

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection

N750834443

FACILITY: A & L IRON AND METAL INC.		SRN / ID: N7508
LOCATION: 2000 MILBOCKER RD., GAYLORD		DISTRICT: Gaylord
CITY: GAYLORD		COUNTY: OTSEGO
CONTACT: Brian Miller		ACTIVITY DATE: 04/29/2016
STAFF: Becky Radulski	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: VE reading of diesel stack		
RESOLVED COMPLAINTS:		

Becky Radulski, AQD, arrived at A&L at approximately 9:48 am on Friday April 29, 2016 to perform VE observation of the diesel engine driving the crusher. The VE readings were in follow up to high VE readings noted from diesel engine stack while in area with Gloria Torello, AQD, on Thursday April 28<sup>th</sup>. Weather was overcast, could read from driveway west of crusher. Sun was not visible.

Crusher was operating. Radulski began opacity readings at 9:50 am. Four minutes into readings A&L staff arrived at DEQ truck (Jason, Chris, Brian), stopped reading at 9:54 am. A second reading was done after discussions with A&L personnel – the 2<sup>nd</sup> reading began at 10:50 am and ended at 11:05 am.

VE observations are attached. There were not enough readings to make a 6 minute average in the first observation; however in the 19 readings that took place, all but 1 reading was 20% or more. The 2<sup>nd</sup> observation resulted in a full 15 minute observation. The highest 6 minute average opacity was 38.8%.

Crusher appeared to be operating different than it was Thursday. Less material appeared to be on the belt going to crusher. The material was more spread out and less bulky. A&L indicated there was less scrap to run today, which is why they were running less; they were at the bottom on the pile, and that Thursday had been larger chunks such as cars going through.

Radulski also noted that the crane operator was 'shaking' each load as it dropped onto the conveyor belt, allowing material to slowing spread out on conveyor. A&L indicated that the crane operator does that to allow the operators to watch for thicker pieces of metal that can damage the crusher, as well as wood that can look like metal if it is dark and stained. While observing the crusher operating, the unit shut down and reversed to allow material to be removed.

The diesel engine was discussed. A&L indicated cylinders on the V8, 16 cylinder engine are replaced on a constant cycle. 2 cylinder packages are replaced each month – the package being replaced includes the fuel injection (controls the amount of fuel used). Replacements also changes out rings and compression components.

A&L indicated they are considering several options to reduce opacity:

1. Converting to electric power. (Selling the engine could potentially cover the cost of the conversion.)
2. Converting existing engine to natural gas fuel. Concern mentioned by A&L with this option is that natural gas can be hard on the cylinders.
3. Utilizing a catalytic convertor.
4. Operating the shredder with less and more consistent throughput to avoid peaks. Thought being that the reason for the black smoke is the increased labor on the engine when the throughput goes from a large heavier chunk of car, to less product; this involves using more fuel; the black smoke appears to be uncombusted fuel leaving the stack.

NAME Becky RadulskiDATE 5/9/16SUPERVISOR 