

Environmental Projects Updates

ChevronTexaco

Former Texaco Casper Refinery

Spring 2004

CAMU Construction

Since June of 2002, ChevronTexaco has removed approximately 368,000 cubic yards of remediation waste from areas of the former refinery in Evansville and incorporated the material into the Corrective Action Management Unit (CAMU). ChevronTexaco anticipates that the CAMU will hold near 580,000 cubic yards of material when completed. Remediation wastes incorporated in the CAMU consist primarily of non-hazardous petroleum contaminated soil, asphalt, concrete rubble, scrap metal, wood and related demolition debris. All material placed into the CAMU is managed to minimize environmental risk and compacted so that there is no unacceptable settlement thereby providing an adequate foundation for the placement of additional layers of remediation wastes as clean-up continues at the site. Operation of the CAMU began in June 2002 and could continue through 2006.

Construction of the Corrective Action Management Unit (CAMU) began in March of 2002 and was complete in early June 2002. The CAMU is an engineered landfill designed and constructed to safely contain wastes generated during environmental remediation activities at the former refinery. The CAMU will not receive waste materials from any other parties or offsite sources. CAMU construction included installation of remediation systems for soils and groundwater underneath the landfill, construction of drainage and access control systems, and installing the engineered double liner and leachate (underdrain) systems.

The final phase of CAMU construction will start after operational activities are complete and will include installation of an engineered cover system to completely encapsulate the landfill material and provide safe, long-term containment of the remediation wastes.

- CAMU Design Upgrade

As noted in the Summer 2002 Newsletter, CAMU Cell #2 was lined to accommodate the quantity and character of remediation materials identified during excavation and removal of waste source areas. In addition, ChevronTexaco received permission from WDEQ to line in between CAMU cells #1 and #2 to allow for placement of remediation wastes between the two cells. Lining between the two cells allows for an efficient use of landfill space and allows for completing the final cap and cover of the landfill under one engineered system rather than two. The engineering design for the liner systems for Cell #2 and between the two cells is identical to the double lined system installed in Cell #1.

- CAMU Public Information

Public review and comment for the CAMU Permit Application was completed in October 2001. A public meeting was held on October 17, 2001 at the Evansville Town Hall. The public meeting allowed WDEQ and ChevronTexaco to present information about the CAMU, answer questions, and to receive public comment. Following public review and comment, WDEQ issued approval of the CAMU Permit Application on December 3, 2001. Copies of the CAMU Permit Application are available for public review at the Natrona County Library and Evansville Town Hall.



Trees and Alfalfa



ChevronTexaco planted more than 2,300 trees and 10 acres of alfalfa in the western portion of the former refinery in spring of 2002. The trees and crops were planted to control dust, enhance the natural biodegradation of certain contaminants that remain in the soils and groundwater, and improve the aesthetics of the property. The trees include five varieties of poplars that were planted as small saplings of cuttings and the alfalfa was planted from seed. ChevronTexaco has been pleased with the progress in growth and establishment of the new trees and crops, as indicated in the photographs below.



ChevronTexaco is currently evaluating the use of Phytoremediation as an alternate remediation technology. Phytoremediation is the use of plants and trees to assist in the remediation of impacted soils and/or groundwater. ChevronTexaco plans to continue efforts to help establish the trees and may expand the area seeded with alfalfa during this and upcoming years. ChevronTexaco will conduct additional research and studies at the refinery in the future to evaluate if phytoremediation is a viable and effective technology to shorten the timeframe over which residual contaminants are removed from the soil and groundwater.



Wyoming Voluntary Remediation Program

CESC submitted an application to the Wyoming Department of Environmental Quality (WDEQ) Solid and Hazardous Waste Division for entrance into the Wyoming Voluntary Remediation Program (VRP) on May 29, 2003. WDEQ notified Chevron Environmental Services Company in a letter dated June 3, 2003, that the site meets the criteria as an eligible site and is accepted for participation in the VRP. Public notice of the facility's entrance into the VRP was first published in the Casper Star-Tribune on July 2, 2003. Additional public notices were published in the Star-Tribune on July 9, 16 and 23, 2003. Public comment extended through August 22, 2003; no comments were received during the public notice or comment periods. An integral part of the VRP is community awareness and participation. ChevronTexaco looks forward to your participation and comments.



As part of the VRP process, Chevron Texaco has been working closely with WDEQ to perform a human health and ecological risk assessment for the site. The VRP activities have included development of Sampling and Analysis Plan(s) in regards to the Constituents of Interest screening process, Data Quality Objectives, Data Adequacy and Risk Assessment. Currently the Risk Assessment focus is for the south portion of the property. During the months of January, February and March more than 400 boreholes were drilled and more than 250 samples were sent for analysis from the south property to evaluate soils in regards to the constituents of interest for the Human Health and Ecological Risk Assessment. The sampling for the Risk Assessment has been completed and the data is being evaluated. The VRP workgroup hopes to have a finished human health risk assessment for the south property by January 2005.

