

2012 Containment Evaluation

The U.S. Army Corps of Engineers conducts an annual assessment of the Operable Unit 2 hydraulic containment system which consists of a series of extraction wells that contain the groundwater contaminant plumes. This assessment is used by the Corps of Engineers, Nebraska Department of Environmental Quality, and the Environmental Protection Agency to determine whether the hydraulic containment system is containing Operable Unit 2 Record of Decision contaminants of concern that are above Final Target Groundwater Cleanup Goals. Additionally, this assessment is used to evaluate the effectiveness of the current groundwater extraction system. The Final Target Groundwater Cleanup Goals are listed below.

Contaminants of Concern	Final Target Groundwater Cleanup Goals (micrograms per liter)
methylene chloride	5
1,2-dichloropropane	5
trichloroethene (TCE)	5
1,3,5-trinitrobenzene (TNB)	0.778
2,4-dinitrotoluene (2,4-DNT)	1.24
hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2
2,4,6-trinitrotoluene (TNT)	2

The 2012 Containment Evaluation is finalized and can be found in the Information Repository at the Mead Library.

Hydraulic containment is evaluated based on chemical data collected from a network of compliance monitoring wells located downgradient of the groundwater extraction system. If contaminants were to get past the containment system, they would be detected in the compliance monitoring wells. These compliance wells are sampled every six months. During the evaluation period of 2012, no Record of Decision contaminants of concern were detected above Final Target Groundwater Cleanup Goals in the compliance wells and the hydraulic containment system is operating successfully at the Site.

The Containment Evaluation also includes a review of the general performance of the hydraulic containment system. The hydraulic containment system consists of a series of extraction wells that function together to contain groundwater contaminant plumes that have contaminant levels

greater than the Final Target Groundwater Cleanup Goals. An evaluation of how these extraction wells function both alone and together is an important process in measuring the continuing effectiveness of the system. The Containment Evaluation includes collection of water levels and analysis of groundwater chemical data. This information is used to evaluate the area over which the extraction wells capture groundwater. A computer groundwater model is also used for this evaluation and uses various types of information including the 2012 sampling data from monitoring wells located throughout the Site and regional water level data measured from wells. Based on the 2012 Containment Evaluation report, the hydraulic containment system continues to maintain a sufficient capture zone for the groundwater and associated contamination.

Although the evaluation of the hydraulic containment system is an annual review, the compliance wells, along with a significant number of monitoring wells located throughout the Site and residential water supply wells within one mile of the contaminant plumes, are sampled throughout the year. This monitoring data is reviewed and evaluated following each sampling event. If an Operable Unit 2, Record of Decision contaminant of concern is detected above Final Target Groundwater Cleanup Goals in a residential water supply well or compliance well, immediate action by the Corps will be undertaken to evaluate and address the issue.

Trichloroethene was detected above the Final Target Groundwater Cleanup Goal in Perimeter Monitoring Well MW-116A during the August 2012 sampling event. MW-116A is southeast of the Load Line 4/Atlas Missile Area contaminant plume. During the March, May and November 2012 sampling events, TCE concentrations in MW-116A were below the Final Target Groundwater Cleanup Goal. Based upon previous detections in MW-116A in 2011, additional studies were conducted and the results were submitted to the Nebraska Department of Environmental Quality and United States Environmental Protection Agency presenting the likely cause of the TCE detections in MW-116. Irrigation operations may be affecting the TCE plume associated with the Load Line 4/Atlas Missile Area contaminant plume. The Fourth Quarter detection (below the Final Target Groundwater Cleanup Goal) indicated no further response actions were needed.

The figure on the inside of this newsletter shows the locations of perimeter, compliance and extraction wells.

Open House Meeting

The U.S. Army Corps of Engineers, had an Open House scheduled for Wednesday, October 16, 2013, from 4:30-7:30 PM at the Veterans of Foreign Wars (VFW) Hall in Yutan, NE. However, due to the Government shutdown, the October 16, 2013 Open House has been cancelled. Watch your local newspaper for the next scheduled Open House.

New Contractor Joining the Former Nebraska Ordnance Plant Project

Starting January 2014 the former Nebraska Ordnance Plant project will be managed by a new operating contractor, HydroGeoLogic (HGL). Personnel from the current contractor ECC as well as HGL will be on-site during a transition period, which runs from October through December 2013. The familiar faces of Toby Hinz, Vince Stallbaumer, and Jesse Phillips will remain at the site in their current roles as part of HGL's project team. Representatives of both contractors will be at the Open House on October 16, 2013.

Operations and Maintenance Summary

Since their respective startup, operation of the Main, Load Line 1, Advanced Oxidation Process, and Load Line 4 Groundwater Treatment Plants have resulted in the removal of the following amounts of contaminants of concern from groundwater as of September 30, 2013:

TCE (trichloroethene) total removed 28,061 – pounds

- Main Groundwater Treatment Plant – 379 pounds
- Load Line 1 Groundwater Treatment Plant - 468 pounds
- Advanced Oxidation Process Treatment Plant - 24,104 pounds
- Load Line 4 Groundwater Treatment Plant – 3,110 pounds

RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine) total removed from the Main Groundwater Treatment Plant – 268 pounds

Total gallons of water treated:

- Main Groundwater Treatment Plant - 12,127,796,000 gallons
- Load Line 1 Groundwater Treatment Plant - 1,218,363,300 gallons
- Advanced Oxidation Process Treatment Plant - 1,330,864,000 gallons
- Load Line 4 Groundwater Treatment Plant - 780,177,000 gallons

The treated water from the Advanced Oxidation Process Groundwater Treatment Plant is sent to the Main Groundwater Treatment Plant for further treatment; therefore the amount of contaminated groundwater treated from the Advanced Oxidation Process Groundwater Treatment Plant is included in the Main Groundwater Treatment Plant discharge quantity.

October 2013

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

Project Manager
U.S. Army
Corps of Engineers
Kansas City District
601 E. 12th Street
Kansas City, Missouri 64106
Phone (816) 389-3172

or go to the project website at

<http://www.nwk.usace.army.mil/Missions/Environmental/EnvironmentalProjects/NOP.aspx>

Information repository documents are available for review at:

Mead Public Library
316 South Vine Street
Mead, Nebraska 68041
(402) 624-6605

Hours

Tuesday: 9 - 11 AM and 2-7 PM
Wednesday 3-5 PM
Thursday: 9-11 AM, and 2-7 PM
Saturday: 9-1 PM



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