0039	**0.223**
					5/6/20	<0.0063	<0.0083	<0.0031	<0.0042	0.13	<0.0042	**0.13**
					6/11/20	0.051	<0.0081	<0.003	<0.004	0.13	<0.004	**0.181**
					9/22/20	0.041	<0.0076	<0.0029	<0.0038	0.13	<0.0038	**0.171**
					11/9/20	0.04	<0.0082	<0.0031	<0.0041	0.13	<0.0041	**0.17**
					4/22/21	0.051 (J)	<0.0084	<0.0053	**0.022 (J)**	0.12	<0.0053	**0.193**
					4/22/21 (D)	0.048 (J)	<0.0082	<0.0051	**0.022 (J)**	0.12	<0.0051	**0.19**
					6/8/21	0.051 (J)	<0.0082	<0.0052	**0.027 (J)**	0.1	<0.0052	**0.178**
					6/8/21 (D)	0.053	<0.0084	<0.0053	**0.029 (J)**	0.1	<0.0053	**0.182**
					9/30/21	0.037 (J)	<0.0082	<0.0051	<0.0051	0.083	<0.0051	**0.12**
					11/9/21	0.038 (J)	<0.0077	<0.0048	<0.0048	0.086	<0.0048	**0.124**
					5/5/22	0.038 (J)	<0.0078	<0.0049	<0.0049	0.083	<0.0049	**0.121**
					7/7/22	0.041 (J)	<0.0078	<0.0049	<0.0049	0.084	<0.0049	**0.125**
					9/26/22	0.022 (J)	<0.0077	<0.0048	<0.0048	0.047 (J)	<0.0048	**0.069**
					11/9/22	0.038 (J)	<0.0076	<0.0048	<0.0048	0.092	<0.0048	**0.13**
					4/25/23	0.034 (J)	<0.0076	<0.0048	<0.0048	0.062	<0.0048	**0.096**
					6/27/23	0.022 (J)	<0.0077	<0.0048	<0.0048	0.061	<0.0048	**0.083**
					9/13/23	<0.0059	<0.0078	<0.0049	<0.0049	0.027 (J)	<0.0049	**0.027 (J)**
					9/13/23 (D)	<0.0058	<0.0077	<0.0048	<0.0048	0.025 (J)	<0.0048	**0.025 (J)**
					11/14/23	<0.0058	<0.0077	<0.0048	<0.0048	0.054	<0.0048	**0.054**
					4/10/24	<0.0057	<0.0076	<0.0048	<0.0048	0.026 (J)	<0.0048	**0.026 (J)**
					6/12/24	<0.0057	<0.0076	<0.0048	<0.0048	0.029 (J)	<0.0048	**0.029 (J)**
					9/11/24	<0.0057	<0.0076	<0.0048	<0.0048	0.028 (J)	<0.0048	**0.028 (J)**

Table 1
2016 - 2024 Summary
Dinitrotoluene Groundwater Results
Deterrent Burning Ground
Badger Army Ammunition Plant

						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
DBG	ELN-1003C	469	2813	C	9/19/16	<0.0061	<0.0081	<0.003	<0.004	<0.004	<0.004	<0.0081
					4/25/17	<0.006	<0.008	<0.003	**0.0085 (J)**	<0.004	<0.004	**0.0085 (J)**
					9/12/17	<0.0064	<0.0085	<0.0032	<0.0043	<0.0043	<0.0043	<0.0085
					4/26/18	0.025 (J)	**0.026 (J)**	<0.003	**0.023 (J)**	<0.004	<0.004	**0.074**
					5/14/18	<0.0061	<0.0081	<0.003	**0.029 (J)**	0.079	<0.004	**0.108**
					6/28/18	<0.0057	<0.0076	<0.0029	<0.0038	<0.0038	<0.0038	<0.0076
					6/28/18 (D)	<0.0058	<0.0077	<0.0029	<0.0038	<0.0038	<0.0038	<0.0077
					10/3/18	0.024 (J)	<0.0078	<0.0029	**0.0087 (J)**	0.1	<0.0039	**0.1327**
					11/15/18	0.07	<0.0078	<0.0029	**0.068**	0.14	<0.0039	**0.278**
					4/23/19	<0.0058	<0.0078	<0.0029	<0.0039	0.09	<0.0039	**0.09**
					4/23/19 (D)	<0.0058	<0.0078	<0.0029	<0.0039	0.093	<0.0039	**0.093**
					6/13/19	0.028 (J)	<0.0082	<0.0031	**0.022 (J)**	0.11	<0.0041	**0.16**
					9/17/19	0.039	<0.0082	<0.0031	**0.022 (J)**	0.11	<0.0041	**0.171**
					11/20/19	<0.0059	<0.0079	<0.003	<0.004	0.13	<0.004	**0.13**
					11/20/19 (D)	<0.0059	<0.0079	<0.003	<0.004	0.13	<0.004	**0.13**
					5/6/20	<0.0064	<0.0085	<0.0032	<0.0043	0.13	<0.0043	**0.13**
					5/6/20 (D)	<0.0064	<0.0085	<0.0032	<0.0043	0.11	<0.0043	**0.11**
					6/11/20	0.05	<0.0084	<0.0032	**0.035**	0.13	<0.0042	**0.215**
					9/22/20	0.039	<0.0078	<0.0029	<0.0039	0.13	<0.0039	**0.169**
					11/9/20	0.038	<0.0082	<0.0031	<0.0041	0.14	<0.0041	**0.178**
					4/22/21	0.048 (J)	<0.0083	<0.0052	**0.026 (J)**	0.13	<0.0052	**0.204**
					6/8/21	0.054	<0.0084	<0.0053	**0.031 (J)**	0.12	<0.0053	**0.205**
					9/30/21	0.037 (J)	<0.008	<0.005	**0.024 (J)**	0.11	<0.005	**0.171**
					11/9/21	0.045 (J)	<0.0081	<0.0051	<0.0051	0.11	<0.0051	**0.155**
					5/5/22	0.046 (J)	<0.0083	<0.0052	**0.033 (J)**	0.11	<0.0052	**0.189**
					5/5/22 (D)	0.045 (J)	<0.0081	<0.0051	<0.0051	0.11	<0.0051	**0.155**
					7/7/22	0.044 (J)	<0.0079	<0.005	**0.035 (J)**	0.11	<0.005	**0.189**
					9/26/22	0.028 (J)	<0.0078	<0.0049	<0.0049	0.077	<0.0049	**0.105**
					11/9/22	0.047 (J)	<0.0076	<0.0048	**0.031 (J)**	0.13	<0.0048	**0.208**
					11/9/22 (D)	0.051	<0.008	<0.005	**0.037 (J)**	0.13	<0.005	**0.218**
					4/25/23	0.042 (J)	<0.008	<0.005	**0.023 (J)**	0.099	<0.005	**0.164**
					4/25/23 (D)	0.039 (J)	<0.0077	<0.0048	**0.02 (J)**	0.091	<0.0048	**0.15**
					6/27/23	0.032 (J)	<0.0079	<0.005	**0.018 (J)**	0.097	<0.005	**0.147**
					9/13/23	0.012 (J)	<0.0077	<0.0048	<0.0048	0.054	<0.0048	**0.066**
					11/14/23	0.036 (J)	<0.0078	<0.0049	<0.0049	0.08	<0.0048	**0.116**
					4/10/24	0.011 (J)	<0.0078	<0.0049	<0.0049	0.055	<0.0049	**0.066**
					6/12/24	0.018 (J)	<0.0078	<0.0049	<0.0049	0.06	<0.0049	**0.078**
					9/11/24	0.019 (J)	<0.0078	<0.0049	<0.0049	0.06	<0.0049	**0.079**

Table 1
2016 - 2024 Summary
Dinitrotoluene Groundwater Results
Deterrent Burning Ground
Badger Army Ammunition Plant

						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
DBG	ELN-1502A	533	2813	A	9/15/16	0.065	<0.008	<0.003	<0.004	0.13	<0.004	**0.195**
					4/18/17	0.11	<0.0082	<0.0031	**0.011 (J)**	0.28	<0.0041	**0.401**
					4/18/17 (D)	0.12	<0.0084	<0.0032	**0.012 (J)**	0.31	<0.0042	**0.442**
					9/5/17	0.13	<0.0082	<0.0031	<0.0041	0.28	0.023 (J)	**0.433**
					9/5/17 (D)	0.13	<0.008	<0.003	<0.004	0.34	0.022 (J)	**0.492**
					4/24/18	0.14	<0.0083	<0.0031	**0.03 (J)**	0.39	0.034	**0.594**
					4/24/18 (D)	0.13	<0.008	<0.003	**0.027 (J)**	0.38	<0.004	**0.537**
					5/14/18	0.17	<0.008	<0.003	**0.08**	0.44	<0.004	**0.69**
					9/4/18	0.16	<0.0082	<0.0031	**0.011 (J)**	0.42	0.036	**0.627**
					9/4/18 (D)	0.21	<0.008	<0.003	**0.02 (J)**	0.53	0.041	**0.801**
					4/1/19	0.17	<0.0082	<0.0031	**0.024 (J)**	0.37	0.054	**0.618**
					4/1/19 (D)	0.16	<0.0082	<0.0031	**0.023 (J)**	0.35	0.053	**0.586**
					9/10/19	0.13	<0.0083	<0.0031	**0.026 (J)**	0.3	0.051	**0.507**
					9/10/19 (D)	0.14	<0.0081	<0.003	**0.027 (J)**	0.32	0.05	**0.537**
					4/6/20	0.085	<0.0087	<0.0033	<0.0043	0.19	<0.0043	**0.275**
					4/6/20 (D)	0.076	<0.0082	<0.0031	<0.0041	0.17	<0.0041	**0.246**
					9/21/20	0.078	<0.008	<0.003	<0.004	0.16	0.03	**0.268**
					4/5/21	0.059	**0.022 (J)**	<0.0051	**0.011 (J)**	0.12	0.028 (J)	**0.24**
					4/5/21 (D)	0.058	**0.027 (J)**	<0.0052	**0.012 (J)**	0.12	0.028 (J)	**0.245**
					9/9/21	0.06	<0.0079	<0.005	<0.005	0.13	0.027 (J)	**0.217**
					9/9/21 (D)	0.061	<0.0078	<0.0049	**0.018 (J)**	0.13	0.026 (J)	**0.235**
					4/25/22	0.067	<0.0082	<0.0051	<0.0051	0.11	<0.0051	**0.177**
					4/25/22 (D)	0.069	<0.008	<0.005	<0.005	0.12	<0.005	**0.189**
					9/15/22	0.067	<0.0078	<0.0049	<0.0049	0.13	0.025 (J)	**0.222**
					4/10/23	0.091	<0.008	<0.005	<0.005	0.17	<0.005	**0.261**
					4/10/23 (D)	0.094	<0.005	<0.005	<0.005	0.17	<0.005	**0.264**
					9/11/23	0.084	<0.0082	<0.005	<0.005	0.17	<0.005	**0.254**
					9/11/23 (D)	0.091	<0.0079	<0.005	<0.005	0.2	<0.005	**0.291**
					4/8/24	0.072	<0.0078	<0.0049	<0.0049	0.16	0.013 (J)	**0.245**
					4/8/24 (D)	0.067	<0.0077	<0.0048	<0.0048	0.15	0.012 (J)	**0.229**
					9/9/24	0.092	**0.014 (J)**	<0.0049	<0.0049	0.18	0.023 (J)	**0.309**
					9/9/24 (D)	0.1	**0.015 (J)**	<0.0049	<0.0049	0.2	0.023 (J)	**0.338**

Table 1
2016 - 2024 Summary
Dinitrotoluene Groundwater Results
Deterrent Burning Ground
Badger Army Ammunition Plant

						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
DBG	ELN-1503A	535	2813	A	4/26/21	<0.0065	<0.0087	<0.0054	<0.0054	<0.0054	<0.0054	<0.0087
					9/28/21	<0.0058	<0.0077	<0.0048	<0.0048	<0.0048	<0.0048	<0.0077
					11/9/21	0.035 (J)	<0.0081	<0.0051	<0.0051	0.05 (J)	<0.0051	**0.085 (J)**
					4/28/22	0.043 (J)	<0.008	<0.005	<0.005	0.07	<0.005	**0.113**
					4/28/22 (D)	0.04 (J)	<0.008	<0.005	<0.005	0.067	<0.005	**0.107**
					7/7/22	<0.006	<0.008	<0.005	<0.005	<0.005	<0.005	<0.008
					7/7/22 (D)	0.037 (J)	<0.008	<0.005	<0.005	<0.005	<0.005	**0.037 (J)**
					9/22/22	0.018 (J)	<0.008	<0.005	<0.005	0.02 (J)	<0.005	**0.038 (J)**
					11/8/22	<0.0058	<0.0078	<0.005	<0.005	<0.005	<0.005	<0.0078
					4/27/23	0.041 (J)	<0.008	<0.005	<0.005	0.064	<0.005	**0.105**
					4/27/23 (D)	0.04 (J)	<0.008	<0.005	<0.005	0.06	<0.005	**0.1**
					6/27/23	<0.006	<0.008	<0.005	<0.005	0.034 (J)	<0.005	**0.034 (J)**
					9/13/23	<0.0058	<0.0077	<0.0048	<0.0048	0.012 (J)	<0.0048	**0.012 (J)**
					11/14/23	<0.0061	<0.0081	<0.0051	<0.0051	<0.0051	<0.0051	<0.0081
					4/10/24	0.0062 (J)	<0.0079	<0.005	<0.005	0.017 (J)	<0.005	**0.0232 (J)**
					6/12/24	<0.0058	<0.0079	<0.005	<0.005	0.024 (J)	<0.005	**0.024 (J)**
					6/12/24 (D)	<0.0058	<0.0079	<0.005	<0.005	0.023 (J)	<0.005	**0.023 (J)**
					9/11/24	0.017 (J)	<0.0082	<0.0052	<0.0052	0.032 (J)	<0.0052	**0.049 (J)**
Chapter NR 140 PAL						NE	0.005	NE	0.005	NE	NE	0.005
Chapter NR 140 ES						NE	0.05	NE	0.05	NE	NE	0.05

Notes:
DBG - Deterrent Burning Ground
The Sample Level references the typical well depth configuration
All results are expressed in micrograms per liter (µg/l)
DNT analysis was performed by CT Laboratories
D = Duplicate sample
J = Analytical result is between the Limit of Detection (LOD) and Limit of Quantitation (LOQ)
NE = Not Established
Chapter NR 140 PAL - Chapter NR 140, Wisconsin Administrative Code, Preventive Action Limit (bold values)
Chapter NR 140 ES - Chapter NR 140, Wisconsin Administrative Code, Enforcement Standard (bold & underline values)

Table 2
2017 - 2024 Summary
Dinitrotoluene Groundwater Results
Propellant Burning Ground
Badger Army Ammunition Plant

