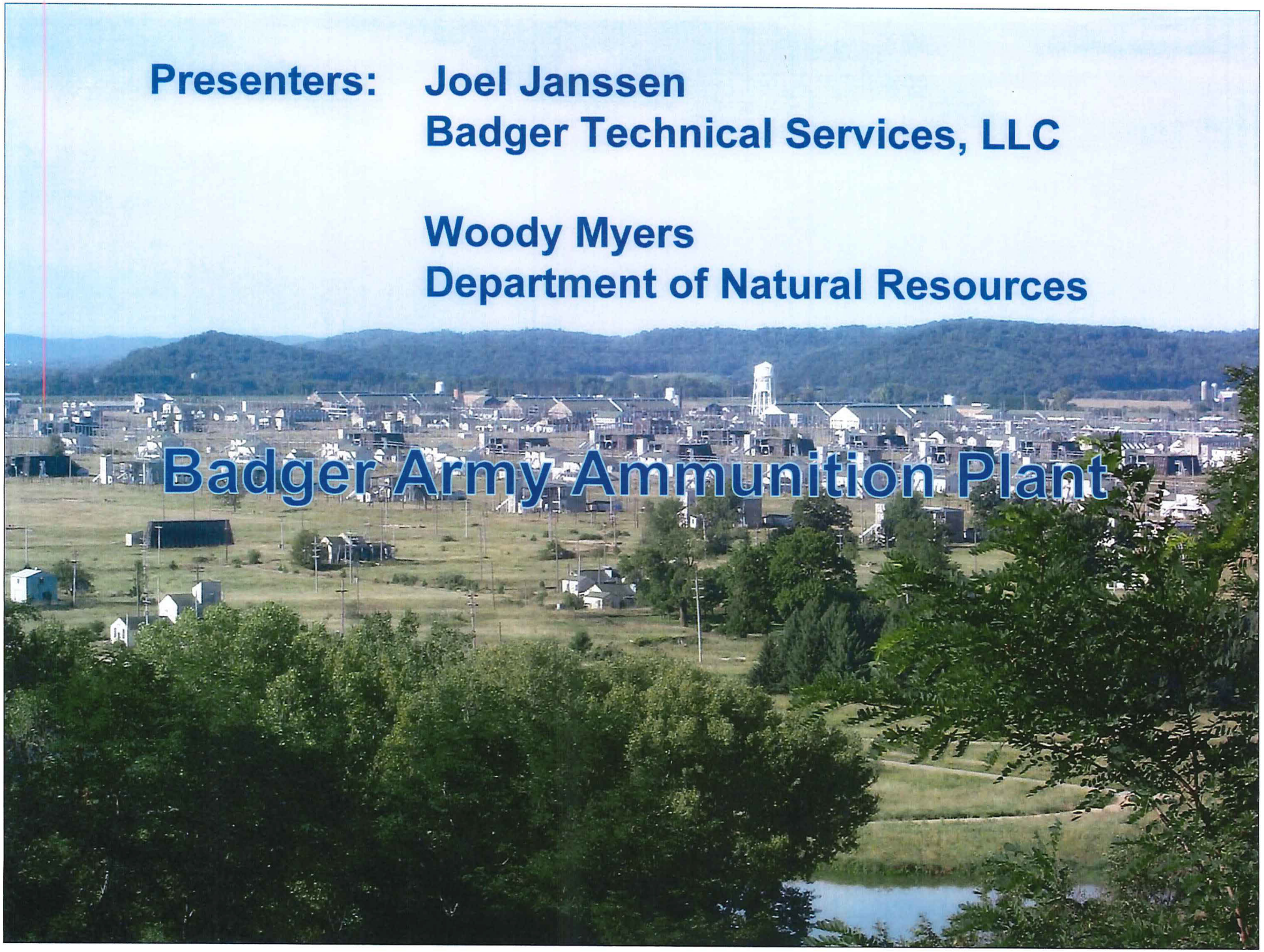

Presenters: Joel Janssen
Badger Technical Services, LLC
Woody Myers
Department of Natural Resources
Badger Army Ammunition Plant

