

Badger Army Ammunition Plant Groundwater Monitoring Status

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November 30, 2017



Groundwater Summary - 2017

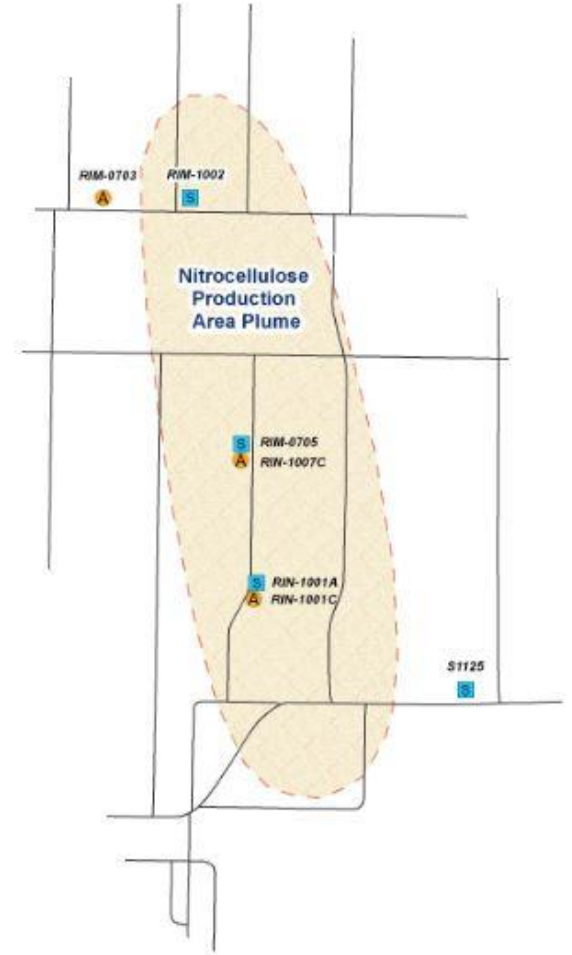
- Residential Wells – 52 wells sampled August 2017
 - *No ES exceedances (stable)*
- Nitrocellulose Production Area (NC) Plume
 - *DNT concentrations decreasing*
- Central Plume
 - *DNT concentrations decreasing < ES*
 - *Benzene detected > ES in SEN-0503B (June 2017)*
– *Water's Edge Subdivision*
 - *Benzene not detected during August 2017*



