



Graymont's Kid's Days explosive fun

— With a thunderous crack, the third annual Kid's Days at Graymont's Plattsburgh Quarry came to a cacophonous conclusion.

After about 90 students from Oak Street Elementary counted down from 20, Graymont Blaster Craig Patterson set off a series of 10 charges that brought down a large section of limestone on the far side of the quarry. The ten charges went off down the line within a millisecond of each other, which produced flames and a large cloud of smoke and dust that billowed across the quarry and resulted in excited reactions from the students.

Each charge is made up of a stick of dynamite covered by a layer of anfo -- ammonium nitrate mixed with fuel oil -- and covered with crushed stone to hold it down, Patterson said.

Oak Street fifth-grade teacher Maureen King said some of her students were not even aware there was a quarry in town. Graymont Sales Manager Scott Bombard said that was one of the reasons the program started, to inform and educate the public about what goes on at the quarry.

Bombard said the program started on a much smaller basis about 7-8 years ago.

"The kids loved it. A couple years ago we decided to try to do a little more," he said.

The program now includes multiple tours of the quarry and presentations by Graymont employees and other officials. It has grown from a couple hours to two full days of tours.

"Our employees get more of a kick out of it than some of the kids do," Bombard said.

As the quarry tour was about to start, Bombard said there were three rules.

"Be aware. This is a working quarry," he said. "Staff are here to make sure you don't get hurt, so pay attention to them and keep your eyes and ears open."

Second, he urged everyone to ask questions throughout the tour.

"Third, everyone has to go out of here with a smile," he said.

Bombard said there are about 50 years worth of rock reserves in the quarry.

The students were led to the control room of a rock crusher. Bombard said big pieces of stone are passed through a series of jaws and ground to smaller pieces.

As the rock travels along a conveyor belt, screens sort the stone into different bins based on size, he said.

Crusher Operator Butch LaFave pointed to a screen where a Euc (Euclid dump truck) was ready to empty about 30-35 tons of stone into the hopper, where the basketball-sized pieces would be crushed to about 5-6 inches.

If a rock is too big for the crusher, he can operate a remote-controlled crushing arm to start the process.

From there, it was on to the asphalt plant. Bombard said asphalt is a mixture of stone and tar.

Plant Operator John Coupal said different projects require different "recipes" as to how much stone and tar is mixed.

The computer equipment in the plant knows which type of stone is in which bin, and delivers it for mixing. The stone is dried by heating it to 1,400 degrees, then mixed with tar and dumped into the delivery trucks.

Ready-mix Plant Operator Rick Darrah said concrete also has multiple "recipes" depending on its intended application.

He enters data such as a customer number, which job it is to be used for and how many yards of concrete are needed.

The computer sends the proper quantity of each ingredient to the plant where it is mixed and dropped to the waiting cement truck.

As a truck was being loaded with ready mix, a series of water nozzles sprayed its surface to keep dust under control.

Bombard said Graymont employees wash the yard all the time to keep dust down.

Students were able to view and handle various samples in the Plattsburgh Quarry laboratory. Quality Control Manager Bill Trudo said he and the other lab employees come up with and test the various product mixes and designs.

Different types of asphalt samples are tested to make sure they have the properties Graymont and its customers desire.

Concrete can be made lighter or heavier, depending on its end use, Trudo said.

Another tray held concrete crushed from some buildings and foundations at the former Plattsburgh Air Force Base.

That can be reused, as can asphalt crushed and removed as a road is repaved, Trudo said.

The students then listened to three presentations on mines and quarries.

Graymont Safety Coordinator Ed Fuhr made a presentation designed to keep people out of abandoned mines and quarries.

"There are (about) 14,000 working mines in this country. There are (about) 500,000 abandoned mines," he said.

Some are scattered about the North Country, including the Lyon Mountain and AuSable Forks area. Fuhr said there are at least six open mines in the Lyon Mountain area, and a drift mine mouth near AuSable Forks.

"You don't see it until you're almost stepping off the edge," he said.

Fuhr said there were 29 deaths in abandoned or active mines in 2006. Tunnels, especially older ones, can contain rotten timbers, gasses, flooded sections and even dangerous wildlife such as snakes and spiders.

Many mines can contain misfired explosives and blasting caps.

"If something even resembles those, don't touch them. They can be very unstable," Fuhr said.

Graymont Mining Engineer Nate Dutil delivered a presentation on the life of a mine. Mines go through five stages -- prospecting, exploration, development, extraction and reclamation, he said.

He listed about 15 occupations available at mines, including engineers, geologists, surveyors and equipment operators.

He said "If something can't be grown, it has to be mined."

One example is kitty litter, which contains bentonite, a clay mineral that absorbs water. Other examples include Tums (calcium carbonate) and the lettering on M&M candies (titanium dioxide), Dutil said.

Jeremy Baine of the DEC's Region 5 office in Warrensburg talked about mine land reclamation. He said that under a state law passed in 1975, companies are obligated to reclaim 100 percent of the land after a mine is closed, and have to post bond to ensure that is done.

For a surface mine, such as the Plattsburgh Quarry, topsoil from the development stage and other materials are used to fill the mine.

The land can then be used for things like golf courses, athletic fields, parks, housing developments and even can be reforested, Baine said.

Wednesday, Oak Street School students Francesca D'Alessandro, 11; Meeghan Aley, 11; and Olivia Raugi-Chandler, 10, talked about the tour.

"Before, I thought we were just going to look at rocks. Then, when we got there, I didn't want to leave because it was so interesting," Aley said.

D'Alessandro said she enjoyed being able to ask so many questions.

"I asked if waves from the explosion can appear on the rocks," she said. "They said yes, you could see the ripples on the rocks."

Raugi-Chandler said she also enjoyed the presentations and equipment.

"I liked when we saw that (picture of that) giant truck. The pick-up truck next to it looked like an ant," she said. "We watched as the trucks got loaded so fast. It was amazing they don't break the trucks."

All three said they were amazed at the number of products that contain materials that come from mining, and how much technology is involved in running a quarry. They said they liked the explosion, but wished it would have been louder.

King said all her students really enjoyed the tour.

"It kept them interested and engaged," she said. "They asked many excellent questions. I thought it was a great presentation and I will definitely take the kids back next year."

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Photos



Everyone who went on the tour was required to wear a hard hat. Scott Bombard told the students to keep their eyes and ears open as they toured the quarry



Graymont Sales Manager Scott Bombard fields questions from Oak Street School fifth-graders near the company's automated scale. He said trucks are weighed as they enter the quarry and again when they leave. The driver is then provided a printed ticket that details his load.