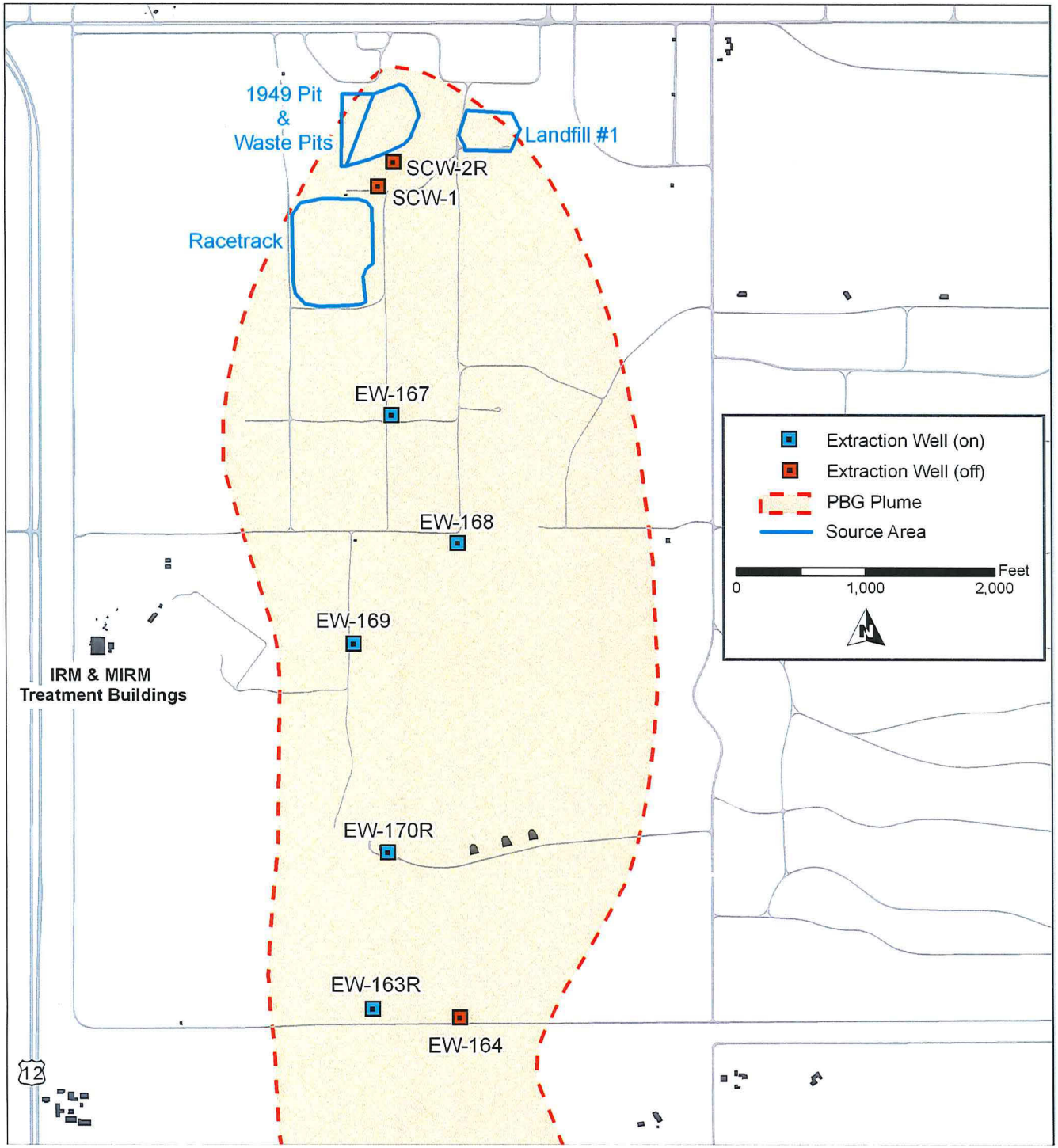
Interim Remedial Measures (IRM) Groundwater Treatment System

- Groundwater monitoring of the PBG source area has shown that no significant changes to groundwater contamination have been identified since the IRM was shut down in December 2012.

