

## Responsiveness Summary to Public Comments

### **Remedial Action Plan for the former Nebraska Solvents Company Site, 1200 East Highway 30, Grand Island, Nebraska IIS 54629 RAP 36-336-4923**

#### **INTRODUCTION**

On January 10, 2011, the Department of Environmental Quality (Department) public noticed a preliminary determination to approve the Remedial Action Plan (RAP) for the former Nebraska Solvents Company Site, located at 1200 Highway 30 East, in Grand Island, Nebraska, and also its intent to conduct a Public Hearing on February 10, 2011. These actions were taken pursuant to the Remedial Action Plan Monitoring Act, Section 81-15, 185.01 of the Nebraska Statutes and the Department's regulations, Title 118 – Ground Water Quality Standards and Use Classification, Chapter 11. Foth Infrastructure and Environment, on behalf of Union Pacific Railroad (UPRR), submitted a RAP to the Department on February 1, 2010, which was reviewed, revised, and preliminarily approved by the Department, subject to the public comment process. The purpose of the Public Hearing was to solicit comments concerning the Department's preliminary determination of approval of the RAP.

#### **REMEDIAL ACTION PLAN SUMMARY**

Soil and groundwater at the site are contaminated with chlorinated solvents and petroleum hydrocarbons. A groundwater plume consisting primarily of dissolved tetrachloroethylene (PCE) extends approximately three and one-half miles to the east and northeast of the site, impacting private drinking water wells primarily, but not exclusively, in the Baker subdivision area of Merrick County. Remedial action objectives for the site are to meet remediation goals for soil and groundwater within a reasonable timeframe. For soil this means excavation and proper disposal of contaminated soil in the source area. For groundwater this means chemical injection within the aquifer to treat contaminated groundwater within and near the source areas. UPRR will conduct a monitored natural attenuation study to determine if natural attenuation can achieve remediation goals throughout the entire groundwater plume within a reasonable time frame. The RAP states that UPRR will provide alternate water to residences by extending the City of Grand Island water service line to residences that have been impacted and that may be reasonably impacted in the future. Also, the RAP proposes to emplace an institutional control restricting the installation of drinking water wells in areas of contaminated groundwater, and an institutional control prohibiting residential land use at and near the sources areas if residential remediation goals are not achieved.

#### **FINAL DETERMINATION**

The Department reviewed and considered all the testimony and comments regarding this preliminary determination prior to making a final decision. Pursuant to the Department's review of the RAP and all testimony and comments received, the Department approves the RAP, dated December 10, 2010, for the former Nebraska Solvents Company Site at 1200 East Highway 30, Grand Island.

## **RESPONSIVENESS SUMMARY**

The following section contains the Department's responses to testimony and other comments received in regard to the preliminary determination of approval of the RAP. Everyone testifying and other interested parties will be sent a copy of this responsiveness summary and of the Department's final determination. Comments and testimony are paraphrased and summarized. In addition, the Responsiveness Summary will be posted on NDEQ's website under "Topics of Interest: Nebraska Solvents Company Site in Grand Island Information".

**1) Although Union Pacific Railroad has offered to hook up homes in the Baker subdivision area to city water, homeowners have not seen anything in writing that states which addresses will be hooked up.**

UPRR will contact all eligible residents following issuance of the Department's final decision on the Remedial Action Plan. As described in the RAP, UPRR proposes to offer water service line connections to residents on existing lots who have been impacted and to those who may reasonably be impacted in the future, which would include all current residential property owners generally within or immediately adjacent to the area bounded by Gunbarrel Road, Beck Road, Fort Kearney Road, and East Capital Avenue. This municipal water supply would replace the use of bottled water and GAC water treatment systems.

UPRR will pay for water line extension and connection to individual homes for participating residents; however, utility bills are the responsibility of the homeowner. Homeowners will have six (6) months to accept the offer to be connected to Grand Island City water. If after six (6) months the homeowner declines the connection, homeowners may still connect to the City water line extension; however at their own cost. Homeowners may decline to be connected to City water, but thereafter, UPRR will not supply bottled water or maintain the whole-house GAC systems.

Each resident will have the choice of either having their existing well abandoned by a Nebraska licensed well driller, or having their well remain in place, but be disconnected from the home potable water supply if the resident wants to maintain the well for non-potable purposes.

