

RCRA Facility Fact Sheet

BP's Former Amoco Refinery
Casper, Wyoming 82602

HISTORY

The Midwest Oil Company and the Franco Petroleum Company began processing petroleum in Casper, Wyoming in 1912 on separate parcels of what is now identified as the former Amoco Refinery Property. In 1913, Amoco began operating adjacent to the Midwest and Franco properties. Eventually, Midwest Oil Company took control of Franco and by 1928, Midwest was purchased by and integrated into Amoco. The former Amoco Refinery operated until 1991 and in 1998 Amoco Corporation merged with British Petroleum to become BP Corporation North America Inc., hereinafter referred to as BP.

The early process units at the refinery consisted of mainly batch and coke stills that separated crude oil into usable products. Other batch processes produced and treated lube oils and finished waxes, and removed sulfur odor from gasoline. These facility along with boiler houses, pump houses, and railroad car loading facility, constituted the bulk of the early operations. In the late 1940s, a fluid catalytic cracking unit was built, followed in the mid-1950s by the ultraformer and alkylation units. The pipestill, central boiler house and lube refining units were constructed in the early 1960s and were continuously upgraded as new technologies developed. At the height of production (circa 1987) the former refinery processed an average of approximately 48,000 barrels of oil per day. In its last year of operation, output from the former refinery included: fuel gas (1450 barrels per day (BPD)); liquid propane gas (300 BPD); motor/aviation gasoline (14,700 BPD); fluid cracking unit coke (780 BPD); heavy fuel oil (400 BPD); kerosene and distillates (11,300 BPD); asphalt (500 BPD) and residuum (1800 BPD).

BP processed their crude at the 'Refinery Property', located along the southern bank of the North Platte River just a few blocks west of downtown Casper. North of the river, BP stored crude oil (North Tank Farm) and disposed of their process residuals and refinery wastes. BP also pumped refinery waste water to a pond six miles north of the property (Soda Lake).

CORRECTIVE ACTION

BP's regulatory history at the former Amoco Refinery in Casper, Wyoming began in 1980 when BP submitted a RCRA Part A permit application designating the property as an interim status facility under federal hazardous waste facility laws. After several years of legal wrangling between BP and the regulatory agencies (U.S. Environmental Protection Agency (EPA) and the Wyoming DEQ (WDEQ)) and as part of a settlement of a citizen's lawsuit in 1998, BP was required to move forward with corrective action at the site. A collaborative process was used to make investigation, risk assessment and cleanup decisions for this site. This collaborative process allowed the local authorities, the WDEQ

and BP to have open technical discussions and required the WDEQ to make corrective action decisions in consideration of public comments and in the public eye. This also provided a forum for each party to understand and address each other's concerns and specific needs during each step of the corrective action process, rather than WDEQ and BP reaching decisions and presenting them for public review and comment after the fact. The WDEQ has produced a video on this process "*Why Casper? A Collaborative Approach to Remediation and Reuse*" and if you are interested in seeing this video, please contact the WDEQ.

Ultimately, the WDEQ and BP reached cleanup agreements with community buy in and support. These agreements are called Remedy Decisions and they have been developed for each of the three areas; *Remedy Decision #1 - South Properties Area* (which includes the Refinery Property); *Remedy Decision #2 - North Properties Area and the North Platte River*; and *Remedy Decision #3 - Soda Lake Area*.

The remedy decisions outline the cleanup requirements for each of the properties in detail, but highlights include:

- A six thousand foot steel sheet pile [subsurface] *barrier wall and hydraulic well system* to contain and remove subsurface contaminants that had the potential to migrate and impact the North Platte River;
- *Source removal* including removal of subsurface pipe, waste units and soils that exceed standards that have the potential to impact groundwater and the removal of free phase hydrocarbons from groundwater;
- *Removal of contaminated soils* that exceed risk-based standards protective of site users and animals;
- Construction of a *Corrective Action Management Unit* as a permanent engineered containment system for remediation wastes;
- An elaborate *groundwater restoration system* including, active groundwater and soil flushing that creates an attenuation zone to protect off-site properties, using plants to augment the cleanup (phytoremediation) and a water treatment system that uses wetlands to remove contaminants; and
- A *demonstration project* designed to increase the likelihood that a technology suitable for remediation of localized persistent source areas will be available in the event the remedies selected do not perform according the performance criteria.

For the past two years the WDEQ and BP have continued to collaborate on design and operation, monitoring and maintenance work plans and completion reports required by the remedy decisions using a work group concept developed while doing the formal collaborative process. The oversight work group has met regularly to discuss and resolve technical issues. For current work group activities and upcoming events, see *Current*

Activities.

REUSE

In 2000, BP was the first facility accepted into WDEQ's *Voluntary Remediation Program (VRP)*. Participating in the VRP allows volunteers to receive liability assurances such as a 'covenant not to sue' from the WDEQ, and also allows the WDEQ to consider future land use when making cleanup decisions with the proviso that the local government is willing to institutionalize the property as a Use Control Area. A Use Control Area is an institutional control developed under WDEQ's VRP law that restricts the future use of a property. The City of Casper and Natrona County were willing to designate BP's properties as part of a Use Control Area, giving the WDEQ the flexibility to consider a cleanup based on potential risk to industrial/commercial and recreational users the property. The remedy decisions also mandate other institutional controls in order to prevent exposure to soils that exceed risk based standards (Soil Management District) and to prevent water use (Groundwater Restriction Area) until the groundwater meets drinking water standards.

Throughout the corrective action process and whenever possible, BP has integrated cleanup systems and remediation requirements with reuse. Examples of this integration is a kayak course in the North Platte River that bolsters the hydraulic containment system on the Refinery Property and the construction of wetlands and treatment ponds as water features on an 18-hole golf course.

ENVIRONMENTAL INDICATORS

Environmental Indicators (EI's) are measures of environmental cleanup success. Currently, there are two measures: 1) Human Health Exposures Under Control and 2) Groundwater Releases Controlled. Currently, the WDEQ has determined that BP meets EI's for both Human Health Exposures Under Control and Groundwater Releases Controlled. This determination is based on a combination of monitoring data, closure information and maintenance of institutional and engineering controls at the site.

FOR MORE INFORMATION

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