- DNR approval to dismantle IRM
  - Required by Condition 4 of the 2012 Groundwater Alternative Feasibility Study approval

Modified Interim Remedial Measures (MIRM) Groundwater Treatment System

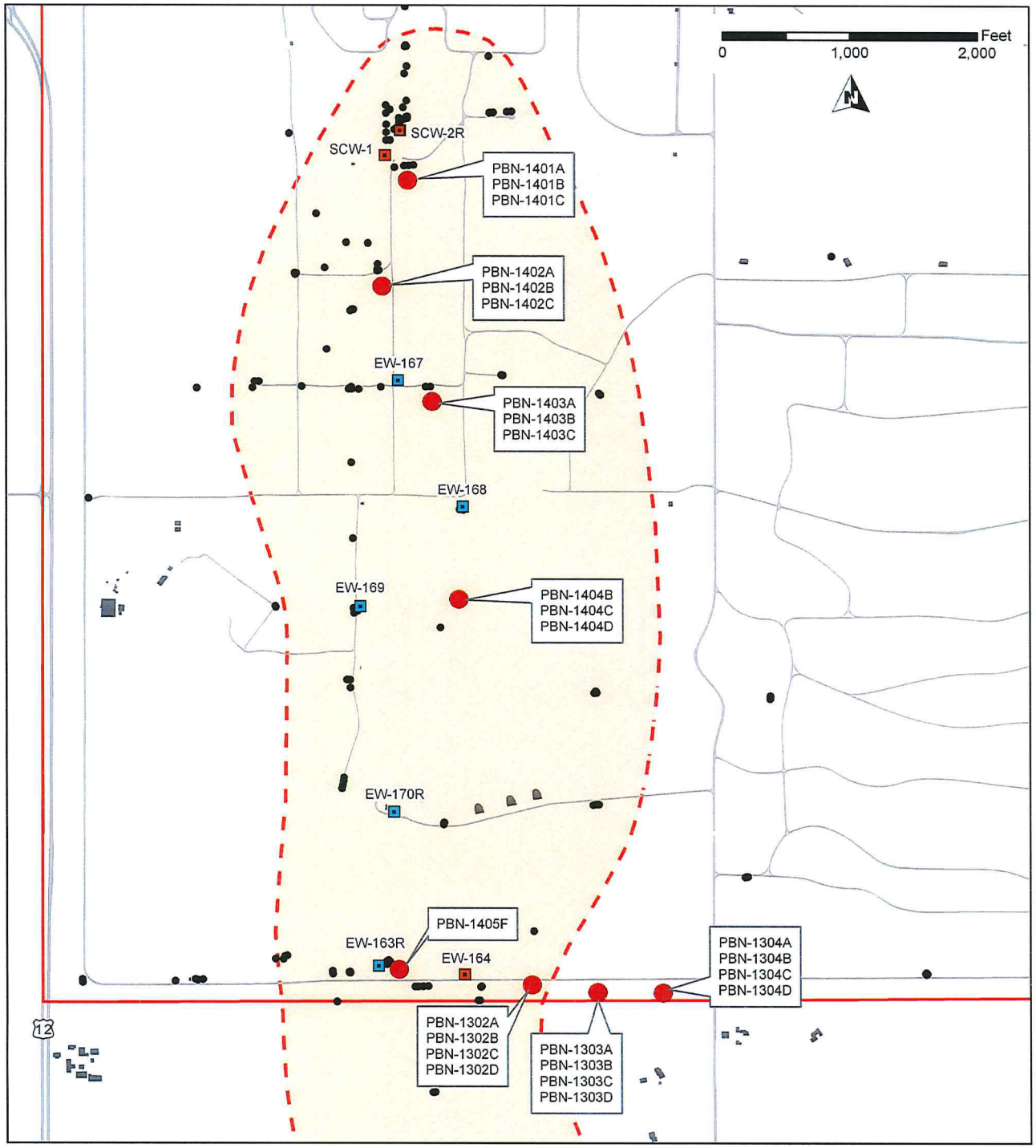
- DNR approved Army's plan to shut down the MIRM
- MIRM groundwater treatment system will be sequentially shut down over next 2 years.
  - *Phase I - turn off pumping wells EW-167, EW-168 and EW-169*
  - *Monitor water levels & contaminants*
  - *Criteria – no significant contaminant plume expansion or contaminant increase*
  - *DNR approval required to proceed to Phase II*
  - *Phase II - turn off pumping wells EW-163R and EW-170R*
- Groundwater monitoring will continue



