



DEPARTMENT OF THE ARMY  
BADGER ARMY AMMUNITION PLANT  
S7273 BLUFF ROAD  
MERRIMAC, WISCONSIN 53561

February 8, 2019

SUBJECT: Residential Well Replacement – Water’s Edge Subdivision  
Badger Army Ammunition Plant

Mr. Jason Lowery  
Wisconsin Department of Natural Resources  
GEF2 Central Office  
PO Box 7921  
Madison, WI 53707-7921

Dear Mr. Lowery:

Residential well WE-UK124 (432) located in the Water’s Edge Subdivision was replaced by SpecPro Professional Services, LLC (SPS) on behalf of the Department of the Army (Army). During June and July 2018, 2,6-dinitrotoluene (DNT) and total DNT were detected above the NR 140 Enforcement Standard (ES) in WE-UK124. The Army informed the homeowner that they would replace their well with a deeper well. The Water’s Edge Subdivision is located at the southern edge of the Central Plume (see Figure 1).

The replacement residential well, WE-ZE512 (437), was installed by Brad Webster & Sons Drilling, Inc., a Wisconsin licensed well driller. Drilling of the replacement well, WE-ZE512, began on November 28 and was completed on November 30, 2018. A new well pump was installed and WE-ZE512 became fully operational on December 21, 2018. WE-ZE512 was constructed below the contaminated unconsolidated sand aquifer and into the bedrock aquifer to avoid DNT-impacted groundwater associated with the Central Plume. The contaminated well (WE-UK124) was screened in the unconsolidated sand aquifer from 97 to 100 feet deep. WE-UK124 was abandoned on December 19, 2018 using bentonite chips and cut off below ground level. The replacement well (WE-ZE512) was drilled into the shale bedrock to a depth of 324 feet. To limit impacts from the DNT-impacted groundwater found the unconsolidated sand aquifer, a steel casing was installed from the ground surface to 15 feet below the unconsolidated sand and bedrock interface. The 220-foot steel casing was grouted with cement to seal off the upper sand aquifer. The well was drilled using air-rotary with an open bedrock hole from 220 to 324 feet. The well draws its groundwater from this 220 to 324-foot zone.

Groundwater from the replacement residential well, WE-ZE512, was sampled on December 26, 2018. CT Laboratories, LLC of Baraboo, Wisconsin performed analytical testing for DNT and volatile organic compounds. Analytical results from both the regular and duplicate samples did not detect any of the six DNT isomers. Toluene was detected in both the regular and duplicate samples at concentrations of 0.63 and 0.76 micrograms per liter ( $\mu\text{g/l}$ ). These toluene concentrations are well below the NR 140 Preventive Action Limit (PAL) of 160  $\mu\text{g/l}$ .

The Army intends to include the new residential well, WE-ZE512, in the annual residential sampling that will be conducted in August 2019.

The enclosed files contain a copy of the well construction report, well abandonment log, residential well lab results, signed Environmental Monitoring Data Certification Form, and a map showing the well locations.

Please do not hesitate to contact me at 608-434-5374 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. M. Sitton', with a stylized flourish at the end.

Robert M. Sitton  
Commander's Representative

Enclosure

Copy furn: Bryan Lynch, Contracting Officer's Representative