September 29, 2006

Tom Chapple
Director – Air Quality
Alaska Department of Environmental Conservation
Division of Air and Water Quality
555 Cordova St.
Anchorage Alaska 99501

RE: Red Dog Fugitive Dust Update No. 6 – 3rd Quarter 2006

Dear Mr. Chapple:

Please find enclosed Teck Cominco Alaska's (TCAK), Red Dog Mine Fugitive Dust Quarterly Update Report as described in Section 6 of the Memorandum of Understanding (MOU) between the Alaska Department of Environmental Conservation (ADEC) and TCAK. The report covers the period of July through September 2006.

1. Studies

Particle Fate Analysis

A final draft of a report entitled *Mineral Weathering in Red Dog Soils* dated May 5, 2006 was reviewed during the early part of the quarter and was found to have deficiencies with regard to techniques applied.

Leachable metals were analyzed by diagnostic leaching using ammonium acetate / ammonium chloride as the extractant. Because this method is known to preferentially leach lead over zinc the results did not reflect what was observed in the field. New tundra samples were collected and they will be analyzed using EPA method 1312 (Synthetic Precipitation Leaching Procedure), which uses a buffered H2SO4 / HNO3 solution as the extraction fluid.

Scanning Electron Microscope images taken of the tundra soils did not clearly identify fugitive dust in the draft report. A second attempt will be made on the new samples. It is hoped that the new images will be similar to those published in *The Natural Dispersal of Metals to the Environment in the Wulik River–Ikalukrok Creek Area, Western Brooks Range, Alaska* by Karen D. Kelley and Travis Hudson, USGS Fact Sheet 107–03, October 2003 (see attached).

2. Ambient and Fugitive Monitoring

Total Suspended Particulate Ambient Air Monitoring

TCAK continues to monitor Total Suspended Particulates (TSP), airborne lead, and airborne zinc using Rupprecht & Patashnick 1400 AB TEOM ambient particulate monitors (TEOM) equipped

with TSP Inlets and Automatic Cartridge Collection Units (ACCU). The monitoring results, by quarter, are provided below.

Table-1
Red Dog Mine
Quarterly TSP Lead Concentration*
(R&P 1440AB TEOM Data)

	PAC TEOM Site			Tailings Dam TEOM Site		
	Average ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Maximum ($\mu g/m^3$)	Average ($\mu g/m^3$)	Minimum ($\mu g/m^3$)	Maximum ($\mu g/m^3$)
1st Quarter 2005	1.7	0.17	5.8	0.7	0.17	1.9
2nd Quarter 2005	1.4	0.05	5.8	0.5	0.05	1.2
3rd Quarter 2005	0.7	0.02	4.8	0.2	0.02	1.4
4th Quarter 2005	1.2	0.22	6.5	1.0	0.02	3.6
1st Quarter 2006	2.2	0.14	14.6	1.0	0.02	3.1
2nd Quarter 2006	1.0	0.12	4.3	0.2	<0.01	2.6

** The table values have been adjusted using the Hi-Vol correlation established in the March 2006 comparison study. (Hi-Vol=TEOM/0.42)*

Vegetation Monitoring

ABR personnel were onsite in June, July and August to establish monitoring transects radiating from the mine site outward to a distance of 3,000 meters. These sites were surveyed using the point intercept method for species, vigor and percent cover. Plant tissue and soil samples were also taken. The sites will be monitored over a three year period. Initial observations suggest that some mosses are recovering in impacted areas near the mine.

ABR also established plots in impacted areas west of the tailings impoundment, north of Red Dog Creek and in the area below the personnel accommodations complex to test various ameliorative treatments. One third of the test plots were treated with lime. The remaining plots are held in reserve for future treatment options and for data control.

Modifications were made to the vegetative mapping program following the initial field examination by ABR. In the attached report, *Assessment and Delineation of Vegetation Community Impacts and Wetland Mapping at the Red Dog Mine*, ABR proposed to delineate and classify the areas of affected vegetation surrounding the mine site, and to establish permanent monitoring plots to track annual trends and changes in plant cover. (*Note* the report also includes discussions on wetland mapping, which is not part of the vegetation study).

3. Engineered Controls

Gyratory and Jaw Crusher Dump Pocket Baghouses

The gyratory crusher and jaw crusher dump pocket baghouses were commissioned on July 19th. Source testing of the baghouses was conducted during the week of August 14th and results are

pending. The effectiveness of the dump pocket dust control systems will be evaluated going forward by comparing real time ambient air TSP concentrations to crusher operational records and comparing those trends to pre-modification data.

Coarse Ore Stockpile Building (COSB) Baghouse
Air Quality Control Minor Permit No. AQ0290MSS03 was issued on August 3rd for the construction and operation of the proposed COSB baghouse. Detailed engineering for the mechanical and structural components is anticipated to begin during the 4th quarter of 2006.

Mine CSB/Truck Loading Facility Fugitive Dust Reduction Review
The prototype baghouse testing was completed in July 2006. The testing has determined that the operation of a baghouse in the high humidity environment on the CSB is feasible except for limited periods when the relative humidity inside the building exceeds 99%, see the attached study report for additional details. Preliminary engineering of the baghouse system is in progress with finalization of the design expected in the first quarter of 2007.

4. Source Apportionment and Particle Deposition Modeling

Source Contribution and Modeling Report
The draft source contribution report is under internal TCAK review including verifying the operational data used in the detailed emissions estimates for each of the time frames. Additional information is also being collected to better represent emission sources. As an example, tailings beaches have been digitized from historic aerial photographs from the different time periods in order to calculate the exposed areas for calculating emissions.

If you have any questions, concerns, or require any additional information regarding this report, please contact Mr. Jim Kulas at 907-426-9129 / jim.kulas@teckcominco.com or Mr. Wayne Hall at 907-426-9259 / wayne.hall@teckcominco.com.

Sincerely,
Teck Cominco Alaska Incorporated

John B. Knapp
General Manager

cc: R. Barr, NANA/Anchorage