

**ENVIRONMENTAL MEMORANDUM**

**Red Chris Development Company Ltd.**  
200–580 Hornby Street, Vancouver, BC V6C 3B6

Date: November 4, 2015

Distribution: Red Chris Monitoring Committee

Blaine Lindstrom and Chantel Quock, Environmental Technicians;

From: Mike Polywkan, Environmental Scientist  
Jack Love, Environmental Superintendent

Re: Red Chris Monitoring Committee Environmental Report Oct 20 – Nov 3, 2015

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**Weather:**

Temperatures range from -11°C to 2°C. Heavy snowfall occurred in the afternoon of the 20<sup>th</sup>, which remained on the ground. There have been clear sunny days almost every day until the 28<sup>th</sup>, which had light to heavy snow throughout the day with some short breaks. Overnight snow on the 30<sup>th</sup> and then every day after the 31<sup>st</sup>.

**General Activities:**

- Haul road construction and touch ups, drilling and blasting in the pit.
- Access road construction/repairs and various other small jobs in the Tailings Impoundment Area (TIA).
- Reclamation work for the Iskut Extension powerline continues.

**Spills and Incidents:**

- No incidents to report.

**Water Management:**

- Weekly water samples (5 samples in 30 days) for sites W3 and W69 were collected on the 21<sup>st</sup> and the 4<sup>th</sup>; the 28<sup>th</sup> was the last sample of the 5 consecutive weekly samples for those 2 sites. A five weekly samples in 30 day program for W4 as well began on the 28<sup>th</sup>.
- Biweekly surface water sampling was collected and sent out for analysis.
- Quarter 4 of groundwater sampling has begun.
- No North Reclaim Dam Discharge (NRDD) samples were collected, as there has been no discharge.
- Monthly phreatic data, i.e. groundwater levels, have been collected for November.
- The north reclaim dam pond has been added to the monthly sampling.
- A transducer was installed in the reclaim pond to measure water levels (see photo) during periods of pumping groundwater and the reclaim pond water into the tailings pond.

**Waste Management:**

- The General Waste Area (GWA) has been in good condition recently. People have been following the rules for the most part, and when they haven't, they rectified the situation after being notified.
- Potassium Permanganate has been found to be discharging outside the water treatment plant for the truck shop. A plan to get the discharge funneled into an empty waste oil cube, and deposited into the tailings pond when full, is being developed.

**Wildlife Management:**

- Very few wildlife sightings reported.
- A weasel was found in the household garbage bin. It had managed to get out before the environmental technicians could see it.
- A few different moose have been seen in the waste water wetland.
- Animal tracks are seen in the snow all over site, usually fox tracks.

**Upcoming Activities:**

- November petroleum distribution system inspection, surface water samples, and data reports.
- The mill workers need to clean up the remaining used bags of reagent at the GWA.

**Photos:**



Oct 20 – Artesian pressures are high when the groundwater is not being pumped into the tailings pond. This is natural groundwater pressure.



Oct 20 – A transducer has been installed in the tailings pond.



Oct 26 – Potassium Permanganate has been found to be leaking outside the water treatment plant for the truck shop.



Oct 26 – The last stage of wastewater treatment. The green light is from the UV bulbs travelling through algae in the water. Water from the wastewater treatment plant is discharged at W74 into the environment, and eventually leads down into the tailings pond.



Oct 26 – A sump near the pit. There was an issue with containment, but pumping has been keeping it in check and upgrades were made



Oct 21/25 – Keeping on top of the waste area, before things get out of hand again, and having workers correct offenses as soon as possible has yielded good results.



Oct 28 – The waste area is in excellent shape.



Nov 1 – Lagoon 1, of 2. There've been some technical issues with keeping the blowers running so the pond can be aerated, but for the most part it's been running smooth.



Nov 2 – A container for used antifreeze behind the pit shop. There's a plan in place to get the container into 110% containment.