



## **PORTAGE FACILITY - ANNUAL GREEN TIER REPORT FOR 2014**

### **Introduction**

The Unimin Corporation – Portage Facility is a non-metallic mining operation producing high-quality silica sand to the glass, foundry and hydraulic fracturing industries, to name a few. Mining operations at the site first began in the early twentieth century under different ownership. Unimin purchased the facility in 1983 from Martin Marietta and has been in continuous operation since that time. Unimin is proud to be a leader in the industry and has always placed value in being a responsible company, an excellent environmental steward and pillar of the communities in which we operate.

Prior to making application to the Wisconsin Green Tier Program in July of 2012, Unimin has been an active member of the Wildlife Habitat Council (WHC), a nonprofit organization that encourages its members to exceed what is expected or required, and to establish programs to take advantage of available resources, as well as partner with local conservation groups and state and local agencies.

### **Green Tier Certification**

The Portage facility achieved Green Tier status in January of 2013 and continued efforts to generate an Environmental Management System (EMS) to help identify significant environmental impacts of our activities, products and services and focus on continuous improvement using a plan-do-check-act approach to problem solving as well as selecting and achieving goals to support sustainable and environmentally conscious operations.

An EMS was developed and successfully implemented, as evidenced by the June 2013 Letter of Conformance provided by a qualified external third-party auditor, Perfect Environmental Performance, LLC. (PEP), documenting that the EMS conforms to the “functional equivalency” requirements of ss. 299.83.

The 2014 EMS audit was conducted by PEP which produced no non-conformances. Management has been working on the EMS and with plant personnel to complete a few Opportunities for Improvement (OFI) recommended by PEP in the audit report.

## **Environmental Compliance**

The Portage Plant operated the year of 2014 with no regulatory violations.

## **Tracking 2014 Objectives**

### **Energy Consumption / Reduction:**

- Realize an average year-end dryer fuel consumption 5.5% less than the year prior.

At year-end 2014, average dryer fuel consumption was unchanged from the prior year, due to cold weather during the year, and unusually high amounts of rainfall in the last quarter. Action plans to address improvements have continued, and marked reductions in fuel consumption have been realized during the first trimester of the year. 2015 year to date, fuel consumption is 6% less than last year, and consumption is continuing to trend downward. With actions put in place during the first half of 2015, a significant reduction will be realized during the upcoming year.

- Realize an average year-end electrical consumption 10% less than the year prior.

At year-end 2014, total KWH electrical consumption was 4.5% less than the year prior; while production was down 17%. The unfavorable ratio was due to cold weather during the year, unusually high amounts of rainfall, and also due to much lower than projected tonnage, which resulted in electrical consumption for dust collectors and other constant-use equipment to be applied against a much reduced production. 2015 year to date, electrical consumption rate is 10% of last year, and continuing a favorable trend.

- The Unimin-Portage Facility will install at least two automatic timing components on processing equipment that will automatically turn equipment off when not in use.

Complete; timed controls were installed on BC-06, and the new BE-04, to automatically shut down when not in use.

- The Unimin-Portage Facility will replace at least 6 High-wattage lighting fixtures (350 W or greater) with high-efficiency lighting fixtures (<200 W w/equal lumens)

Complete; at least 6 fixtures were replaced. Additionally, the new truck loadout conveyor system was installed with LED lighting.

### **Direct Environmental Affects:**

- The Unimin-Portage Facility will upgrade Screenhouse PLC to provide continuous monitoring of dust collection equipment

Ongoing. We have transducers on the dust collection equipment, and we programming and a monitoring screen on the screenhouse Wonderware / PLC computer. The instrumentation needs to be calibrated / adjusted so that readings on the screenhouse computer monitor match the readings on the equipment.

- The Unimin-Portage Facility will replace and/or reseal 12,000 square feet of asphalt on the facility roads & parking lots

Complete

- The Unimin-Portage Facility will identify at least one process area that has higher-than-average amounts of ambient dust, and will implement action plans to reduce dust in that same area.

Complete; the plant developed a project to reduce ambient dust being generated inside the wetscrubber building.

- Continue project to control invasive plants and improve prairie grassland habitat for game birds and other wildlife; the Unimin-Portage Facility will spray 10 acres of pheasant project area grassland to control knapweed.

Complete

### **Other Accomplishments**

- Completed reclamation of cleaned-up scrap dump area by planting grass & wildflowers
- No Spills to the environment
- Reduce waste – continued to recycle / repurpose items such as used pallets and conveyor belting, versus discarding these materials
- Unimin-Portage facility provided EMS refresher training to all site employees. The employees continue to respond in a positive manner and are more aware of best practices in all aspects of the facility activities.
- Continued wildlife habitat projects, including sponsoring a blue-bird trail, which was facilitated and chronicled by local member of the Audubon Society; and enhanced pollinators, by providing a local bee keeper with an on-site location for his bee hives.
- Initiated two major Capital projects, which included components / aspect that will reduce energy consumption, including but not limited to:
  - LED yard lighting for the loadout area;
  - PLC control which includes timed, automatic shut-down of conveying equipment
  - Improved dust collection

## **Planning for the Future, Starting with 2014-2015**

Continue with Energy Consumption reduction efforts:

- The Unimin-Portage Facility will continue the program of lighting upgrades by replacing at least 6 High-wattage lighting fixtures (350 W or greater) with high-efficiency lighting fixtures (<200 W w/equal lumens)
- The Unimin-Portage Facility will further reduce electrical consumption by installing motion-sensing light switches in the employee lunchroom and locker room.
- The Unimin-Portage Facility will reduce water consumption / pumping requirements by installing low-flow toilets and urinal flush valves in the employee locker room.
- The Unimin-Portage facility will reduce heating and cooling requirements by installing insulating window shades in front office.

To reduce / prevent dust emissions and employee exposure to dust:

- The Unimin-Portage Facility will improve its monitoring of screenhouse dust collection equipment by adding a warning system that will alert operators of out-of-compliance operating conditions on the dust collection equipment.
- The Unimin-Portage Facility will continue to replace and/or reseal of asphalt on the facility roads & parking lots; another 12,000 square feet will be replaced in 2015.

Other: The Unimin-Portage Facility will implement a battery recycling program, which will reduce the likelihood of spent batteries being discarded into landfills.

Giles Perkins – Plant Manager

May 26, 2015