Extraction Wells

Monitoring Well Installation

- 12 wells were installed along the southern boundary
  - *Wells will monitor any potential plume migration towards residential wells*
- 12 wells were installed in center of PBG Plume
  - *Wells will be used to evaluate MIRM shutdown conditions*
- Initially sampled these wells in May 2014
  - *Groundwater results were consistent with expectations*
  - *PBG plume boundary has not changed*



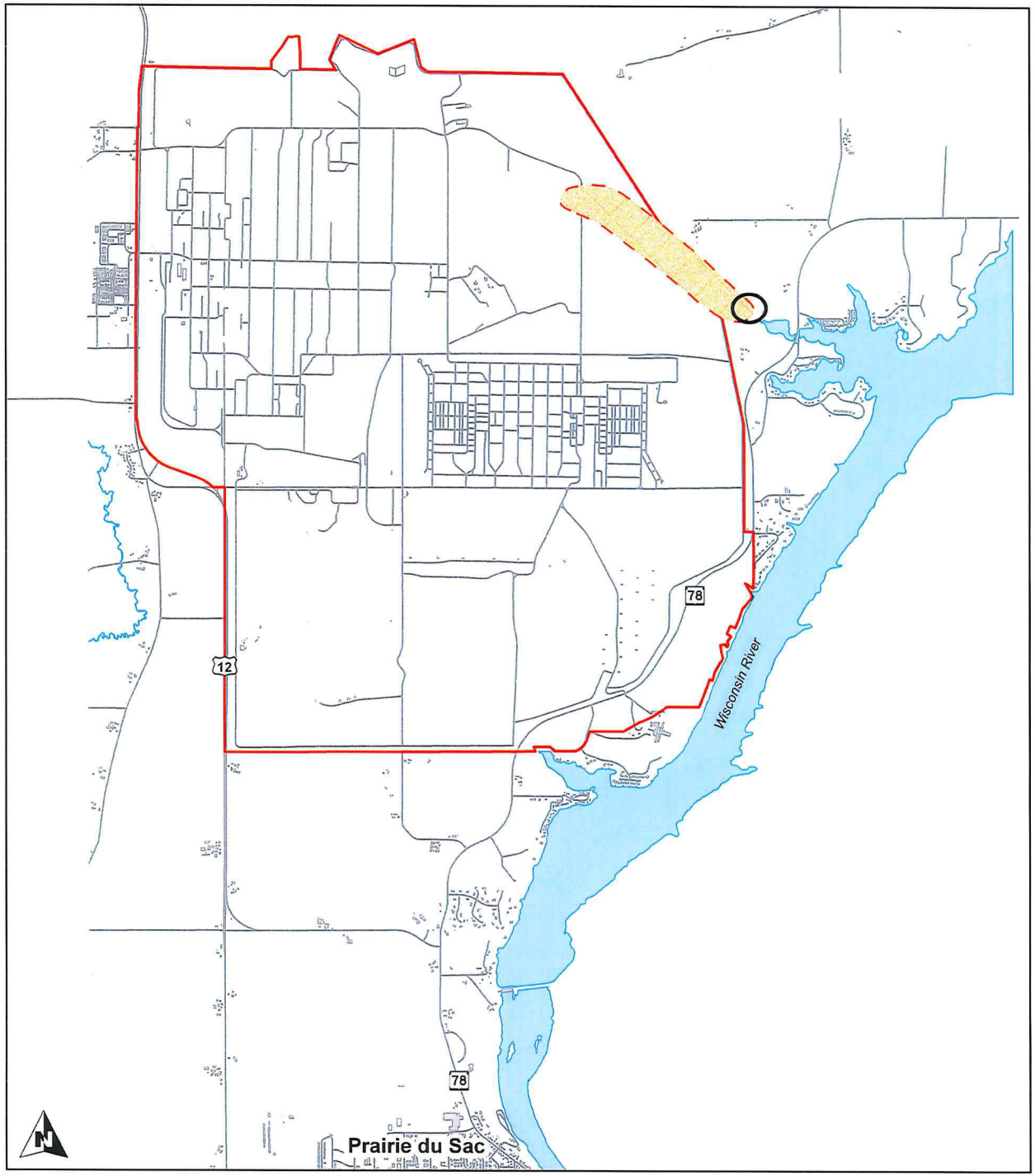
New Monitoring Wells

Groundwater Sampling

- Residential Well Sampling plan modified in 2013
  - *Completed Annual residential well sampling in August 2014*
  - *No Enforcement Standard exceedances in 2014*
- Monitoring Well Sampling plan is being modified
