

NEWS Letter

Former Nebraska Ordnance Plant ■ Mead, Nebraska

Open House Meeting

The U.S. Army Corps of Engineers will host the Fall Open House on Wednesday October 19, 2011 at the Yutan VFW Country Club in Yutan, Nebraska. The Yutan VFW Country Club is located south of Highway 92 at 1581 Yutan Road. The open house meeting is from 4:00 p.m. to 8:00 p.m. with technical staff in attendance to answer specific questions regarding the former Nebraska Ordnance Plant. Representatives from the U.S. Environmental Protection Agency and Nebraska Department of Environmental Quality are expected to attend as well. A variety of updated handouts and new displays will be available along with refreshments. Additionally, a brief informational presentation will be given on the 2010 Containment Evaluation. The presentation will be given hourly at 5:00, 6:00, and 7:00 p.m. For further information regarding the meeting, contact Kristine Stein, Project Manager, at (816) 389-3172.

Operations and Maintenance Summary

Operation of the Main, Load Line 1, Advanced Oxidation Process, and Load Line 4 Groundwater Treatment Plants have resulted in removal of the following amounts of contaminants of concern from groundwater as of September 30, 2011 since their respective startup:

TCE (trichloroethene) total removed – 19,690 pounds

- Main Groundwater Treatment Plant – 369 pounds
- Load Line 1 Groundwater Treatment Plant - 178 pounds
- Advanced Oxidation Process Treatment Plant - 17,563 pounds
- Load Line 4 Groundwater Treatment Plant – 1,581 pounds

RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine) total removed from the Main Groundwater Treatment Plant – 211 pounds

Total gallons of water treated:

- Main Groundwater Treatment Plant - 10,425,813,000 gallons
- Load Line 1 Groundwater Treatment Plant -886,778,000 gallons
- Advanced Oxidation Process Treatment Plant 872,602,000 gallons
- Load Line 4 Groundwater Treatment Plant -300,817,000 gallons



Main Groundwater Treatment Plant Process Equipment (Photo by ECC)

The treated water from the Advanced Oxidation Process Groundwater Treatment Plant is sent to the Main Groundwater Treatment Plant for further polishing; therefore

October 2011

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

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

316 South Vine Street

Mead, Nebraska 68041

(402) 624-6605

Hours

Monday: 2-7 PM

Thursday: 9:30-11:30 AM, and 2-7 PM

Saturday: 9-12 PM



US Army Corps
of Engineers ®

Operations and Maintenance Summary continued

the amount of contaminated groundwater treated from the Advanced Oxidation Process Groundwater Treatment Plant is included in the Main Groundwater Treatment Plant discharge quantity. Focused Extraction Wells 11 and 15, which pump groundwater to the Advanced Oxidation Process Groundwater Treatment Plant and Load Line 4 Groundwater Treatment Plant respectively, are installed in high contaminant concentration areas which result in high mass removal.

2010 Containment Evaluation

The U.S. Army Corps of Engineers conducts an annual assessment of the Operable Unit 2 hydraulic containment system. This assessment is used by the Corps, 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 2010 Containment Evaluation is complete and can be found in the information repository at the Mead Library. It is also posted online at the Corps of Engineers former Nebraska Ordnance Plant website. Based upon the groundwater chemical data collected in 2010 and the system effectiveness review, the hydraulic containment system is operating successfully at the Site.

Hydraulic containment is evaluated based on chemical data collected from a network of compliance monitoring wells located downgradient of the groundwater

extraction system. These compliance wells are sampled every six months. During the evaluation period of 2010, no Record of Decision chemicals of concern were detected above Final Target Groundwater Cleanup Goals in the compliance wells.

The Containment Evaluation also includes a review of the general performance of the hydraulic containment system. The 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 tool in measuring the continuing effectiveness of the system. A computer groundwater model is also used for this evaluation and uses various types of information including the 2010 sampling data from monitoring wells located throughout the Site and regional water level data measured from wells. This information, in conjunction with site-specific physical and chemical data, is used to predict how the extraction wells contain contaminants in the groundwater and the effectiveness of the extraction well capture of groundwater in surrounding areas. Based on the 2010 Containment Evaluation report, the hydraulic containment system is operating successfully through the establishment of 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.

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