

**November 2023**

**Monitoring Well and Residential Well Groundwater Data**

**Badger Army Ammunition Plant**

**Central Plume**

**Deterrent Burning Ground Plume**

**List of Attachments**

Figure 1 November 2023 Sampled Wells

Figure 2 Total DNT November 2023 Central Plume

Figure 3 Total DNT November 2023 DBG Plume

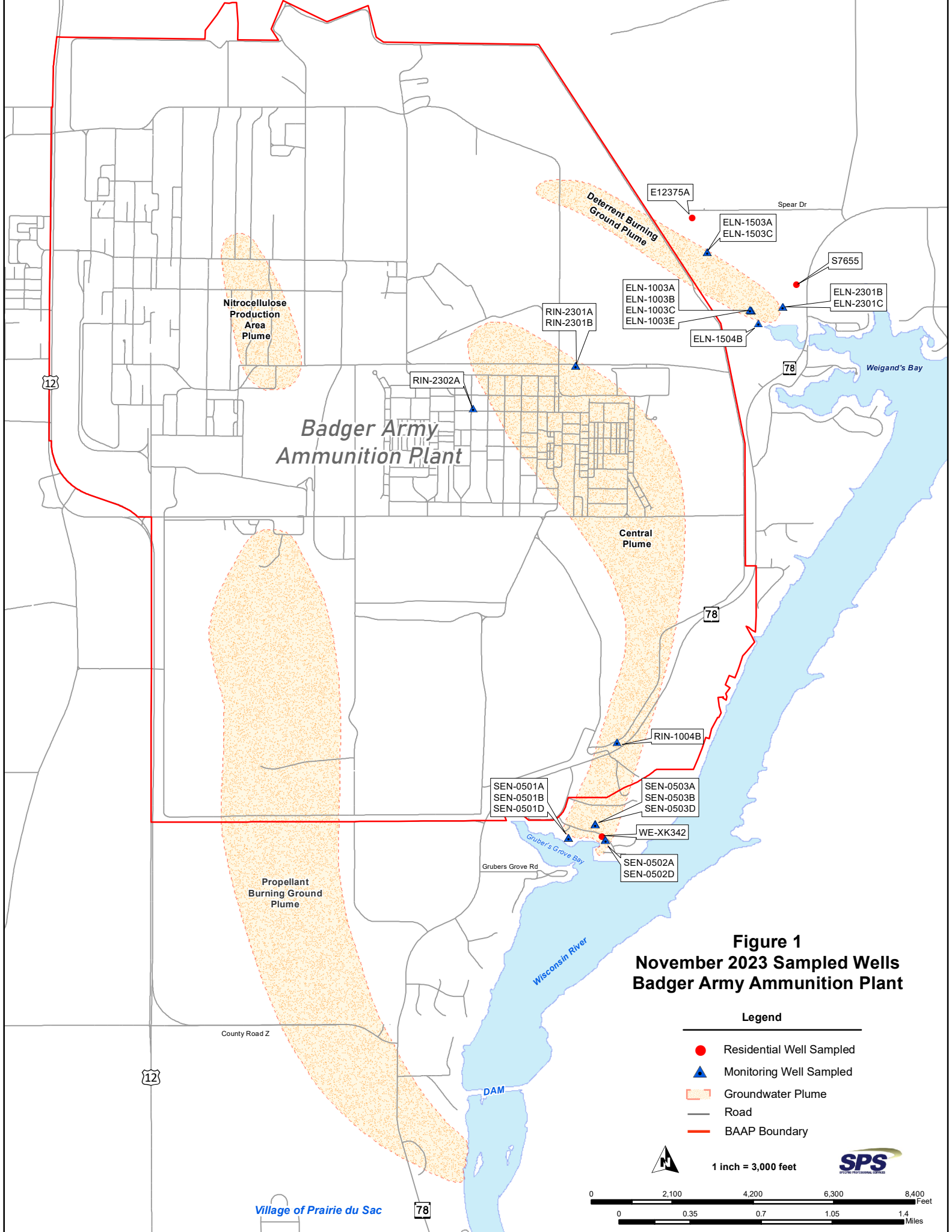
Table 1 DNT Summary Table DBG Plume

November 2023 Sampled Wells List

Residential Groundwater Results Summary - November 2023

Environmental Monitoring Data Certification Forms per License Area

Groundwater Monitoring Exceedance & Hits Reports per License Area



**Figure 1**  
**November 2023 Sampled Wells**  
**Badger Army Ammunition Plant**

- Legend**
- Residential Well Sampled
  - ▲ Monitoring Well Sampled
  - Groundwater Plume
  - Road
  - BAAP Boundary

