



UNIMIN

Unimin Canada Ltd.

Date: June 26, 2015
To: PLC Members
Copies: Blue Mountain Modernization PLC Engagement files; Mary Kainer (Environmental Chair, LKRA); posted on www.CanadianNepheline.ca website
Subject: **Public Liaison Committee – Minutes of June 26, 2015 Meeting**

Meeting Date: Friday June 26, 2015 **Time:** 2:00 – 4:15 PM

Hosted by: Bob Marshall (Unimin) – Blue Room (plus site tour)

Attendees: Lake Kasshabog representatives:
Dawn Mitchell – Member at large
Mike Delsey – East Lake rep
John Davison (absent) – East Lake rep
Ron Kearn (absent) – West Lake rep
Michael Rosin (absent) – West Lake rep

Unimin personnel: Bob Marshall, Cynthia Jamieson, Doug Staples

Observer: Jim Martin (absent)

Go-To-Meeting: Doug Staples was available from 2 - 4:15 pm to assist, if necessary, with member login via phone or webinar. However, no one attended from a remote location for this meeting.

Agenda Items:

Three changes were made to the agenda including: (1) rearranged agenda order to conduct the site tour between 2 and 3 pm prior to the 3:30 pm blast; (2) addition of noise abatement update; and (3) addition of Open House information. For safety reasons, the tour was conducted prior to the blast so that the meeting could continue uninterrupted in a safe zone during the blast.

1. Group Tour of outside areas of the mine site (2 – 3 pm)

- D. Mitchell and M. Delsey, and C. Jamieson accompanied B. Marshall in a cab-truck to (1) the Blue Mountain tailings site, (2) the Nephton tailings site, (3) the FR 90 cottage access road off the haul road; and (4) the highwall between the Main Pit and the South Pit. Irrigation cannons were operating at both tailings sites, to cover active areas and to aid vegetation. Inactive tailings deposition areas were covered with ponded water, robust vegetation, and rock armour. No environmental concerns were raised with respect to

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observations. The cottage access road was followed part way so as not to compromise privacy of cottagers proximal to Unimin’s haul road. To-date, Unimin has never received a complaint from these residents. The tour concluded with a lookout view of the region including the perspective of the mining operations relative to Kasshabog Lake neighbours.

2. Review of the Minutes of the last meeting

- Bob Marshall conducted a brief overview of the meeting minutes and reiterated key points
 - Results of the Acoustic Audit confirm that the operations as measured and observed by Cambium at the Blue Mountain and Nephton Plants and their receptors are in compliance with the MOECC sound level limits.
 - Most of the time, the sound levels at the off-site receptor are below 40 dBA. There are few occasions when the one hour Leq rises to above 40 dBA; however there are no observed corresponding elevated sound levels at the on-site monitor (Nref) during the same period. In some cases it higher sound levels at the receptor may be attributed to by wind or other external non-Unimin sources
 - Microscopic analysis of dust collected on high dust count days shows that there is a high concentration of organics, possibly pollen, that contributes to the monitoring results
- Bob Marshall asked if there were any errors or omissions from the last meeting minutes
- None was noted - Minutes accepted from first meeting

3. Review the 2015 Dust Control Action Plans for each Plant

- Bob Marshall presented (via screen and paper copy) the Blue Mountain Dust Action Plan and the Nephton Dust Action Plan for 2015, including their attached schematic diagrams
- The Dust Action Plan (one for each Plant), which is one of Unimin’s proactive dust management tools, is a table of annual dust control activities, responsible individuals and target dates to be carried out during the warm weather. The Blue Mountain actions items are listed below. This Plan is generated in the first quarter of the year and a copy is provided to the MOECC.
- Example of Blue Mountain’s Dust Action Plan Activity list, below.

Item 1	Re-calibrate the weather station
Item 2	Re-commission irrigation system for Tailings Area (<i>As per TBR – Watering</i>)
Item 3	Plant and fertilize 40 acres of grass mixtures (<i>As per TBR- Vegetation</i>)
Item 4	Inspect Tailings Dam face, re-apply coarse rock facing as required (<i>As per TBR – Non-erodible</i>)
Item 5	Inspect Tailings Pond Roadways, re-apply gravel topcoat as required (<i>As per TBR – Non-erodible</i>)
Item 6	Full crew review of Best Management Practice Plan for the Control of Fugitive Dust
Item 7	Re-fertilize vegetated areas
Item 8	Arrange for Calcium supply guarantee for short notice dust suppression (<i>As per TBR – Chemical Suppressant</i>)
Item 9	Re-install hose stations for wetting down of areas outside of main plant (<i>As per TBR – Watering</i>)

- Cynthia Jamieson explained that references to the “TBR” meant that the activity was aligned with activities identified in Unimin’s Technology Benchmarking Report (TBR) prepared by RWDI, an outside consultant, who investigated best available technology strategies for tailings dust abatement around the world.

