



2015 Green Tier Annual Report for U.S. Silica Company

Executive Summary

U.S. Silica Company (U.S. Silica) is a silica sand mining and processing company that provides processed silica sand products to the oil and gas industry, as well as for general industry use in areas such as glass manufacturing, foundries, golf courses, volleyball and filtration applications. U.S. Silica is a publicly traded company that employs more than 1000 people nationally, at its headquarters offices in Frederick, Maryland and Chicago, Illinois, and at its manufacturing facilities across the country. The U.S. Silica facility located in Sparta, Wisconsin was formally accepted into the Wisconsin Green Tier program on July 31, 2013 as a Tier 1 participant.

U.S. Silica has committed to being an environmentally responsible business and an active participant and partner within our host communities.

EMS Audit Report

In March 2016, U.S. Silica performed an internal audit of the Environmental Management System in place at its Sparta, Wisconsin facility. The audit indicated that the facility was found to be operating in accordance with the requirements found in 299.83(dg). No major non-conformances were identified during the audit. U.S. Silica finds its EMS meets the "Functional Equivalency" criteria and the continual improvement requirements of the Green Tier Program.

Description of Progress

Goal 1: EHS Back-up Role

Progress: Due to a Reduction in Force that occurred in 2015, environmental health and safety (EHS) duties were distributed amongst several plant employees. These duties include compliance duties such as piezometer level readings, visible emission observations, NPDES sampling, inspections, et cetera. The employees received training from the former EHS Coordinator as well as from corporate Environmental personnel on performing their new duties, and no compliance issues have been noted during that time.

Goal 2: Fugitive Dust (Vehicle Traffic)

Progress: The Sparta plant intended to train backup employees in operating the on-site water truck to ensure that proper wetting is always available when needed (as there is no dedicated water truck operator). The water truck is used for periodic wetting of material to prevent fugitive dust emissions. In 2015, the majority of the nineteen hourly staff on site (and at least three of the six remaining salaried staff) were trained to operate the water truck. Log books are in use to document watering applications. In addition, verified pond water is being used to fill the water truck rather than city water, which reduces the amount of water withdrawn from the local aquifer.

Goal 3: Energy Use (MMBtu/ton, kWh/ton)



Progress: The Sparta plant intended to reduce its energy use in 2015 in order to increase the plant's sustainability and to reduce its use of electricity and natural gas used to process material. In 2015, the plant utilized Control Soft software (installed in October 2014) to monitor and control the dryers, making the dryers more efficient. In 2015, the natural gas burn rate was calculated to be approximately 0.136 MMBtu/ton of sand dried, representing a 15% year-over-year improvement in natural gas usage from the 2014 rate of 0.16 MMBtu/ton.

Goal 4: Particulate Emission during Construction Activities

Progress: In 2015, the Sparta facility was constructing a berm around the perimeter of the property. In order to prevent visible emissions during construction activities, staff conducted daily visible emission observations as well as weekly inspections of erosion controls. Once construction of the berm was completed to elevation, the berm was covered with topsoil, grass seed and straw mats. The water truck was used routinely to encourage vegetative growth and reduce potential emissions, and trees were planted on the top and outside slopes of the berm to stabilize berm soils and prevent erosion. Berm construction and vegetation planting was completed by October 15, 2015.

Goal 5: Erosion Control

Progress: Erosion had been occurring at the edge of one of the facility's ponds (in an area referred to as the "peninsula"). The facility undertook an effort to control this erosion to prevent a potential safety hazard from occurring. Riprap was placed on the north and west ends of this peninsula to control the erosion, and additional riprap may be installed in the early spring of 2016, if needed.

Goal 6: Task and Data Management

Progress: In 2015, the facility undertook local implementation of the Gensuite EHS management information system (EHSMIS) to improve overall task management and the management of EHS data. The Gensuite system monitors EHS compliance activities, such as sampling and monitoring, and reminds personnel of the due dates for those activities. The system is also used to monitor any EHS corrective actions, audits and other pertinent data. In 2015, the facility personnel were trained on Gensuite use and are currently using the system for task and EHS finding management.

Environmental Performance

U.S. Silica continued a strong focus on environmental performance and sustainability in its operations in calendar year 2015. A summary of facility environmental performance is below, summarized by environmental aspect:

Energy

The Sparta facility performed extremely well in regards to energy efficiency in 2015. Both electricity use (in kWh/ton) and natural gas use (in MMBTU/ton) were lower in 2015 than 2014. Energy use rates for the last several years of operation are summarized in the table below.



Energy Use	2013	2014	2015	Reduction (%)
kWh/ton	14.17	10.6	9.6	9%
MMBTU/ton	0.18	0.16	0.136	15%

The decrease in energy usage is driven by several factors, including the previously-mentioned installation of improved dryer monitoring software, and performing individual smaller projects designed to increase energy efficiency.

Waste

In 2015, plant operations generated approximately 30 tons of municipal solid waste (down from 34.15 tons in 2013), and approximately 38.3 tons of scrap steel and 5.75 tons of waste paper/cardboard were recycled (compared to 20.33 tons of scrap steel and 8.05 tons of waste paper/cardboard in 2014).

Water

The Sparta facility implemented a water recycle loop in 2014 in order to reduce the amount of water withdrawn from on-site high-capacity wells and the local municipal treated water supply. As a result, the facility has reduced its water withdrawal by an estimated 85%.

Transportation

Overall, U.S. Silica seeks to minimize the carbon footprint of its product transportation by shipping its products to customers by the most efficient method. At the Sparta facility, products are only shipped by rail rather than by less efficient methods like trucking, reducing the amount of fuel used to get sand to market.

Stakeholder Involvement

The U.S. Silica Sparta facility actively partners with local stakeholders in order to understand how best to serve the community and how best to address any potential issues. The facility holds an annual meeting with the Sparta City Council to discuss facility performance and address stakeholder concerns. In addition, the facility Community Outreach Committee conducts activities designed to give back to the town of Sparta. In 2015, these activities included the following:

- Funding celebrations for organizations such as the Sparta Boys and Girls Club
- Sponsoring the 2015 Monroe County ARC Dance (for community members with disabilities)
- Participating in the 2015 Spring Adopt-a-Highway Cleanup
- Participating in a Sparta community Habitat for Humanity home build