						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
PBG	PBM-9801	360	2814	A	9/20/17	0.18	**0.11**	<0.0031	**0.2**	0.058	<0.0041	**0.548**
					9/17/18	0.48	**2**	0.028	**0.81**	0.19	0.074	**3.582**
					9/25/19	0.31	**5.7**	0.039	**0.61**	0.13	0.07	**6.859**
					9/1/20	0.37	**110**	<0.0032	**2.1**	0.18	<0.0042	**112.65**
					9/21/21	0.45	**64**	0.044 (J)	**2.2**	0.2	0.081	**66.975**
					5/4/22	0.44	**0.26**	0.055	**0.28**	0.19	0.078	**1.303**
					9/21/22	0.41	**0.16**	0.031 (J)	**0.11**	0.18	0.059	**0.95**
					4/26/23	0.34	**0.12**	0.057	**0.1**	0.17	0.07	**0.857**
					9/20/23	0.31	**0.08**	<0.005	**0.08**	0.12	0.038 (J)	**0.628**
					4/15/24	0.27	**0.084**	0.016 (J)	**0.1**	0.11	0.037 (J)	**0.617**
					9/16/24	0.28	**0.13**	0.026 (J)	**0.097**	0.12	0.041 (J)	**0.694**
					9/16/24 (D)	0.28	**0.12**	0.026 (J)	**0.11**	0.12	0.043 (J)	**0.699**
PBG	PBN-8202A	613	2814	A	9/20/17	0.91	**0.059**	0.02 (J)	**0.07**	0.27	0.14	**1.469**
					9/20/17 (D)	0.83	**0.056**	0.019 (J)	**0.066**	0.25	0.12	**1.341**
					4/23/18	45	**2.1**	0.14	**27**	17	2.1	**93.34**
					4/23/18 (D)	48	**2.2**	0.15	**24**	18	2.3	**94.65**
					5/14/18	78	**33**	0.094	**270**	35	4.2	**420.294**
					9/17/18	70	**6.3**	0.12	**2**	32	6	**116.42**
					9/17/18 (D)	62	**5.1**	0.12	**4.4**	27	4.7	**103.32**
					4/8/19	20	**0.26**	0.12	**0.31**	4.6	5.2	**30.49**
					9/25/19	75	**9.1**	0.14	**110**	15	6.5	**215.74**
					1/14/20	49	**30**	<0.14	**79**	13	4.9	**175.9**
					1/14/20 (D)	49	**39**	<0.14	**88**	15	5	**196**
					4/30/20	72	**670**	<0.15	**500**	35	9.9	**1,286.9**
					6/8/20	17	**0.35**	0.1	**17**	7.9	1.9	**44.25**
					6/8/20 (D)	18	**0.4**	0.12	**15**	8.1	2.6	**44.22**
					9/1/20	9.1	**0.3**	0.078	**0.14**	3.3	1.2	**14.118**
					4/7/21	14	**0.24**	0.065	**0.17**	2.1	1	**17.575**
					9/21/21	21	**0.38**	0.082	**0.22**	1.8	1.4	**24.882**
					9/21/21 (D)	19	**0.37**	0.081	**0.22**	1.7	1.4	**22.771**
					5/4/22	36	**2.3**	0.051	**0.2**	12	3.4	**53.951**
					9/21/22	13	**0.27**	0.032 (J)	**0.17**	1.6	1.3	**16.372**
					4/26/23	0.38	**0.11**	0.06	**0.085**	0.4	0.093	**1.128**
					9/20/23	1.9	**0.11**	<0.0048	**0.11**	0.3	0.32	**2.740**
					4/15/24	1.3	**0.091**	0.018 (J)	**0.088**	0.24	0.23	**1.967**
					9/16/24	0.97	**0.12**	0.022 (J)	**0.08**	0.23	0.16	**1.582**

Table 2
2017 - 2024 Summary
Dinitrotoluene Groundwater Results
Propellant Burning Ground
Badger Army Ammunition Plant

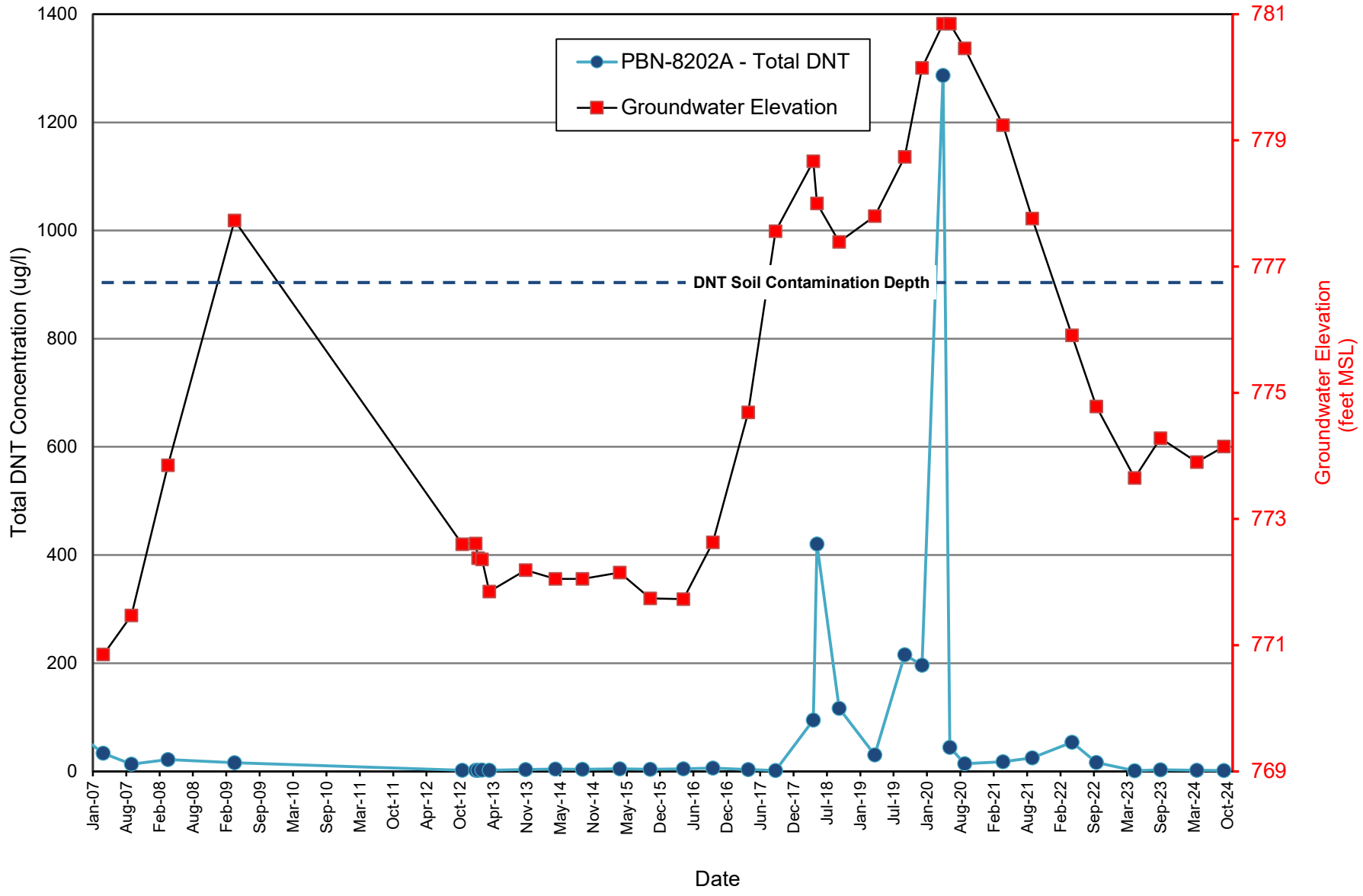
						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
PBG	PBN-8202B	614	2814	B	9/20/17	0.54	**0.055**	<0.0031	**0.049**	0.15	0.087	**0.881**
					4/23/18	0.99	<0.0081	<0.003	**0.12**	0.36	0.13	**1.6**
					9/17/18	9.2	**0.26**	0.054	**0.038**	4.6	0.46	**14.612**
					4/8/19	39	**0.63**	0.13	**0.54**	36	8.8	**85.1**
					9/25/19	16	**0.18**	0.12	**0.26**	6.3	1.6	**24.46**
					1/14/20	9.9	**0.44**	<0.029	**0.25**	2.8	1	**14.39**
					4/30/20	11	**0.35**	0.091	**0.21**	1.7	1.2	**14.551**
					6/8/20	8.7	**0.2**	0.075	**0.055**	1.2	1.1	**11.33**
					9/1/20	7.3	**0.22**	0.4	**0.058**	0.71	0.88	**9.208**
					4/7/21	4.2	**0.11**	0.032 (J)	**0.086**	0.2	0.53	**5.158**
					9/21/21	2.4	**0.19**	0.049 (J)	**0.13**	0.13	0.28	**3.179**
					5/4/22	15	**0.18**	0.076	**0.16**	0.35	0.82	**16.586**
					9/21/22	24	**0.18**	0.063	**0.19**	0.8	1.1	**26.333**
					4/26/23	2.5	**0.23**	0.055	**0.15**	0.38	0.46	**3.775**
					9/20/23	4.2	<0.04	<0.025	<0.025	0.32	0.44	**4.96**
					4/15/24	2.9	**0.13 (J)**	<0.024	**0.078 (J)**	0.24	0.41	**3.76**
					9/16/24	1.4	**0.12**	0.022 (J)	**0.055**	0.19	0.21	**1.997**
PBG	PBN-8202C	615	2814	C	9/20/17	0.15	**0.061**	<0.0031	**0.078**	0.055	0.033	**0.377**
					4/23/18	0.16	**0.19**	0.04	**0.19**	0.091	0.065	**0.736**
					9/17/18	0.2	**0.19**	0.036	**0.16**	0.11	0.075	**0.77**
					4/8/19	0.13	**0.088**	0.054	**0.064**	0.081	0.065	**0.482**
					9/25/19	0.19	**0.16**	0.082	**0.078**	0.12	0.095	**0.725**
					1/14/20	0.13	**0.12**	0.059	**0.062**	0.078	0.07	**0.519**
					4/30/20	<0.0062	**0.39**	0.08	**0.44**	0.14	0.13	**1.18**
					6/8/20	<0.0058	**0.47**	0.06	**0.46**	0.11	0.11	**1.21**
					9/1/20	0.17	**0.29**	<0.0031	**0.26**	0.072	0.076	**0.868**
					4/7/21	0.091	**0.16**	0.038 (J)	**0.093**	0.043 (J)	0.057	**0.482**
					9/21/21	0.099	**0.26**	0.044 (J)	**0.094**	0.053	0.063	**0.613**
					5/4/22	0.45	**0.15**	0.047 (J)	**0.1**	0.072	0.094	**0.913**
					9/21/22	0.49	**0.094**	0.032 (J)	**0.074**	0.045 (J)	0.076	**0.811**
					4/26/23	8.2	**0.2**	0.075	**0.095**	1.2	1	**10.77**
					9/20/23	0.11	**0.034 (J)**	<0.0049	**0.053**	0.022 (J)	0.034 (J)	**0.253**
					4/15/24	0.081	**0.043 (J)**	0.017 (J)	**0.058**	0.026 (J)	0.038 (J)	**0.263**
					9/16/24	0.061	**0.061**	0.02 (J)	**0.049**	0.036 (J)	0.035 (J)	**0.262**

Table 2
2017 - 2024 Summary
Dinitrotoluene Groundwater Results
Propellant Burning Ground
Badger Army Ammunition Plant

						Dinitrotoluenes						
Plume	**Well Name**	**Well ID**	**License**	**Sample Level**	**Date**	**2,3-Dinitrotoluene**	**2,4-Dinitrotoluene**	**2,5-Dinitrotoluene**	**2,6-Dinitrotoluene**	**3,4-Dinitrotoluene**	**3,5-Dinitrotoluene**	**Dinitrotoluene, Total**
PBG	PBM-0001	367	2814	A	9/20/17	0.41	**0.059**	0.015	**0.059**	0.11	0.048	**0.701**
					4/23/18	0.74	<0.008	<0.003	**0.13**	0.23	0.099	**1.199**
					9/17/18	8.7	**0.24**	0.07	**0.19**	3.1	0.68	**12.98**
					4/23/19	14	**0.19**	0.12	**0.068**	6.2	1.6	**22.178**
					9/25/19	2.9	**0.15**	0.085	**0.12**	1.3	0.39	**4.945**
					1/14/20	1	**0.38**	0.069	**0.43**	0.2	0.17	**2.249**
					4/30/20	8	**0.25**	0.18	**0.22**	1.5	0.9	**11.05**
					9/1/20	5.6	**0.25**	0.093	**0.15**	0.62	0.58	**7.293**
					4/7/21	8.5	**0.13**	0.058	**0.1**	0.4	0.58	**9.768**
					9/21/21	4.9	**0.26**	0.083	**0.15**	0.45	0.46	**6.303**
					5/4/22	2.6	**0.2**	0.088	**0.24**	0.28	0.28	**3.688**
					9/21/22	29	**110**	0.059	**130**	9.4	1.8	**280.259**
					4/26/23	7.6	**0.24**	0.068	**0.13**	0.86	1.1	**9.998**
					9/20/23	0.98	**0.066**	<0.0049	**0.081**	0.058	0.15	**1.335**
					4/15/24	0.42	**0.059**	0.011 (J)	**0.081**	0.11	0.076	**0.757**
					9/16/24	0.32	**0.11**	0.022 (J)	**0.085**	0.12	0.062	**0.719**
PBG	PBM-0006	372	2814	A	9/20/17	0.42	**0.063**	0.016 (J)	**0.046**	0.27	0.068	**0.883**
					4/23/18	0.79	0.27	0.04	**0.11**	0.62	0.14	**1.97**
					9/17/18	0.73	**0.27**	0.031	**0.11**	0.57	0.13	**1.841**
					4/8/19	0.34	**0.12**	0.042	**0.057**	0.31	0.086	**0.955**
					9/25/19	0.58	**0.16**	0.048	**0.12**	0.53	0.12	**1.588**
					4/30/20	0.84	**0.16**	0.068	**0.13**	0.73	0.14	**2.068**
					9/1/20	0.63	**0.13**	<0.0031	**0.067**	0.52	0.098	**1.445**
					4/7/21	0.72	**0.12**	0.034 (J)	**0.069**	0.5	0.11	**1.553**
					4/7/21 (D)	0.7	**0.13**	0.033 (J)	**0.065**	0.48	0.11	**1.518**
					9/21/21	0.77	**0.2**	0.043 (J)	**0.088**	0.55	0.11	**1.761**
					5/4/22	0.64	**0.17**	0.06	**0.12**	0.54	0.12	**1.65**
					5/4/2022 (D)	0.64	**0.18**	0.059	**0.12**	0.52	0.12	**1.639**
					9/21/22	0.39	**0.09**	0.03 (J)	**0.082**	0.36	0.074	**1.026**
					4/26/23	7.8	**0.21**	0.14	**0.098**	0.16	0.55	**10.398**
					9/20/23	0.27	**0.061**	<0.0049	**0.062**	0.22	0.046 (J)	**0.659**
					4/15/24	0.2	**0.046 (J)**	0.011 (J)	**0.055**	0.17	0.041 (J)	**0.523**
					9/16/24	0.22	**0.081 (J)**	0.023 (J)	**0.054**	0.18	0.05	**0.608**
Chapter NR 140 PAL						NE	0.005	NE	0.005	NE	NE	0.005
Chapter NR 140 ES						NE	0.05	NE	0.05	NE	NE	0.05

Notes:
PBG - Propellant Burning Ground
The Sample Level references the typical well depth configuration
All results are expressed in micrograms per liter (µg/l)
DNT analysis was performed by CT Laboratories
D = Duplicate sample
J = Analytical result is between the Limit of Detection (LOD) and Limit of Quantitation (LOQ)
NE = Not Established
Chapter NR 140 PAL - Chapter NR 140, Wisconsin Administrative Code, Preventive Action Limit (bold values)
Chapter NR 140 ES - Chapter NR 140, Wisconsin Administrative Code, Enforcement Standard (bold & underline values)

