



smartsand

July 28, 2016

VIA E-MAIL

Daniel.Helsel@wisconsin.gov

Dan Helsel, Natural Resources Manager
Wisconsin Dept. of Natural Resources – Black River Falls
910 Highway 54 East
Black River Falls, WI 54615

RE: One Year Green Tier Update – Smart Sand

Dear Mr. Helsel:

The following letter is submitted to the Wisconsin Department of Natural Resources (DNR) as the two year update on Smart Sand's entry into the Department's Green Tier Program. Green Tier continues to be part of Smart Sand's corporate identity and has helped our environmental performance programs. It is a well-conceived program and is one in which all employees take pride.

In comparison to our previous year, we are pleased that the Green Tier program has become further enmeshed with our daily activities and our more recent efforts to register our quality and environmental management systems.

For the most part, this report follows the format outlined by the DNR, although we have brought our executive summary forward.

Executive Summary

Like all mining businesses, our operations are conceptually simple. We extract sand from the ground, and process it for industrial use, in our case, that use is primarily domestic oil and gas production. There is, however, complexity in environmental management. This goes beyond simply meeting environmental regulations. Further, the energy market has changed and tightened technical requirements for sand, and also continually seeks logistics improvements.

In the past year, the industry has experienced a significant downturn related to the price of oil. Only now do we see some stabilization and perhaps some indications of a rebound. We are aware that some of our industrial colleagues have suspended operations and some have closed. Every single company in the industry has had to "do more with less."

During this time, we have achieved formal registration of our EMS, our QMS and set a series of new goals aimed at efficiency. Our management is completely committed to responsible operation and to achieving efficiency. We view these goals as complementary, and we know that reducing energy consumption, makes environmental sense and reduces our expenses. Time and again we have demonstrated that good environmental practice is good business.

We endeavor to be a good neighbor and a good corporate citizen locally and at the state and national levels. We hope that the following report highlights our efforts in this regard.

EMS Audit Report

Smart Sand is very pleased to report that it received EN 14001 registration for our Environmental Management System on April 27, 2016. Smart Sand was audited and registered by a third party, the DQS/UL Company of Buffalo Grove IL. Our EMS registration details are as follows:

Standard: EN 14001-2004

Certificate Number: 10014264 UM

Scope: The environmental activity and supporting processes associated with the dry processing of industrial sand and proppant, and the mining of sand.

Given the recency of our registration, we know that our EMS is working. No non-conformances related to our EMS were identified during our registration audit.

Compliance Report

As with all sand industry participants in Green Tier, Smart Sand is a Tier 1 participant and is therefore not providing a compliance report.

Smart Sand's "Green Tier" Goals and Description of progress:

In our original Green Tier application, Smart Sand outlined two projects that we thought would be interesting and would demonstrate an intensive focus on environmental performance. One goal was to monitor and increase fuel efficiency in our road going vehicle fleet and the other was to improve a habitat in one of our estuaries on site. We made double-duty of these goals by adding them to our ISO goals. In addition we added several more environmental goals for ISO. The status of our Green Tier goals follow, and our ISO goals are discussed later in this document.

- 1. Performance toward self-articulated environmental goals – Fuel Usage.** Smart Sand maintains a (relatively small) fleet of road-going vehicles. For our first year, we thought we could use less fuel by managing the usage of the vehicles better, and by capturing all fuel usage. We instituted fuel cards, reviewed our company driver policy, and offered some guidelines for driving. We believed that we would experience superior utility, better reliability and safer operation of our road-going vehicles. **In our first year we set a goal of +5% fuel economy *per mile driven*. We are pleased to report an actual performance of +18% for our full year (comparing 2014 to 2015).**

Against that formidable and somewhat surprising performance, we knew we wanted to move forward with this metric, but given the state of the industry, we were not able to commit resources to fleet management (i.e. acquisition of new vehicles with better fuel efficiency). Still, our management team challenged the company for further improvement and we committed to a goal of +3% for 2016 vs. 2015. This goal is tracked continuously and reported monthly. We believe that we are on track to meet the goal again this year although at the end of May, we were at approximately +2%. This shortfall against our goal is believed to be the result of an unusually cold winter and also some unanticipated downtime with our most fuel-efficient vehicle. Smart Sand will continue with a similar goal moving into 2017, a year in which some of our fleet will likely be replaced. Smart Sand will determine the specifics of this goal for 2017 in Q4 of this year.