The recently updated schedule for the water line extension is as follows: UPRR will have an Agreement for the design and construction of the water line extension in place with the City of Grand Island by June 2011. Design and contracting is anticipated to be completed by March 2012. Construction of the main water line and individual home connections is expected to take place throughout the 2012 construction season, and will be completed before the end of 2012.

**2) Once homes are hooked up, residents will have to pay for city water. The cost of City water will be a financial burden for those hooked up; this cost should be paid for by those who caused the contamination.**

The Department's statutory authority under the Remedial Action Plan Monitoring Act to require a voluntary cleanup program participant to provide an alternate water supply to impacted residences is within the context of approval of the remedial action components of an approved RAP to address a human health exposure to contaminated drinking water. This authority does not extend to requiring the participant to pay monthly city water service fees. Once the hookup is completed at UPRR's expense, monthly city water service fees will be the responsibility of individual homeowners.

**3) There have been significant impacts to property values and home sales as a result of the groundwater contamination and impacts to private drinking water wells. It is difficult to get a loan to buy a house in the neighborhood affected by the groundwater contamination.**

As stated above, the Department's statutory authority only extends to requiring a voluntary cleanup program participant to provide an alternate water supply to impacted residences within the context of approval of the remedial action components of an approved RAP to address a human health exposure to contaminated drinking water. This authority does not extend to providing State compensation or

requiring the participant to provide compensation to an affected residence. This is a matter between the homeowner and UPRR.

**4) The chemical in the water caused the some of the cancer and other illnesses in the Baker subdivision area.**

During the June 23, 2010 public meeting a representative from the Nebraska Department of Health and Human Services (DHHS) presented risk assessment information related to the contaminants detected in groundwater at the site, and responses to some of the more common health related questions received from the public. This information indicated that PCE is considered a probable human carcinogen and has been associated with both liver and kidney cancer in laboratory animal studies. DHHS conducted a review of the cancer registry data in the Grand Island area for the period 2000 to 2006, and did not identify any liver or kidney cancers. Lung cancer was the most frequently diagnosed cancer. DHHS also indicated that 27 to 28 cancer diagnoses would have been expected to occur during this timeframe. Thirty-four cases of cancer were diagnosed, which is about one extra case each year. DHSS concluded that the difference of one extra case each year was too small to rule out chance as the most likely explanation.

Degradation or “daughter” products of PCE were also found in this area, but at concentrations significantly below the maximum contaminant levels (MCLs). Trichloroethylene (TCE) was found in groundwater from several monitoring wells along Gunbarrel Road at concentrations ranging from the detection limit of 0.38 to 0.99 ug/l. NDEQ’s split sampling conducted in 2010 found 0.28 ug/l of TCE in one private well, but no TCE has been found in private wells at concentrations above 1.0 ug/l from sampling conducted by UPRR. The MCL for TCE is 5 ug/l.

**5) Once homes are hooked up to city water, is private well water safe to use for gardening or lawn watering?**

PCE and associated compounds that have been found in groundwater in this area are volatile and evaporate readily when exposed to air. Private well water containing the low levels of PCE and associated compounds in the Baker Subdivision area is not expected to pose a health risk when used for purposes such as lawn watering and gardening.

**6) The City of Grand Island municipal water has problems with naturally occurring compounds in groundwater such as uranium. How do residents know if city water is safer than private well water?**

The federal Safe Drinking Water Act was enacted in 1974 and amended in 1986 to “ensure that public water supplies meet national standards that protect consumers from harmful contaminants in drinking water”. In Nebraska, public water quality is regulated by the DHHS.

As required by the Safe Drinking Water Act, the DHHS tests public drinking water periodically for regulated constituents, both naturally and artificially occurring, including volatile organic compounds (VOCs) such as PCE. Municipalities must meet drinking water MCLs whether regulated constituents are naturally occurring or are the result of human activity. Uranium is naturally occurring over much of Nebraska’s groundwater aquifers, but municipalities still have to meet the current drinking water standard of 30 ug/l. This means groundwater may have to be treated to meet the MCLs before it can be provided to consumers.

**7) People need to have an idea of what a “reasonable time frame” for cleanup of contaminants is so people have something to look forward to.**

The state regulation requiring groundwater cleanup is Nebraska Title 118 - Groundwater Quality Standards and Use Classification. According to Title 118, Appendix A - GROUND WATER REMEDIAL ACTION PROTOCOL, Step 8, “The time frame for required action (including cleanup) will be the period of potential contamination in the absence of any remedial action, or 20 years, whichever is less. On a case-by-case basis, a longer period of time may be allowed if adequately justified by the responsible party.”

