

# NEWS Letter

Former Nebraska Ordnance Plant ■ Mead, Nebraska

## Open House at New Location

The U.S. Army Corps of Engineers will be hosting our fall Open House on October 21, 2009 at the Yutan VFW Country Club in Yutan, Nebraska. The Yutan VFW Country Club is located south off highway 92 at 1581 Yutan Road.

The open house meeting will be between 4:00 p.m. to 8:00 p.m. with our technical staff in attendance to assist you with any questions regarding the former Nebraska Ordnance Plant. Representatives from US Environmental Protection Agency (EPA) and Nebraska Department of Environmental Quality (NDEQ) are expected to attend as well. A variety of handouts and displays will be available along with refreshments. Additionally, we will be giving a brief informational presentation on the operations of the Advanced Oxidation Process (AOP) treatment plant. The presentation will be given 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.

## Load Line 4 Plant Construction Underway

The Corps of Engineers is happy to announce the start of construction for the Load Line 4 groundwater treatment plant at the former Nebraska Ordnance Plant. The construction of the new Load Line 4 treatment plant started with the clearing of the existing vegetation for construction of the building pad. Crews are currently working on the excavation and construction of the building footings.

The new Load Line 4 treatment plant will treat groundwater contaminated with trichloroethene using the same successful air stripper technology currently in use at the Load Line 1 treatment plant. The Corps and

their contractor, ECC, broke ground for the plant on August 24, 2009. The plant is scheduled to be up and running by December 31, 2009.



▲ Excavation (looking southwest) for the new Load Line 4 groundwater treatment plant building footings. (Photo by ECC)

The contaminated groundwater will be extracted at the newly installed Focused Extraction Well 15. This well is located on University of Nebraska property just east of Load Line 4; off of Country Road 7. The new plant is designed to treat 500 gallons per minute of contaminated groundwater and meet all of the treatment requirements defined by the NDEQ. Once treated, the water will be discharged to the creek in accordance with the directive from Lower Platte North Natural Resources District (LPNNRD). The water can be made available for beneficial reuse. For beneficial reuse, Mr. Larry Angle at LPNNRD can be contacted at (402) 443-4675.

The new focused extraction well and new treatment plant are part of the overall treatment system at the site, consisting of the Main treatment plant, Load Line 1 treatment plant and the AOP treatment plant.

## AOP Plant - The Work Horse At The Former NOP

After one year of operation, the newest of the three groundwater treatment plants in the assortment of treatment plants at the former Nebraska Ordnance Plant is showing itself to

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

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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

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



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be an outstanding performer. This is the AOP treatment plant.

At the former Nebraska Ordnance Plant, there are currently 3 groundwater treatment plants. These are the Main treatment plant, the Load Line 1 treatment plant, and the AOP treatment plant. The AOP treatment plant has been in operation since March 2008. The purpose of this plant is to treat high concentrations of trichloroethene (TCE) which is one of the main contaminants in the groundwater at the site. The AOP treatment plant uses hydrogen peroxide and ozone to destroy the TCE contamination. The TCE is broken down into safe compounds like carbon dioxide and water.

The AOP treatment plant has treated almost 3.8 million gallons of groundwater since it became operational in March 2008. With a flow rate of 550 gallons per minute from Focused Extraction Well 11 (FEW-11) and an incoming groundwater concentration of approximately 2,400 parts per billion TCE, this system has removed an estimated 9,969 pounds of TCE from groundwater at the site.

Comparatively, the amount of TCE removed so far by the Main treatment plant is approximately 353 pounds and the Load Line 1 treatment plant has removed approximately 76 pounds. These plants have been in operation since 2002 and 2006, respectively. The reason for lower removal of TCE from the Main treatment plant and Load Line 1 treatment plant is that the amount of TCE contamination coming into those plants is much smaller than the amount of contamination coming in to the AOP treatment plant.

The AOP treatment plant is a great asset to the clean-up project at the site and is helping to protect the public from the groundwater contamination.

## O&M Summary

As of the end of September 2009, operation of the Main treatment plant, AOP treatment plant and Load Line 1 treatment plant have resulted in an estimated mass removal and/or treatment of:

### TCE (Trichloroethene) – 10,398 pounds

- 353 pounds from the Main treatment plant (February 2002 – September 2009)
- 76 pounds for the Load Line 1 treatment plant (February 2006 – September 2009)
- 9,969 pounds for the AOP treatment plant (March 2008 – September 2009)

### RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine) – 148 pounds

- 148 pounds from the Main treatment plant (February 2002 – September 2009)



Two GAC units at the Main Groundwater Treatment Plant (Photo by URS)

A total of more than 9,340,444,000 gallons of groundwater have been treated by the three plants since startup of the Main treatment plant in 2002. Both the Main treatment plant and Load Line 1 treatment plant process water from the containment wells. The high mass removal generated by the AOP treatment plant is due to the nature of the extraction well FEW-11, a focused extraction well installed in a portion of the Load Line 1 plume with high concentrations of TCE.

## Situational Assessment

The Situational Assessment Report for the clean-up project at the former Nebraska Ordnance Plant has been completed. A copy of the report is available in the site information repository at the Mead Library and on the project website at: <http://www.nwk.usace.army.mil/projects/mead/History/MeadSARreport.pdf>.

This report explains the results of the community interviews which were held this past winter and provides suggestions for improving communications between the Corps of Engineers and the local community.

## UST Removal Set To Begin

The Corps of Engineers contractor, Kingston Environmental, will begin removal of 24 underground storage tanks at the former Nebraska Ordnance Plant on September 22, 2009. These tanks are located near the four former Load Line areas on University of Nebraska property. Initially, a geophysical investigation will be conducted to help determine the exact location of the tanks that were adjacent to boiler buildings at each of the former Load Lines. Each tank is 40-feet in length and 10-feet in diameter with a capacity of approximately 25,000 gallons. After the tanks have been located, they will be examined to determine if there is any fuel or oil remaining in the tanks. The contractor will remove any fuel or oil prior to excavation. Excavation and construction equipment will be on-site October 28, 2009 to begin removal of the tanks and associated soil. The tanks and any soil above state regulatory levels will be transported off-site for disposal by trucks. Soil sampling will be conducted in the excavation areas to ensure NDEQ standards are met. The excavation areas will then be backfilled with clean soil.