



**Unimin Canada Ltd.
Blue Mountain Plant
Open Houses
August 10th & 13th, 2016
Collated Meeting Minutes and Q&A**

Unimin hosted 2016 Open House events at the Blue Mountain plant site on Wednesday August 10th and Saturday August 13th from 9:00 AM to 11:00 AM. A weekday and a weekend event were scheduled to facilitate the greatest number of attendees, including permanent and seasonal Lake Kasshabog residents, as well as stakeholders from the municipality and aboriginal communities. The purpose of the Open Houses was to provide the neighbouring community with information about Unimin, and specifically, to share our history, future, and anticipated projects and to answer questions and encourage dialogue.

Nepheline rock ore, glass grade product and tailings samples were available for touching and handling. Consumer products that use nepheline as a raw material were also made available including glass containers, tiles, paints, building products, plastics, and insulation. A haul truck and loader were displayed next to the reception tent.

The Open House presentation included an overview of the history of the mining site, an introduction to Unimin's Nepheline Syenite Operations, details about nepheline ore, information on dust and noise abatement activities and discussion of upcoming projects, including the Modernization proposal. Afterwards, a bus tour was conducted of the quarry. The locations of the proposed changes to the Blue Mountain building footprint were identified. A one-page handout highlighting the proposed Modernization project was distributed.

Unimin Hosts: Assistant Plant Manager, Mikhail Clarkson as well as Quarry and Plant Superintendents, QC and Environmental Supervisors, and other environmental personnel.

Guests:

Approximately 45 guests attended on Wednesday August 10th, and another 38 guests on Saturday August 13th.

Guests included:

- Melissa Dokis (Curve Lake First Nations) – August 10th
- Kaitlin Hill (Curve Lake First Nations) – August 10th
- Lori Loucks (Hiawatha First Nations) – August 10th
- Mike Delsey (Kasshabog Lake Public Liaison Committee rep) – August 10th & 13th
- Dawn Mitchell (Kasshabog Lake Public Liaison Committee rep) – August 10th & 13th
- Rick Rye (Kasshabog Lake Public Liaison Committee rep) – August 10th
- Janet Humber (future Kasshabog Lake Public Liaison Committee rep) – August 10th
- Karen Kettles (Ministry of Northern Development and Mines - MNDM) – August 10th
- Sarah Curtis (MNDM) – August 10th
- Shannon Dennie (MNDM) – August 10th

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- Numerous permanent and seasonal residents of Kasshabog Lake

Mikhail Clarkson, Assistant Plant Manager, welcomed guests to the 2016 Open House and introduced the staff members and special guests. Representatives of the Unimin/Kasshabog Lake Public Liaison Committee (PLC) were identified and attendees were encouraged to seek them out and bring forward all comments, concerns or questions. The Kasshabog Lake Public Liaison Committee requested volunteer applicants to serve as the PLC member representing the west end of the lake.

The presentation was given, followed by a question and answer session. A summary of the questions and answers is provided below.

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August 10th 2016

Questions & Answers

1. *Why are the beaver dams disappearing?*

Unimin can't speak to the beaver activity in the area, but it has been a dry summer and this may have had an impact on beaver dam construction.

2. *Barrette Lake, where you draw water from, is it spring fed? How many gallons do you take out yearly?*

Water is pumped from the quarry into Devils Lake, which drains to neighbouring Barrette Lake. It is unknown if Barrette Lake is spring fed. Recent water use is approximately 115,000 gallons per day (~500,000 litres per day) from Barrette Lake. Water consumption is minimized at both plants with re-use, recirculation and recycling strategies.

3. *What does the schedule for new development look like?*

Permitting for Modernization has been initiated. The permitting process may take in excess of a year to receive all approvals. After that, construction designs will be prepared, and then construction can begin. Construction is expected to take at least another 2 years.

4. *Do you have a specific blast day?*

Blasting may take place any day of the week. Typically it occurs at the end of the day shift on Thursday afternoons, usually around 2:30 pm, and may occur more frequently if more rock is needed.

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5. ***In your presentation you indicated that you were going to be quieter when your Modernization project is completed. How can that be?***

We anticipate that fewer processing fans would be necessary after Modernization. Noise mitigation would be incorporated into the design and the overall noise footprint is expected to be smaller.

6. ***Is the noise we hear from the fans, the hum?***

The fans contribute to the overall industrial hum.

7. ***When you close Nephton, will there be less lights?***

Lights would be removed when Nephton is decommissioned and demolished. Also, Unimin is currently evaluating changing the direction of certain existing lights and adding hoods that could minimize glare.

8. ***The grinding and crushing noise we hear, where does it come from and will it be less with the new plant?***

Mineral processing includes rock crushing activities at both facilities. When the Nephton plant is closed, the associated noise there will discontinue.

9. ***Is the dust harmful?***

Nepheline is a naturally occurring inert mineral. Like any dust, prolonged overexposure is best avoided.