PBN-8202A **Total Dinitrotoluene vs Groundwater Elevation** **2007 - 2024**



September 2024
Badger Army Ammunition Plant
Sampled Wells List

License Area	Well ID	Reporting Name	Date	Sample Frequency	Plume
3487	495	RIN-1003A	9/25/2024	Annual	Central Plume
2813	210	ELN-8203A	9/10/2024	Semiannual	Deterrent Burning Ground
2813	211	ELN-8203B	9/10/2024	Semiannual	Deterrent Burning Ground
2813	212	ELN-8203C	9/10/2024	Semiannual	Deterrent Burning Ground
2813	216	ELM-8901	9/10/2024	Semiannual	Deterrent Burning Ground
2813	220	ELM-8907	9/10/2024	Semiannual	Deterrent Burning Ground
2813	221	ELM-8908	9/10/2024	Semiannual	Deterrent Burning Ground
2813	222	ELM-8909	9/10/2024	Semiannual	Deterrent Burning Ground
2813	224	ELN-8902B	9/10/2024	Semiannual	Deterrent Burning Ground
2813	227	ELN-9107A	9/9/2024	Semiannual	Deterrent Burning Ground
2813	228	ELN-9107B	9/9/2024	Semiannual	Deterrent Burning Ground
2813	234	ELM-9501	9/9/2024	Semiannual	Deterrent Burning Ground
2813	236	S1134R	9/10/2024	Semiannual	Deterrent Burning Ground
2813	455	ELN-0801B	9/9/2024	Semiannual	Deterrent Burning Ground
2813	456	ELN-0801C	9/9/2024	Semiannual	Deterrent Burning Ground
2813	457	ELN-0801E	9/9/2024	Semiannual	Deterrent Burning Ground
2813	458	ELN-0802A	9/10/2024	Biennial	Deterrent Burning Ground
2813	459	ELN-0802C	9/10/2024	Biennial	Deterrent Burning Ground
2813	460	ELN-1001B	9/9/2024	Semiannual	Deterrent Burning Ground
2813	461	ELN-1001C	9/9/2024	Semiannual	Deterrent Burning Ground
2813	462	ELN-1001E	9/9/2024	Semiannual	Deterrent Burning Ground
2813	463	ELN-1002A	9/11/2024	Semiannual	Deterrent Burning Ground
2813	464	ELN-1002B	9/11/2024	Semiannual	Deterrent Burning Ground
2813	465	ELN-1002C	9/11/2024	Semiannual	Deterrent Burning Ground
2813	466	ELN-1002E	9/11/2024	Semiannual	Deterrent Burning Ground
2813	467	ELN-1003A	9/11/2024	Quarterly	Deterrent Burning Ground
2813	468	ELN-1003B	9/11/2024	Quarterly	Deterrent Burning Ground
2813	469	ELN-1003C	9/11/2024	Quarterly	Deterrent Burning Ground
2813	470	ELN-1003E	9/11/2024	Quarterly	Deterrent Burning Ground
2813	533	ELN-1502A	9/9/2024	Semiannual	Deterrent Burning Ground
2813	534	ELN-1502C	9/9/2024	Semiannual	Deterrent Burning Ground
2813	535	ELN-1503A	9/11/2024	Quarterly	Deterrent Burning Ground
2813	536	ELN-1503C	9/11/2024	Quarterly	Deterrent Burning Ground
2813	537	ELN-1504B	9/11/2024	Quarterly	Deterrent Burning Ground
2813	547	ELN-2301B	9/11/2024	Quarterly	Deterrent Burning Ground
2813	548	ELN-2301C	9/11/2024	Quarterly	Deterrent Burning Ground
3037	301	DBM-8201	9/10/2024	Semiannual	Deterrent Burning Ground
3037	302	DBM-8202	9/10/2024	Semiannual	Deterrent Burning Ground
3037	306	DBM-8903	9/10/2024	Semiannual	Deterrent Burning Ground
3037	314	DBN-9501A	9/11/2024	Semiannual	Deterrent Burning Ground
3037	315	DBN-9501B	9/11/2024	Semiannual	Deterrent Burning Ground
3037	316	DBN-9501C	9/11/2024	Semiannual	Deterrent Burning Ground
3037	317	DBN-9501E	9/11/2024	Semiannual	Deterrent Burning Ground
3037	472	DBN-1001B	9/10/2024	Semiannual	Deterrent Burning Ground
3037	473	DBN-1001C	9/10/2024	Semiannual	Deterrent Burning Ground
3037	474	DBN-1001E	9/10/2024	Semiannual	Deterrent Burning Ground

September 2024
Badger Army Ammunition Plant
Sampled Wells List

License Area	Well ID	Reporting Name	Date	Sample Frequency	Plume
3037	476	DBN-1002C	9/10/2024	Semiannual	Deterrent Burning Ground
3037	477	DBN-1002E	9/10/2024	Semiannual	Deterrent Burning Ground
3038	755	S1121	9/9/2024	Semiannual	Deterrent Burning Ground
3487	440	RIM-0703	9/9/2024	Annual	Nitrocellulose Production Area
3487	442	RIM-0705	9/9/2024	Semiannual	Nitrocellulose Production Area
3487	478	RIM-1002	9/25/2024	Semiannual	Nitrocellulose Production Area
3487	479	RIN-1007C	9/9/2024	Annual	Nitrocellulose Production Area
3487	480	RIN-1001A	9/9/2024	Semiannual	Nitrocellulose Production Area
3487	481	RIN-1001C	9/9/2024	Annual	Nitrocellulose Production Area
3487	504	S1125	9/9/2024	Semiannual	Nitrocellulose Production Area
2814	360	PBM-9801	9/16/2024	Semiannual	Propellant Burning Ground
2814	367	PBM-0001	9/16/2024	Semiannual	Propellant Burning Ground
2814	368	PBM-0002	9/16/2024	Semiannual	Propellant Burning Ground
2814	372	PBM-0006	9/16/2024	Semiannual	Propellant Burning Ground
2814	374	PBM-0008	9/16/2024	Semiannual	Propellant Burning Ground
2814	544	PBN-2301B	9/18/2024	Semiannual	Propellant Burning Ground
2814	545	PBN-2301C	9/18/2024	Semiannual	Propellant Burning Ground
2814	546	PBN-2301D	9/18/2024	Semiannual	Propellant Burning Ground
2814	592	PBN-1003C	9/19/2024	Annual	Propellant Burning Ground
2814	595	PBN-1001C	9/23/2024	Semiannual	Propellant Burning Ground
2814	613	PBN-8202A	9/16/2024	Semiannual	Propellant Burning Ground
2814	614	PBN-8202B	9/16/2024	Semiannual	Propellant Burning Ground
2814	615	PBN-8202C	9/16/2024	Semiannual	Propellant Burning Ground
2814	622	PBN-8205A	9/19/2024	Semiannual	Propellant Burning Ground
2814	623	PBN-8205B	9/19/2024	Semiannual	Propellant Burning Ground
2814	624	PBN-8205C	9/19/2024	Semiannual	Propellant Burning Ground
2814	632	PBN-8502A	9/19/2024	Semiannual	Propellant Burning Ground
2814	633	PBN-8503A	9/23/2024	Semiannual	Propellant Burning Ground
2814	637	PBM-8907	9/19/2024	Annual	Propellant Burning Ground
2814	639	PBM-8909	9/25/2024	Biennial	Propellant Burning Ground
2814	645	PBN-8902C	9/19/2024	Semiannual	Propellant Burning Ground
2814	646	PBN-8903B	9/23/2024	Semiannual	Propellant Burning Ground
2814	647	PBN-8903C	9/23/2024	Semiannual	Propellant Burning Ground
2814	653	PBN-8910D	9/16/2024	Semiannual	Propellant Burning Ground
2814	654	PBN-8912A	9/19/2024	Semiannual	Propellant Burning Ground
2814	655	PBN-8912B	9/19/2024	Semiannual	Propellant Burning Ground
2814	665	PBN-9112C	9/19/2024	Semiannual	Propellant Burning Ground
2814	666	PBN-9112D	9/19/2024	Semiannual	Propellant Burning Ground
2814	668	PBN-9301B	9/23/2024	Semiannual	Propellant Burning Ground
2814	669	PBN-9301C	9/23/2024	Semiannual	Propellant Burning Ground
2814	673	PBN-9303B	9/23/2024	Semiannual	Propellant Burning Ground
2814	674	PBN-9303C	9/23/2024	Semiannual	Propellant Burning Ground
2814	675	PBN-9303D	9/23/2024	Semiannual	Propellant Burning Ground
2814	684	PBN-9304A	9/12/2024	Semiannual	Propellant Burning Ground
2814	685	PBN-9304B	9/12/2024	Semiannual	Propellant Burning Ground
2814	686	PBN-9304C	9/12/2024	Semiannual	Propellant Burning Ground

September 2024
Badger Army Ammunition Plant
Sampled Wells List

License Area	Well ID	Reporting Name	Date	Sample Frequency	Plume
2814	687	PBN-9304D	9/12/2024	Semiannual	Propellant Burning Ground
2814	692	PBN-9903A	9/25/2024	Semiannual	Propellant Burning Ground
2814	693	PBN-9903B	9/25/2024	Semiannual	Propellant Burning Ground
2814	694	PBN-9903C	9/25/2024	Semiannual	Propellant Burning Ground
2814	695	PBN-9903D	9/25/2024	Semiannual	Propellant Burning Ground
2814	770	PBN-1302A	9/23/2024	Semiannual	Propellant Burning Ground
2814	771	PBN-1302B	9/23/2024	Semiannual	Propellant Burning Ground
2814	772	PBN-1302C	9/23/2024	Semiannual	Propellant Burning Ground
2814	773	PBN-1302D	9/23/2024	Semiannual	Propellant Burning Ground
2814	774	PBN-1303A	9/24/2024	Semiannual	Propellant Burning Ground
2814	775	PBN-1303B	9/24/2024	Semiannual	Propellant Burning Ground
2814	776	PBN-1303C	9/24/2024	Semiannual	Propellant Burning Ground
2814	777	PBN-1303D	9/24/2024	Semiannual	Propellant Burning Ground
2814	778	PBN-1304A	9/24/2024	Semiannual	Propellant Burning Ground
2814	779	PBN-1304B	9/24/2024	Semiannual	Propellant Burning Ground
2814	780	PBN-1304C	9/24/2024	Semiannual	Propellant Burning Ground
2814	781	PBN-1304D	9/24/2024	Semiannual	Propellant Burning Ground
2814	782	PBN-1401A	9/16/2024	Semiannual	Propellant Burning Ground
2814	783	PBN-1401B	9/16/2024	Semiannual	Propellant Burning Ground
2814	784	PBN-1401C	9/16/2024	Semiannual	Propellant Burning Ground
2814	791	PBN-1404B	9/23/2024	Semiannual	Propellant Burning Ground
2814	792	PBN-1404C	9/23/2024	Semiannual	Propellant Burning Ground
2814	793	PBN-1404D	9/23/2024	Semiannual	Propellant Burning Ground
2814	794	PBN-1405F	9/12/2024	Biennial	Propellant Burning Ground
2814	795	PBN-8902BR	9/19/2024	Semiannual	Propellant Burning Ground
3485	981	PBM-9001D	9/18/2024	Semiannual	Propellant Burning Ground
3485	982	PBM-9002D	9/25/2024	Biennial	Propellant Burning Ground
3493	561	PBN-9101C	9/18/2024	Semiannual	Propellant Burning Ground
3493	562	PBN-9102B	9/25/2024	Biennial	Propellant Burning Ground
3493	563	PBN-9102C	9/25/2024	Biennial	Propellant Burning Ground
3493	569	SWN-9102C	9/18/2024	Annual	Propellant Burning Ground
3493	570	SWN-9102D	9/18/2024	Annual	Propellant Burning Ground
3493	571	SWN-9103B	9/18/2024	Semiannual	Propellant Burning Ground
3493	572	SWN-9103C	9/18/2024	Semiannual	Propellant Burning Ground
3493	573	SWN-9103D	9/18/2024	Semiannual	Propellant Burning Ground
3493	574	SWN-9103E	9/18/2024	Semiannual	Propellant Burning Ground
3493	575	SWN-9104C	9/18/2024	Semiannual	Propellant Burning Ground
3493	576	SWN-9104D	9/18/2024	Semiannual	Propellant Burning Ground
3493	577	SWN-9105B	9/18/2024	Annual	Propellant Burning Ground
3493	578	SWN-9105C	9/18/2024	Annual	Propellant Burning Ground
3493	579	SWN-9105D	9/18/2024	Annual	Propellant Burning Ground
3499	709	S1147	9/19/2024	Semiannual	Propellant Burning Ground
3499	710	S1148	9/12/2024	Semiannual	Propellant Burning Ground
3499	718	SPN-8903B	9/19/2024	Semiannual	Propellant Burning Ground
3499	719	SPN-8903C	9/19/2024	Semiannual	Propellant Burning Ground
3499	720	SPN-8904B	9/12/2024	Semiannual	Propellant Burning Ground

September 2024
Badger Army Ammunition Plant
Sampled Wells List

License Area	Well ID	Reporting Name	Date	Sample Frequency	Plume
3499	721	SPN-8904C	9/12/2024	Semiannual	Propellant Burning Ground
3499	725	SPN-9103D	9/19/2024	Semiannual	Propellant Burning Ground
3499	726	SPN-9104D	9/12/2024	Semiannual	Propellant Burning Ground

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

Form 4400-231(R 1/04)

Notice: Personally identifiable information collected will be used for program administration and enforcement purposes. The Department may also provide this information to requesters as required under Wisconsin's Open Records law, ss. 19.31 to 19.39, Wis. Stats.
When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30NR 635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- **Prepare one form for each license or monitoring ID.**
- **Please type or print legibly.**
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact - WA/5
  Bureau of Waste Management
  Wisconsin Department of Natural Resources
  101 South Webster Street
  Madison WI 53707-7921

Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):
SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Landfill #5	02813	157005530	9/9 - 9/11/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen — 11/19/24
Signature — Date

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] **Found uploading problems on** _____ **Initials**
- [ ] **Notified contact of problems on** _____ **Uploaded data successfully on** _____

EDD format(s): [ ] **Diskette** [ ] **CD (initial submittal and follow-up)** [ ] **E-mail (follow-up only)** [ ] **Other**

Case Narrative
Groundwater Monitoring
License Number 2813
Landfill #5
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Thirty-five (35) monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) in the Deterrent Burning Ground Plume. No water was present in ELN-9402AR; therefore, it could not be sampled.

Total DNT exceeded the Enforcement Standard (ES) in ELM-8901 (216), ELM-8907 (220), ELM-8908 (221), ELN-1003C (469), and ELN-1502A (533).

2,4-DNT exceeded the Preventive Action Limit (PAL) in ELM-8901 (216), ELM-9501 (234), ELN-0801B (455), ELN-1001B (460), ELN-1001C (461), ELN-1001E (462), and ELN-1502A (533). 2,6-DNT exceeded the PAL in ELM-8901 (216). Total DNT exceeded the PAL in ELM-9501 (234), ELN-0801B (455), ELN-1001B (460), ELN-1001C (461), ELN-1001E (462), ELN-1003B (468), and ELN-1503A (535).

Volatile organic compounds (VOCs) analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C. Only ELN-0802A (458) and ELN-0802C (459) were analyzed for VOCs during September.

