

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Stack Test Observation**

B182427762

FACILITY: Morton Salt, Inc.		SRN / ID: B1824
LOCATION: 180 Sixth St., MANISTEE		DISTRICT: Cadillac
CITY: MANISTEE		COUNTY: MANISTEE
CONTACT: Don Kuk, Environmental Manager		ACTIVITY DATE: 10/28/2014
STAFF: Caryn Owens	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Stack Test observation for particulate testing of the FGPELLPROD process to demonstrate compliance with PTI 54-14.		
RESOLVED COMPLAINTS:		

On Tuesday, October 28, 2014, Ms. Caryn Owens of the DEQ-AQD was at Morton Salt, Inc. located at 180 Sixth Street, Manistee, Michigan, to observe a scheduled stack test demonstrating compliance with particulate emissions limitations required in permit to install 54-14. DEQ met with Mr. Don Kuk, the Environmental Manager of Morton Salt, who showed the DEQ the mill process area of the facility. DEQ observed the FGPELLPRETZEL processes to assess that the facility was operating the pellet salt production (EUPPELLPROD) and the pretzel salt production (EUPRETZELSALT) at maximum load. DEQ also observed six newly installed vents used by EUPRETZELSALT and how they were connected into the FGPELLPRETZEL system.

The stack test was conducted by Network Environmental, Inc. (Network), and Mr. Jeremy Howe of the DEQ-AQD Technical Programs Unit (TPU) was providing oversight of the stack test. Ms. Owens arrived on site at approximately 9:15am, and the stack test was on Run 1, of 3 Runs. There was hardly any moisture in the flu gas (estimated at 3 percent moisture) exiting the stack. Network was collecting the total particulate using EPA Method 17 (front half of the sampling train was collecting filterable particulate and the back half of the sampling train was collecting condensable particulate). The stack temperature exceeded 85°F (the stack temperature was approximately 100°F), so most of the particulate will be collected on the front filter in the sampling train and the condensable PM impinger filter. This was not a combustion source, therefore a diluent measurement was not necessary, and ambient air could be used for the dry molecular weight of the stack gas. Network indicated that the vacuum pressure on the filter was low, and stayed at approximately 4 inches of water column (wc) throughout the run. This indicated there was not a lot of build-up on the filter. Network brought three separate sampling trains for the testing runs, purging the samples between each run. Ms. Owens recorded the differential pressure of the baghouse during Run 1 which was 2.47 inches wc, in between Run 1 and Run 2 which was 2.45 inches wc, and during Run 2 which was at 2.45 inches wc. Ms. Owens left the site during Run 2, while Mr. Howe stayed for the duration of the stack test. Mr. Howe verified the isokinetics for Runs 1 and 2, and Network also completed isokinetic sampling for Run 3. Mr. Howe also noticed that the sampling nozzle of the probe was not brushed after Run 1, but it was for Run 2, so Run1 was collected then.

During the stack test, Morton Salt was operating at full capacity. The Pellet Production was reported to be operating about 30 tons per hour for the day of the stack test, and Pretzel Salt Production was operating at 1.8 tons per hour. The Pellet System operating report shows that all the pellet presses were in operation during the stack test. The lower production numbers was due to shut down early in the morning, prior to starting the stack test, and later in the evening after the stack test was complete.

A visual emissions (VE) test was completed on September 29, 2014 to give Morton Salt more time with operational restrictions (EUPRETZELSALT does not operate very often), weather conditions, notification timelines, and completion timelines. During the VE test, the pellet production was operating at 32.5 tons per hour, the pretzel salt production was operating at 1.5 tons per hour, and the baghouse differential pressure ranged between 1.90-2.92 inches wc. The operating conditions during the VE test on September 29, 2014, were similar to the particulate stack test on October 25, 2014. An additional VE test was not completed at the time of the stack test due to the weather conditions when the stack test began. When the DEQ arrived at the facility, it was cloudy and raining. When Ms. Owens left the stack test the weather conditions changed and cleared up a little. No visible emissions were observed outside from the sides of the building or the roof during the stack test. Mr. Howe will follow up with a review of the stack test report once the DEQ receives it.

NAME Caryn Owens DATE 11/25/14 SUPERVISOR [Signature]