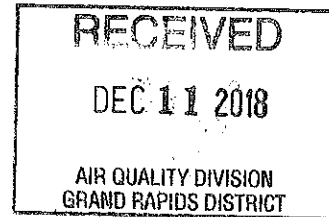




NORTH AMERICAN NATURAL RESOURCES, INC.
300 N. 5th Avenue, Suite 100
Ann Arbor, Michigan 48104
Telephone (734) 627-9000

December 5, 2018

Mr. David L. Morgan
Environmental Quality Specialist
STATE OF MICHIGAN
Department of Environmental Quality
Air Quality Division
Grand Rapids District Office
350 Ottawa Avenue NW, Unit 10
Grand Rapids MI 49503



Subject: NANR Central Generating Facility; SRN N2804
Response to Violation Notice dated November 19, 2018

Dear Mr. Morgan,

North American Natural Resources (NANR) has prepared this document to reply to the Violation Notice (VN) dated November 19, 2018 that was issued by the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD). The VN was issued for exceedances of the permitted sulfur dioxide (SO₂) emission rate for emission units EUENGINE1 and EUENGINE2 at the NANR Central Generating Facility in Pierson, Montcalm County.

Landfill gas (LFG) collected from the adjacent Central Sanitary Landfill is used as fuel in the two reciprocating internal combustion engine (EUENGINE1 and EUENGINE2) generator sets that are owned and operated by NANR. The SO₂ emission exceedances specified in the VN were measured during the initial emission testing event that occurred on September 11, 2018.

Sulfur dioxide emissions result from the oxidation of sulfur-bearing compounds that are present in the LFG that is used as fuel for EUENGINE1 and EUENGINE2. In November 2016, prior to construction of the Central Generating Facility, NANR obtained a sample of the LFG recovered from the Central Sanitary Landfill and determined that it had a sulfur content of 297 parts per million by volume (ppmv). The gas analytical result was provided to MDEQ-AQD as part of the Permit to Install application submitted in March 2017. In the application documents, Derenzo Environmental Services (DES) recommended SO₂ emissions limits for the Central Generating Facility based on LFG that contained up to 450 ppmv sulfur. The proposed emission limits allowed for a 50% increase in the LFG sulfur content, which was thought to be a reasonable contingency, and were incorporated into Permit to Install (PTI) 45-17.

Based on the results of the initial emission testing and LFG sulfur sampling that occurred on September 11, 2018 following facility startup, the LFG sulfur content has increased to approximately 700 ppmv. NANR has no control of the sulfur content in the LFG and sulfur removal (or add-on emission controls) is not economically feasible. Therefore, NANR worked with DES to prepare and submit an application to modify PTI 45-17 to account for using fuel with increased sulfur content. The permit application was submitted to MDEQ-AQD approximately the same time as the emission test results. NANR received confirmation that the application was received by MDEQ-AQD on November 7, 2018 and was issued PTI application No. 45-17A.

Analyses submitted as part of the application verify that operation of the Central Generating Facility will comply with state and federal regulations and air quality standards at the proposed increased SO₂ emission rates, which were based on LFG containing up to 1,000 ppmv sulfur (an additional 40% increase relative to what was measured in September 2018).

It should be emphasized that installation and operation of the NANR Central Generating Facility does not result in increased SO₂ emissions for the stationary source. The RICE are fueled with LFG collected from the landfill that would otherwise be burned in the landfill's open flare. Since SO₂ emissions are dependent on the fuel sulfur content (not the type of combustion process) the same quantity of SO₂ is released from the engines as would be released from flaring the gas.

NANR looks forward to approval and issuance of PTI 45-17A, which will resolve the emission limit exceedances specified in the VN. Should you have any questions please contact us at 734-627-9000, or Derenzo Environmental Services at 517-268-0043.

Sincerely,

NORTH AMERICAN NATURAL RESOURCES

A handwritten signature in black ink, appearing to read 'Richard Spranger', with a stylized flourish at the end.

Richard Spranger
Director of Operations

cc: Ms. Jenine Camilleri, MDEQ Enforcement Unit
Mr. Robert Harvey, Derenzo Environmental Services