1 inch = 3,000 feet

0 2,100 4,200 6,300 8,400

Feet

0 0.35 0.7 1.05 1.4

Miles

**SPS**  
PROFESSIONAL SERVICE

**Legend**

● Sampled Well (Total DNT Detection)

● Sampled Well (No Detection)

➔ Groundwater Flow Direction

▭ Central Plume

▭ Wisconsin River

▬ Badger Army Ammunition Plant Boundary

DNT - Dinitrotoluene

ND - Compound was not detected

All results are expressed in micrograms per liter (µg/l)

Dashed plume boundary is interpreted

0 775 1,550 2,325 3,100 Feet

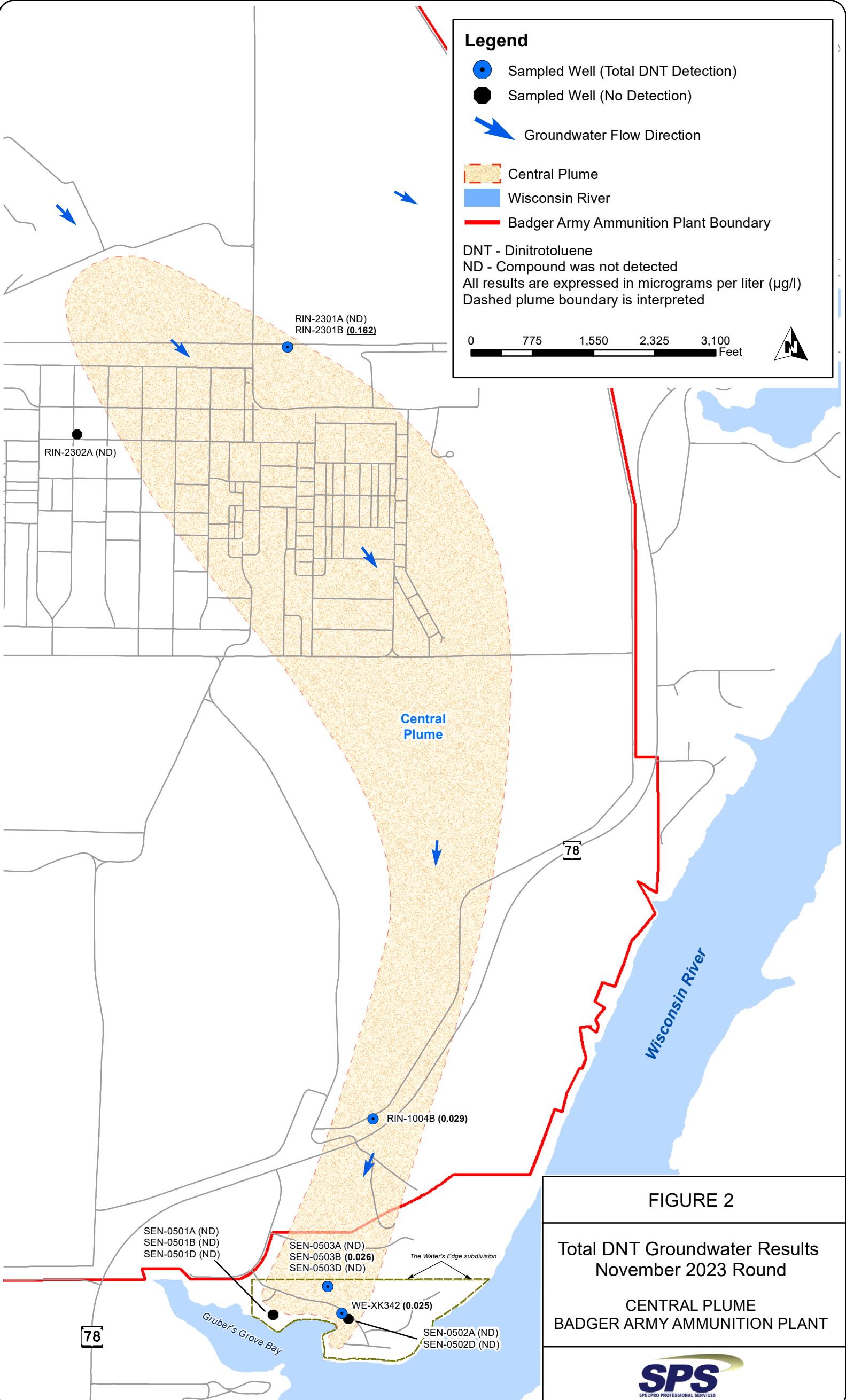
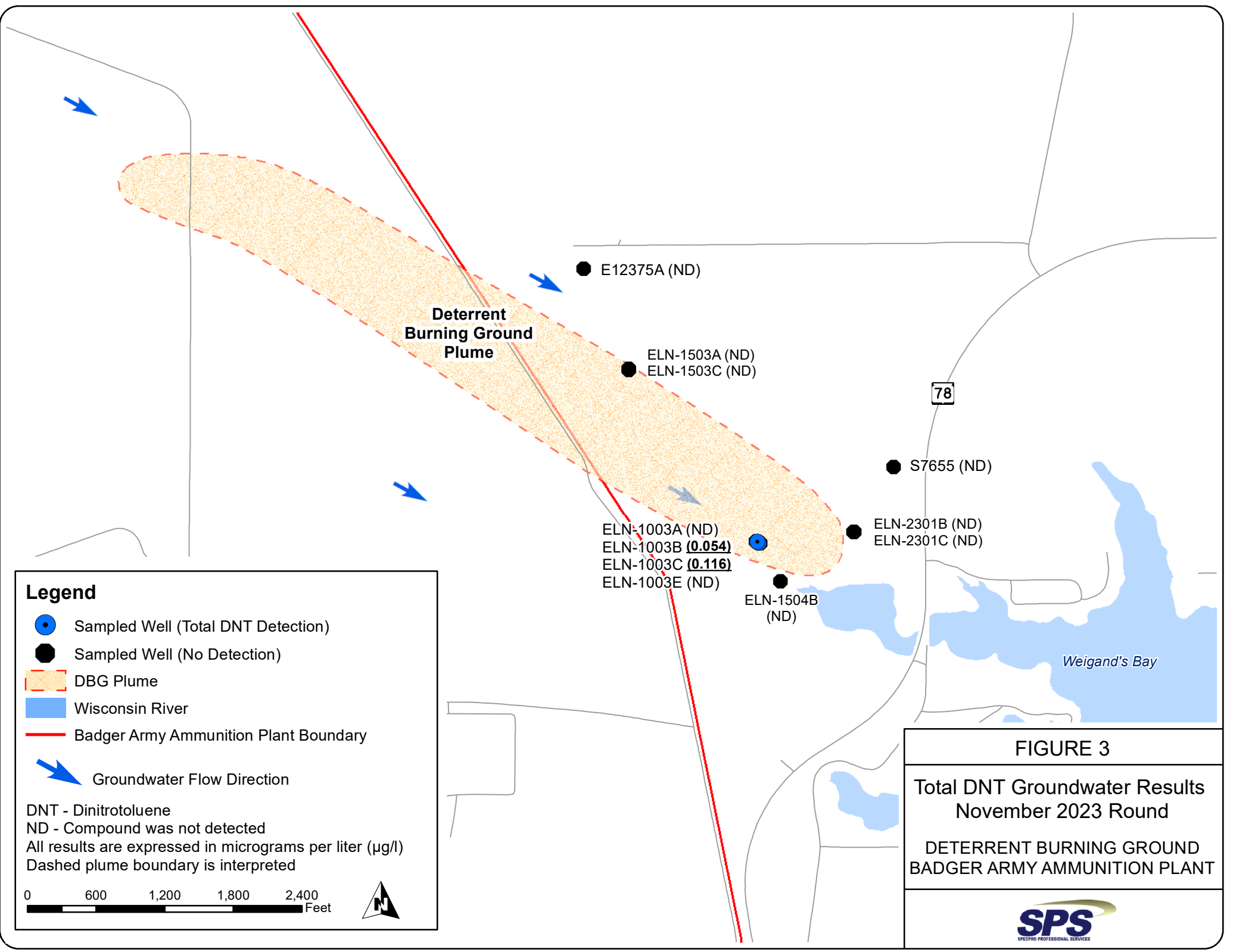