DNT analysis was also performed by CT Laboratories using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024 Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
2,4-Dinitrotoluene	2813	216	ELM-8901	9/10/2024	1	0.018	ug/l	0.005	0.05
2,6-Dinitrotoluene	2813	216	ELM-8901	9/10/2024	1	0.014	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	216	ELM-8901	9/10/2024	1	0.552	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	220	ELM-8907	9/10/2024	1	0.288	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	220	ELM-8907	9/10/2024	2	0.29	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	221	ELM-8908	9/10/2024	1	0.194	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	234	ELM-9501	9/9/2024	1	0.014	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	234	ELM-9501	9/9/2024	1	0.014	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	455	ELN-0801B	9/9/2024	1	0.015	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	455	ELN-0801B	9/9/2024	1	0.015	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	460	ELN-1001B	9/9/2024	1	0.014	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	460	ELN-1001B	9/9/2024	1	0.014	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	461	ELN-1001C	9/9/2024	1	0.017	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	461	ELN-1001C	9/9/2024	1	0.017	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	462	ELN-1001E	9/9/2024	1	0.014	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	462	ELN-1001E	9/9/2024	1	0.014	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	468	ELN-1003B	9/11/2024	1	0.028	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	469	ELN-1003C	9/11/2024	1	0.079	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	533	ELN-1502A	9/9/2024	1	0.014	ug/l	0.005	0.05
2,4-Dinitrotoluene	2813	533	ELN-1502A	9/9/2024	2	0.015	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	533	ELN-1502A	9/9/2024	1	0.309	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	533	ELN-1502A	9/9/2024	2	0.338	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	535	ELN-1503A	9/11/2024	1	0.049	ug/l	0.005	0.05

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 2813 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,3-Dinitrotoluene	216	ELM-8901	9/10/2024	1	0.24	0.0067	0.056	ug/l		
2,4-Dinitrotoluene	216	ELM-8901	9/10/2024	1	0.018	0.0089	0.056	ug/l	0.005	0.05
2,6-Dinitrotoluene	216	ELM-8901	9/10/2024	1	0.014	0.0056	0.056	ug/l	0.005	0.05
3,4-Dinitrotoluene	216	ELM-8901	9/10/2024	1	0.16	0.0056	0.056	ug/l		
3,5-Dinitrotoluene	216	ELM-8901	9/10/2024	1	0.12	0.0056	0.056	ug/l		
Total Dinitrotoluenes	216	ELM-8901	9/10/2024	1	0.552	0.0089	0.056	ug/l	0.005	0.05
2,3-Dinitrotoluene	220	ELM-8907	9/10/2024	2	0.18	0.0059	0.05	ug/l		
2,3-Dinitrotoluene	220	ELM-8907	9/10/2024	1	0.18	0.0058	0.049	ug/l		
3,4-Dinitrotoluene	220	ELM-8907	9/10/2024	1	0.063	0.0049	0.049	ug/l		
3,4-Dinitrotoluene	220	ELM-8907	9/10/2024	2	0.066	0.005	0.05	ug/l		
3,5-Dinitrotoluene	220	ELM-8907	9/10/2024	1	0.045	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	220	ELM-8907	9/10/2024	2	0.044	0.005	0.05	ug/l		
Total Dinitrotoluenes	220	ELM-8907	9/10/2024	1	0.288	0.0078	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	220	ELM-8907	9/10/2024	2	0.29	0.0079	0.05	ug/l	0.005	0.05
2,3-Dinitrotoluene	221	ELM-8908	9/10/2024	1	0.12	0.0061	0.051	ug/l		
3,4-Dinitrotoluene	221	ELM-8908	9/10/2024	1	0.043	0.0051	0.051	ug/l		
3,5-Dinitrotoluene	221	ELM-8908	9/10/2024	1	0.031	0.0051	0.051	ug/l		
Total Dinitrotoluenes	221	ELM-8908	9/10/2024	1	0.194	0.0082	0.051	ug/l	0.005	0.05
2,4-Dinitrotoluene	234	ELM-9501	9/9/2024	1	0.014	0.0076	0.048	ug/l	0.005	0.05
Total Dinitrotoluenes	234	ELM-9501	9/9/2024	1	0.014	0.0076	0.048	ug/l	0.005	0.05
2,4-Dinitrotoluene	455	ELN-0801B	9/9/2024	1	0.015	0.0077	0.048	ug/l	0.005	0.05
Total Dinitrotoluenes	455	ELN-0801B	9/9/2024	1	0.015	0.0077	0.048	ug/l	0.005	0.05
Chloroform	459	ELN-0802C	9/10/2024	1	0.13	0.1	0.2	ug/l	0.6	6
2,4-Dinitrotoluene	460	ELN-1001B	9/9/2024	1	0.014	0.0078	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	460	ELN-1001B	9/9/2024	1	0.014	0.0078	0.049	ug/l	0.005	0.05
2,4-Dinitrotoluene	461	ELN-1001C	9/9/2024	1	0.017	0.0089	0.056	ug/l	0.005	0.05
Total Dinitrotoluenes	461	ELN-1001C	9/9/2024	1	0.017	0.0089	0.056	ug/l	0.005	0.05
2,4-Dinitrotoluene	462	ELN-1001E	9/9/2024	1	0.014	0.0076	0.048	ug/l	0.005	0.05
Total Dinitrotoluenes	462	ELN-1001E	9/9/2024	1	0.014	0.0076	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	468	ELN-1003B	9/11/2024	1	0.028	0.0048	0.048	ug/l		
Total Dinitrotoluenes	468	ELN-1003B	9/11/2024	1	0.028	0.0076	0.048	ug/l	0.005	0.05
2,3-Dinitrotoluene	469	ELN-1003C	9/11/2024	1	0.019	0.0059	0.049	ug/l		
3,4-Dinitrotoluene	469	ELN-1003C	9/11/2024	1	0.06	0.0049	0.049	ug/l		
Total Dinitrotoluenes	469	ELN-1003C	9/11/2024	1	0.079	0.0078	0.049	ug/l	0.005	0.05
2,3-Dinitrotoluene	533	ELN-1502A	9/9/2024	1	0.092	0.0058	0.049	ug/l		
2,3-Dinitrotoluene	533	ELN-1502A	9/9/2024	2	0.1	0.0058	0.049	ug/l		
2,4-Dinitrotoluene	533	ELN-1502A	9/9/2024	1	0.014	0.0078	0.049	ug/l	0.005	0.05
2,4-Dinitrotoluene	533	ELN-1502A	9/9/2024	2	0.015	0.0078	0.049	ug/l	0.005	0.05
3,4-Dinitrotoluene	533	ELN-1502A	9/9/2024	2	0.2	0.0049	0.049	ug/l		
3,4-Dinitrotoluene	533	ELN-1502A	9/9/2024	1	0.18	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	533	ELN-1502A	9/9/2024	2	0.023	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	533	ELN-1502A	9/9/2024	1	0.023	0.0049	0.049	ug/l		
Total Dinitrotoluenes	533	ELN-1502A	9/9/2024	2	0.338	0.0078	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	533	ELN-1502A	9/9/2024	1	0.309	0.0078	0.049	ug/l	0.005	0.05
2,3-Dinitrotoluene	535	ELN-1503A	9/11/2024	1	0.017	0.0062	0.052	ug/l		
3,4-Dinitrotoluene	535	ELN-1503A	9/11/2024	1	0.032	0.0052	0.052	ug/l		
Total Dinitrotoluenes	535	ELN-1503A	9/11/2024	1	0.049	0.0082	0.052	ug/l	0.005	0.05

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

Form 4400-231(R 1/04)

Notice: Personally identifiable information collected will be used for program administration and enforcement purposes. The Department may also provide this information to requesters as required under Wisconsin's Open Records law, ss. 19.31 to 19.39, Wis. Stats.
When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30NR 635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- **Prepare one form for each license or monitoring ID.**
- **Please type or print legibly.**
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact - WA/5
  Bureau of Waste Management
  Wisconsin Department of Natural Resources
  101 South Webster Street
  Madison WI 53707-7921

Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):
SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Propellant Burning Grounds	02814	157005420	9/12 - 9/25/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen 11/19/24
Signature Date

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] **Found uploading problems on** _____ **Initials**
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Case Narrative
Groundwater Monitoring
License Number 2814
Propellant Burning Grounds
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Contamination from the Propellant Burning Ground (PBG) impacts groundwater quality in wells associated with this license. Sixty-one (61) monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) and volatile organic compounds (VOCs) in the PBG Plume.

2,4-DNT, 2,6-DNT, and total DNT exceeded the Enforcement Standards (ES) in PBM-9801 (360), PBM-0001 (367), PBM-0002 (368), PBM-0006 (372), PBM-0008 (374), PBN-8202A (613), and PBN-8202B (614). 2,4-DNT exceeded the ES in PBN-8202C (615). 2,6-DNT exceeded the ES in PBN-8205A (622), PBN-8205B (623), PBN-1401A (782), and PBN-1401B (783).Total DNT exceeded the ES in PBN-8202C (615), PBN-8205A (622), PBN-8205B (623), PBN-8205C (624), PBN-8902C (645), PBN-9304B (685), PBN-9304C (686), PBN-9903B (693), PBN-1401A (782), and PBN-1401B (783).

2,4-DNT exceeded the Preventive Action Limit (PAL) in PBN-2301C (545), PBN-8205A (622), PBN-8205B (623), PBN-8205C (624), PBN-1401A (782), and PBN-1401B (783). 2,6-DNT exceeded the PAL in PBN-8202C (615), PBN-8902C (645), PBN-9304B (685), PBN-9304C (686), and PBN-9903B (693). Total DNT exceeded the PAL in PBN-2301C (545) and PBN-1401C (784).

Bromodichloromethane exceeded the PAL in PBN-1001C (595), PBN-9301C (669), PBN-9303C (674), PBN-9903C (694), and PBN-1404C (792).

Carbon tetrachloride exceeded the ES in PBN-8502A (632), PBN-9903C (694), and the PAL in 27 wells.

Chloroform exceeded the PAL in PBN-1001C (595), PBN-9301C (669), PBN-9303B (673), PBN-9303C (674), PBN-9903C (694), PBN-1302C (772), and PBN-1404C (792).

Ethyl ether exceeded the PAL in PBN-9903D (695).

Nitrate plus nitrite exceeded the PAL in PBM-0001 (367), PBM-0002 (368), and PBM-0006 (372).

Trichloroethene exceeded the PAL in PBN-8202B (614), PBN-8205A (622), PBN-8205B (623), PBN-8502A (632), PBN-9903B (693), PBN-9903C (694), PBN-1404B (791), and PBN-8902BR (795).

VOC analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C.

DNT analysis was also performed by CT Lab using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

Nitrate plus nitrite analysis was also performed by CT Lab using method SW 9056A.

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024 Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
2,4-Dinitrotoluene	2814	360	PBM-9801	9/16/2024	1	0.13	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	360	PBM-9801	9/16/2024	2	0.12	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	360	PBM-9801	9/16/2024	1	0.097	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	360	PBM-9801	9/16/2024	2	0.11	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	360	PBM-9801	9/16/2024	1	0.694	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	360	PBM-9801	9/16/2024	2	0.699	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	367	PBM-0001	9/16/2024	1	0.11	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	367	PBM-0001	9/16/2024	1	0.085	ug/l	0.005	0.05
Nitrate+Nitrite Nitrogen	2814	367	PBM-0001	9/16/2024	1	4	mg/l	2	10
Total Dinitrotoluenes	2814	367	PBM-0001	9/16/2024	1	0.719	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	368	PBM-0002	9/16/2024	1	31	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	368	PBM-0002	9/16/2024	1	6.4	ug/l	0.005	0.05
Nitrate+Nitrite Nitrogen	2814	368	PBM-0002	9/16/2024	1	5.1	mg/l	2	10
Total Dinitrotoluenes	2814	368	PBM-0002	9/16/2024	1	46.29	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	372	PBM-0006	9/16/2024	1	0.081	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	372	PBM-0006	9/16/2024	1	0.054	ug/l	0.005	0.05
Nitrate+Nitrite Nitrogen	2814	372	PBM-0006	9/16/2024	1	3.2	mg/l	2	10
Total Dinitrotoluenes	2814	372	PBM-0006	9/16/2024	1	0.608	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	374	PBM-0008	9/16/2024	1	0.13	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	374	PBM-0008	9/16/2024	1	0.068	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	374	PBM-0008	9/16/2024	1	0.778	ug/l	0.005	0.05
Carbon tetrachloride	2814	544	PBN-2301B	9/18/2024	1	2.2	ug/l	0.5	5
Carbon tetrachloride	2814	544	PBN-2301B	9/18/2024	2	2.3	ug/l	0.5	5
2,4-Dinitrotoluene	2814	545	PBN-2301C	9/18/2024	1	0.014	ug/l	0.005	0.05
Carbon tetrachloride	2814	545	PBN-2301C	9/18/2024	1	3.2	ug/l	0.5	5
Total Dinitrotoluenes	2814	545	PBN-2301C	9/18/2024	1	0.014	ug/l	0.005	0.05
Bromodichloromethane	2814	595	PBN-1001C	9/23/2024	1	0.18	ug/l	0.06	0.6
Carbon tetrachloride	2814	595	PBN-1001C	9/23/2024	1	0.88	ug/l	0.5	5
Chloroform	2814	595	PBN-1001C	9/23/2024	1	1.2	ug/l	0.6	6
2,4-Dinitrotoluene	2814	613	PBN-8202A	9/16/2024	1	0.12	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	613	PBN-8202A	9/16/2024	1	0.08	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	613	PBN-8202A	9/16/2024	1	1.582	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	614	PBN-8202B	9/16/2024	1	0.12	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	614	PBN-8202B	9/16/2024	1	0.055	ug/l	0.005	0.05
Carbon tetrachloride	2814	614	PBN-8202B	9/16/2024	1	0.5	ug/l	0.5	5
Total Dinitrotoluenes	2814	614	PBN-8202B	9/16/2024	1	1.997	ug/l	0.005	0.05
Trichloroethene	2814	614	PBN-8202B	9/16/2024	1	0.53	ug/l	0.5	5
2,4-Dinitrotoluene	2814	615	PBN-8202C	9/16/2024	1	0.061	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	615	PBN-8202C	9/16/2024	1	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	615	PBN-8202C	9/16/2024	1	0.262	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	622	PBN-8205A	9/19/2024	1	0.029	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	622	PBN-8205A	9/19/2024	1	0.06	ug/l	0.005	0.05
Carbon tetrachloride	2814	622	PBN-8205A	9/19/2024	1	2.4	ug/l	0.5	5
Total Dinitrotoluenes	2814	622	PBN-8205A	9/19/2024	1	0.634	ug/l	0.005	0.05
Trichloroethene	2814	622	PBN-8205A	9/19/2024	1	0.51	ug/l	0.5	5
2,4-Dinitrotoluene	2814	623	PBN-8205B	9/19/2024	1	0.032	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	623	PBN-8205B	9/19/2024	1	0.053	ug/l	0.005	0.05
Carbon tetrachloride	2814	623	PBN-8205B	9/19/2024	1	2.1	ug/l	0.5	5

