

Chuitna Coal Project

PACRIM COAL LP

PROJECT SUMMARY

In the development of mineral resources, areas of exploration require studies evaluating environmental sensitivities. The expertise of Riverside Technology, inc. in groundwater and surface water hydrology is being used to study the effects of the proposed coal project on environmental resources.

LOCATION
Alaska, U.S.A.

PERIOD
1986 – Present

PROJECT DETAILS

Alaska’s Beluga coal field is not only rich with mineral resources, it also is saturated with water - both above and below the ground surface. Because of the wet nature of the region and environmental sensitivities, it is important to understand the groundwater and surface water hydrology of an exploration and mining area before large-scale mining work begins.

The Chuitna Coal Project is located in the Beluga coal field, and Riverside Technology, inc. (Riverside) has been retained to design, coordinate, and implement the groundwater, surface hydrology, water quality, and sediment baseline studies for the proposed 12-million-metric-tons-per-year coal project. Data collected on the project is being used to support a surface mine permit and a National Environment Policy Act (NEPA) review. Surface water monitoring included:

- Establishing the surface water stations.
- Installing digital data collection equipment.
- Operating and maintaining the monitoring network.

Both continuous and instantaneous streamflow data are collected. Rating curves and annual daily records are generated. Continuous water temperature data and water quality data were collected and analyzed as part of a baseline study to be able to evaluate the project’s impact on anadromous fish and other wildlife. Baseline studies to characterize surface and groundwater hydrology began in the spring of 1982. Data collection continued on the project on a smaller scale until 2006 when Riverside rehabilitated the data collection network to support the new permitting process. Riverside continues to collect and analyze ground and surface water data.

During the 1986 and current mine permit application process, Riverside has acted as the project’s hydrologic consultant. As such, Riverside is responsible for hydrologic data collection and analysis to support the mine permit application. Riverside’s activities included validation of a storm runoff and flood hydrology methodology for use in the project area, then computation of all design flows for culverts, sediment ponds, drainage channels, and other project features. Since anadromous fish are native in streams on the project area, sediment control was a critical issue. Riverside performed measurement of sediment wash load and estimation of bed load sediment transport, and produced sediment control plans and sediment pond design. Part of the mine plan included mining through streams on the site. Riverside evaluated and documented the stream channel as part of the plan to reconstruct the channels during mine reclamation. Riverside was responsible for the stable channel hydraulic analysis used in the design.



Surface water and water quality monitoring

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CORPORATE

2950 E. Harmony Rd.

Suite 390

Fort Collins, CO 80528

(970) 484-7573

D.C. AREA OFFICE

1010 Wayne Ave.

Suite 500

Silver Spring, MD 20910

(240) 638-3345

www.riverside.com