Groundwater Plumes



Central Plume



NC Plume

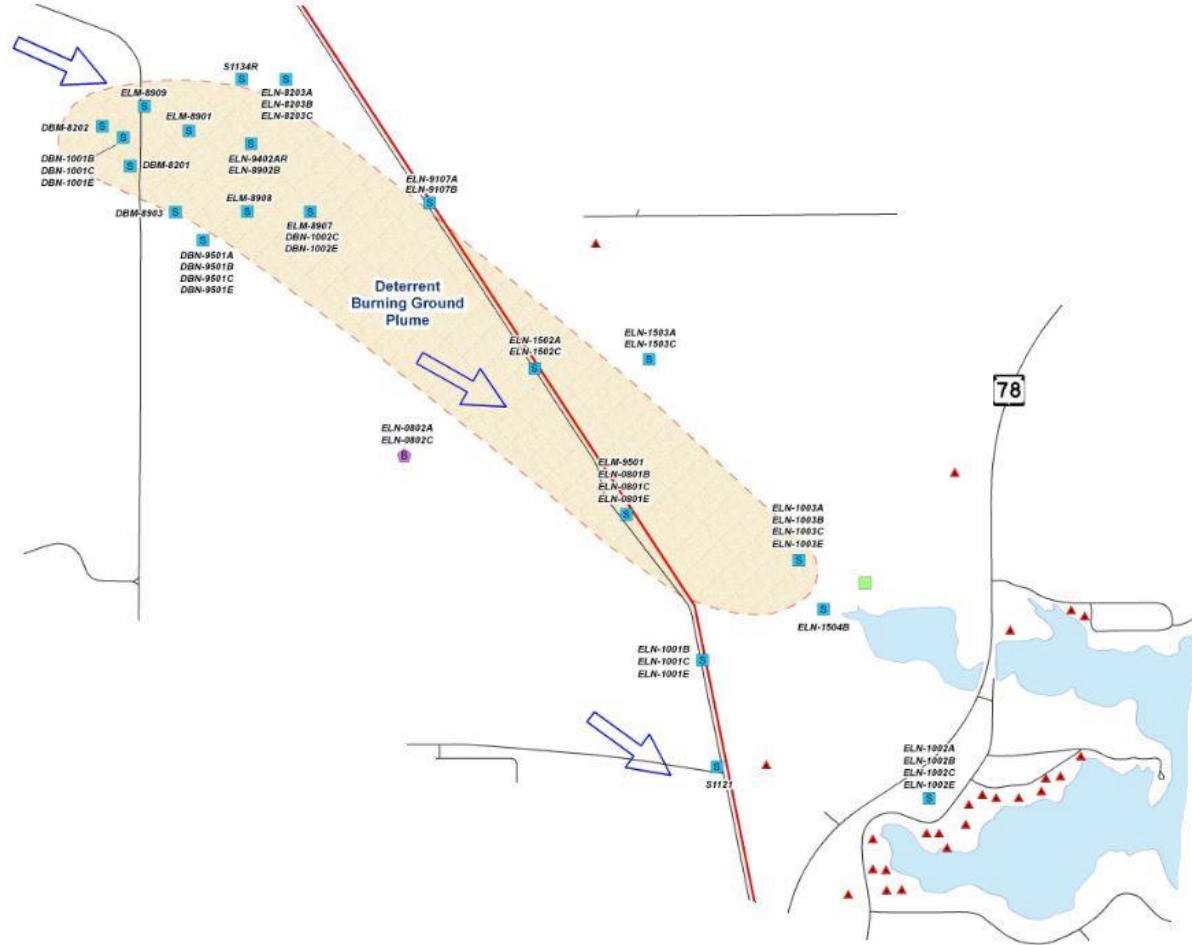
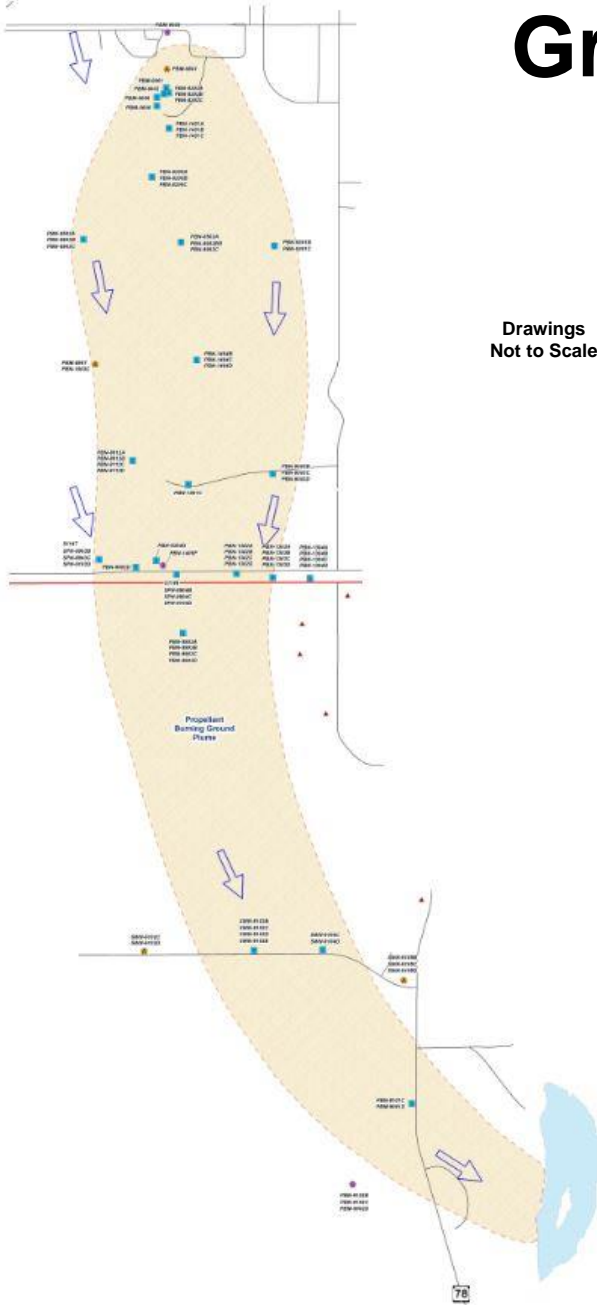
Groundwater Summary - 2017

- Deterrent Burning Ground Plume
 - *DNT concentrations decreasing overall*
 - *DNT concentrations in ELN-1502A increasing since 2015*
 - *ELN-1502A located at BAAP boundary*
- Propellant Burning Ground Plume
 - *DNT & VOC concentrations stable/decreasing*
 - *Operated groundwater pump and treat system*