  - *Central Plume sampling expanded*
  - *Deterrent Burning Ground (DBG) Plume sampling refined*
  - *Future – Install 11 wells in DBG & Central Plumes*

Monitoring Well Analyses

- Base Neutral Acid (BNA) Analysis
  - *March 2014 - DNR approved a reduction in BNA testing*
  - *Historic results showed no threat to groundwater quality*
- VOC Analysis - *continues*
  - *Carbon Tetrachloride, Chloroform, Ethyl Ether, Trichloroethene, + 53 other compounds*
- DNT (6 isomers) Analysis – *continues*
- DNT Degradation Analysis – *continues at PBG*
- Nitrate Analysis – *continues at PBG*
- Sulfate Analysis – *continues at DBG*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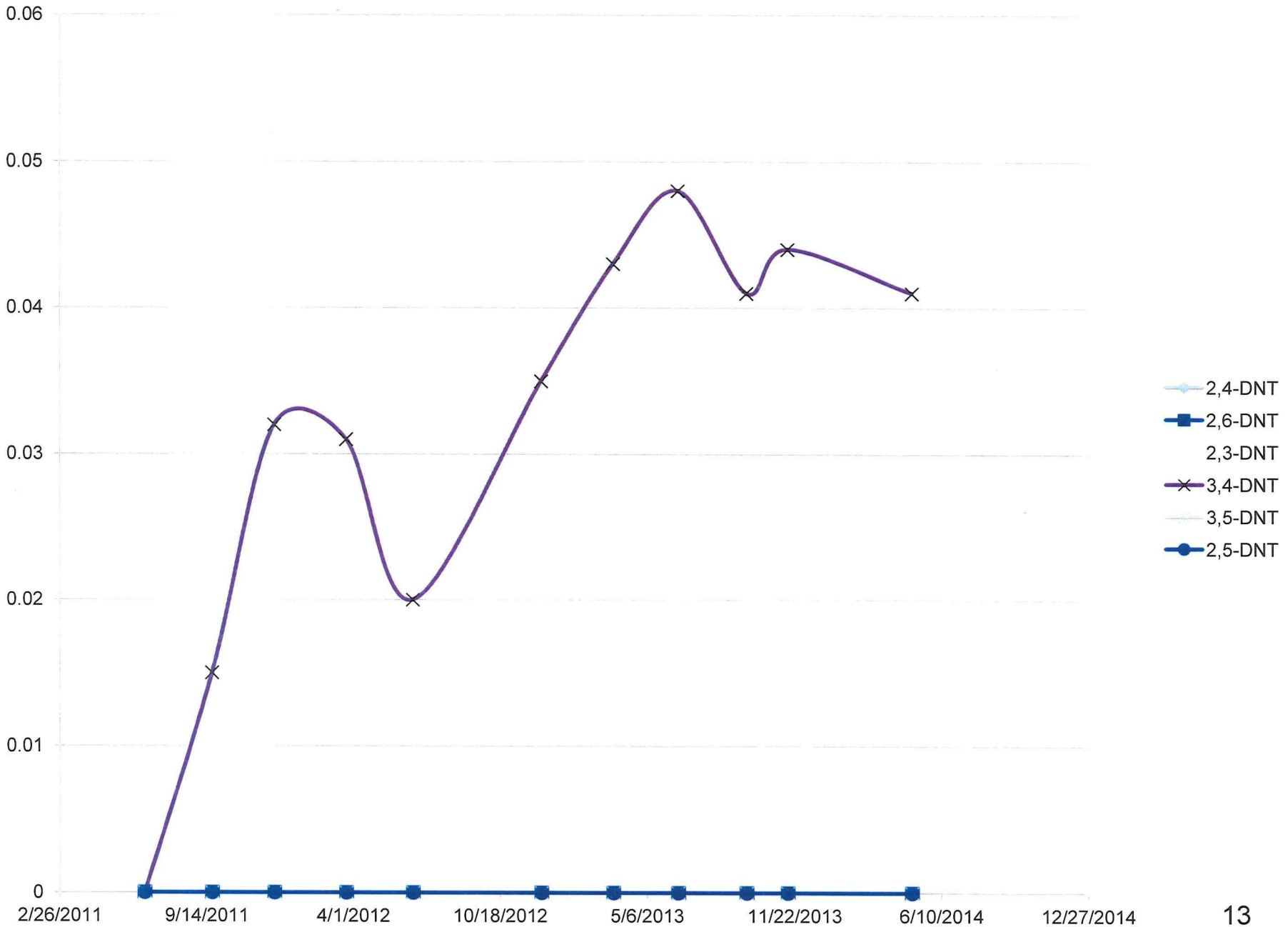
78
78
Wisconsin River
Prairie du Sac