- 2. Performance toward self-articulated environmental goals – Habitat Improvement – Bear Creek.** Bear Creek runs through our facility flowing North. Our original plan was to improve Bear Creek as a trout habitat. While we did take part last year in a DNR-sanctioned fingerling release, water monitoring suggests to us that Bear Creek is not a good candidate for this project.

The main concern is agricultural runoff into Bear Creek. Our portion of the creek is downstream from a number of large and small dairy farms, and from land that is farmed. We are concerned

that the levels of certain chemicals - probably the result of fertilizer - is such that a trout habitat is infeasible. A secondary concern is the low water level that can occur late in the summer.

Smart Sand has recently entered into a discussion with the DNR in which we suggested putting this goal on hiatus. We have several new goals and projects in mind. Please know that Smart Sand will continue to monitor and consider improvements to this waterway.

Additional ISO QMS and EMS Goals

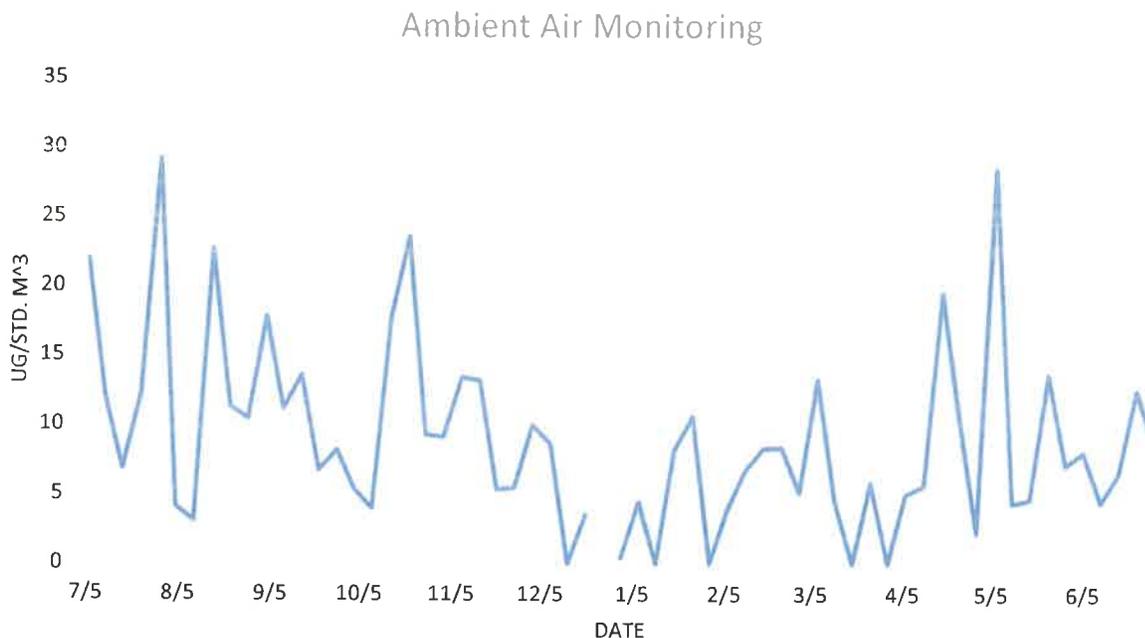
We are outlining the following goals that we have added to our operation. We are open to turning these into true "Green Tier" related activities, but note that some of our results must remain confidential for business reasons. All of our 2015 goals are considered baselines and we are on or ahead of schedule on all of our 2016 goals as outlined below. (Except our Bear Creek goal)

Please note that our original goals on our Green Tier application are also reported as ISO EMS goals.