FIGURE 2

Total DNT Groundwater Results  
November 2023 Round

CENTRAL PLUME  
BADGER ARMY AMMUNITION PLANT





**Legend**

- Sampled Well (Total DNT Detection)
- Sampled 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      600      1,200      1,800      2,400  
 ─────────── Feet

**FIGURE 3**

**Total DNT Groundwater Results  
 November 2023 Round**

**DETERRENT BURNING GROUND  
 BADGER ARMY AMMUNITION PLANT**



**Table 1**  
**2016 - 2023 Summary**  
**Dinitrotoluene Groundwater Results**  
**Deterrent Burning Ground**  
**Badger Army Ammunition Plant**

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

**Table 1**  
**2016 - 2023 Summary**  
**Dinitrotoluene Groundwater Results**  
**Deterrent Burning Ground**  
**Badger Army Ammunition Plant**

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

**Table 1**  
**2016 - 2023 Summary**  
**Dinitrotoluene Groundwater Results**  
**Deterrent Burning Ground**  
**Badger Army Ammunition Plant**

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

**Table 1**  
**2016 - 2023 Summary**  
**Dinitrotoluene Groundwater Results**  
**Deterrent Burning Ground**  
**Badger Army Ammunition Plant**

Plume	Well Name	Well ID	License	Sample Level	Date	Dinitrotoluenes						Dinitrotoluene, Total
						2,3-Dinitrotoluene	2,4-Dinitrotoluene	2,5-Dinitrotoluene	2,6-Dinitrotoluene	3,4-Dinitrotoluene	3,5-Dinitrotoluene	
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	<b><u>0.085 (J)</u></b>
					4/28/22	0.043 (J)	<0.008	<0.005	<0.005	0.07	<0.005	<b><u>0.113</u></b>
					4/28/22 (D)	0.04 (J)	<0.008	<0.005	<0.005	0.067	<0.005	<b><u>0.107</u></b>
					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	<b><u>0.037 (J)</u></b>
					9/22/22	0.018 (J)	<0.008	<0.005	<0.005	0.02 (J)	<0.005	<b><u>0.038 (J)</u></b>
					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	<b><u>0.105</u></b>
					4/27/23 (D)	0.04 (J)	<0.008	<0.005	<0.005	0.06	<0.005	<b><u>0.1</u></b>
					6/27/23	<0.006	<0.008	<0.005	<0.005	0.034 (J)	<0.005	<b><u>0.034 (J)</u></b>
					9/13/23	<0.0058	<0.0077	<0.0048	<0.0048	0.012 (J)	<0.0048	<b><u>0.012 (J)</u></b>
					11/14/23	<0.0061	<0.0081	<0.0051	<0.0051	<0.0051	<0.0051	<0.0081
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)



November 2023  
Badger Army Ammunition Plant  
Sampled Wells List

<u>License Area</u>	<u>Well ID</u>	<u>Reporting Name</u>	<u>Date</u>	<u>Plume</u>
2813	467	ELN-1003A	11/14/23	Deterrent Burning Ground
2813	468	ELN-1003B	11/14/23	Deterrent Burning Ground
2813	469	ELN-1003C	11/14/23	Deterrent Burning Ground
2813	470	ELN-1003E	11/14/23	Deterrent Burning Ground
2813	535	ELN-1503A	11/14/23	Deterrent Burning Ground
2813	536	ELN-1503C	11/14/23	Deterrent Burning Ground
2813	537	ELN-1504B	11/14/23	Deterrent Burning Ground
2813	547	ELN-2301B	11/14/23	Deterrent Burning Ground
2813	548	ELN-2301C	11/14/23	Deterrent Burning Ground
3487	498	RIN-1004B	11/13/23	Central
3487	549	RIN-2301A	11/13/23	Central
3487	550	RIN-2301B	11/13/23	Central
3487	551	RIN-2302A	11/13/23	Central
3497	435	WE-XK342	11/13/23	Central
3497	803	E12375A	11/14/23	Deterrent Burning Ground
3497	916	S7655	11/14/23	Deterrent Burning Ground
4330	580	SEN-0501A	11/13/23	Central
4330	581	SEN-0501B	11/13/23	Central
4330	582	SEN-0501D	11/13/23	Central
4330	583	SEN-0502A	11/13/23	Central
4330	584	SEN-0502D	11/13/23	Central
4330	585	SEN-0503A	11/13/23	Central
4330	586	SEN-0503B	11/13/23	Central
4330	587	SEN-0503D	11/13/23	Central