0.06
0.05
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0
2/26/2011
9/14/2011
4/1/2012
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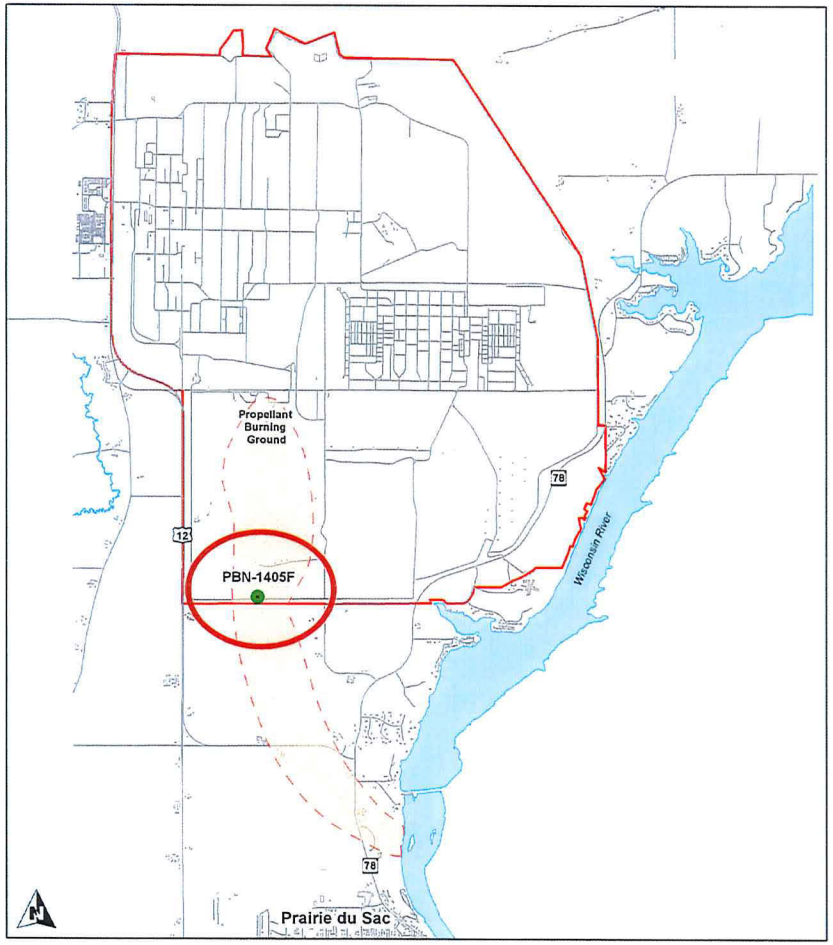
