

DINE COMPLY INC.
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22 December 2016

VIA ELECTRONIC MAIL AND FIRST CLASS MAIL

(7015 1730 0000 1915 4093)

Mr. Rex Lane
MDEQ, AQD, Kalamazoo District Office
7953 Adobe Road
Kalamazoo, Michigan 49009-5025

Subject: *ReConserve of Michigan, Inc.
SRN: N8081, Calhoun County
Violation Notice Response*



Dear Mr. Lane:

In coordination with and on behalf of ReConserve of Michigan, Inc. ("ReConserve"), Dine Comply Inc. ("Dine Comply") has been contracted to evaluate the 1 December 2016 Violation Notice (VN), review the compliance information provided by the company, and develop the appropriate compliance plan and schedule to resolve the alleged outstanding violation associated with Permit to Install (PTI) number 184-08A.

After review of the VN and review of the air permit application supporting the effective PTI, response is provided regarding the violation indicated in the 1 December 2016 VN.

1	Violation:	Exceedance of PM _{2.5} emission limit
	Date:	July 28-29, 2016 (Stack Testing Date)
	Duration:	July 28-29 to the Present
	Ongoing:	July 28-29 to the Present
	Cause:	Emission limit established based on estimated particle size data
	Corrective Actions:	Request modification to permitting to adjust the PM ₁₀ and PM _{2.5} emission limits based on empirical (stack testing) data
	Comments:	ReConserve's position is that a violation of applicable legal requirements did not occur because the emissions limitation was based on poor data, the testing methodology is widely known to have significant positive bias and the facility already utilizes control technology for PM _{2.5} (Regenerative Thermal Oxidizer with a pre-filter). Also, there is no federal statutory requirement (MACT/NSPS) requiring the measurement of CPM using Method 202 when determining PM ₁₀ or PM _{2.5} emission estimates.

Emissions Limitation:

The emissions limitation is based on estimated particle characterization data from AP-42 Chapter 9.9.1 for a column dryer for the grain drying industry (See Attachment A). Only the particle size distribution data was applied to the total PM emission calculation. The background document for this AP-42 chapter indicates this data was based on two tests that were conducted in 1972 and the emission factors have a rating of E, which means it is a very poorly rated emissions factor. While working with MDEQ to establish the emissions factor for PM_{2.5}, MDEQ admitted that the agency had no stack testing for a similar source for PM_{2.5} and they actually wanted to use a higher limit based on the Post Cereal company, but the Post Cereal Company stack testing did not include condensable particulate emissions (CPM). Regardless, PM_{2.5} emissions limitations were established for several permitted emissions units and there was significant correspondence documenting the emissions limitations, see Attachment B. There was zero data regarding CPM and there is no data to support that the PM_{2.5} emissions limit established by MDEQ included CPM. USEPA guidance information indicates that PM_{2.5} should be established only for Title V, PSD and non-attainment New Source Review or for MACT/NSPS standards, none of which are applicable to ReConserve. Lastly, evaluation of the drying operation indicates there is no significant combustion associated with the drying operation, the only material combusted is natural gas (CPM more common in combustion, metallurgical and wood product sources that emit large quantities of vapors that condense into PM_{2.5}). Use of the AP-42 particle characterization data resulted in emission limitations that are biased low, yet the stack testing is known for a high bias (See Attachment C). Overall, ReConserve accepted emissions limits that were not attainable in order to obtain a timely Permit to Install and MDEQ used a filterable emission factor to set a limit requiring compliance testing using filterable and condensable methods.

Stack Testing Methodology:

It is widely recognized that EPA Method 202 (which measures CPM) is inherently biased. The measurement method does not directly measure CPM. USEPA's own March 2016 guidance document (which was developed to assist stack testers because the method is so complex and sensitive) indicates that significant positive bias could be from residual mass contamination (from laboratory glassware, the sampling train, the CPM filter, the nitrogen purge gas, the wash bottles, the sample containers and the reagents used to recover and analyze samples) or from the oxidation of soluble gases inadvertently captured in the cold impinger solutions used in the sampling trains. Lastly, the purpose of the RTO is to combust VOC's and HAP's and convert them to carbon dioxide and water and EPA Method 202 is not recommended for any gas stream where water is present. There are many exposures with this testing methodology that can significantly over-state the actual emissions of CPM to the atmosphere and are at the control of the stack testing company and the laboratory processing the testing. Essentially, this testing method works great in a controlled environment, such as a laboratory, but not in the industrial field exposed to atmospheric conditions. In evaluation of the results, the results would be 0.89 lbs/hr for PM (PM + CPM), 0.55 lbs/hr for PM₁₀ (PM₁₀ + CPM) and 0.564 for PM_{2.5} (PM_{2.5} + CPM). The results indicate that the PM_{2.5} fraction is higher than the PM₁₀ fraction, which is impossible in reality and should be observed as methodology bias and not a compliance determination.

Control Technology:

The only method to control PM_{2.5} emissions from this type of exhaust stream would be through the use of a regenerative thermal oxidizer with a pre-filter, which is already employed.

In consideration of the above, it is requested that PTI 184-08A be administratively amended to adjust all of the particulate emissions limitations based on the stack testing data (with an MDEQ approved safety factor) and assume that all of the PM_{2.5} emissions are equal to the PM₁₀ emissions. For this industry, the condensible fraction should never change the result of a compliance demonstration. ReConserve has already paid more than \$25,000 for the stack testing and re-testing would likely result in the same observance.

If there are any questions and/or concerns regarding this submittal, please contact me at (740) 389-2076. After your review and consideration, please contact Don Sturch of ReConserve of Michigan, Inc. or me regarding the appropriate path forward.

Sincerely,



Shara Kay Hayes
President, Dine Comply, Inc.

cc: Don Sturch, ReConserve of Michigan, Inc. (USPS 7015 1730 0000 1915 4109)
Dine Comply, Inc. Client Files