1. Smart Sand set a goal of 150 hours of employee time donated to charity and outreach.
2. Smart Sand set a goal of surpassing continuously ambient air test requirements.
3. Smart Sand set a goal of surpassing requirements related to our WPDES requirements.

Sustainability Metrics:

During the reporting year, air monitoring continued according to the EPA 6-day schedule for PM10. One sample was omitted due to damage, and the average ambient PM10 concentration recorded was 9 $\mu\text{g}/\text{standard m}^3$. The following graph represents the results during the reporting year:



With regard to other sustainability metrics, and as acknowledged by the GRI, we are in an industry where we are on the road to reporting. As is known, our process water recirculation system is efficient well in excess of 80%. Our facilities are among the most modern in the business, as are our conveyors and our heavy equipment. Our use of natural gas and propane reflects our interest in the cleanest energy sources. Our internal logistics and mining plan are optimized continually in an effort to minimize our carbon footprint. At the same time, our expansion makes it slightly difficult to benchmark our usage from year-to-year. Some of the following elements are appropriate for sustainability reporting.

Environmental Performance

Our main facility is located in Oakdale, WI on more than 1,100 acres of grassy and wooded hills that provide ideal habitats for native flora and fauna. Therefore, maintaining the abundant biodiversity and the two waterways on-site is considered high priority for all employees and is integrated into day-to-day mining operations. Environmental sustainability begins with innovative design and state-of-the-art infrastructure at the Oakdale facility. Smart Sand, Inc. prides itself on pioneering an eco-friendly water recycling practice that uses gravity to settle particulates in the water used in the washing process. This technology allows the facility to minimize well drawdown and recycle more than 80% of the water without the addition of any chemicals or flocculants.

New Plant

Since our last report, we have opened a new, third, dry processing plant, which is “state-of-the-art” and tailored to Smart Sand’s specific needs.

Natural Gas

From September through November 2015, we worked to bring a natural gas supply to each of our dry plants. To do so, Smart Sand had to spearhead and finance the construction of a natural gas pipeline to the plant. The existing pipeline was several miles away, and the permitting process and construction were considerable.

The natural gas supply provides a significant efficiency for Smart Sand dry plant operation, but also provides the advantage of a clean, efficient heating fuel for our neighbors who are able to connect to the supply. We can safely say that this service would not have come to Oakdale for many years without Smart Sand’s investment.

Smart Sand’s plants are all “dual-fuel” and can run on propane if the price of propane is favorable, or when natural gas business usage is curtailed during cold weather so that residences can be assured heating fuel.

Mine Logistics

A constant challenge in our work is to minimize the number of times sand is handled by heavy equipment. The footprint of the mine is ever-changing, so every day can pose new efficiency questions. With that in mind, we have made some investments to optimize our activities. Since our last report, we have revisited our entire conveyor operation, replaced several conveyors with new, more efficient equipment and placed certain conveyors in locations that reduce haul truck usage. While comparing efficiency between conveyors and haul trucks can be tricky because of the varying ways in which capital equipment is calculated, conveyors on a ton per mile basis, use much less energy and have a smaller footprint impact than roadways.

Rail and Transportation Logistics (Supply Chain)

Smart Sand’s Oakdale Facility has a double-track rail loop and contains more than seven miles of railway track. The loop allows a number of logistic advantages, including easy handling of inbound and outbound unit trains, and a minimal number of hooking and unhooking rail cars for loading cars. Unit trains (typically 80 to 120 cars) tend to be handled with priority in the rail systems as compared to smaller trains. In the past year, Smart Sand has added an additional rail loadout to this track.

Within our quality system and our environmental management system, we have set specific requirements for efficient loading of rail cars. As mentioned in previous years, Smart Sand has a strong commitment to rail transport, and to access rail lines that support the various destinations associated with oil and gas exploration and production. We further support efforts to maintain and improve rail facilities in Wisconsin, nationwide and in North America.

Since our last report, we have hired a rail expert whose role is to pursue rail efficiency through our rail partners and with our customers.

Market Requirements

As we announced our EMS and QMS registrations, we were pleased to get responses from other registered facilities of our suppliers and colleagues. ISO 9001 requires gathering information from all suppliers on their quality systems and their products.

