

## Current Remediation Status – Wyoming Refining Company, Newcastle, Wyoming

**Hermes Consolidated LLC.**  
**Db a Wyoming Refining Company**  
740 West Main  
Newcastle, Wyoming 82701

### HISTORY

The Wyoming Refining Company (WRC) (formerly Gray Oil Company, Sioux Oil Company, and Tesoro Crude Oil Company) is a petroleum refinery which is located in the western portion of the town of Newcastle, Wyoming.

The facility consists of a refinery production/processing area and evaporation ponds (latter onsite and offsite). Cambria Creek serves as the western boundary of the facility and West Main Street/U.S. Highway 16 serves as the facility's northern boundary. Stampede Street generally serves as the facility's eastern boundary, and Little Oil Creek/U.S. Highway 16 Bypass serves as the facility's southern boundary. The refinery property is approximately forty-six (46) acres in size.

The first production of refined petroleum products from the refinery dates back to the 1930's. The refinery produced a range of products from locally derived crude oil, but currently specializes in the production of light-end/middle products such as butane, propane, diesel fuel, JP-4 jet fuel, leaded/unleaded gasoline and fuel oil. The refinery is currently allowed 22,500 bbls/day of crude throughput on an annual average.

### CORRECTIVE ACTION

Wyoming Refining Company's RCRA corrective action as required by a U.S. Environmental Protection Agency (EPA) Consent Decree (June 1, 1988) is currently an interim measure ground water recovery system that is employed to act as a containment system to prevent off-site migration of contaminants. Groundwater monitoring is also conducted under two separate orders with the State of Wyoming Department of Environmental Quality (DEQ) including an Administrative Order on Consent (AOC) (January 4, 2000) and a Consent Decree (April 23, 2002).

WRC and the DEQ entered into an Administrative Order on Consent (AOC) which was effective on January 4, 2000. The purpose of the AOC was to address a Release (which refers to a release of hydrocarbons from Tanks #60 and #151), discovered in September, 1997. To comply with the AOC, containment systems were installed to capture the subject Release and other incidental hydrocarbon contamination that may be present in the groundwater. Interceptor trenches and other appropriate systems that are sufficiently designed and constructed to capture and halt migration of all non-aqueous phase liquids (NAPL) and dissolved phase hydrocarbon contamination from the Release were installed. The Interceptor Trench (IT) Systems include lateral drains, sumps, and a matrix of piezometers and monitoring wells. The Tank 151 IT system was installed in September 2004 and began operation in March 2005. The Tank 60 IT system was installed in October 2004 and began operation in April 2005. An upgradient drain system that would divert groundwater entering the north tank farm area was also installed.

During RCRA inspections conducted by DEQ at the refinery in 1996 and 1997, DEQ staff identified concerns relating to Wyoming Refining Company's handling of spent caustic, refinery wastewater sludges, leaded wastes, and other wastes. On April 23, 2002, Wyoming Refining Company and the DEQ entered a Consent Decree to address these issues at three sites: Thermal Catalytic Cracking (TCC) Drainage Swale, Tetraethyl Lead (TEL) Recirculation Tank, and Windmill Draw. Under Appendix B of the Consent Decree, a Boundary Control System is to be implemented as an Interim Corrective Measure to halt migration of groundwater potentially containing hydrocarbons past the WRC property boundary. Installation of the South Boundary Control System consisting of installation of a slurry barrier wall, was completed in June 2008. The remainder

of the system and operation began in March 2009. Boundary control along the west side of the active portion of the facility is currently being evaluated.

### TCC DRAINAGE SWALE

The TCC unit is described as extending two feet from the outer edge of the swale, from its origin at the west edge of the TCC unit charge heater pad to its termination point at the discharge to Waste Water Pond 2 to a depth of 24 inches below ground surface. As part of the Consent Decree with DEQ, Wyoming Refining was required to apply for a post-closure permit for the area designated as the TCC unit. The unit is alleged to have managed hazardous waste, thus requiring a permit. The Post-Closure Permit was issued on August 1, 2005 and will expire in 2015. The TCC drainage swale is no longer used for the management of hazardous wastes. Inspections of the unit are conducted quarterly and potential releases of contaminants from the TCC unit to groundwater and the subsurface environment are addressed as part of the boundary control and NAPL recovery systems which are in the process of being installed.

### TEL RECIRCULATION TANK

The TEL Unit is defined as an area encompassing a 20-foot diameter circle centered on the former TEL Unit diesel recirculation tank. The unit includes an area three feet on either side of the diesel pipeline corridors that formerly connected the diesel recirculation tank to the eductor valve of the TEL weigh tank. Approximately 20 cubic yards of material was removed from the former TEL Unit in 2006. The contaminated soils were replaced with clean fill material to begin the process of Clean Closure at the area.

### WINDMILL DRAW

Windmill Draw consists of two areas for investigation, the Annulus and the Downstream Area. The Annulus is defined horizontally as the area around the entire perimeter of the surface impoundment that encompasses a depth of zero to two feet of surface water and vertically to a depth of two feet of waste, sediment, soil, or subsoil from the low water level. If a discernable fluctuation in surface water levels exists, then the Annulus shall also include that area encompassing the high and low water levels. Screening-Level Ecological Risk Assessments were performed in October 2004 for both areas. Additional data was collected in 2006 for the Annulus to determine if the organic constituents in sediment/soil at the former inlet of the Annulus may pose unacceptable ecological risks. Groundwater monitoring is also conducted as part of the Windmill Draw surface impoundment assessment. WDEQ is currently reviewing the Screening-Level Ecological Risk Assessments to determine whether they meet the requirements of the Order (protective of sensitive ecological receptors) or a Baseline Risk Assessment will be necessary.

### Voluntary Remediation Program

On November 4, 2014, WRC entered the Voluntary Remediation Program (VRP). WRC and the DEQ entered into a Remedy Agreement for remediation of the TCC drainage swale on September 3, 2015. Upon completion of the public notice period on October 24, 2015, for the Remedy Agreement, the consent decree will be modified and WRC will no longer be required to have a Post-Closure Permit for the TCC drainage swale.

The primary focus on corrective action activities under the VRP at the WRC site will soon be completing a Current Conditions Report to compile all data and investigations conducted at the site, develop a site characterization work plan to address data gaps identified in the Current Conditions Report for soils, groundwater and vapor intrusion, human health risk assessment, and ecological risk assessment where applicable. After the characterization and risk assessments activities are completed at the Site, WRC will implement remedies identified through the development of a Remedial Alternatives Evaluation Report and Remedy Agreement.

## **FOR MORE INFORMATION**

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