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
Total Dinitrotoluenes	2814	623	PBN-8205B	9/19/2024	1	0.645	ug/l	0.005	0.05
Trichloroethene	2814	623	PBN-8205B	9/19/2024	1	0.5	ug/l	0.5	5
2,4-Dinitrotoluene	2814	624	PBN-8205C	9/19/2024	1	0.018	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	624	PBN-8205C	9/19/2024	1	0.284	ug/l	0.005	0.05
Carbon tetrachloride	2814	632	PBN-8502A	9/19/2024	1	6.6	ug/l	0.5	5
Trichloroethene	2814	632	PBN-8502A	9/19/2024	1	0.79	ug/l	0.5	5
Carbon tetrachloride	2814	633	PBN-8503A	9/23/2024	1	0.87	ug/l	0.5	5
2,6-Dinitrotoluene	2814	645	PBN-8902C	9/19/2024	1	0.026	ug/l	0.005	0.05
Carbon tetrachloride	2814	645	PBN-8902C	9/19/2024	1	1	ug/l	0.5	5
Total Dinitrotoluenes	2814	645	PBN-8902C	9/19/2024	1	0.13	ug/l	0.005	0.05
Carbon tetrachloride	2814	665	PBN-9112C	9/19/2024	1	0.87	ug/l	0.5	5
Carbon tetrachloride	2814	665	PBN-9112C	9/19/2024	2	0.85	ug/l	0.5	5
Carbon tetrachloride	2814	668	PBN-9301B	9/23/2024	1	2.2	ug/l	0.5	5
Bromodichloromethane	2814	669	PBN-9301C	9/23/2024	1	0.18	ug/l	0.06	0.6
Carbon tetrachloride	2814	669	PBN-9301C	9/23/2024	1	0.58	ug/l	0.5	5
Chloroform	2814	669	PBN-9301C	9/23/2024	1	1.4	ug/l	0.6	6
Carbon tetrachloride	2814	673	PBN-9303B	9/23/2024	1	3.4	ug/l	0.5	5
Chloroform	2814	673	PBN-9303B	9/23/2024	1	0.61	ug/l	0.6	6
Bromodichloromethane	2814	674	PBN-9303C	9/23/2024	1	0.11	ug/l	0.06	0.6
Carbon tetrachloride	2814	674	PBN-9303C	9/23/2024	1	1.7	ug/l	0.5	5
Chloroform	2814	674	PBN-9303C	9/23/2024	1	1.1	ug/l	0.6	6
2,6-Dinitrotoluene	2814	685	PBN-9304B	9/12/2024	2	0.0097	ug/l	0.005	0.05
Carbon tetrachloride	2814	685	PBN-9304B	9/12/2024	1	1.2	ug/l	0.5	5
Carbon tetrachloride	2814	685	PBN-9304B	9/12/2024	2	1.2	ug/l	0.5	5
Total Dinitrotoluenes	2814	685	PBN-9304B	9/12/2024	1	0.072	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	685	PBN-9304B	9/12/2024	2	0.0797	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	686	PBN-9304C	9/12/2024	1	0.012	ug/l	0.005	0.05
Carbon tetrachloride	2814	686	PBN-9304C	9/12/2024	1	1.4	ug/l	0.5	5
Total Dinitrotoluenes	2814	686	PBN-9304C	9/12/2024	1	0.088	ug/l	0.005	0.05
Carbon tetrachloride	2814	692	PBN-9903A	9/25/2024	1	0.8	ug/l	0.5	5
2,6-Dinitrotoluene	2814	693	PBN-9903B	9/25/2024	1	0.013	ug/l	0.005	0.05
Carbon tetrachloride	2814	693	PBN-9903B	9/25/2024	1	1.9	ug/l	0.5	5
Total Dinitrotoluenes	2814	693	PBN-9903B	9/25/2024	1	0.052	ug/l	0.005	0.05
Trichloroethene	2814	693	PBN-9903B	9/25/2024	1	0.58	ug/l	0.5	5
Carbon tetrachloride	2814	694	PBN-9903C	9/25/2024	1	6.1	ug/l	0.5	5
Carbon tetrachloride	2814	694	PBN-9903C	9/25/2024	2	5.7	ug/l	0.5	5
Chloroform	2814	694	PBN-9903C	9/25/2024	1	0.89	ug/l	0.6	6
Chloroform	2814	694	PBN-9903C	9/25/2024	2	0.85	ug/l	0.6	6
Trichloroethene	2814	694	PBN-9903C	9/25/2024	1	2.7	ug/l	0.5	5
Trichloroethene	2814	694	PBN-9903C	9/25/2024	2	2.5	ug/l	0.5	5
Ethyl ether	2814	695	PBN-9903D	9/25/2024	1	160	ug/l	100	1000
Carbon tetrachloride	2814	770	PBN-1302A	9/23/2024	1	3.4	ug/l	0.5	5
Carbon tetrachloride	2814	771	PBN-1302B	9/23/2024	1	3.5	ug/l	0.5	5
Carbon tetrachloride	2814	772	PBN-1302C	9/23/2024	1	2.3	ug/l	0.5	5
Chloroform	2814	772	PBN-1302C	9/23/2024	1	0.81	ug/l	0.6	6
Carbon tetrachloride	2814	774	PBN-1303A	9/24/2024	1	1.7	ug/l	0.5	5
Carbon tetrachloride	2814	775	PBN-1303B	9/24/2024	1	1.8	ug/l	0.5	5
Carbon tetrachloride	2814	776	PBN-1303C	9/24/2024	1	2.1	ug/l	0.5	5
Carbon tetrachloride	2814	779	PBN-1304B	9/24/2024	1	0.54	ug/l	0.5	5
Carbon tetrachloride	2814	779	PBN-1304B	9/24/2024	2	0.53	ug/l	0.5	5
Carbon tetrachloride	2814	780	PBN-1304C	9/24/2024	1	0.86	ug/l	0.5	5
2,4-Dinitrotoluene	2814	782	PBN-1401A	9/16/2024	1	0.036	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	782	PBN-1401A	9/16/2024	1	0.052	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	782	PBN-1401A	9/16/2024	1	0.738	ug/l	0.005	0.05
2,4-Dinitrotoluene	2814	783	PBN-1401B	9/16/2024	1	0.046	ug/l	0.005	0.05
2,6-Dinitrotoluene	2814	783	PBN-1401B	9/16/2024	1	0.054	ug/l	0.005	0.05
Total Dinitrotoluenes	2814	783	PBN-1401B	9/16/2024	1	0.793	ug/l	0.005	0.05

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
Total Dinitrotoluenes	2814	784	PBN-1401C	9/16/2024	1	0.045	ug/l	0.005	0.05
Carbon tetrachloride	2814	791	PBN-1404B	9/23/2024	1	3.3	ug/l	0.5	5
Trichloroethene	2814	791	PBN-1404B	9/23/2024	1	0.66	ug/l	0.5	5
Bromodichloromethane	2814	792	PBN-1404C	9/23/2024	1	0.12	ug/l	0.06	0.6
Chloroform	2814	792	PBN-1404C	9/23/2024	1	0.83	ug/l	0.6	6
Carbon tetrachloride	2814	795	PBN-8902BR	9/19/2024	1	1.7	ug/l	0.5	5
Trichloroethene	2814	795	PBN-8902BR	9/19/2024	1	0.51	ug/l	0.5	5

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 2814 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,3-Dinitrotoluene	360	PBM-9801	9/16/2024	2	0.28	0.0058	0.048	ug/l		
2,3-Dinitrotoluene	360	PBM-9801	9/16/2024	1	0.28	0.0058	0.049	ug/l		
2,4-Dinitrotoluene	360	PBM-9801	9/16/2024	2	0.12	0.0077	0.048	ug/l	0.005	0.05
2,4-Dinitrotoluene	360	PBM-9801	9/16/2024	1	0.13	0.0078	0.049	ug/l	0.005	0.05
2,5-Dinitrotoluene	360	PBM-9801	9/16/2024	1	0.026	0.0049	0.049	ug/l		
2,5-Dinitrotoluene	360	PBM-9801	9/16/2024	2	0.026	0.0048	0.048	ug/l		
2,6-Dinitrotoluene	360	PBM-9801	9/16/2024	2	0.11	0.0048	0.048	ug/l	0.005	0.05
2,6-Dinitrotoluene	360	PBM-9801	9/16/2024	1	0.097	0.0049	0.049	ug/l	0.005	0.05
3,4-Dinitrotoluene	360	PBM-9801	9/16/2024	2	0.12	0.0048	0.048	ug/l		
3,4-Dinitrotoluene	360	PBM-9801	9/16/2024	1	0.12	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	360	PBM-9801	9/16/2024	2	0.043	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	360	PBM-9801	9/16/2024	1	0.041	0.0049	0.049	ug/l		
Carbon tetrachloride	360	PBM-9801	9/16/2024	1	0.12	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	360	PBM-9801	9/16/2024	2	0.11	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	360	PBM-9801	9/16/2024	1	0.694	0.0078	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	360	PBM-9801	9/16/2024	2	0.699	0.0077	0.048	ug/l	0.005	0.05
2,3-Dinitrotoluene	367	PBM-0001	9/16/2024	1	0.32	0.006	0.05	ug/l		
2,4-Dinitrotoluene	367	PBM-0001	9/16/2024	1	0.11	0.008	0.05	ug/l	0.005	0.05
2,5-Dinitrotoluene	367	PBM-0001	9/16/2024	1	0.022	0.005	0.05	ug/l		
2,6-Dinitrotoluene	367	PBM-0001	9/16/2024	1	0.085	0.005	0.05	ug/l	0.005	0.05
3,4-Dinitrotoluene	367	PBM-0001	9/16/2024	1	0.12	0.005	0.05	ug/l		
3,5-Dinitrotoluene	367	PBM-0001	9/16/2024	1	0.062	0.005	0.05	ug/l		
Carbon tetrachloride	367	PBM-0001	9/16/2024	1	0.23	0.1	0.2	ug/l	0.5	5
Nitrate+Nitrite Nitrogen	367	PBM-0001	9/16/2024	1	4	0.05	0.5	mg/l	2	10
Total Dinitrotoluenes	367	PBM-0001	9/16/2024	1	0.719	0.008	0.05	ug/l	0.005	0.05
Trichloroethene	367	PBM-0001	9/16/2024	1	0.23	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	368	PBM-0002	9/16/2024	1	6.4	0.029	0.24	ug/l		
2,4-Dinitrotoluene	368	PBM-0002	9/16/2024	1	31	0.39	2.4	ug/l	0.005	0.05
2,5-Dinitrotoluene	368	PBM-0002	9/16/2024	1	0.1	0.024	0.24	ug/l		
2,6-Dinitrotoluene	368	PBM-0002	9/16/2024	1	6.4	0.024	0.24	ug/l	0.005	0.05
3,4-Dinitrotoluene	368	PBM-0002	9/16/2024	1	2	0.024	0.24	ug/l		
3,5-Dinitrotoluene	368	PBM-0002	9/16/2024	1	0.39	0.024	0.24	ug/l		
Carbon tetrachloride	368	PBM-0002	9/16/2024	1	0.25	0.1	0.2	ug/l	0.5	5
Nitrate+Nitrite Nitrogen	368	PBM-0002	9/16/2024	1	5.1	0.05	0.5	mg/l	2	10
Total Dinitrotoluenes	368	PBM-0002	9/16/2024	1	46.29	0.0078	0.049	ug/l	0.005	0.05
Trichloroethene	368	PBM-0002	9/16/2024	1	0.46	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	372	PBM-0006	9/16/2024	1	0.22	0.0058	0.048	ug/l		
2,4-Dinitrotoluene	372	PBM-0006	9/16/2024	1	0.081	0.0077	0.048	ug/l	0.005	0.05
2,5-Dinitrotoluene	372	PBM-0006	9/16/2024	1	0.023	0.0048	0.048	ug/l		
2,6-Dinitrotoluene	372	PBM-0006	9/16/2024	1	0.054	0.0048	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	372	PBM-0006	9/16/2024	1	0.18	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	372	PBM-0006	9/16/2024	1	0.05	0.0048	0.048	ug/l		
Carbon tetrachloride	372	PBM-0006	9/16/2024	1	0.26	0.1	0.2	ug/l	0.5	5
Nitrate+Nitrite Nitrogen	372	PBM-0006	9/16/2024	1	3.2	0.05	0.5	mg/l	2	10
Total Dinitrotoluenes	372	PBM-0006	9/16/2024	1	0.608	0.0077	0.048	ug/l	0.005	0.05
Trichloroethene	372	PBM-0006	9/16/2024	1	0.36	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	374	PBM-0008	9/16/2024	1	0.3	0.0057	0.048	ug/l		
2,4-Dinitrotoluene	374	PBM-0008	9/16/2024	1	0.13	0.0076	0.048	ug/l	0.005	0.05

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,5-Dinitrotoluene	374	PBM-0008	9/16/2024	1	0.035	0.0048	0.048	ug/l		
2,6-Dinitrotoluene	374	PBM-0008	9/16/2024	1	0.068	0.0048	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	374	PBM-0008	9/16/2024	1	0.17	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	374	PBM-0008	9/16/2024	1	0.075	0.0048	0.048	ug/l		
Carbon tetrachloride	374	PBM-0008	9/16/2024	1	0.24	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	374	PBM-0008	9/16/2024	1	0.778	0.0076	0.048	ug/l	0.005	0.05
Trichloroethene	374	PBM-0008	9/16/2024	1	0.29	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	544	PBN-2301B	9/18/2024	1	0.21	0.1	0.2	ug/l	40	200
1,1,1-Trichloroethane	544	PBN-2301B	9/18/2024	2	0.21	0.1	0.2	ug/l	40	200
Carbon tetrachloride	544	PBN-2301B	9/18/2024	2	2.3	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	544	PBN-2301B	9/18/2024	1	2.2	0.1	0.2	ug/l	0.5	5
Chloroform	544	PBN-2301B	9/18/2024	1	0.25	0.1	0.2	ug/l	0.6	6
Chloroform	544	PBN-2301B	9/18/2024	2	0.24	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	545	PBN-2301C	9/18/2024	1	0.34	0.1	0.2	ug/l	40	200
2,4-Dinitrotoluene	545	PBN-2301C	9/18/2024	1	0.014	0.0078	0.049	ug/l	0.005	0.05
Carbon tetrachloride	545	PBN-2301C	9/18/2024	1	3.2	0.1	0.2	ug/l	0.5	5
Chloroform	545	PBN-2301C	9/18/2024	1	0.32	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	545	PBN-2301C	9/18/2024	1	0.014	0.0078	0.049	ug/l	0.005	0.05
1,1-Dichloroethane	546	PBN-2301D	9/18/2024	1	0.31	0.1	0.2	ug/l	85	850
Ethyl ether	546	PBN-2301D	9/18/2024	1	2.5	0.1	0.2	ug/l	100	1000
Carbon tetrachloride	592	PBN-1003C	9/19/2024	1	0.12	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	595	PBN-1001C	9/23/2024	1	0.11	0.1	0.2	ug/l	40	200
Bromodichloromethane	595	PBN-1001C	9/23/2024	1	0.18	0.1	0.2	ug/l	0.06	0.6
Carbon tetrachloride	595	PBN-1001C	9/23/2024	1	0.88	0.1	0.2	ug/l	0.5	5
Chloroform	595	PBN-1001C	9/23/2024	1	1.2	0.1	0.2	ug/l	0.6	6
Trichloroethene	595	PBN-1001C	9/23/2024	1	0.27	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	613	PBN-8202A	9/16/2024	1	0.97	0.0057	0.048	ug/l		
2,4-Dinitrotoluene	613	PBN-8202A	9/16/2024	1	0.12	0.0076	0.048	ug/l	0.005	0.05
2,5-Dinitrotoluene	613	PBN-8202A	9/16/2024	1	0.022	0.0048	0.048	ug/l		
2,6-Dinitrotoluene	613	PBN-8202A	9/16/2024	1	0.08	0.0048	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	613	PBN-8202A	9/16/2024	1	0.23	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	613	PBN-8202A	9/16/2024	1	0.16	0.0048	0.048	ug/l		
Carbon tetrachloride	613	PBN-8202A	9/16/2024	1	0.31	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	613	PBN-8202A	9/16/2024	1	1.582	0.0076	0.048	ug/l	0.005	0.05
Trichloroethene	613	PBN-8202A	9/16/2024	1	0.32	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	614	PBN-8202B	9/16/2024	1	1.4	0.0058	0.048	ug/l		
2,4-Dinitrotoluene	614	PBN-8202B	9/16/2024	1	0.12	0.0077	0.048	ug/l	0.005	0.05
2,5-Dinitrotoluene	614	PBN-8202B	9/16/2024	1	0.022	0.0048	0.048	ug/l		
2,6-Dinitrotoluene	614	PBN-8202B	9/16/2024	1	0.055	0.0048	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	614	PBN-8202B	9/16/2024	1	0.19	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	614	PBN-8202B	9/16/2024	1	0.21	0.0048	0.048	ug/l		
Carbon tetrachloride	614	PBN-8202B	9/16/2024	1	0.5	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	614	PBN-8202B	9/16/2024	1	1.997	0.0077	0.048	ug/l	0.005	0.05
Trichloroethene	614	PBN-8202B	9/16/2024	1	0.53	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	615	PBN-8202C	9/16/2024	1	0.061	0.0058	0.049	ug/l		
2,4-Dinitrotoluene	615	PBN-8202C	9/16/2024	1	0.061	0.0078	0.049	ug/l	0.005	0.05
2,5-Dinitrotoluene	615	PBN-8202C	9/16/2024	1	0.02	0.0049	0.049	ug/l		
2,6-Dinitrotoluene	615	PBN-8202C	9/16/2024	1	0.049	0.0049	0.049	ug/l	0.005	0.05
3,4-Dinitrotoluene	615	PBN-8202C	9/16/2024	1	0.036	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	615	PBN-8202C	9/16/2024	1	0.035	0.0049	0.049	ug/l		
Total Dinitrotoluenes	615	PBN-8202C	9/16/2024	1	0.262	0.0078	0.049	ug/l	0.005	0.05
Trichloroethene	615	PBN-8202C	9/16/2024	1	0.11	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	622	PBN-8205A	9/19/2024	1	0.2	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	622	PBN-8205A	9/19/2024	1	0.33	0.0057	0.048	ug/l		
2,4-Dinitrotoluene	622	PBN-8205A	9/19/2024	1	0.029	0.0076	0.048	ug/l	0.005	0.05
2,5-Dinitrotoluene	622	PBN-8205A	9/19/2024	1	0.023	0.0048	0.048	ug/l		
2,6-Dinitrotoluene	622	PBN-8205A	9/19/2024	1	0.06	0.0048	0.048	ug/l	0.005	0.05