## Residential Groundwater Results Summary - November 2023 Sampling Event

					All results are expressed as µg/l (micrograms per liter)						
Well No.	Well Name or Address	Shared With	Analyzed By	Sample Date	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2,3-Dinitrotoluene	3,4-Dinitrotoluene	2,5-Dinitrotoluene	3,5-Dinitrotoluene	Dinitrotoluene, Total
435	WE-XK342	S8741, S8737	CT Lab	11/13/2023	ND	0.025	ND	ND	ND	ND	0.025
803	E12375A		CT Lab	11/14/2023	ND	ND	ND	ND	ND	ND	ND
916	S7655		CT Lab	11/14/2023	ND	ND	ND	ND	ND	ND	ND

Nov '23 Round	Level of Detection	Level of Quantitation
2,3-DNT	0.0058	0.048
2,4-DNT	0.0077	0.048
2,5-DNT	0.0048	0.048
2,6-DNT	0.0048	0.048
3,4-DNT	0.0048	0.048
3,5-DNT	0.0077	0.048

\*Level of detection and level of quantitation may change each round.

- = Under PAL and ES
- = Over Preventive Action Limit (PAL)
- = Over Enforcement Standard (ES)
- = No PAL or ES established
- = Not Tested
- ND = Compound was not detected

(D) = Duplicate

CT Lab = CT Laboratories, LLC

2,4-DNT, 2,6-DNT & Total DNT - NR 140 PAL = 0.005 µg/l

2,4-DNT, 2,6-DNT & Total DNT - NR 140 ES = 0.05 µg/l

**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@SpecProSvc.com

Facility name:	License # / Monitoring ID	Facility ID [ FID ]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Landfill #5	02813	157005530	11/14/23

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

November 2023

Type of Data Submitted (Check all that apply)

- |                                                                                       |                                                |
|---------------------------------------------------------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> Groundwater monitoring data from monitoring wells | <input type="checkbox"/> Gas monitoring data   |
| <input type="checkbox"/> Groundwater monitoring data from private water supply wells  | <input type="checkbox"/> Air monitoring data   |
| <input type="checkbox"/> Leachate monitoring data                                     | <input type="checkbox"/> Other (specify) _____ |

Notification attached?

- 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.

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  
November 2023  
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Nine 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 ELN-1003B (468) and ELN-1003C (469).

Volatile organic compounds (VOCs) analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C.

DNT analysis was also performed by CT Lab using method SW 8270D SIM. 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

November 2023

Report Date: 1/2/2024

<b>Parameter Name</b>	<b>Lic No.</b>	<b>Well No.</b>	<b>Well Name</b>	<b>Date</b>	<b>Dup</b>	<b>Result</b>	<b>Units</b>	<b>PAL</b>	<b>ES</b>
Total Dinitrotoluenes	2813	468	ELN-1003B	11/14/2023	1	0.054	ug/l	0.005	0.05
Total Dinitrotoluenes	2813	469	ELN-1003C	11/14/2023	1	0.116	ug/l	0.005	0.05

# Badger Army Ammunition Plant

SpecPro Professional Services, LLC

November 2023

GROUNDWATER MONITORING ALL HITS REPORT

License No: 2813

Report Date: 1/2/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
3,4-Dinitrotoluene	468	ELN-1003B	11/14/2023	1	0.054	0.0048	0.048	ug/l		
Total Dinitrotoluenes	468	ELN-1003B	11/14/2023	1	0.054	0.0077	0.048	ug/l	0.005	0.05
2,3-Dinitrotoluene	469	ELN-1003C	11/14/2023	1	0.036	0.0058	0.049	ug/l		
3,4-Dinitrotoluene	469	ELN-1003C	11/14/2023	1	0.08	0.0049	0.049	ug/l		
Total Dinitrotoluenes	469	ELN-1003C	11/14/2023	1	0.116	0.0078	0.049	ug/l	0.005	0.05

**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	11/13/23

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

November 2023

Type of Data Submitted (Check all that apply)

- |                                                                                       |                                                |
|---------------------------------------------------------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> Groundwater monitoring data from monitoring wells | <input type="checkbox"/> Gas monitoring data   |
| <input type="checkbox"/> Groundwater monitoring data from private water supply wells  | <input type="checkbox"/> Air monitoring data   |
| <input type="checkbox"/> Leachate monitoring data                                     | <input type="checkbox"/> Other (specify) _____ |

Notification attached?