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- 10. *Are there more back up beepers now than there used to be? We have noticed that they are louder. What, if anything, has changed?***

Unimin has diligently reduced its overall noise footprint and the new quiet background has made some noises stand out. Unimin converted its back up alarms to less invasive “duck” quacking sound. However, rental equipment and contract trucks currently working on the tailings sites do not have quiet alarms. These contractor activities are only temporary.

- 11. *The by product in the tailings, can it be used for anything?***

There are numerous potential applications for tailings including road and concrete uses and the challenge is to find applications where costs, including shipping, are feasible for customers.

- 12. *The MRT plant down County Road 46 sells road rock but we heard a rumour that they are actually mining titanium. Is that true?***

The MRT plant is not a Unimin facility, and consequently, we are not familiar with their activities.

- 13. *Do you use any chemicals in processing from start to finish?***

Unimin's mineral processing is a dry mechanical process, which means the rock is crushed, dried and ground to specific sizes. Chemicals are not added during mineral processing.

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14. *You say that you are planting buckwheat on your tailings. Is this why there are a lot more geese this year? Do they feed off the buckwheat?*

Buckwheat is a fast growing plant that is used to stabilize areas subject to wind erosion. Unimin can't say for sure if the geese are enjoying the buckwheat any more this year than in the past years, but each year, natural vegetation re-growth occurs and displaces the buckwheat.

General Comments:

At least two formal compliments were extended by Kasshabog Lake residents. One resident indicated that blasting was a lot quieter. Another resident was pleased with the successful control of dust.

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Saturday August 13, 2016

Questions & Answers

1. *Is this a 24-hour operation?*

Different aspects of Unimin's Nepheline Syenite Operation (NSO) may run 24 hours a day, even when others do not. For example, the quarry may run 5-days a week while a plant operates 24/7.

2. *How far does the ore body extend? You said you were coming south. Will that be closer to the cottagers?*

Active mining is currently in the north and there are no immediate plans to move south. However, the nepheline deposit spans the property between Blue Mountain and Nephton to the south. Unimin will explore options further west before advancing to the south.

3. *(a) Are you an American Company; and (b) are you a publicly traded company?*

Unimin Canada Ltd. is an Ontario company and a subsidiary of Unimin Corporation, a US company. Neither is publicly traded. Both are ultimately owned by the Belgium company, Sibelco. (SCR Sibelco N.V.)

4. *(a) When are you closing down, and (b) what is going to happen with employees at Nephton?*

No definite time has been set. Re-training and apprenticeship programs are underway to help the employees.

5. *Did you blast this morning? If so, it was very loud and the ground moved.*

Unimin did not blast today. Blasting typically only occurs during the week, and usually on Thursday afternoons.

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6. *Do you ever find any fossils?*

No, there are no fossils in the rock that is mined. It is an igneous rock that was formed millions of years ago before there was life to create fossils. Fossils are commonly found in younger sedimentary rocks.

7. *Why did you change the time of the blast to 2:30?*

Most blasts occur on Thursday afternoon, but the typical blast time was adjusted slightly to 2:30 pm to accommodate the worker's shift change. This new schedule has less impact on the operation as a whole.

8. *Do you research to find out what other operations can use your product or do people just come to you?*

Unimin offers a wide variety of materials solutions and has research and technical staff to investigate, identify applications and assist customers. New applications may be developed with or for customers or sought out by new customers.

9. *Where do the railcars sitting in Havelock go?*

Rail cars move the product to our customers all across North America.

10. Where do you get your water supply from?

Unimin has Permits to Take Water from Barrette Lake near Blue Mountain and Big Mountain Lake near Nephton. Unimin is conscientious about water consumption and has implemented water recycling and water conservation strategies.

11. Do you have any competition?

Unimin competes with other mineral manufacturers, but Unimin's nepheline has unparalleled quality. No other mineral product can directly compete with nepheline for brightness, clarity and strength in paint and plastics.

13. When are you closing the Nephton plant?

Scheduling the closure of the Nephton plant is subject to many variables, such as permitting and construction, and no definite time has been set. At this time, a good estimate is 2019.

14. After the Nephton site is closed, are you filling in the pit there?

Quarries at Nephton were left dormant when mining was consolidated to Blue Mountain in 1985, but may still be re-activated in the future. When mining is ultimately completed, Unimin may have mined through former quarries, but if not, they may be back filled with tailings, rock, or water, or they may be protected with Ministry-approved barricades.

15. Is the dust from the tailings harmful?

Nepheline is a naturally occurring inert mineral. Like any dust, prolonged overexposure is best avoided.



Community Open House
August 2016

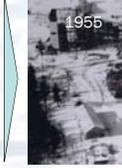
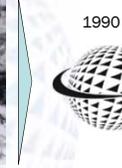
The collage features several images: a large excavator at a mining site, a group of people shaking hands in front of a 'UNIMIN' sign, a man in a hard hat holding a rock sample, a map of the region, and a large industrial facility with a lake in the background.