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
3,4-Dinitrotoluene	622	PBN-8205A	9/19/2024	1	0.13	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	622	PBN-8205A	9/19/2024	1	0.062	0.0048	0.048	ug/l		
Carbon tetrachloride	622	PBN-8205A	9/19/2024	1	2.4	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	622	PBN-8205A	9/19/2024	1	0.634	0.0076	0.048	ug/l	0.005	0.05
Trichloroethene	622	PBN-8205A	9/19/2024	1	0.51	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	623	PBN-8205B	9/19/2024	1	0.16	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	623	PBN-8205B	9/19/2024	1	0.34	0.0061	0.051	ug/l		
2,4-Dinitrotoluene	623	PBN-8205B	9/19/2024	1	0.032	0.0081	0.051	ug/l	0.005	0.05
2,5-Dinitrotoluene	623	PBN-8205B	9/19/2024	1	0.022	0.0051	0.051	ug/l		
2,6-Dinitrotoluene	623	PBN-8205B	9/19/2024	1	0.053	0.0051	0.051	ug/l	0.005	0.05
3,4-Dinitrotoluene	623	PBN-8205B	9/19/2024	1	0.13	0.0051	0.051	ug/l		
3,5-Dinitrotoluene	623	PBN-8205B	9/19/2024	1	0.068	0.0051	0.051	ug/l		
Carbon tetrachloride	623	PBN-8205B	9/19/2024	1	2.1	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	623	PBN-8205B	9/19/2024	1	0.645	0.0081	0.051	ug/l	0.005	0.05
Trichloroethene	623	PBN-8205B	9/19/2024	1	0.5	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	624	PBN-8205C	9/19/2024	1	0.13	0.006	0.05	ug/l		
2,4-Dinitrotoluene	624	PBN-8205C	9/19/2024	1	0.018	0.008	0.05	ug/l	0.005	0.05
2,5-Dinitrotoluene	624	PBN-8205C	9/19/2024	1	0.021	0.005	0.05	ug/l		
3,4-Dinitrotoluene	624	PBN-8205C	9/19/2024	1	0.064	0.005	0.05	ug/l		
3,5-Dinitrotoluene	624	PBN-8205C	9/19/2024	1	0.051	0.005	0.05	ug/l		
Carbon tetrachloride	624	PBN-8205C	9/19/2024	1	0.1	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	624	PBN-8205C	9/19/2024	1	0.284	0.008	0.05	ug/l	0.005	0.05
Trichloroethene	624	PBN-8205C	9/19/2024	1	0.16	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	632	PBN-8502A	9/19/2024	1	0.33	0.1	0.2	ug/l	40	200
Carbon tetrachloride	632	PBN-8502A	9/19/2024	1	6.6	0.1	0.2	ug/l	0.5	5
Trichloroethene	632	PBN-8502A	9/19/2024	1	0.79	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	633	PBN-8503A	9/23/2024	1	0.87	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	637	PBM-8907	9/19/2024	1	0.17	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	645	PBN-8902C	9/19/2024	1	0.1	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	645	PBN-8902C	9/19/2024	1	0.075	0.0059	0.049	ug/l		
2,6-Dinitrotoluene	645	PBN-8902C	9/19/2024	1	0.026	0.0049	0.049	ug/l	0.005	0.05
3,4-Dinitrotoluene	645	PBN-8902C	9/19/2024	1	0.029	0.0049	0.049	ug/l		
Carbon tetrachloride	645	PBN-8902C	9/19/2024	1	1	0.1	0.2	ug/l	0.5	5
Total Dinitrotoluenes	645	PBN-8902C	9/19/2024	1	0.13	0.0078	0.049	ug/l	0.005	0.05
Trichloroethene	645	PBN-8902C	9/19/2024	1	0.41	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	646	PBN-8903B	9/23/2024	1	0.4	0.1	0.2	ug/l	0.5	5
1,1-Dichloroethane	653	PBN-8910D	9/16/2024	1	0.11	0.1	0.2	ug/l	85	850
Carbon tetrachloride	655	PBN-8912B	9/19/2024	1	0.36	0.1	0.2	ug/l	0.5	5
o-Xylene	655	PBN-8912B	9/19/2024	1	0.12	0.1	0.2	ug/l	400	2000
Tetrachloroethene	655	PBN-8912B	9/19/2024	1	0.12	0.1	0.2	ug/l	0.5	5
Toluene	655	PBN-8912B	9/19/2024	1	1.7	0.1	0.2	ug/l	160	800
Trichloroethene	655	PBN-8912B	9/19/2024	1	0.3	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	665	PBN-9112C	9/19/2024	2	0.85	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	665	PBN-9112C	9/19/2024	1	0.87	0.1	0.2	ug/l	0.5	5
Chloroform	665	PBN-9112C	9/19/2024	1	0.1	0.1	0.2	ug/l	0.6	6
Trichloroethene	665	PBN-9112C	9/19/2024	2	0.2	0.1	0.2	ug/l	0.5	5
Trichloroethene	665	PBN-9112C	9/19/2024	1	0.18	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	668	PBN-9301B	9/23/2024	1	0.12	0.1	0.2	ug/l	40	200
Carbon tetrachloride	668	PBN-9301B	9/23/2024	1	2.2	0.1	0.2	ug/l	0.5	5
Chloroform	668	PBN-9301B	9/23/2024	1	0.26	0.1	0.2	ug/l	0.6	6
Trichloroethene	668	PBN-9301B	9/23/2024	1	0.21	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	669	PBN-9301C	9/23/2024	1	0.31	0.1	0.2	ug/l	40	200
Bromodichloromethane	669	PBN-9301C	9/23/2024	1	0.18	0.1	0.2	ug/l	0.06	0.6
Carbon tetrachloride	669	PBN-9301C	9/23/2024	1	0.58	0.1	0.2	ug/l	0.5	5
Chloroform	669	PBN-9301C	9/23/2024	1	1.4	0.1	0.2	ug/l	0.6	6
Trichloroethene	669	PBN-9301C	9/23/2024	1	0.14	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	673	PBN-9303B	9/23/2024	1	0.28	0.1	0.2	ug/l	40	200

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
Carbon tetrachloride	673	PBN-9303B	9/23/2024	1	3.4	0.1	0.2	ug/l	0.5	5
Chloroform	673	PBN-9303B	9/23/2024	1	0.61	0.1	0.2	ug/l	0.6	6
Trichloroethene	673	PBN-9303B	9/23/2024	1	0.17	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	674	PBN-9303C	9/23/2024	1	1.1	0.1	0.2	ug/l	40	200
1,1-Dichloroethene	674	PBN-9303C	9/23/2024	1	0.1	0.1	0.2	ug/l	0.7	7
Bromodichloromethane	674	PBN-9303C	9/23/2024	1	0.11	0.1	0.2	ug/l	0.06	0.6
Carbon tetrachloride	674	PBN-9303C	9/23/2024	1	1.7	0.1	0.2	ug/l	0.5	5
Chloroform	674	PBN-9303C	9/23/2024	1	1.1	0.1	0.2	ug/l	0.6	6
Trichloroethene	674	PBN-9303C	9/23/2024	1	0.21	0.1	0.2	ug/l	0.5	5
1,1-Dichloroethane	675	PBN-9303D	9/23/2024	1	0.85	0.1	0.2	ug/l	85	850
1,1-Dichloroethene	675	PBN-9303D	9/23/2024	1	0.16	0.1	0.2	ug/l	0.7	7
Chloroethane	675	PBN-9303D	9/23/2024	1	0.5	0.2	0.4	ug/l	80	400
Ethyl ether	675	PBN-9303D	9/23/2024	1	27	0.5	1	ug/l	100	1000
1,1,1-Trichloroethane	685	PBN-9304B	9/12/2024	1	0.12	0.1	0.2	ug/l	40	200
1,1,1-Trichloroethane	685	PBN-9304B	9/12/2024	2	0.11	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	685	PBN-9304B	9/12/2024	1	0.033	0.0059	0.049	ug/l		
2,3-Dinitrotoluene	685	PBN-9304B	9/12/2024	2	0.033	0.0058	0.048	ug/l		
2,6-Dinitrotoluene	685	PBN-9304B	9/12/2024	2	0.0097	0.0048	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	685	PBN-9304B	9/12/2024	2	0.02	0.0048	0.048	ug/l		
3,4-Dinitrotoluene	685	PBN-9304B	9/12/2024	1	0.02	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	685	PBN-9304B	9/12/2024	1	0.019	0.0049	0.049	ug/l		
3,5-Dinitrotoluene	685	PBN-9304B	9/12/2024	2	0.017	0.0048	0.048	ug/l		
Carbon tetrachloride	685	PBN-9304B	9/12/2024	1	1.2	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	685	PBN-9304B	9/12/2024	2	1.2	0.1	0.2	ug/l	0.5	5
Chloroform	685	PBN-9304B	9/12/2024	2	0.14	0.1	0.2	ug/l	0.6	6
Chloroform	685	PBN-9304B	9/12/2024	1	0.15	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	685	PBN-9304B	9/12/2024	2	0.0797	0.0077	0.048	ug/l	0.005	0.05
Total Dinitrotoluenes	685	PBN-9304B	9/12/2024	1	0.072	0.0078	0.049	ug/l	0.005	0.05
Trichloroethene	685	PBN-9304B	9/12/2024	1	0.31	0.1	0.2	ug/l	0.5	5
Trichloroethene	685	PBN-9304B	9/12/2024	2	0.3	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	686	PBN-9304C	9/12/2024	1	0.11	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	686	PBN-9304C	9/12/2024	1	0.031	0.0058	0.048	ug/l		
2,6-Dinitrotoluene	686	PBN-9304C	9/12/2024	1	0.012	0.0048	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	686	PBN-9304C	9/12/2024	1	0.024	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	686	PBN-9304C	9/12/2024	1	0.021	0.0048	0.048	ug/l		
Carbon tetrachloride	686	PBN-9304C	9/12/2024	1	1.4	0.1	0.2	ug/l	0.5	5
Chloroform	686	PBN-9304C	9/12/2024	1	0.22	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	686	PBN-9304C	9/12/2024	1	0.088	0.0077	0.048	ug/l	0.005	0.05
Trichloroethene	686	PBN-9304C	9/12/2024	1	0.45	0.1	0.2	ug/l	0.5	5
1,2-Dichloroethane	687	PBN-9304D	9/12/2024	1	0.17	0.1	0.2	ug/l	0.5	5
Ethyl ether	687	PBN-9304D	9/12/2024	1	31	0.5	1	ug/l	100	1000
Carbon tetrachloride	692	PBN-9903A	9/25/2024	1	0.8	0.1	0.2	ug/l	0.5	5
Trichloroethene	692	PBN-9903A	9/25/2024	1	0.26	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	693	PBN-9903B	9/25/2024	1	0.14	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	693	PBN-9903B	9/25/2024	1	0.021	0.0058	0.049	ug/l		
2,6-Dinitrotoluene	693	PBN-9903B	9/25/2024	1	0.013	0.0049	0.049	ug/l	0.005	0.05
3,4-Dinitrotoluene	693	PBN-9903B	9/25/2024	1	0.018	0.0049	0.049	ug/l		
Carbon tetrachloride	693	PBN-9903B	9/25/2024	1	1.9	0.1	0.2	ug/l	0.5	5
Chloroform	693	PBN-9903B	9/25/2024	1	0.24	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	693	PBN-9903B	9/25/2024	1	0.052	0.0078	0.049	ug/l	0.005	0.05
Trichloroethene	693	PBN-9903B	9/25/2024	1	0.58	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	694	PBN-9903C	9/25/2024	1	0.32	0.1	0.2	ug/l	40	200
1,1,1-Trichloroethane	694	PBN-9903C	9/25/2024	2	0.3	0.1	0.2	ug/l	40	200
Carbon disulfide	694	PBN-9903C	9/25/2024	1	0.21	0.2	0.4	ug/l	200	1000
Carbon tetrachloride	694	PBN-9903C	9/25/2024	2	5.7	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	694	PBN-9903C	9/25/2024	1	6.1	0.1	0.2	ug/l	0.5	5
Chloroform	694	PBN-9903C	9/25/2024	2	0.85	0.1	0.2	ug/l	0.6	6