The RAP for the Nebraska Solvents site states in Section 9.2.4 that “UPRR will endeavor to develop remedial actions to restore groundwater to VCP remediation goals within a reasonable timeframe. Nebraska Title 118 defines a reasonable timeframe to meet VCP remediation goals as 20 years, although Appendix A of Title 118 also states that alternative timeframes may be established. UPRR will conduct studies to determine the remedial actions necessary to achieve groundwater remediation goals and will work with NDEQ to establish remedial timeframes consistent with Nebraska Title 118 and satisfactory to NDEQ”.

**8) There are other chemicals besides PCE in the groundwater. How long has it been known about the other chemicals besides PCE?**

In 2004 the Department conducted a Preliminary Assessment and Site Inspection, which included groundwater sampling. This investigation found various chlorinated solvents and petroleum hydrocarbons, similar to those in Table 1 of the fact sheet for the Public Hearing. This table lists soil and groundwater remediation goals for all of the chemicals of concern at the site. Most of these compounds are only found in the source area at and near 1200 East Highway 30. Contaminants that have dissolved into groundwater and migrated significant distances from the original site are PCE, trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), 1,1,1-trichloroethane (TCA), and 1,1-dichloroethane (1,1-DCA). PCE has been the most mentioned compound because it is the only compound that has been found in groundwater exceeding drinking water standards in the Baker subdivision area.

**9) People’s taxes go to the state of Nebraska that should be used to look after and help out the general public when these types of contamination problems occur. What is NDEQ’s role in the cleanup?**

In 1984, the U.S. Environmental Protection Agency (EPA) conducted a records search of the Nebraska Solvents Company (NSC) site at 1200 East Highway and determined no potential hazard to human health and the environment existed based on company records and other sources. No groundwater sampling was conducted. Around 1987, NSC ceased doing business, and underground fuel tanks were removed. In 1990, Mr. Clifford Alderson, vice president of NSC, responded to an EPA request for information letter stating there had been no spills at the site. In 1995, the Department obtained a copy of the shallow soil sampling results conducted by NSC in 1988. A low level detection of methylene chloride was the only contaminant found in the soils at the site.

The Department, based on a file review in 2004, decided to investigate the former NSC site to determine if similar contaminants existed that had been found at the original NSC facility near the Cleburn Street municipal well in Grand Island. The Department’s contractor conducted a Preliminary Assessment and Site Inspection which included groundwater and soil sampling, and reported finding extensive

contamination in the source area. A plume of primarily PCE was found in groundwater extending to Shady Bend Road. UPRR continued the investigation, and entered the Nebraska VCP in 2007. The Department provided oversight of the work conducted by UPRR through numerous phone calls and meetings, and reviewed sampling results as they were completed.

The Department has met with residents and other concerned citizens on a number of occasions. Department staff met with the Merrick County Board at resident's request in August, 2008. The Department held an informational session addressing private well impacts and other topics in Grand Island in October, 2008. The Department reviewed the Remedial Action Plan (RAP), when it was submitted in February, 2010, and again held numerous conferences with UPRR and its contractor. At the resident's request, Department staff attended a community meeting in Grand Island on April 7, 2010. In response to concerns that residents expressed regarding UPRR's well sampling, the Department conducted split sampling in April, 2010 and issued a report which can be accessed on the Department's website. Department staff held a second public information session in Grand Island on June 23, 2010 to discuss the Split Sampling results and to update interested persons on investigation progress. The Department completed the RAP review in December, submitted it for public comment, and held a public hearing in Grand Island about the RAP on February 10, 2011.

The Department has approved the RAP, and will review work plans and reports for soil excavation, groundwater treatment via in situ injection, and monitored natural attenuation. The Department will continue to monitor progress on site cleanup, review progress reports, and review other documents such as proposed institutional controls. The Department will be involved in the NSC site until final cleanup is achieved.

The Voluntary Cleanup Program was established by the Remedial Action Plan Monitoring Act in 1995, and is intended to be a more stream-lined, results-based approach to environmental cleanup. The property owners and other participants must maintain compliance with all applicable State and Federal environmental rules and regulations. The party conducting the cleanup, in this case UPRR, has the responsibility to conduct the investigation and carry out cleanup of the site, and the Department's role is to ensure the cleanup is done to the proper standards and in a timely manner.