

# FACTSheet

Former Nebraska Ordnance Plant ■ Mead, Nebraska

## Summary of the Detection in MW-116A during the 2011 First Quarter Sampling Event

Groundwater sampling is performed at perimeter monitoring wells 4 times per year to monitor the location and concentration of contaminants in groundwater. Trichloroethene (TCE), a groundwater contaminant at the former Nebraska Ordnance Plant, was detected in perimeter monitoring well MW-116A above the Federal drinking water standards during sampling performed in January and April of 2011. TCE was measured at a concentration of 20 micrograms per liter ( $\mu\text{g/L}$ ) in January and 16  $\mu\text{g/L}$  in April. The Federal drinking water standard and the Final Target Groundwater Cleanup Goal are both 5  $\mu\text{g/L}$  for TCE.

Since TCE was discovered in MW-116A during the January and April 2011 sampling event, the following tasks have been performed:

### Collection of additional groundwater samples for laboratory analysis

Former Nebraska Ordnance Plant procedures require that additional groundwater samples are collected if a contaminant is detected above the Final Target Groundwater Cleanup Goals to confirm if the contaminant is still present above the Final Target Groundwater Cleanup Goals. The resampling occurred in April 2011.

### Preliminary assessment of pumping extraction well EW-1 capture zone

Analysis of the groundwater flow direction near EW-1 was performed using computer simulations. This evaluation confirmed that MW-116A is within the EW-1 capture zone at its current pumping rate which means groundwater in the immediate vicinity of MW-116A flows to EW-1 where it is captured and treated. The groundwater elevation measurements taken in the field closely matched those predicted by the groundwater computer simulations indicating that the computer simulations are correct.

### Operate EW-1 at current maximum pumping rate

The pumping rate at EW-1 is now being operated at its current maximum operational pumping rate of approximately 191 gallons per minute.

### Take continuous water level measurements in the vicinity of EW-1 and MW-116A

Data loggers that electronically measure and record water levels were immediately placed in MW-116A and observation wells OW-10 and OW-11 that are located nearby. These devices will remain in the wells at least through the end of the 2011 irrigation season. Water level data will be used to confirm that groundwater in the vicinity of MW-116 is flowing towards pumping well EW-1 where it is captured and treated.

The following tasks are planned to address the TCE detections at monitoring well MW-116A:

### Groundwater pumping test at EW-1

A pumping test will be conducted with a target pumping rate of 550 gallons per minute to measure the decline in the groundwater levels in wells east of Johnson Creek and Clear Creek from the increased pumping rate. Water level measurements will also be collected in surrounding wells.

### Data Evaluation

Water level data collected during the aquifer test will be evaluated to assess the influence of groundwater pumping at EW-1 in the vicinity of MW-116 during the 550 gallons per minute pumping test. Water levels collected in this area will also be used to evaluate if a nearby irrigation well is impacting groundwater flow in the vicinity of MW-116. Following the EW-1 pumping test and data evaluation, the groundwater levels will be used to further verify the results of the computer simulations of the area surrounding EW-1. This data will also be used to evaluate the need for increasing the pumping rate above 191 gallons per minute at EW-1 as an additional safety measure. The results of the evaluation and computer simulations will be presented in a technical memorandum.

No residential wells in the area of MW-116A have been impacted by TCE. Since MW-116A is still within the EW-1 capture zone, no impact to residential wells is anticipated. U.S. Army Corps of Engineers currently maintains an aggressive site-wide sampling program and will continue this program to ensure continued protectiveness at the former Nebraska Ordnance Plant.

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For more information or any questions concerning the former Nebraska Ordnance Plant project, please contact:

### **Kristine Stein**

Project Manager

U.S. Army

Corps of Engineers

Kansas City District

601 E. 12th Street

Kansas City, Missouri 64106

Phone (816) 389-3172

email:

[kristine.m.stein@usace.army.mil](mailto:kristine.m.stein@usace.army.mil)

or go to the project website at

<http://www.nwk.usace.army.mil/projects/mead>

Information repository documents are available for review at:

### **Mead Public Library**

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