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
Chloroform	694	PBN-9903C	9/25/2024	1	0.89	0.1	0.2	ug/l	0.6	6
Trichloroethene	694	PBN-9903C	9/25/2024	2	2.5	0.1	0.2	ug/l	0.5	5
Trichloroethene	694	PBN-9903C	9/25/2024	1	2.7	0.1	0.2	ug/l	0.5	5
1,1-Dichloroethane	695	PBN-9903D	9/25/2024	1	0.15	0.1	0.2	ug/l	85	850
1,2-Dichloroethane	695	PBN-9903D	9/25/2024	1	0.25	0.1	0.2	ug/l	0.5	5
Carbon disulfide	695	PBN-9903D	9/25/2024	1	0.21	0.2	0.4	ug/l	200	1000
Ethyl ether	695	PBN-9903D	9/25/2024	1	160	5	10	ug/l	100	1000
1,1,1-Trichloroethane	770	PBN-1302A	9/23/2024	1	0.16	0.1	0.2	ug/l	40	200
Carbon tetrachloride	770	PBN-1302A	9/23/2024	1	3.4	0.1	0.2	ug/l	0.5	5
Chloroform	770	PBN-1302A	9/23/2024	1	0.37	0.1	0.2	ug/l	0.6	6
Trichloroethene	770	PBN-1302A	9/23/2024	1	0.18	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	771	PBN-1302B	9/23/2024	1	0.18	0.1	0.2	ug/l	40	200
Carbon tetrachloride	771	PBN-1302B	9/23/2024	1	3.5	0.1	0.2	ug/l	0.5	5
Chloroform	771	PBN-1302B	9/23/2024	1	0.43	0.1	0.2	ug/l	0.6	6
Trichloroethene	771	PBN-1302B	9/23/2024	1	0.33	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	772	PBN-1302C	9/23/2024	1	0.97	0.1	0.2	ug/l	40	200
1,1-Dichloroethene	772	PBN-1302C	9/23/2024	1	0.13	0.1	0.2	ug/l	0.7	7
Carbon tetrachloride	772	PBN-1302C	9/23/2024	1	2.3	0.1	0.2	ug/l	0.5	5
Chloroform	772	PBN-1302C	9/23/2024	1	0.81	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	774	PBN-1303A	9/24/2024	1	0.37	0.1	0.2	ug/l	40	200
Carbon tetrachloride	774	PBN-1303A	9/24/2024	1	1.7	0.1	0.2	ug/l	0.5	5
Chloroform	774	PBN-1303A	9/24/2024	1	0.31	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	775	PBN-1303B	9/24/2024	1	0.37	0.1	0.2	ug/l	40	200
Carbon tetrachloride	775	PBN-1303B	9/24/2024	1	1.8	0.1	0.2	ug/l	0.5	5
Chloroform	775	PBN-1303B	9/24/2024	1	0.29	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	776	PBN-1303C	9/24/2024	1	0.67	0.1	0.2	ug/l	40	200
Carbon tetrachloride	776	PBN-1303C	9/24/2024	1	2.1	0.1	0.2	ug/l	0.5	5
Chloroform	776	PBN-1303C	9/24/2024	1	0.45	0.1	0.2	ug/l	0.6	6
Trichloroethene	776	PBN-1303C	9/24/2024	1	0.13	0.1	0.2	ug/l	0.5	5
1,1-Dichloroethane	777	PBN-1303D	9/24/2024	1	0.62	0.1	0.2	ug/l	85	850
1,1-Dichloroethene	777	PBN-1303D	9/24/2024	1	0.12	0.1	0.2	ug/l	0.7	7
Ethyl ether	777	PBN-1303D	9/24/2024	1	2.9	0.1	0.2	ug/l	100	1000
1,1,1-Trichloroethane	778	PBN-1304A	9/24/2024	1	0.22	0.1	0.2	ug/l	40	200
Carbon tetrachloride	778	PBN-1304A	9/24/2024	1	0.44	0.1	0.2	ug/l	0.5	5
Chloroform	778	PBN-1304A	9/24/2024	1	0.13	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	779	PBN-1304B	9/24/2024	2	0.24	0.1	0.2	ug/l	40	200
1,1,1-Trichloroethane	779	PBN-1304B	9/24/2024	1	0.26	0.1	0.2	ug/l	40	200
Carbon tetrachloride	779	PBN-1304B	9/24/2024	1	0.54	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	779	PBN-1304B	9/24/2024	2	0.53	0.1	0.2	ug/l	0.5	5
Chloroform	779	PBN-1304B	9/24/2024	2	0.18	0.1	0.2	ug/l	0.6	6
Chloroform	779	PBN-1304B	9/24/2024	1	0.17	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	780	PBN-1304C	9/24/2024	1	0.42	0.1	0.2	ug/l	40	200
Carbon tetrachloride	780	PBN-1304C	9/24/2024	1	0.86	0.1	0.2	ug/l	0.5	5
Chloroform	780	PBN-1304C	9/24/2024	1	0.25	0.1	0.2	ug/l	0.6	6
1,1-Dichloroethane	781	PBN-1304D	9/24/2024	1	0.54	0.1	0.2	ug/l	85	850
2,3-Dinitrotoluene	782	PBN-1401A	9/16/2024	1	0.49	0.006	0.05	ug/l		
2,4-Dinitrotoluene	782	PBN-1401A	9/16/2024	1	0.036	0.008	0.05	ug/l	0.005	0.05
2,5-Dinitrotoluene	782	PBN-1401A	9/16/2024	1	0.026	0.005	0.05	ug/l		
2,6-Dinitrotoluene	782	PBN-1401A	9/16/2024	1	0.052	0.005	0.05	ug/l	0.005	0.05
3,4-Dinitrotoluene	782	PBN-1401A	9/16/2024	1	0.088	0.005	0.05	ug/l		
3,5-Dinitrotoluene	782	PBN-1401A	9/16/2024	1	0.046	0.005	0.05	ug/l		
Total Dinitrotoluenes	782	PBN-1401A	9/16/2024	1	0.738	0.008	0.05	ug/l	0.005	0.05
Trichloroethene	782	PBN-1401A	9/16/2024	1	0.15	0.1	0.2	ug/l	0.5	5
2,3-Dinitrotoluene	783	PBN-1401B	9/16/2024	1	0.52	0.0065	0.054	ug/l		
2,4-Dinitrotoluene	783	PBN-1401B	9/16/2024	1	0.046	0.0086	0.054	ug/l	0.005	0.05
2,5-Dinitrotoluene	783	PBN-1401B	9/16/2024	1	0.025	0.0054	0.054	ug/l		
2,6-Dinitrotoluene	783	PBN-1401B	9/16/2024	1	0.054	0.0054	0.054	ug/l	0.005	0.05

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
3,4-Dinitrotoluene	783	PBN-1401B	9/16/2024	1	0.098	0.0054	0.054	ug/l		
3,5-Dinitrotoluene	783	PBN-1401B	9/16/2024	1	0.05	0.0054	0.054	ug/l		
Total Dinitrotoluenes	783	PBN-1401B	9/16/2024	1	0.793	0.0086	0.054	ug/l	0.005	0.05
2,3-Dinitrotoluene	784	PBN-1401C	9/16/2024	1	0.023	0.0059	0.049	ug/l		
3,4-Dinitrotoluene	784	PBN-1401C	9/16/2024	1	0.022	0.0049	0.049	ug/l		
Total Dinitrotoluenes	784	PBN-1401C	9/16/2024	1	0.045	0.0078	0.049	ug/l	0.005	0.05
1,1,1-Trichloroethane	791	PBN-1404B	9/23/2024	1	0.2	0.1	0.2	ug/l	40	200
Carbon tetrachloride	791	PBN-1404B	9/23/2024	1	3.3	0.1	0.2	ug/l	0.5	5
Chloroform	791	PBN-1404B	9/23/2024	1	0.44	0.1	0.2	ug/l	0.6	6
Trichloroethene	791	PBN-1404B	9/23/2024	1	0.66	0.1	0.2	ug/l	0.5	5
Bromodichloromethane	792	PBN-1404C	9/23/2024	1	0.12	0.1	0.2	ug/l	0.06	0.6
Carbon tetrachloride	792	PBN-1404C	9/23/2024	1	0.28	0.1	0.2	ug/l	0.5	5
Chloroform	792	PBN-1404C	9/23/2024	1	0.83	0.1	0.2	ug/l	0.6	6
Trichloroethene	792	PBN-1404C	9/23/2024	1	0.16	0.1	0.2	ug/l	0.5	5
Ethyl ether	793	PBN-1404D	9/23/2024	1	54	1	2	ug/l	100	1000
Ethyl ether	793	PBN-1404D	9/23/2024	2	53	1	2	ug/l	100	1000
1,1,1-Trichloroethane	795	PBN-8902BR	9/19/2024	1	0.13	0.1	0.2	ug/l	40	200
Carbon tetrachloride	795	PBN-8902BR	9/19/2024	1	1.7	0.1	0.2	ug/l	0.5	5
Chloroform	795	PBN-8902BR	9/19/2024	1	0.13	0.1	0.2	ug/l	0.6	6
Trichloroethene	795	PBN-8902BR	9/19/2024	1	0.51	0.1	0.2	ug/l	0.5	5

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

Form 4400-231(R 1/04)

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When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30NR 635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- **Prepare one form for each license or monitoring ID.**
- **Please type or print legibly.**
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact - WA/5
  Bureau of Waste Management
  Wisconsin Department of Natural Resources
  101 South Webster Street
  Madison WI 53707-7921

Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):
SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Deterrent Burning Grounds	03037	157065260	9/10 - 9/11/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen — 11/19/24
Signature — Date

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EDD format(s): [ ] **Diskette** [ ] **CD (initial submittal and follow-up)** [ ] **E-mail (follow-up only)** [ ] **Other**

Case Narrative
Groundwater Monitoring
License Number 3037
Deterrent Burning Grounds
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Twelve (12) monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) in the Deterrent Burning Ground Plume.

Total DNT exceeded the Enforcement Standard (ES) in DBM-8201 (301), DBM-8202 (302), DBN-1001B (472), and DBN-1002C (476).

2,4-DNT exceeded the Preventive Action Limit (PAL) in DBM-8201 (301) and DBN-1002C (476). 2,6-DNT exceeded the PAL in DBM-8201 (301).

DNT analysis was also performed by CT Laboratories using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024 Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
2,4-Dinitrotoluene	3037	301	DBM-8201	9/10/2024	1	0.018	ug/l	0.005	0.05
2,6-Dinitrotoluene	3037	301	DBM-8201	9/10/2024	1	0.044	ug/l	0.005	0.05
Total Dinitrotoluenes	3037	301	DBM-8201	9/10/2024	1	1.322	ug/l	0.005	0.05
Total Dinitrotoluenes	3037	302	DBM-8202	9/10/2024	1	0.196	ug/l	0.005	0.05
Total Dinitrotoluenes	3037	472	DBN-1001B	9/10/2024	1	0.207	ug/l	0.005	0.05
2,4-Dinitrotoluene	3037	476	DBN-1002C	9/10/2024	1	0.013	ug/l	0.005	0.05
Total Dinitrotoluenes	3037	476	DBN-1002C	9/10/2024	1	0.353	ug/l	0.005	0.05

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 3037 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,3-Dinitrotoluene	301	DBM-8201	9/10/2024	1	0.73	0.006	0.05	ug/l		
2,4-Dinitrotoluene	301	DBM-8201	9/10/2024	1	0.018	0.008	0.05	ug/l	0.005	0.05
2,6-Dinitrotoluene	301	DBM-8201	9/10/2024	1	0.044	0.005	0.05	ug/l	0.005	0.05
3,4-Dinitrotoluene	301	DBM-8201	9/10/2024	1	0.21	0.005	0.05	ug/l		
3,5-Dinitrotoluene	301	DBM-8201	9/10/2024	1	0.32	0.005	0.05	ug/l		
Total Dinitrotoluenes	301	DBM-8201	9/10/2024	1	1.322	0.008	0.05	ug/l	0.005	0.05
2,3-Dinitrotoluene	302	DBM-8202	9/10/2024	1	0.11	0.0057	0.048	ug/l		
3,4-Dinitrotoluene	302	DBM-8202	9/10/2024	1	0.023	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	302	DBM-8202	9/10/2024	1	0.063	0.0048	0.048	ug/l		
Total Dinitrotoluenes	302	DBM-8202	9/10/2024	1	0.196	0.0076	0.048	ug/l	0.005	0.05
2,3-Dinitrotoluene	472	DBN-1001B	9/10/2024	1	0.062	0.006	0.05	ug/l		
3,4-Dinitrotoluene	472	DBN-1001B	9/10/2024	1	0.13	0.005	0.05	ug/l		
3,5-Dinitrotoluene	472	DBN-1001B	9/10/2024	1	0.015	0.005	0.05	ug/l		
Total Dinitrotoluenes	472	DBN-1001B	9/10/2024	1	0.207	0.008	0.05	ug/l	0.005	0.05
2,3-Dinitrotoluene	476	DBN-1002C	9/10/2024	1	0.16	0.0058	0.048	ug/l		
2,4-Dinitrotoluene	476	DBN-1002C	9/10/2024	1	0.013	0.0077	0.048	ug/l	0.005	0.05
3,4-Dinitrotoluene	476	DBN-1002C	9/10/2024	1	0.15	0.0048	0.048	ug/l		
3,5-Dinitrotoluene	476	DBN-1002C	9/10/2024	1	0.03	0.0048	0.048	ug/l		
Total Dinitrotoluenes	476	DBN-1002C	9/10/2024	1	0.353	0.0077	0.048	ug/l	0.005	0.05

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

Form 4400-231(R 1/04)

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Instructions:

- **Prepare one form for each license or monitoring ID.**
- **Please type or print legibly.**
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact - WA/5
  Bureau of Waste Management
  Wisconsin Department of Natural Resources
  101 South Webster Street
  Madison WI 53707-7921

Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):
SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Southeast Boundary	03038	157005530	9/9/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [x] No. No groundwater standards or explosive gas limits were exceeded.
- [ ] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen — 11/19/24
Signature — Date

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EDD format(s): [ ] **Diskette** [ ] **CD (initial submittal and follow-up)** [ ] **E-mail (follow-up only)** [ ] **Other**

Case Narrative
Groundwater Monitoring
License Number 3038
Southeast Boundary
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. One monitoring well, S1121 (755), was sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) in the Deterrent Burning Ground Plume.

No compounds were detected in S1121.

DNT analysis was also performed by CT Laboratories using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

Form 4400-231(R 1/04)

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When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30NR 635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- **Prepare one form for each license or monitoring ID.**
- **Please type or print legibly.**
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
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  Bureau of Waste Management
  Wisconsin Department of Natural Resources
  101 South Webster Street
  Madison WI 53707-7921

Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):
SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Off-Site Plume Wells	03485 & 03493	157005530	9/18 - 9/25/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen — 11/19/24
Signature — Date

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Case Narrative
Groundwater Monitoring
License Number 3485 & 3493
Off-Site Plume Wells
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Contamination from the Propellant Burning Ground (PBG) impacts groundwater quality in monitoring wells associated with these licenses. Sixteen (16) monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) and volatile organic compounds (VOCs) in the PBG Plume.

Total DNT exceeded the Enforcement Standard (ES) in PBN-9101C (561). 2,4-DNT and 2,6-DNT exceeded the Preventive Action Limit (PAL) in PBN-9101C (561).

Carbon tetrachloride exceeded the ES in PBN-9101C (561) and PBM-9001D (981). Carbon tetrachloride exceeded the PAL in SWN-9103B (571), SWN-9103D (573), SWN-9104C (575), SWN-9104D (576), and SWN-9105D (579).

Ethyl ether exceeded the ES in SWN-9103D (573).

Trichloroethene exceeded the PAL in PBN-9101C (561) and PBM-9001D (981).

VOC analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C.

