

**SECOND ADDENDUM TO THE FACT SHEET
FOR NPDES PERMIT NO.
WA-005243-4**

**CROWN RESOURCES CORPORATION
BUCKHORN MOUNTAIN MINE**

Facility Location:

Approximately 3.5 miles east of Chesaw, WA

Mailing Address:

**363 Fish Hatchery Road
Republic, WA 99166**

This is an addendum to the fact sheet that accompanies NPDES Permit No. WA-005243-4. The permit was issued to Crown Resources Corporation on September 27, 2007.

Permit modifications are proposed to add:

- Permit limit and monitoring for Total Residual Chlorine due to changes in the treatment process for mine dewatering water and stormwater from development rock and ore stockpiles.
- Changes to the frequency of water quality monitoring for certain parameters at several surface water monitoring sites as a result of the Settlement Agreement dated April 22, 2008, between and among Crown Resources Corporation, Okanogan Highlands Alliance, the Washington Environmental Council, and the Center for Environmental Law and Policy.
- Oil and Grease and Total Suspended Solids monitoring in the treatment plant influent and effluent.
- Continuous turbidity monitoring currently required in the U.S. Forest Service Plan of Operations at two monitoring sites along the Marias Creek Haul Road.
- Acute and chronic Whole Effluent Toxicity characterization beyond that conducted in 2008.

DRAFT MODIFICATION

Permit modifications due to changes in treatment

Crown Resources proposes to add breakpoint chlorination pretreatment for ammonia to the existing ion exchange treatment system. Crown Resources submitted an engineering report for the breakpoint chlorination process for Ecology's review and approval. The engineering report was approved by Ecology on February 18, 2009. The effluent from the breakpoint chlorination contains Total Residual Chlorine, which is regulated in the surface water quality standards (Ch 173-201a). The permit has been modified to incorporate the following changes:

Changes to Special Condition S1.A. Effluent Limits for Mine Water and Stockpile Stormwater Discharges.

For Total Residual Chlorine, an Average Monthly limit of 0.008 mg/L and a Maximum Daily limit of 0.019 mg/L will be added to Special Condition S1.A.

Changes to Special Condition S2.A. Treated Mine Water and Stockpile Stormwater Discharges Monitoring Schedule

A monitoring frequency of 5 times/week for Total Residual Chlorine will be added to the monitoring tables for treatment plant effluent to verify the effluent limit established in Special Condition S1.A.

Oil and Grease and Total Suspended Solids monitoring will be added to the monitoring tables for treatment plant influent and effluent. This change corrects an oversight in the original permit, which set effluent limits for those parameters but did not include monitoring. Upon discovery of the oversight, and through an informal agreement, Crown Resources has been monitoring for the parameters beginning in April 2008.

Permit modifications due to changes in monitoring frequency

Changes to Special Condition S2.C. Mine Site Surface Water Monitoring Schedule

The Settlement Agreement results in adding an increase in monitoring frequency to bi-weekly during the months of April, May, and June for turbidity and total suspended solids at surface water monitoring sites SW-7, SW-8, and SW-9. Bi-weekly means every two weeks. The previous monitoring frequency was monthly for these parameters at the named sites.

DRAFT MODIFICATION

Changes to Special Condition S2.D. Marias Creek Haul Road Surface Water Quality Monitoring Schedule

The Settlement Agreement results in adding an increase in monitoring frequency to bi-weekly during the months of April, May, and June for turbidity and total suspended solids at surface water monitoring sites MC-1, MC-2, and MC-3. Bi-weekly means every two weeks. The previous monitoring frequency was monthly for these parameters at the named sites. Other parameters in Special Condition S2.D. are not affected by the Settlement Agreement.

The U.S. Forest Service Plan of Operations for the Marias Creek Haul Road required installation of two continuous turbidity monitoring devices at surface water quality monitoring sites MC-1 and MC-3. These turbidity data will be collected and reported in addition to the monitoring under the Settlement Agreement.

Permit modification for acute and chronic toxicity characterization

Changes to Special Condition S10.A. Acute Toxicity, Effluent Characterization

Changes to Special Condition S11.A. Chronic Toxicity, Effluent Characterization

Crown Resources conducted acute and chronic Whole Effluent Toxicity characterization in 2008, as required in Special Condition S10.A and Special Condition S11.A. The results from those tests were not conclusive and are not applicable to the changes in the treatment process covered in this Second Addendum. Additional dates during 2009 and 2010 will be added to the captioned special conditions for acute and chronic Whole Effluent Toxicity characterization.

RECOMMENDATION FOR PERMIT MODIFICATION

Ecology proposes that this Permit be modified for the remainder of the current permit cycle ending **October 31, 2012**.

PUBLIC NOTICE

The proposed changes to this permit are considered major modifications under 40 CFR 122.63. Consequently, the draft permit modifications are required to be published for a 30-day public review and comment period.

DRAFT MODIFICATION