

## Section 6.0 Recommendations

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## 6.0 Recommendations

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Rhodia completed the Phase 1 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) to evaluate the nature and extent of releases of hazardous waste or hazardous constituents from solid waste management units (SWMUs) or areas of concern (AOCs) at the Silver Bow Site (Site) and to gather necessary data to support human health and ecological risk assessment and a Corrective Measures Study (CMS). The specific objective of the work outlined in this report was to address identified data gaps that were identified in the U.S. EPA-approved CCRA Report (Barr, 2006). The RFI activities included programs to define site characteristics, including: groundwater quality, surface water and sediment quality along Sheep Gulch; surface water quality along Silver Bow Creek; SWMU-specific and AOC-specific material and soil quality; background/reference area soil quality; and soil gas quality.

The Silver Bow Plant, including the SWMUs and AOCs, has been adequately characterized for risk assessment purposes. The human health and ecological risk assessments will identify which parameters, if any, are present at concentrations that may warrant corrective measures. The RFI data set will be reviewed at that time to identify what additional sampling may be necessary to inform the corrective measures study or the corrective measures design phase.

### 6.1 Surface Water

The Site surface water quality data set is sufficient to initiate the baseline risk assessments to evaluate whether identified surface water constituent concentrations present an unacceptable risk to human health or the environment. No additional investigation activities are recommended for surface water at this time.

### 6.2 Sediment

Sediment quality was evaluated along the length of Sheep Gulch from the REC Plant to its discharge to the constructed wetlands associated with the Silver Bow Creek Streamside Tailings Operable Unit (SSTOU) remedy. This includes sediment samples collected from each of the beaver ponds located north of the tailing basin at the Site. Several constituents are present at concentrations above background which indicate a potential release from the tailing basin.

The Site sediment quality data set is sufficient to initiate the baseline risk assessments to evaluate whether identified sediment constituent concentrations present an unacceptable risk to human health or the environment. No additional investigation activities are recommended for sediment at this time.

### **6.3 Groundwater**

The Site groundwater quality data set is sufficient to initiate the baseline risk assessments to evaluate whether identified groundwater quality constituent concentrations present an unacceptable risk to human health or the environment. However, supplemental groundwater quality information will help support conclusions drawn from the existing groundwater data set. Additional monitoring wells were installed in October 2012 in the northwest corner of the Site to further evaluate groundwater quality trends and the potential northwest-ward groundwater flow direction. These monitoring wells were sampled in November 2012, and the analytical will help to further evaluate the risks to potential downgradient receptors such as the residential wells located to the northwest of the Site. These groundwater quality data will be presented in the Long Term Groundwater Monitoring Plan to be submitted to EPA in 2013. The Long Term Groundwater Monitoring Plan will establish the locations, parameters and frequency for sampling the Silver Bow Plant monitoring wells.

### **6.4 Soil - Natural and Undeveloped Areas**

The Site soil quality data set is sufficient to initiate the baseline risk assessments to evaluate whether identified soil constituent concentrations present an unacceptable risk to human health or the environment. No additional investigation activities are recommended for soil quality for the natural and undeveloped areas at the Site.

### **6.5 SWMUs and AOCs**

The data sets for the individual SWMUs and AOCs are sufficient to initiate the baseline risk assessments to evaluate whether identified constituent concentrations present an unacceptable risk to human health or the environment. The risk assessment will identify which parameters, if any, are present at concentrations that warrant corrective measures. The data sets will be reviewed at that time and additional sampling may be necessary to inform the corrective measures study or the corrective measures design phase.

### **6.6 References**

Barr Engineering Co. 2009. Final Phase I RCRA Facility Investigation Work Plan Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001., Rhodia Silver Bow Plant, Butte, Montana, March 2009.