Tunnel City Facility – Green Tier Annual Report for 2014

Introduction

The Unimin Corporation – Tunnel City Facility is a non-metallic mining operation producing high quality silica sand for the hydraulic fracturing industry. Unimin is a leader in the specialty minerals industry and has placed value in being a responsible company, an excellent environmental steward, and pillar of the communities in which it operates.

Construction of the Tunnel City Facility began in November 2011 and was completed in December 2013. Prior to applying to the Wisconsin Green Tier Program, the Tunnel City Facility was an active member of the Wildlife Habitat Council (WHC), a nonprofit organization that encourages its members to exceed expectations and requirements and to establish programs taking advantage of available resources. Unimin Tunnel City continues its involvement with WHC, as well as partnerships with local conservation groups and state and local agencies.

Green Tier Certification

Tunnel City achieved Green Tier status in February of 2014. Part of the Green Tier achievement process was finalizing an Environmental Management System (EMS) and having the EMS audited for compliance by an approved third party auditor.

The EMS assists in identifying potential environmental impacts of the operation, focusing on continuous improvement and a "plan-do-check-act" approach to problem solving. Yearly measurable goals are also determined as part of the EMS, to support sustainable and environmentally conscious operations.

The third party auditors found the Tunnel City EMS to be compliant to Green Tier standards and issued a certificate of compliance to the DNR.

Background of Tunnel City

Tunnel City is a state of the art facility, designed and constructed with energy efficiency and conservation in mind. Some of the features of the facility are:

1) A water recycling plant designed to drastically reduce the amount of water utilized
2) High efficiency lighting and variable speed drives to increase energy efficiency
3) Carefully designed berms and enclosures to minimize offsite noise and dust impacts
4) A site designed to prevent offsite stormwater discharges
5) Air returns placed throughout the plant to recycle warm air

Water Conservation

Tunnel City is designed to produce two million tons of sand per year. Utilizing traditional methods of processing, that volume of sand would require 2.5 billion gallons (9.5 billion liters) of water to wash and process the mined feedstock. Traditional methods would involve supplementing process water either by

drawing clean water from surface sources or by tapping the underground aquifer. Unimin combined several innovative water management technologies to recycle water, reducing the amount of clean water drawn from the supplemental sources. These technologies allowed Tunnel City to reduce the expected makeup water requirement by 97 percent, from 38,000 liters per minute to 1,150 liters per minute. The stand-alone water filtration plant employs vacuum belts, thickener tanks and filter presses to clean and recycle the approximately 9,700 gallons (36,850 liters) of water per minute that would otherwise need to be replaced. This water savings greatly reduces demand on the local aquifer, the supplemental source of process water.

Energy Conservation

Energy efficient LED lighting is an element of Unimin's energy conservation activities. Initial acquisition costs of LED lighting are about 20 percent to 30 percent greater than sodium or metal halide lights; however LED lights use approximately 40 percent to 50 percent less electricity than the comparable sodium or metal halide alternatives. LED lights are highly efficient in the industrial environment, and their longer operating life translates into lower total maintenance and disposal costs. The installation of variable frequency drives along with the utilization of LED lighting lowers demand on local power generation sources.

Environmental Stewardship

Karner Blue Butterfly

During initial pre-mine surveys, habitat of the endangered Karner Blue Butterfly (KBB) was discovered. Unimin's years of land and habitat management experience facilitated the reclamation plan to be reworked with the assistance of the U.S. Fish and Wildlife Service. This collaboration resulted in a long-term KBB conservancy plan on the Tunnel City site.

Unimin is the first mining company to partner with both the U.S. Fish and Wildlife Service and the Wisconsin Statewide Karner Blue Butterfly Habitat Conservation Plan. Thus far 108 acres (44 hectares) of KBB habitat have been restored using a diverse seed mix to support the KBB and other pollinator species.

Bats

During baseline investigations it was also determined that Tunnel City had active bat hibernaculum on site. In an effort to preserve the hibernaculum Unimin, with the guidance of Wisconsin Department of Natural Resources (DNR), constructed a bat gate at the entrance of the hibernaculum. The gate allows bats access to the hibernaculum but prevents unwanted human access. Because of this effort, bat populations in the tunnel have increased from ~200 bats during the initial survey in the winter of 2012 to over 800 bats during the November 2014 survey. The DNR with cooperation from Unimin maintains access for annual monitoring of white nose syndrome.

Tunnel City has a certified wildlife at work program through WHC designed to allow employee input with wildlife habitat creation, monitoring, and education. In addition, Tunnel City has partnered with the local boy scouts to build bathhouses, supporting the local bat populations. Bat houses simulate nursery habitat providing safe locations to raise their young.

Air Monitoring

Tunnel City's air monitoring program was designed above and beyond state requirements. The state and local legislation require one air monitor on site. Tunnel City utilizes three air monitors equipped with individual weather stations to monitor local conditions. By using three air monitors, instead of just one Tunnel City can triangulate the monitoring data and calculate background concentrations, resulting in more accurate monitoring.

Reclamation

Tunnel City has reclaimed over 100 acres of disturbed land since construction began in November 2011. It is Unimin's desire to reclaim disturbed land directly after the land has been mined, minimizing the environmental impact.

Environmental Compliance

During 2014 Tunnel City received zero regulatory violations.

Community Involvement

Unimin invests more than $50,000 annually in the University of Wisconsin-Eau Claire's Responsible Mining Initiative (UW-EC RMI). This commitment funds internships for students, as well as scholarships and grants for geology, hydrogeology, restorative ecology and regulatory policy studies. The initiative spans a range of industry topics, including the economics of mineral recovery, responsible mining practices and environmental stewardship. RMI provides UW-EC students with the opportunity to gain valuable professional experience with a scientific based environment while still supporting creativity. RMI aims to help produce creative, scientifically literate graduates who can make a positive difference in the mining industry. The investment in RMI represents Unimin's commitment to continuous improvement and innovation.

In addition to RMI, Unimin donated over $70,000 to various local charities. The charities include; the Tomah School District, the Oakdale First responders, and the Organization for Bat Conservation.

2015 Objectives and Targets

2015 objectives will focus on reducing waste generation, improving wildlife habitat, and water conservation