- 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.

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 3487  
Nitroglycerine Pond/Rocket Paste Area  
November 2023  
Badger Army Ammunition Plant

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

Total DNT exceeded the Enforcement Standard (ES) in RIN-2301B (550). This is the first time RIN-2301B has been sampled.

2,6-DNT and total DNT exceeded the Preventive Action Limit (PAL) in RIN-1004B (498).

Volatile organic compounds (VOCs) analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C.

DNT analysis was also performed by CT Lab using method SW 8270D SIM. 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

November 2023

Report Date: 1/2/2024

<b>Parameter Name</b>	<b>Lic No.</b>	<b>Well No.</b>	<b>Well Name</b>	<b>Date</b>	<b>Dup</b>	<b>Result</b>	<b>Units</b>	<b>PAL</b>	<b>ES</b>
2,6-Dinitrotoluene	3487	498	RIN-1004B	11/13/2023	1	0.029	ug/l	0.005	0.05
Total Dinitrotoluenes	3487	498	RIN-1004B	11/13/2023	1	0.029	ug/l	0.005	0.05
Total Dinitrotoluenes	3487	550	RIN-2301B	11/13/2023	1	0.162	ug/l	0.005	0.05

# Badger Army Ammunition Plant

SpecPro Professional Services, LLC

November 2023

GROUNDWATER MONITORING ALL HITS REPORT

License No: 3487

Report Date: 1/2/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
2,6-Dinitrotoluene	498	RIN-1004B	11/13/2023	1	0.029	0.0049	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	498	RIN-1004B	11/13/2023	1	0.029	0.0078	0.049	ug/l	0.005	0.05
2,3-Dinitrotoluene	550	RIN-2301B	11/13/2023	1	0.062	0.0058	0.049	ug/l		
3,4-Dinitrotoluene	550	RIN-2301B	11/13/2023	1	0.1	0.0049	0.049	ug/l		
Total Dinitrotoluenes	550	RIN-2301B	11/13/2023	1	0.162	0.0078	0.049	ug/l	0.005	0.05

**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 - Off-Site Residential Wells	03497	157005530	11/13 & 11/14/23

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

November 2023

Type of Data Submitted (Check all that apply)

- |                                                                                                 |                                                |
|-------------------------------------------------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Groundwater monitoring data from monitoring wells                      | <input type="checkbox"/> Gas monitoring data   |
| <input checked="" type="checkbox"/> Groundwater monitoring data from private water supply wells | <input type="checkbox"/> Air monitoring data   |
| <input type="checkbox"/> Leachate monitoring data                                               | <input type="checkbox"/> Other (specify) _____ |

Notification attached?

- 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.

Signature Joel Janssen Date 1/2/24

**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 3497  
Off-Site Residential Wells  
November 2023  
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. One residential well located in the Central Plume and two residential wells located east of the Deterrent Burning Ground Plume were sampled during this round.

2,6-Dinitrotoluene (DNT) and total DNT exceeded the Preventive Action Limit (PAL) in WE-XK342 (435). WE-XK342 is located in the Water's Edge Subdivision at the southern end of the Central Plume.