DNT analysis was also performed by CT Lab using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024

Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
Carbon tetrachloride	3485	981	PBM-9001D	9/18/2024	1	7.2	ug/l	0.5	5
Trichloroethene	3485	981	PBM-9001D	9/18/2024	1	1.4	ug/l	0.5	5

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 3485 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
1,1,1-Trichloroethane	981	PBM-9001D	9/18/2024	1	0.12	0.1	0.2	ug/l	40	200
Carbon tetrachloride	981	PBM-9001D	9/18/2024	1	7.2	0.1	0.2	ug/l	0.5	5
Chloroform	981	PBM-9001D	9/18/2024	1	0.36	0.1	0.2	ug/l	0.6	6
Toluene	981	PBM-9001D	9/18/2024	1	0.14	0.1	0.2	ug/l	160	800
Trichloroethene	981	PBM-9001D	9/18/2024	1	1.4	0.1	0.2	ug/l	0.5	5
Ethyl ether	982	PBM-9002D	9/25/2024	1	0.15	0.1	0.2	ug/l	100	1000

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024

Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
2,4-Dinitrotoluene	3493	561	PBN-9101C	9/18/2024	1	0.019	ug/l	0.005	0.05
2,6-Dinitrotoluene	3493	561	PBN-9101C	9/18/2024	1	0.031	ug/l	0.005	0.05
Carbon tetrachloride	3493	561	PBN-9101C	9/18/2024	1	7.7	ug/l	0.5	5
Total Dinitrotoluenes	3493	561	PBN-9101C	9/18/2024	1	0.064	ug/l	0.005	0.05
Trichloroethene	3493	561	PBN-9101C	9/18/2024	1	1.5	ug/l	0.5	5
Carbon tetrachloride	3493	571	SWN-9103B	9/18/2024	1	0.95	ug/l	0.5	5
Carbon tetrachloride	3493	573	SWN-9103D	9/18/2024	1	0.96	ug/l	0.5	5
Ethyl ether	3493	573	SWN-9103D	9/18/2024	1	1400	ug/l	100	1000
Carbon tetrachloride	3493	575	SWN-9104C	9/18/2024	1	3.2	ug/l	0.5	5
Carbon tetrachloride	3493	576	SWN-9104D	9/18/2024	1	4.2	ug/l	0.5	5
Carbon tetrachloride	3493	579	SWN-9105D	9/18/2024	1	0.7	ug/l	0.5	5

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 3493 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,3-Dinitrotoluene	561	PBN-9101C	9/18/2024	1	0.014	0.0058	0.048	ug/l		
2,4-Dinitrotoluene	561	PBN-9101C	9/18/2024	1	0.019	0.0077	0.048	ug/l	0.005	0.05
2,6-Dinitrotoluene	561	PBN-9101C	9/18/2024	1	0.031	0.0048	0.048	ug/l	0.005	0.05
Carbon tetrachloride	561	PBN-9101C	9/18/2024	1	7.7	0.1	0.2	ug/l	0.5	5
Chloroform	561	PBN-9101C	9/18/2024	1	0.41	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	561	PBN-9101C	9/18/2024	1	0.064	0.0077	0.048	ug/l	0.005	0.05
Trichloroethene	561	PBN-9101C	9/18/2024	1	1.5	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	571	SWN-9103B	9/18/2024	1	0.13	0.1	0.2	ug/l	40	200
Carbon tetrachloride	571	SWN-9103B	9/18/2024	1	0.95	0.1	0.2	ug/l	0.5	5
Trichloroethene	571	SWN-9103B	9/18/2024	1	0.13	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	573	SWN-9103D	9/18/2024	1	0.96	0.1	0.2	ug/l	0.5	5
Chloroform	573	SWN-9103D	9/18/2024	1	0.18	0.1	0.2	ug/l	0.6	6
Ethyl ether	573	SWN-9103D	9/18/2024	1	1400	20	40	ug/l	100	1000
Trichloroethene	573	SWN-9103D	9/18/2024	1	0.27	0.1	0.2	ug/l	0.5	5
Ethyl ether	574	SWN-9103E	9/18/2024	1	7	0.1	0.2	ug/l	100	1000
1,1,1-Trichloroethane	575	SWN-9104C	9/18/2024	1	0.36	0.1	0.2	ug/l	40	200
Carbon tetrachloride	575	SWN-9104C	9/18/2024	1	3.2	0.1	0.2	ug/l	0.5	5
Chloroform	575	SWN-9104C	9/18/2024	1	0.34	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	576	SWN-9104D	9/18/2024	1	0.22	0.1	0.2	ug/l	40	200
Carbon tetrachloride	576	SWN-9104D	9/18/2024	1	4.2	0.1	0.2	ug/l	0.5	5
Chloroform	576	SWN-9104D	9/18/2024	1	0.42	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	577	SWN-9105B	9/18/2024	1	0.18	0.1	0.2	ug/l	40	200
Carbon tetrachloride	577	SWN-9105B	9/18/2024	1	0.4	0.1	0.2	ug/l	0.5	5
Chloroform	577	SWN-9105B	9/18/2024	1	0.13	0.1	0.2	ug/l	0.6	6
Carbon tetrachloride	578	SWN-9105C	9/18/2024	1	0.4	0.1	0.2	ug/l	0.5	5
Chloroform	578	SWN-9105C	9/18/2024	1	0.25	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	579	SWN-9105D	9/18/2024	1	0.16	0.1	0.2	ug/l	40	200
Carbon tetrachloride	579	SWN-9105D	9/18/2024	1	0.7	0.1	0.2	ug/l	0.5	5
Chloroform	579	SWN-9105D	9/18/2024	1	0.34	0.1	0.2	ug/l	0.6	6

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

Form 4400-231(R 1/04)

Notice: Personally identifiable information collected will be used for program administration and enforcement purposes. The Department may also provide this information to requesters as required under Wisconsin's Open Records law, ss. 19.31 to 19.39, Wis. Stats.
When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30NR 635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- **Prepare one form for each license or monitoring ID.**
- **Please type or print legibly.**
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact - WA/5
  Bureau of Waste Management
  Wisconsin Department of Natural Resources
  101 South Webster Street
  Madison WI 53707-7921

Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):
SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Nitroglycerine Pond/Rocket Paste Area	03487	157005530	9/9 - 9/25/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen 11/19/24
Signature Date

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] **Found uploading problems on** _____ **Initials**
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EDD format(s): [ ] **Diskette** [ ] **CD (initial submittal and follow-up)** [ ] **E-mail (follow-up only)** [ ] **Other**

Case Narrative
Groundwater Monitoring
License Number 3487
Nitroglycerine Pond/Rocket Paste Area
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Seven (7) monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) in the Nitrocellulose Production Area Plume. One monitoring well, RIN-1003A, was sampled in the Central Plume to supplement the June 2024 sampling round. No DNT isomers were detected in RIN-1003A.

Total DNT exceeded the Enforcement Standard (ES) in RIM-0705 (442) and RIN-1001A (480).

2,4-DNT and 2,6-DNT exceeded the Preventive Action Limit (PAL) in RIM-0705 (442), RIM-1002 (478), RIN-1001A (480), and S1125 (504). Total DNT exceeded the PAL in RIM-1002 (478) and S1125 (504).

DNT analysis was performed by CT Laboratories using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024 Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
2,4-Dinitrotoluene	3487	442	RIM-0705	9/9/2024	1	0.035	ug/l	0.005	0.05
2,6-Dinitrotoluene	3487	442	RIM-0705	9/9/2024	1	0.039	ug/l	0.005	0.05
Total Dinitrotoluenes	3487	442	RIM-0705	9/9/2024	1	0.074	ug/l	0.005	0.05
2,4-Dinitrotoluene	3487	478	RIM-1002	9/25/2024	1	0.027	ug/l	0.005	0.05
2,6-Dinitrotoluene	3487	478	RIM-1002	9/25/2024	1	0.021	ug/l	0.005	0.05
Total Dinitrotoluenes	3487	478	RIM-1002	9/25/2024	1	0.048	ug/l	0.005	0.05
2,4-Dinitrotoluene	3487	480	RIN-1001A	9/9/2024	1	0.03	ug/l	0.005	0.05
2,6-Dinitrotoluene	3487	480	RIN-1001A	9/9/2024	1	0.039	ug/l	0.005	0.05
Total Dinitrotoluenes	3487	480	RIN-1001A	9/9/2024	1	0.069	ug/l	0.005	0.05
2,4-Dinitrotoluene	3487	504	S1125	9/9/2024	1	0.017	ug/l	0.005	0.05
2,6-Dinitrotoluene	3487	504	S1125	9/9/2024	1	0.016	ug/l	0.005	0.05
Total Dinitrotoluenes	3487	504	S1125	9/9/2024	1	0.033	ug/l	0.005	0.05

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 3487 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,4-Dinitrotoluene	442	RIM-0705	9/9/2024	1	0.035	0.0078	0.049	ug/l	0.005	0.05
2,6-Dinitrotoluene	442	RIM-0705	9/9/2024	1	0.039	0.0049	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	442	RIM-0705	9/9/2024	1	0.074	0.0078	0.049	ug/l	0.005	0.05
2,4-Dinitrotoluene	478	RIM-1002	9/25/2024	1	0.027	0.0078	0.049	ug/l	0.005	0.05
2,6-Dinitrotoluene	478	RIM-1002	9/25/2024	1	0.021	0.0049	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	478	RIM-1002	9/25/2024	1	0.048	0.0078	0.049	ug/l	0.005	0.05
2,4-Dinitrotoluene	480	RIN-1001A	9/9/2024	1	0.03	0.0078	0.049	ug/l	0.005	0.05
2,6-Dinitrotoluene	480	RIN-1001A	9/9/2024	1	0.039	0.0049	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	480	RIN-1001A	9/9/2024	1	0.069	0.0078	0.049	ug/l	0.005	0.05
2,4-Dinitrotoluene	504	S1125	9/9/2024	1	0.017	0.0089	0.056	ug/l	0.005	0.05
2,6-Dinitrotoluene	504	S1125	9/9/2024	1	0.016	0.0056	0.056	ug/l	0.005	0.05
Total Dinitrotoluenes	504	S1125	9/9/2024	1	0.033	0.0089	0.056	ug/l	0.005	0.05

State of Wisconsin
Department of Natural Resources

Environmental Monitoring Data Certification

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SpecPro Professional Services - Badger Army Ammunition Plant

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:
Name: Joel Janssen Phone: (608) 438-1110
E-mail: Joel.Janssen@SpecProSvcs.com

Facility name:	License # / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Settling Ponds	03499	157005530	9/12 - 9/19/24

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
September 2024

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
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- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Joel Janssen	Project Manager	(608) 438-1110
Facility Representative Name (Print)	Title	(Area Code) Telephone No.

Joel Janssen — 11/19/24
Signature — Date

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Case Narrative
Groundwater Monitoring
License Number 3499
Settling Ponds
September 2024
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Contamination from the Propellant Burning Ground (PBG) largely impacts groundwater quality in monitoring wells associated with this license. Eight (8) monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) and volatile organic compounds (VOCs) in the PBG Plume.

Total DNT exceeded the Enforcement Standard (ES) in SPN-8904B (720) and SPN-8904C (721). 2,6-DNT exceeded the Preventive Action Limit (PAL) in SPN-8904B (720) and SPN-8904C (721).

Carbon tetrachloride exceeded the PAL in SPN-8903B (718), SPN-8904B (720), and SPN-8904C (721).

Ethyl ether exceeded the PAL in SPN-9104D (726).

Trichloroethene exceeded the PAL in SPN-8904C (721).

VOC analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C.

DNT analysis was also performed by CT Lab using method SW 8270DSIM. The following DNT isomers were reported: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT, and 3,5-DNT.

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

GROUNDWATER MONITORING EXCEEDANCE REPORT

September 2024 Report Date: 11/18/2024

Parameter Name	Lic No.	Well No.	Well Name	Date	Dup	Result	Units	PAL	ES
Carbon tetrachloride	3499	718	SPN-8903B	9/19/2024	1	0.65	ug/l	0.5	5
2,6-Dinitrotoluene	3499	720	SPN-8904B	9/12/2024	1	0.016	ug/l	0.005	0.05
Carbon tetrachloride	3499	720	SPN-8904B	9/12/2024	1	1.5	ug/l	0.5	5
Total Dinitrotoluenes	3499	720	SPN-8904B	9/12/2024	1	0.087	ug/l	0.005	0.05
2,6-Dinitrotoluene	3499	721	SPN-8904C	9/12/2024	1	0.02	ug/l	0.005	0.05
Carbon tetrachloride	3499	721	SPN-8904C	9/12/2024	1	2	ug/l	0.5	5
Total Dinitrotoluenes	3499	721	SPN-8904C	9/12/2024	1	0.114	ug/l	0.005	0.05
Trichloroethene	3499	721	SPN-8904C	9/12/2024	1	0.87	ug/l	0.5	5
Ethyl ether	3499	726	SPN-9104D	9/12/2024	1	280	ug/l	100	1000

Badger Army Ammunition Plant

SpecPro Professional Services, LLC

September 2024 GROUNDWATER MONITORING ALL HITS REPORT

License No: 3499 Report Date: 11/18/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
Carbon tetrachloride	718	SPN-8903B	9/19/2024	1	0.65	0.1	0.2	ug/l	0.5	5
Carbon tetrachloride	719	SPN-8903C	9/19/2024	1	0.49	0.1	0.2	ug/l	0.5	5
Chloroform	719	SPN-8903C	9/19/2024	1	0.34	0.1	0.2	ug/l	0.6	6
1,1,1-Trichloroethane	720	SPN-8904B	9/12/2024	1	0.12	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	720	SPN-8904B	9/12/2024	1	0.043	0.0059	0.05	ug/l		
2,6-Dinitrotoluene	720	SPN-8904B	9/12/2024	1	0.016	0.005	0.05	ug/l	0.005	0.05
3,4-Dinitrotoluene	720	SPN-8904B	9/12/2024	1	0.028	0.005	0.05	ug/l		
Carbon tetrachloride	720	SPN-8904B	9/12/2024	1	1.5	0.1	0.2	ug/l	0.5	5
Chloroform	720	SPN-8904B	9/12/2024	1	0.19	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	720	SPN-8904B	9/12/2024	1	0.087	0.0079	0.05	ug/l	0.005	0.05
Trichloroethene	720	SPN-8904B	9/12/2024	1	0.47	0.1	0.2	ug/l	0.5	5
1,1,1-Trichloroethane	721	SPN-8904C	9/12/2024	1	0.17	0.1	0.2	ug/l	40	200
2,3-Dinitrotoluene	721	SPN-8904C	9/12/2024	1	0.059	0.0062	0.052	ug/l		
2,6-Dinitrotoluene	721	SPN-8904C	9/12/2024	1	0.02	0.0052	0.052	ug/l	0.005	0.05
3,4-Dinitrotoluene	721	SPN-8904C	9/12/2024	1	0.035	0.0052	0.052	ug/l		
Carbon tetrachloride	721	SPN-8904C	9/12/2024	1	2	0.1	0.2	ug/l	0.5	5
Chloroform	721	SPN-8904C	9/12/2024	1	0.3	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	721	SPN-8904C	9/12/2024	1	0.114	0.0082	0.052	ug/l	0.005	0.05
Trichloroethene	721	SPN-8904C	9/12/2024	1	0.87	0.1	0.2	ug/l	0.5	5
Ethyl ether	726	SPN-9104D	9/12/2024	1	280	5	10	ug/l	100	1000