Innovative Technology Forum

ChevronTexaco, WDEQ, the U.S. Environmental Protection Agency (USEPA) and a number of energy and research companies formed a group to investigate and test innovative remediation technologies, the Remediation Technology Development Forum (RTDF). The RTDF was formed in February 2001 and meets regularly to share information on innovative testing and remediation technologies. RTDF members use information they gather to develop an improved decision making framework for remediation of large, complex industrial sites contaminated with petroleum hydrocarbons. ChevronTexaco has volunteered the former refinery in Evansville as a test site for the RTDF program.

The first phase of subsurface investigation was to further characterize the mobility and volume of petroleum products underlying a portion of the former refinery. This investigation used an innovative technology developed by the U.S. Navy called the Site Characterization and Analysis Penetrometer System (SCAPS) to complete this characterization. The technology can identify petroleum products in soils and groundwater. Hydraulic equipment (brought in from San Diego, CA) pushes testing probes deep into the soil and groundwater to perform specialized tests and measurements. The probes can detect the presence or absence of petroleum and measures its physical characteristics. The information gathered by the SCAPS equipment is then used to produce improved maps from which scientists develop models showing where hydrocarbon contamination exists at the site and how it behaves. Using the environmental data collected during earlier site investigations, in addition to that generated during the SCAPS investigation, ChevronTexaco will be able to evaluate the types and most effective locations for new remediation systems.



SCAPS probe collecting soil and groundwater data as it is pushed into the ground.

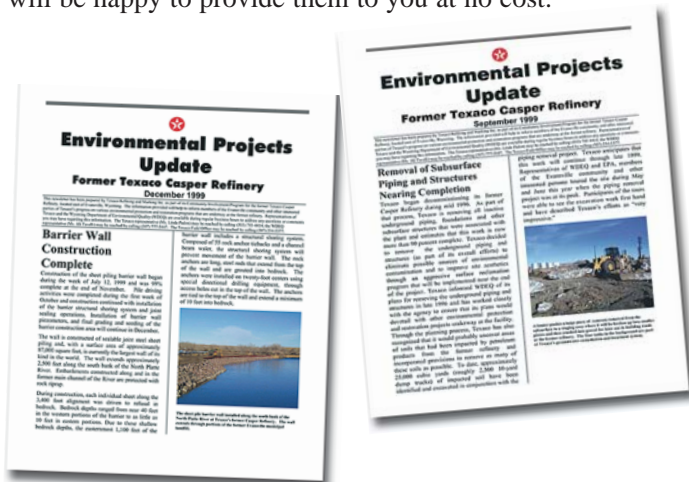
ChevronTexaco completed a NAPL (i.e. petroleum product) mobility investigation at the former refinery in Evansville, WY and presented the results at the first quarter meeting of the RTDF in Austin, TX on January 23, 2003. The objectives of the investigation were to develop a much more detailed conceptual model of the former refinery to understand the characteristics, distribution and behavior of NAPLs, more specifically the total mass and mobile mass of NAPL present on site. Results showed a much more detailed understanding of the NAPL impacts at the former refinery. The refined estimates of NAPL mass and distribution will allow ChevronTexaco to develop more specific goals for the long-term management of the hydrocarbon impacts. Immediate future activities include collecting biodegradation data and additional chemistry data that will help in determining the natural attenuation of the hydrocarbon at the site. In addition, the project team is evaluating a suite of innovative technologies for performing a possible pilot test in the coming year. The refined conceptual model allows ChevronTexaco to make more informed decisions on technology types and how to target areas for implementation of pilot testing activities.

ChevronTexaco, as a core member of the RTDF, is involved in the development of a national decision-making framework document to address the long-term management of NAPL – impacted properties. The document has the potential to globally change how large NAPL sites are regulated and managed in the future. The ChevronTexaco team is also involved in a NAPL training initiative with the API, whose purpose is to educate and begin to train state and federal agencies to better address NAPL cleanup issues.

For more information on the RTDF and SCAPS technology, please visit the RTDF website at www.rtdf.org.

Past Editions of Texaco's Newsletters

Past editions of ChevronTexaco's (Texaco) newsletters for Casper are available upon request. If you would like past copies of newsletters, or you are new to town and did not receive these previous newsletters, please contact us at (307) 234-5377, and we will be happy to provide them to you at no cost.



Contact Information

ChevronTexaco, as part of its Community Involvement Program, has prepared this newsletter for the former Texaco Casper Refinery, located east of Evansville, Wyoming. The information provided will help to inform members of the Evansville community and other interested parties of ChevronTexaco's progress on various environmental protection and restoration programs that are underway at the former refinery. Representatives of ChevronTexaco and the Wyoming Department of Environmental Quality (WDEQ) are available during regular business hours to address any questions or comments you may have regarding this information. The ChevronTexaco representative (Mr. Ed Wilson) may be reached by calling (925) 842-9976; the WDEQ representative (Mr. Jerry Breed) may be reached by calling (307) 777-5973. The ChevronTexaco Field Office may be reached by calling (307) 234-5377.