Smart Sand has no regrets about investing in QMS, EMS and Green Tier programs, and our customers have expressed approval.

We note that quality and environmental system registration is becoming more of a standard in the energy industry.

Green Transportation

Due to the nature of our business and our dependence on heavy equipment, Smart Sand does not allow the use of bicycles and motorcycles at our facility. Our actions are driven by a desire for safety for our employees and other colleagues.

As mentioned previously, we have managed our road-going fleet such that we maximize the use of our fuel-efficient vehicles and we monitor fuel usage. We are further investigating incorporating hybrid or alternative fuel vehicles into our fleet.

Stakeholder Involvement

Smart Sand, Inc. places high value on volunteer efforts on literacy and hunger. In addition to supporting the local elementary school and the Neighbor for Neighbor Food Pantry, Smart Sand employees also spend considerable time in the communities we operate in. Management team members participate in monthly town hall meetings to update the community on any changes in our operation and to answer any questions neighbors may have about nonmetallic mining. We routinely find opportunities to help our community. For example, during a discussion at the Village of Oakdale meeting, residents were voicing concerns about recycling not being picked up. The problem was narrowed down to receptacles not being properly labeled. To remedy this, Smart Sand purchased and donated 250 recycling labels.

This spring, volunteers participated in the Oakdale Elementary Family Night. During this event, students and their families learned about nonmetallic mining and green efforts. In addition, each student picked out flower/vegetable seeds to plant at home. Current efforts are focused on adopting County Highway CA, which spans the south end of our facility. Smart Sand team members will routinely clean our adopted section.

In addition to volunteering efforts, stakeholders are regularly invited to tour our Oakdale Facility. This includes university professors, neighbors, government representatives, and regulators. Smart Sand is a member and participates heavily in the Wisconsin Industrial Sand Association (WISA) as well as the responsible mining initiative at the University of Wisconsin – Eau Claire. During the second year as a Green Tier participant, employees spent 153 hours.

Smart Sand continues to support the Responsible Mining Initiative Internship Program at the University of Wisconsin Eau Claire to create an entirely new major dedicated to providing students with the necessary skills to pursue responsible mining and regulation in Wisconsin. Smart Sand pioneered the program and has employed interns for the past three years. Two full-time Smart Sand employees are alumni of this program.

Safety and Health Awareness

Smart Sand feels every mining company should hold employee safety as its first priority. Mining can be deadly and continues to be one of the world's most hazardous occupations. That said, safety, along with environmental requirements, is an area where Smart Sand tries to excel. In addition to required MSHA training, each and every miner begins each work shift with a safety meeting to go over common

hazards that any individual could encounter throughout their shift such as conveyor belts, moving machinery, lock-out and tag-out procedure, NIOSH respiratory protection standards, etc. Smart Sand believes that taking approximately 20 minutes at the beginning of each shift to consider potential hazards will increase the chance that miners remember to follow best practices throughout the day and reduce the chance of an incident. Safety meetings are conducted by a safety professional, whose only role is to ensure operations are done safely. **Smart Sand is pleased to report that it had no lost-time accidents in 2015.**

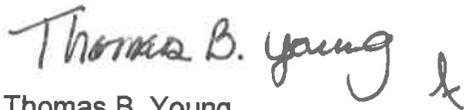
DNR Relationship

As a member of the Wisconsin Industrial Sand Association, Smart Sand has had regular opportunity to interact with various individuals from the DNR. Some time ago, the DNR appointed Roberta Walls to be the Department's industry specialist for industrial sand. We have been extremely pleased at her efforts to let us know what is happening at the Department.

Smart Sand remains very enthusiastic about Green Tier. The program drives us to think about superior environmental performance. Smart Sand will continue to work with the DNR to promote and improve Green Tier, and to bring other sand companies into the program.

Sincerely,

SMART SAND, INC

A handwritten signature in cursive script that reads "Thomas B. Young" followed by a small flourish.

Thomas B. Young
General Manager, Health, Safety, Environmental, Quality