

TIMBER LAKE LUST SITE COMMUNITY ENGAGEMENT

CHEYENNE RIVER INDIAN RESERVATION
TIMBER LAKE, SOUTH DAKOTA



SEPTEMBER 2010

History and Site Activities

Contamination at the City of Timber Lake's project site was identified in the early 1990's and is believed to be from several former gas stations and bulk fueling facilities. Since 1993, EPA has monitored the groundwater to evaluate site conditions and continued to find increasing groundwater contamination as well as impacts on the City's Municipal Well #1. In 2007, a risk-based corrective action assessment was conducted at the site. The site assessment identified three locations with petroleum contaminated soil (PCS) as well as three separate contaminated groundwater source areas. In 2008, 422 cubic yards of PCS was excavated from three target areas and three in-situ chemical oxidation injection events were conducted. In 2009, a microbial analysis was conducted to identify benzene degrading bacteria and 69 tree seedlings were planted at the site. The plants are being utilized as a supplemental approach to remediate the contaminated soils and groundwater. This approach, known as phyto-remediation, is a relatively affordable method of remedial clean up by using fewer secondary water and decreased environmental impact. Most recently, a new municipal well was installed in 2010 with the help of EPA to replace the contaminated Municipal Well #1.



Historic and Current Petroleum Sites in Timber Lake demonstrates numerous potential contamination sources

Community Engagement Activities

EPA Region 8 performed this work in partnership with the Cheyenne River Sioux Tribe and with contract support from the Avanti Corporation. Regional staff coordinated a city council meeting with the City of Timber Lake, South Dakota Department of Natural Resources, and the Cheyenne River Sioux Tribe to discuss the replacement of a contaminated city well. Working extensively with representatives from the city and the water department, construction details and the location for the new well was selected to optimize well production. In addition, the Region met with the local newspapers each time they were on site to keep the community informed of site activities during the implementation of the remedy. Residents were informed of the assessment and remedial activities, along with the progress on the well installation through stories published in the local newspaper. The remedies selected to treat soil and groundwater included soil excavation, chemical oxidation, phyto-remediation, monitoring well installation, and city well replacement activities.

Community Engagement Lessons Learned

What Worked? What Didn't?

Early Community Engagement – EPA UST Program personnel worked closely with city officials from the beginning of the project. They were involved with the selection of subcontractors, construction details and coordinating field activities. In addition, input from the community was critical in locating the installation of a new municipal well.

Active Participation

City personnel had an active role in the planting of the trees, lending equipment, and supplying topsoil and mulch. They are currently performing maintenance of the trees. Their involvement from the beginning and active participation has resulted in this project being more successful.

High visibility and Community awareness

Visibility in the community was valuable in promoting awareness. This included notifying the local newspaper with project activities and news updates. During the excavation activities, several community members stopped at the site to ask about the odors emanating from the stockpiled soil. EPA personnel were available during the excavation to educate citizens of the risks associated with the odors and prevent community members from being placed at risk.



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