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July 14, 2010

Angela Plautz
Regulatory Officer
Mackenzie Valley Land and Water Board
4910 50th Ave, Yellowknife NT, X1A 2P6

Dear Ms. Plautz

RE: Modifications to Monitoring Plan submitted as condition of Tundra water license MV2009L8-0008

This letter is to document modifications to the Monitoring Plan submitted to the Mackenzie Valley Land and Water Board on April 1st 2010 as part of conditions D.34 and D.35 of Tundra water license MV2009L8-0008. The monitoring plan is entitled: *Development of Tundra Mine Construction Monitoring, Long-Term Monitoring, and Status of the Environment Programs.*

Baseline Monitoring:

1. Monthly sampling of Powder Mag Outflow (14-6G) and Sandy Lake Outflow (14-6H) for *Solids* instead of Weekly (Table 3.3-1). Erosion issues at these particular sites are of minor concern only, as treated water is "buffered" by 3 - 6 ponds/lakes before these sites. Monthly sampling and historic results have allowed us to confidently determine "baseline" conditions.
2. Weekly sampling of the stream crossing upstream of Sandy Lake (14-9) instead of monthly. (Table 3.3-1). Since it is the first year that this site has been monitored, weekly sampling is more appropriate.
3. Sampling for cyanide of the surface seepage sites (14-2.1 to 14-2.6) in the spring instead of monthly (Table 6.3-1). Historic results are adequate to determine baseline levels and more frequent and expensive analysis of these parameters is not warranted. The current SNP does not require any cyanide sampling at these sites.
4. Benthic and sediment surveys to be completed in depositional areas (shallow and mid-depth) not the inflow and outflow of each of the exposure lakes (Table

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- 3.3.-2). Benthic organisms and sediment only occur in depositional areas.
5. Additional samples of Phytoplankton taxonomy and biomass samples to be collected because these organisms were consistently found to be the most susceptible organisms to toxicants in several lakes during past toxicology experiments. (Section 3.3.2.3).
 6. It is proposed to use another reference water body than the Control Lake for the Aquatic Ecology Baseline Construction Monitoring Program (Table 3.3-2). The recommended Control Lake to be sampled as a reference water body for both Matthews and Sandy Lakes is only known to contain Arctic grayling and both forage *and* predatory fish are required to compare with the exposure lakes.

Construction Monitoring (Water Treatment)

7. Monthly sampling of Whale-Tail Outflow instead of Weekly. Weekly sampling is very difficult logistically as WhaleTail is only accessible by foot or helicopter and the lake is located a significant distance from the Tundra mine site.

Long Term Monitoring

8. It is proposed that sampling sites (lakes, seeps and groundwater) be monitored in the spring (Tables 4.2-1 and 6.4-1). However, as “spring” isn’t defined in the report, we suggest a July sampling date to be consistent with “Baseline Monitoring”. Groundwater and larger lakes often take considerable time to break-up and are frequently frozen until the beginning of July.

Surveillance Monitoring Program (SNP)

9. Monthly sampling of the Landfill ditches (14-5) instead of weekly. Weekly sampling of the Landfill ditches (14-5) during freshet does not make much sense and is a 'carried over mistake from the original Type B water licence' from the MVLWB. Landfill Leachate (station 14-3) is downstream of the landfill ditches and would be the most appropriate site to conduct weekly sampling, as all water leaving the landfill area passes by this site. However, even at this site weekly sampling is onerous and logistically difficult if the camp is not operational. Following the receipt of the Type B licence, the INAC inspector (Scott Stewart) and MVLWB staff (Adrian Paradis) were comfortable with monthly sampling at that time for all landfill locations.

If you have further questions please do not hesitate to contact me at (867) 669-2773.

Sincerely,

Jane Amphlett
Project Manager
INAC – Contaminants and Remediation Directorate
Northwest Territories

The logo for the Government of Canada, featuring the word "Canada" in a bold, serif font with a small red maple leaf icon above the letter 'a'.

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