DNT analysis was also performed by CT Lab using method SW 8270D SIM. 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

November 2023

Report Date: 1/2/2024

<b>Parameter Name</b>	<b>Lic No.</b>	<b>Well No.</b>	<b>Well Name</b>	<b>Date</b>	<b>Dup</b>	<b>Result</b>	<b>Units</b>	<b>PAL</b>	<b>ES</b>
2,6-Dinitrotoluene	3497	435	WE-XK342	11/13/2023	1	0.025	ug/l	0.005	0.05
Total Dinitrotoluenes	3497	435	WE-XK342	11/13/2023	1	0.025	ug/l	0.005	0.05

# Badger Army Ammunition Plant

SpecPro Professional Services, LLC

November 2023

GROUNDWATER MONITORING ALL HITS REPORT

License No: 3497

Report Date: 1/2/2024

<b>Parameter Name</b>	<b>Well</b>	<b>Well Name</b>	<b>Date</b>	<b>Dup</b>	<b>Result</b>	<b>LOD</b>	<b>LOQ</b>	<b>Units</b>	<b>PAL</b>	<b>ES</b>
2,6-Dinitrotoluene	435	WE-XK342	11/13/2023	1	0.025	0.0049	0.049	ug/l	0.005	0.05
Total Dinitrotoluenes	435	WE-XK342	11/13/2023	1	0.025	0.0078	0.049	ug/l	0.005	0.05

**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@SpecProSvc.com

Facility name:	License # / Monitoring ID	Facility ID [ FID ]	Actual sampling dates (e.g., July 2-6, 2003)
BAAP - Southeast Area	04330	157005530	11/13 & 11/14/23

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

November 2023

Type of Data Submitted (Check all that apply)

- |                                                                                       |                                                |
|---------------------------------------------------------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> Groundwater monitoring data from monitoring wells | <input type="checkbox"/> Gas monitoring data   |
| <input type="checkbox"/> Groundwater monitoring data from private water supply wells  | <input type="checkbox"/> Air monitoring data   |
| <input type="checkbox"/> Leachate monitoring data                                     | <input type="checkbox"/> Other (specify) _____ |

Notification attached?

- 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.

Signature Joel Janssen Date 1/2/24

**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 4330  
Southeast Area  
November 2023  
Badger Army Ammunition Plant

Groundwater is currently being monitored by the facility because of past production activities. Eight monitoring wells were sampled to assist with determining the degree and lateral extent of dinitrotoluene (DNT) in the Central Plume. All eight monitoring wells are located in the Water's Edge Subdivision on Gruber's Grove Bay.

2,6-DNT and total DNT exceeded the Preventive Action Limit (PAL) in SEN-0503B (586).

Chloroform exceeded the PAL in SEN-0502D (584) and SEN-0503D (587).

Volatile organic compounds (VOCs) analysis was performed by CT Laboratories (CT Lab) using method EPA 8260C.

DNT analysis was also performed by CT Lab using method SW 8270D SIM. 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

November 2023

Report Date: 1/2/2024

<b>Parameter Name</b>	<b>Lic No.</b>	<b>Well No.</b>	<b>Well Name</b>	<b>Date</b>	<b>Dup</b>	<b>Result</b>	<b>Units</b>	<b>PAL</b>	<b>ES</b>
Chloroform	4330	584	SEN-0502D	11/13/2023	1	1.1	ug/l	0.6	6
2,6-Dinitrotoluene	4330	586	SEN-0503B	11/13/2023	1	0.026	ug/l	0.005	0.05
Total Dinitrotoluenes	4330	586	SEN-0503B	11/13/2023	1	0.026	ug/l	0.005	0.05
Chloroform	4330	587	SEN-0503D	11/13/2023	1	1.1	ug/l	0.6	6

# Badger Army Ammunition Plant

SpecPro Professional Services, LLC

November 2023

GROUNDWATER MONITORING ALL HITS REPORT

License No: 4330

Report Date: 1/2/2024

Parameter Name	Well	Well Name	Date	Dup	Result	LOD	LOQ	Units	PAL	ES
Chloroform	582	SEN-0501D	11/13/2023	1	0.45	0.1	0.2	ug/l	0.6	6
Chloroform	584	SEN-0502D	11/13/2023	1	1.1	0.1	0.2	ug/l	0.6	6
2,6-Dinitrotoluene	586	SEN-0503B	11/13/2023	1	0.026	0.005	0.05	ug/l	0.005	0.05
Chloroform	586	SEN-0503B	11/13/2023	1	0.15	0.1	0.2	ug/l	0.6	6
Total Dinitrotoluenes	586	SEN-0503B	11/13/2023	1	0.026	0.008	0.05	ug/l	0.005	0.05
Chloroform	587	SEN-0503D	11/13/2023	1	1.1	0.1	0.2	ug/l	0.6	6