

From: [Tyree Mullaney](#)
To: ["Permits"](#)
Subject: FW: Roaster Decommissioning Plan
Date: Monday, June 03, 2013 4:22:34 PM

Please post

MV2012L8-0010

From: Adrian Paradis [mailto:Adrian.Paradis@aandc-aadnc.gc.ca]
Sent: June 1, 2013 9:04 AM
To: tyree@mvlwb.com
Cc: Katherine Silcock
Subject: Re: Roaster Decommissioning Plan

Hi Tyree,

Please see the Project response to Alternatives North follow up comments from May 31, 2013 concerning the Roaster Decommissioning Plan.

1) Although the live internet reporting of the community based air quality monitoring stations (at Sir John Franklin High School, Niven Lake and Latham Island) is an improvement, we would recommend that the fenceline monitoring stations are much more important in terms of providing an early warning system and a much better indicator of site conditions and management responses. We ask that AANDC commit to live internet reporting of the fenceline stations.

Response: Important to note is that the fenceline monitoring stations are the second line of dust monitoring that will take place. The first line of monitoring as stated in our May 21 cover letter is the roaster perimeter monitoring. Roaster perimeter monitoring is a conservative program and will commence each day prior to start of work and occur continuously throughout the work day. Monitors will be fitted with automatic alarms to provide notification of any exceedances as soon as they occur so that appropriate actions can be taken immediately as set out in Section 5.2 of the DMP. In addition to the roaster perimeter monitoring, industrial hygiene monitoring under the NWT Mine Health and Safety Act will be implemented to ensure a safe work zone.

Implementing many layers of dust prevention measures (summarized in the May 21 cover letter) and monitoring to ensure the safety of workers within the immediate active work zone, more distant areas (at the fenceline and in the community) will also be protected.

Also important to note is that the fenceline monitoring program will capture dust generated by unrelated sources such as traffic on Highway 4 and windblown dust from other parts of the Giant Mine site. As such, live reporting of fenceline monitoring is not a direct indicator of site conditions and management responses related solely to roaster deconstruction. For these reasons, live internet reporting of the fenceline stations is not meaningful.

The Mackenzie Valley Land and Water Board is aware of the urgency and time sensitivity of the roaster deconstruction. The Project Team will fulfill its commitments to live reporting (webcams and community station continuous direct read data) within a few weeks; a period of time is required to install and test the "live" system and make it fully operational. However, we respectfully suggest that requiring a live system to be in place prior to starting work is neither necessary nor appropriate in light of the recognized urgency of the situation.

2) We also note that monitoring at these sites is only to be conducted during operations, rather than 24-7. We recommend continuous monitoring (including over the winter months) that would ensure that should an accident or malfunction happen outside of regular work hours, that it would be detected as

soon as possible, rather than as much as 12 hours or more later.

Response: As stated in our May 21 response to Alternatives North Comment 33, monitoring to capture periods of active AND inactive operations will take place as follows:

. The continuous particulate monitors at the three community stations (i.e. Latham Island, Niven Lake, downtown Yellowknife) will be operated 24-7 throughout the year since their purpose is to provide population exposure information.

. The discrete samplers used in roaster perimeter and fenceline monitoring will be operated for 24-hr sampling periods, some units varying from every day of operations to every 3 days of operations, to every 6 days during no operations. These samples will therefore capture times of no site activities as well as during site activities.

There is no need for continuous monitoring over the winter months as no disruptive activities will be taking place. All structures will be secured prior to seasonal shutdown. The highest priority areas will be decontaminated prior to the end of the 2013 work season, meaning that remaining contamination on buildings will be much less than existing amounts. In addition, the Care and Maintenance contractor performs daily physical inspections of the site throughout the year which provides an early detection service. Any failure in the roaster complex structures would trigger spill responses in accordance with the approved Spill Contingency Plan.

3) We had asked AANDC to provide a copy of the 2012 air quality monitoring program report. Some data from the report is summarized in the Dust Management Plan (page 14) and show that PM10 levels ranged from 45.2 to 75.6 micrograms per cubic metre and that the Ambient Air Quality Criterion limit is 50. This data serves as a reality check when one considers the proposed Risk Based Action Levels set at 85-159 micrograms per cubic metre depending on the averaging period. Aside from our concerns on the assumptions that went into setting the Risk Based Action Levels (comments 42-45), it would appear that the Risk Based Action Levels have been set so high that regular site activities do not trigger any management responses whatsoever.

It is important to note that the 2012 site air quality data are based on 24 hour averages whereas the RBALs were developed based on 15 minute averages. This is important when comparing historic data sets and considering how management responses will be triggered on site. The historic air quality data collected on-site was conducted with samplers that collect on a 24-hr basis, and the results are presented as an average particulate concentration (mass particulate/volume of air) over those 24 hours. The historic monitoring data was compared to provincial criteria for PM10 (i.e. 50 ug/m3), which is established for a 24-hr basis, and accounts for the possible peaks and valleys in data that may occur throughout those 24 hours. We do not have any data from the Giant Mine site that can identify short term elevations throughout those 24 hour periods, however, we can look at the NAPS monitoring station in Yellowknife, which monitors PM10 hourly. As demonstrated by the following example, hourly results can be highly variable when compared to the 24-hour average value. One example, which is representative of typical spring dust seasons days each year in Yellowknife, is as follows:

. This example demonstrates that although a 24 hour average measured at the Giant Site may be below the RBALs levels established for the site fenceline, there could be multiple instances throughout those 24 hours that are well above the RBAL and would therefore trigger action in accordance with the response tables.

Recall the RBAL was developed to provide a surrogate measurement for arsenic in PM10, since there is no technology that can monitor As in real-time. It is based on 15-minute action levels, established based on conservative estimates for concentration of Arsenic in soils on site, and conservative estimates for dilution over distance to the receptors. In addition to the continuous monitoring of PM10, against which site dust mitigation measures will be triggered, there will be 24-hour samplers collecting particulate for arsenic analysis on the fenceline and at 3 community stations in order to verify that assumptions were correct and site dust management actions are effective.

We trust that this answers all of Alternatives North questions and provides the Board appropriate information to make a timely decision.

Adrian Paradis
Regulatory Manager
Giant Mine Remediation Project
Wk. 867.669.2425

>>> "Tyree Mullaney" <tyree@mvlwb.com> 5/30/2013 3:10:18 PM >>>

Hi Adrian,

The Board received on May 31, 2013 follow up comments from Alternatives North concerning the Roaster Decommissioning Plan. In order to ensure a complete review of this plan, the Board requests a response to these follow up items. As rules of administrative fairness, and Board process, require the proponent to have the final opportunity to respond to comments submitted, could you please respond to the questions outlined below (full email available on the registry). The record will then be closed on this review.

Taken from Alternatives North email.

- 1) Although the live internet reporting of the community based air quality monitoring stations (at Sir John Franklin High School, Niven Lake and Latham Island) is an improvement, we would recommend that the fenceline monitoring stations are much more important in terms of providing an early warning system and a much better indicator of site conditions and management responses. We ask that AANDC commit to live internet reporting of the fenceline stations.
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As the Roaster Complex Deconstruction Plan is going to the Board in the near future a timely

response is required.

Tyree Mullaney

Regulatory Manager

Mackenzie Valley Land and Water Board

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