What to expect today

1. Meet and Greet!
2. A brief presentation about what we do here
 - a. History of NSO
 - b. What is Nepheline Syenite
 - c. How we operate
 - d. Our environmental impact
 - e. Modernization update
3. Opportunity to ask questions and provide feedback
4. Bus tour of the facility

History of Mining at NSO

Unimin has operated NSO for 26 years, but the mine has origins that date back to the late 1800s

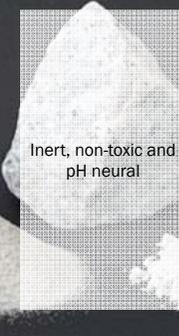
1890	1935	1955	1990
			
First discovery of Nepheline ore body	Nephton begins production	Blue Mountain begins production	Unimin acquired by Unimin from Falconbridge

We plan to continue to invest in NSO and the local community to serve our customers and develop this world class ore body

A part of the community

There are two operating plants on the property: Blue Mountain and Nephton	All active mining operations are adjacent to Blue Mountain
The quarry mines approximately 1,000,000 tons annually	Unimin employs approximately 200 local people
The operation is supported by many local businesses and services	Sustainable operation with 60+ years of reserves

A little bit about Nepheline Syenite

In a mouthful: A coarse grained high alumina granodioric feldspar with no free silica		NSO is the world's premium source of this versatile and safe mineral
	Inert, non-toxic and pH neutral	

Nepheline is just about in everything

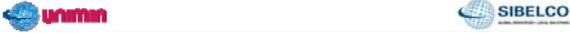
	Glass: Important source of low-iron alumina that lowers required kiln temperature and acts as 'flux' to provide stability
	Paints: Unsurpassed durability to abrasion and UV
	Plastics: Unsurpassed durability to abrasion and UV

NSO uses a dry, mechanical and high-tech process



Ore is recovered by drilling, blasting and hauling from traditional open pits

It is processed by crushing, drying, separation, screening and grinding



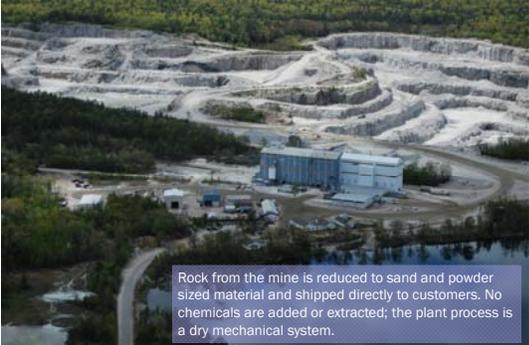
A closer look at mining operations



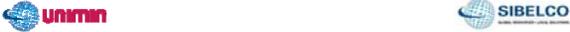
Mining has taken place in two pits adjacent to Blue Mountain for 30 years. Ore reserves will last 25+ years and Unimin will continue to expand the quarry footprint to the West and South.



What's inside the big blue box



Rock from the mine is reduced to sand and powder sized material and shipped directly to customers. No chemicals are added or extracted; the plant process is a dry mechanical system.



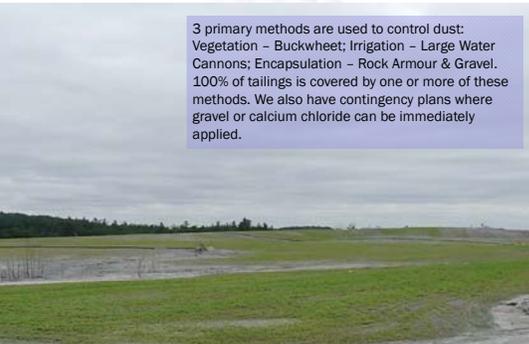
Tailings is a non-toxic and inert process byproduct



Rock that is not sold is placed in tailings storage areas. It is pumped as a slurry and settles out of the water. Most of the water we pump is then used to irrigate vegetation on the tailings area. Dam expansion continues with two 5 foot lifts.



Unimin has invested over \$2.0MM in dust control



3 primary methods are used to control dust: Vegetation - Buckwheat; Irrigation - Large Water Cannons; Encapsulation - Rock Armour & Gravel. 100% of tailings is covered by one or more of these methods. We also have contingency plans where gravel or calcium chloride can be immediately applied.



Successful noise abatement strategies

Nephton: Silencers installed on 26 large fans

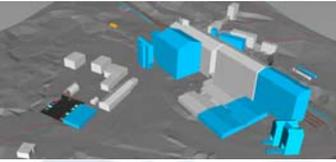
Blue Mountain: Silencers installed on 14 large fans

RPM on specific large fans adjusted to avoid low frequency sound

Most mobile equipment retrofitted with white noise back-up alarms




On the Horizon: Canadian Nepheline Modernization



A facility rationalization that minimizes footprint and improves sustainability

- 1) Equipment upgrades and additions
- 2) Build removals and additions
- 3) Business assessments ongoing
- 4) Permitting process has begun
- 5) Reduction in overall footprint will improve environmental impact



Permitting and Consultation for Modernization

- 1**
Unimin are in the process of obtaining environmental permits with appropriate municipal, provincial and federal agencies
- 2**
We have also begun to engage aboriginal communities in consultation
- 3**
We continue public consultation with this Open House Forum



Come and check us out online!



For more information or to register for updates, fill out the form below:

Name:

Email:

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Message:

canadiannepheline.com



Thank you!