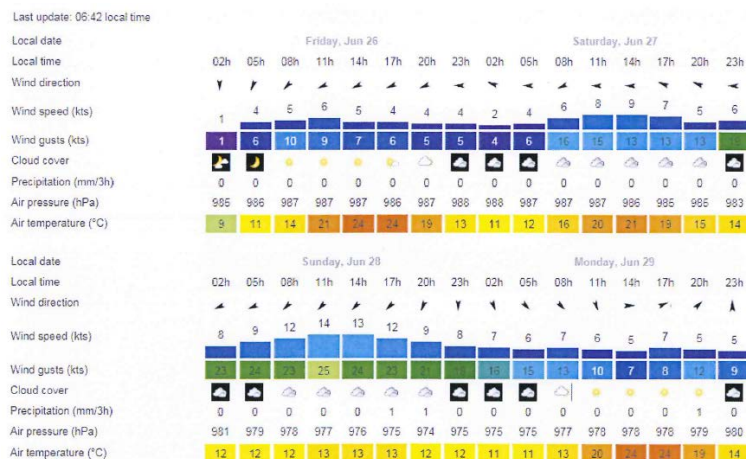
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- It was noted that Nephton dedicates 2 full time employees to manage irrigation systems
- Bob Marshall also presented the Blue Mountain Daily Dust Activities (DDA) sheets dated June 26, 2015 (see screen print on following page), as an example of another dust management tool. The DDA sheet consists of two parts: (1) an hourly weather forecast for the day and in the case of Friday, for the weekend, which includes hourly weather forecasts (temperature, wind direction/ speed/ gusts, and precipitation), and (2) activities to be conducted over the course of the day (and weekend) to mitigate potential problematic climate concerns. This tool allows extra vigilance in proactive dust management (i.e. clearly identifying responsibilities, identifying monitoring frequency, inspection frequency, road watering scheduling, irrigation equipment checks, and addressing ancillary abatement techniques, etc.)

Blue Mountain DDA

June 26, 2015

- **Copy of the current Windfinder forecast (see below)** (Above 15km/hr creates liftoff, critical from N)
Friday – low winds and sunny
Saturday – overcast with increasing winds.
Sunday – overcast with high winds changing to **from North**
- **Irrigation pump run plan**
Friday - Operate today to help evaporate water and maintain pre-soak.
Saturday – Operate in morning. If no rain operate again in afternoon.
Sunday – If not raining operate in morning. Inspect in afternoon and operate again as required.
- **Haul road watering plan** – Tom Hill (705-760-3113), Kevin Hill (705-760-4694)
Quarry monitoring road and watering as required.
- **Calcium plan** – *Morris Chemical (705-652-3391)*
None currently.
- **Supervisor responsible for irrigation over the next 24 hours (72 for weekends),**
Friday – Jeff Towns/Rainer Kruger
Saturday – Caleb Huycke
Sunday – Caleb Huycke
- **Assigned irrigation operator.**
Plant assigned worker.
- **Status of Plant DC Emissions and planned corrective action.**
No issue to report.
- **MISA and Tailings Containment Basin Status**
Containment basin continues to be low.
No flow at tailings MISA.



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4. Noise Abatement

- Bob Marshall indicated that since 2008, 26 silencers have been installed at Nephton and 14 at Blue Mountain, to reduce noise levels.
- It was explained that silencers are substantial pieces of engineered equipment, designed for specific fan characteristics and can be as large as 2 metres in height. They require monitoring via port holes, and periodic maintenance (i.e. re-packing acoustic material)
- White noise back up alarms have been installed on all vehicles except for some forklifts, which typically operate indoors

5. Update the committee on the Canadian Nepheline Modernization Project

- Unimin has recently acquired a new President, Campbell Jones, who is being fully briefed on the Modernization project. Unimin has been reviewing all aspects of the project merits and is assessing multiple options and scenarios that include continuing as is with no Modernization; conducting Modernization in phases to address customer priorities and economic benefits; or carrying out the full Modernization proposal, as designed, as quickly as possible.
- The presentation for the Modernization proposal was reviewed. It remains unchanged since the previous meeting. Time lines are still 4 – 6 years from receiving internal approval
- Unimin expects board approval for one of these options in September 2015

6. 2015 Open Houses

- Three Open Houses will be hosted at the Blue Mountain facility in July 2015, strategically positioned to facilitate schedules of permanent and seasonal residents
- Dates include: July 18 (Saturday); July 22 (Wednesday); and July 25 (Saturday)
- Invitations will be issued (a) delivered to Lake Kasshabog properties as in previous years; (b) posted on the CanadianNepheline.com website; and (c) a request will be made to the LKRA to post on their website
- The Open House will include presentations, supplemented with a spectrum of customer products, and a site tour. Light refreshments will be offered.

7. New Business

- None noted

8. Next Meeting

- Next meeting is tentatively scheduled for September
- A plant tour is proposed

Meeting adjourned at 4:15 pm.