Groundwater Plumes

Drawings
Not to Scale



Propellant Burning Ground Plume

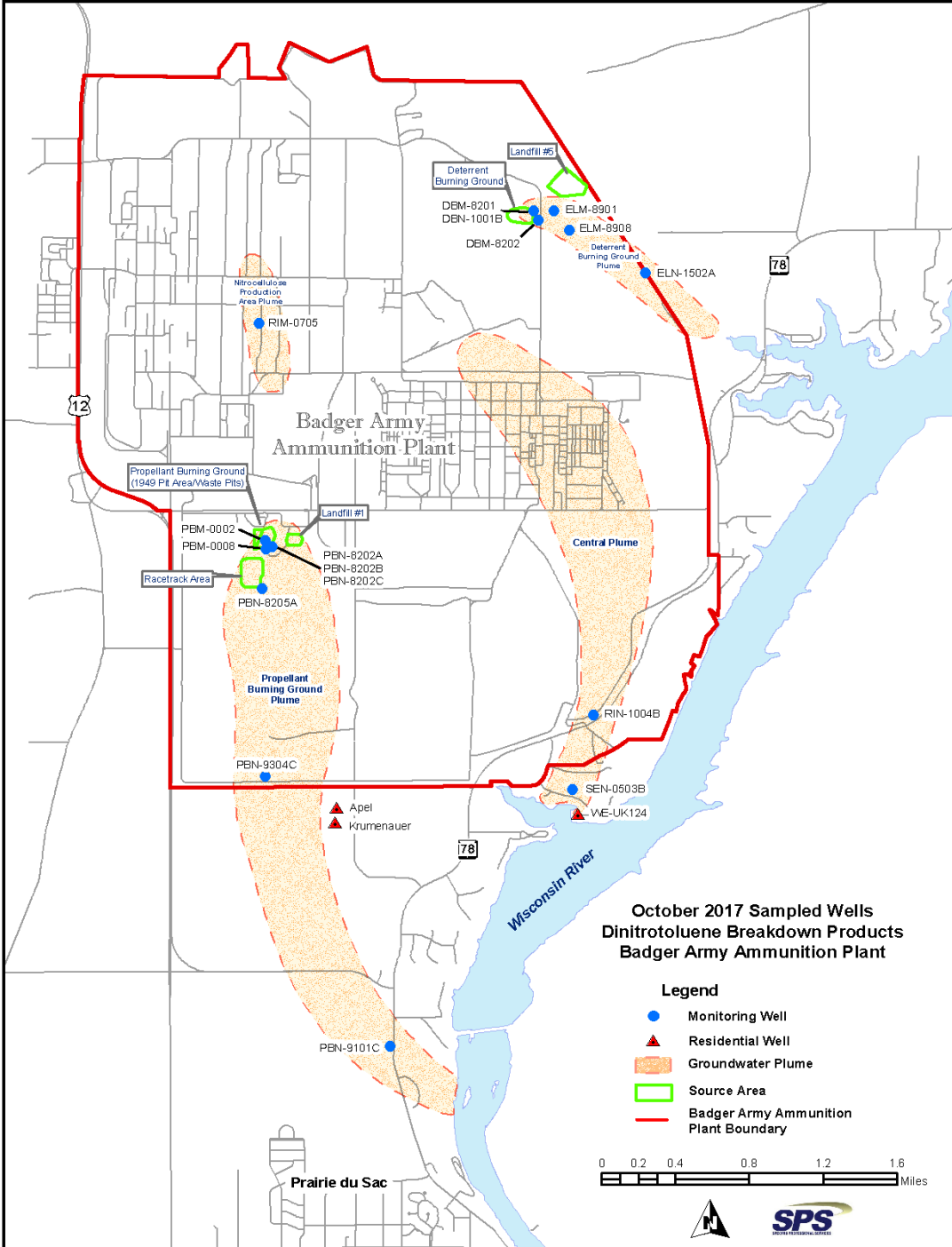
Deterrent Burning Ground Plume

Questions ?

Dinitrotoluene Breakdown Products Sampling

- 17 Monitoring Wells
- 3 Residential Wells
- 5 DNT breakdown products sampled-Oct 2017
- Sampling requested by DNR
- Wisconsin Dept. Health issued interim drinking water HAL

Compound	Health Advisory Level
2-Nitroaniline	100 µg/l
3- and 4-Nitroaniline (combined)	2 µg/l
2,4-Diaminotoluene	0.01 µg/l
2,6-Diaminotoluene	300 µg/l



Dinitrotoluene Breakdown Products Sampling

- Laboratory developed testing method
- 2-Nitroaniline found in 7 monitoring wells
- No detections in residential wells
- No results above a drinking water standard

Compound	Detection Limit
2-Nitroaniline	0.12 µg/l
3-Nitroaniline	0.10 µg/l
4-Nitroaniline	0.11 µg/l
2,4 & 2,6-Diaminotoluene (combined)	1.1 µg/l

Questions ?