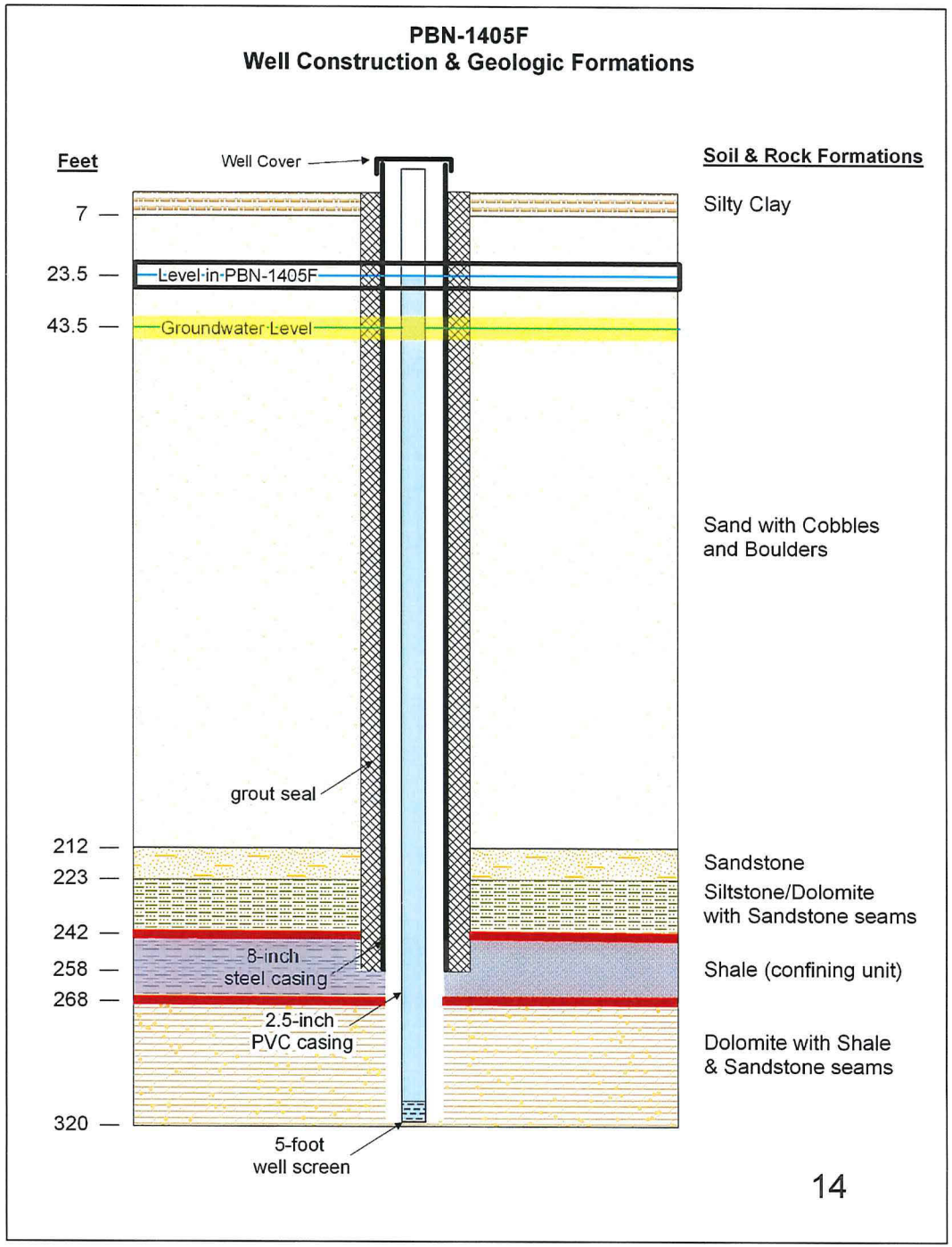
11/22/2013
6/10/2014
12/27/2014
2,4-DNT
2,6-DNT
2,3-DNT
3,4-DNT
3,5-DNT
2,5-DNT

PBN-1405F
Well Installation



No contaminants detected