Manila
Manistee

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
Field Observation Report: Stack Testing

Facility: Packaging Corporation of America - Filer City Mill		**SRN / ID:** B3692
Location: FILER CITY	**County:** MANISTEE	**District:** Cadillac

Permit(s):	MI-ROP-B3692-20009				
Save					
Contact (s):	Sara Kaltunas	Staff (s):	Shane Nixon	Date (s):	2/18/15

ACTIVITY:	
☐ Pre-Test Site Visit/Monitoring	☑ Source Test Observation
☐ Visible Emissions Observation	☐ Sample(s) Collected
☐ Photos Taken	☐ Other

Observed VOC destruction efficiency (DE) testing of the regenerative thermal oxidizer (RTO) associated with EUCOPELAND+DISTANK at Packaging Corporation of America in Filer City, Michigan This protocol was received by the DEQ on January 14, 2015 and approved on February 4, 2015. Testing was performed on February 18, 2015. Testing is required by Renewable Operating Permit number MI-ROP-B3692-2009. The contractor performing the testing was BT Environmental Consultants, Inc.

Testing was performed for exhaust gas parameters and VOC in accordance with USEPA Methodology 40 CFR, Part 60, Appendix A, Methods 1, 2, 3A, 4, and 25A; and State of Michigan Part 10 Rules. Following is the evaluation of each method observed:

Method 1 – Sampling location was historic for the outlet and did not demonstrate cyclonic flow. Sampling at the inlet was performed at three points across the traverse. Procedures and equipment used appeared consistent with the method and approved protocol.

Method 2 – Stack gas velocity and flow was determined at the outlet. Procedures and equipment used appeared consistent with the method and approved protocol.

Method 3A – Oxygen content of the stack gas was performed through obtaining an integrated bag sample. This sample was then run for O2 content. Procedures and equipment used appeared consistent with the method and approved protocol.

Method 4 - Stack gas moisture was determined to be approximately 50%. Procedures and equipment used appeared consistent with the method and approved protocol.

Method 25A – VOC content at the RTO inlet and outlet was determined using this method. Two FID detectors were employed for this purpose. Methane concentration was also determined and subtracted from the VOC measurements. Calibration was performed using a gas dilution unit. Method 205 was performed on this unit and the results were acceptable. Pre and post calibrations for each run were good. All leak checks for each sample train were good. Procedures and equipment used appeared consistent with the method and approved protocol.

Inlet to the RTO – Sampling equipment and placement of said equipment appears satisfactory. Ambient temperature is approximately 5-10 degrees F which makes keeping equipment heated difficult. Dilution probe is being used at this location. Testing location is under positive pressure and has very high moisture (47%).

Outlet of the RTO - Sampling equipment and placement of said equipment appears satisfactory. Ambient temperature is approximately 5-10 degrees F which makes keeping equipment heated difficult. Dilution probe is being used at this location. Testing location is under negative pressure and has very high moisture (47%).

The RTO – Internal temperature is approximately 1700 F. The pressure drop across the scrubber is approximately 60 inches of water, gauge.

Testing Issues – Run #1 was at a lower temperature, 1650, and failed DE (87%), adjustments were made to the RTO and the facility was made aware that Run #1 needed to be reported, but could be thrown out. Run #2 was higher, 1750 F, and passed very well (97%). The facility wished to run at a lower temperature, but, wanted to use one of the previous runs and just run two more times after adjusting to this lower temperature. The RTO has temperature swings as high as 150F during the course of a 60 minute run. So, it was decided that they could use the higher temperature run and average it with the next two. However, the facility decided they wished to have three good runs at approximately the same average temperature. Therefore, a total of five runs were performed.

Staff: Rob Dickman  CC: Shane Nixon Date: 3/5/15