

# NEWS Letter

Former Nebraska Ordnance Plant ■ Mead, Nebraska

## Open House Meeting

The U.S. Army Corps of Engineers will host the Spring Open House on Wednesday April 20, 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 proposed Load Line 2 pilot study. 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 March 31, 2011 since their respective startup:

TCE (Trichloroethene) total removed – 17,473 pounds

- Main Groundwater Treatment Plant – 364 pounds
- Load Line 1 Groundwater Treatment Plant - 140 pounds
- Advanced Oxidation Process Treatment Plant - 15,800 pounds
- Load Line 4 Groundwater Treatment Plant – 1,169 pounds

RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine) total removed from the Main Groundwater Treatment Plant – 196 pounds

Total gallons of water treated:

- Main Groundwater Treatment Plant - 10,015,613,000 gallons
- Load Line 1 Groundwater Treatment Plant - 807,853,000 gallons
- Advanced Oxidation Process Treatment Plant - 753,189,000 gallons
- Load Line 4 Groundwater Treatment Plant - 201,364,000 gallons

The treated water from the Advanced Oxidation Process Groundwater Treatment Plant is sent to the Main Groundwater Treatment Plant for further polishing; 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. 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 TCE contaminant concentration areas which result in high mass removal.



Advanced Oxidation Process Groundwater Treatment Plant Piping, Photo by ECC

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

or go to the project website at

[http://www.nwk.usace.army.mil.projects/mead](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

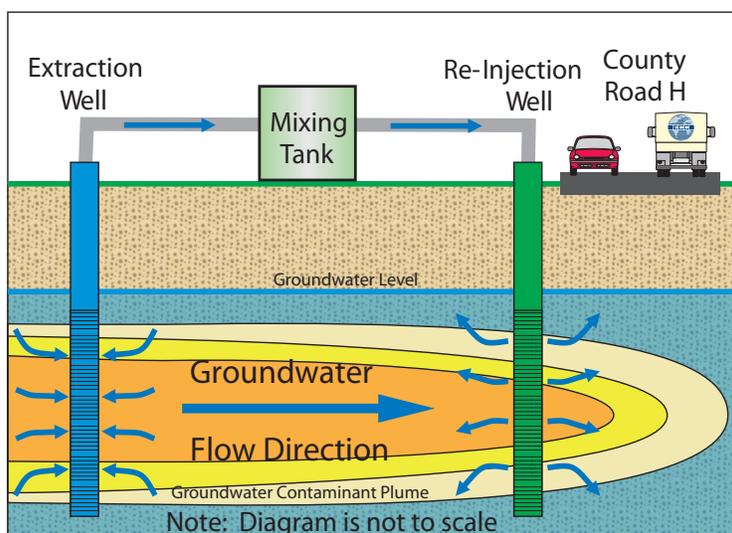
Saturday: 9-12 PM



**US Army Corps  
of Engineers** ®

## Pilot Study Treatment Selection

Following a review of the Load Line 2 soil and groundwater data collected by the U.S. Army Corps of Engineers during the Pre-Pilot Study Investigation in the summer of 2010, two areas with elevated concentrations of TCE and RDX in groundwater were identified as pilot study treatment areas. These areas were identified as Preliminary Treatment Area 1 and Preliminary Treatment Area 2. Following a bench scale Treatability Study and a treatment alternative selection process, treatment options were identified for possible field testing at each treatment area to determine if contaminated groundwater can be successfully treated in place, without pumping to a treatment facility. For Preliminary Treatment Area 1, two alternatives were selected for treating TCE in groundwater. These include (1) installation of a permeable reactive barrier containing iron, and (2) injection of sodium lactate to enhance biological degradation. If successful, both of these groundwater treatment alternatives will reduce TCE to non-toxic degradation products. For Preliminary Treatment Area 2, the two phased installation of a biological degradation treatment barrier will be implemented to treat RDX in groundwater. The barrier will use a sodium acetate amendment to enhance biological degradation processes. If successful, this alternative will reduce RDX to non-toxic degradation products. Depending on availability of funding, designs for both Preliminary Treatment Areas could be completed by the Fall of 2011 with the installation of the treatment systems beginning in the Spring of 2012.



Preliminary Treatment Area 1 - injection of sodium lactate, designed by BMCd.

## Operable Unit 3 Supplemental Remedial Investigation

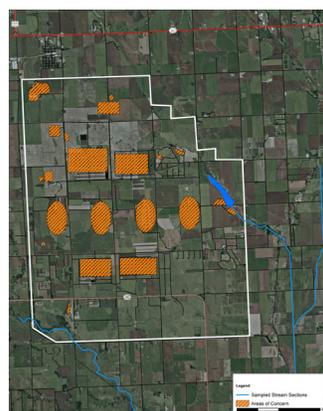
The Supplemental Remedial Investigation Report for Operable Unit 3 (OU3) is in the process of completion. A Remedial Investigation was used to collect data on the site conditions, to determine the nature and extent of the waste, to assess the risk to human health and the environment, and to evaluate potential remedial options.

The initial Remedial Investigation for OU3 was conducted from 1995 to 1999. The potential areas of concern were evaluated against screening levels and No Further Action was recommended at the majority of locations while unacceptable risks and hazards were found at three areas. Those areas were addressed during a Removal Action in 2007 and 2008. The potential existence of a 'burn layer' was also found during an unrelated removal action in 2009.

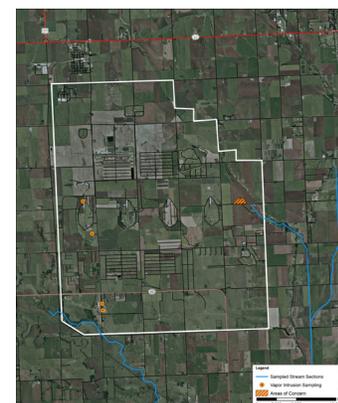
The Supplemental Remedial Investigation is part of the continuing effort to assess the potential risk from contaminated media at the former Nebraska Ordnance Plant and will update the existing Baseline Risk Assessment (BLRA). Those updates will include:

- Surface water data collected since the previous Baseline Risk Assessment (2004-2010);
- Vapor intrusion data collected at 4 buildings of potential concern in September and October 2010 to assess the risk of exposure to volatile organic compounds in the air; and
- Data collected from the potential 'burn layer' in September 2010 to determine the extent and risk of exposure in soil.

These samples, as well as the results from samples collected during the initial Remedial Investigation, will be analyzed for risk to human health and appended to the Baseline Risk Assessment. The Final Supplemental Remedial Investigation Report will be complete in the Fall of 2011.



Original OU-3 Areas of Potential Concerns, provided by GEO.



Remaining OU-3 Areas of Potential Concern to be addressed, provided by GEO.