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**FORTISTAR Methane Group** 

Arbor Hills Energy LLC 10611 West 5 Mile Road • Northville, Michigan 48167 Tel. (248) 305-7774 • Fax. (248) 305-7879

November 10, 2015

Ms. Diane Kavanaugh Vetort Air Quality Division Michigan Department of Environmental Quality 301 East Lewis B. Glick Highway Jackson, MI 49201

Subject: Response to MDEQ Violation Notice issued November 6, 2015 Arbor Hills Energy LLC ROP No.: N2688-2011

Dear Ms. Kavanaugh Vetort;

We are in receipt of the above referenced Violation Notice regarding the apparent exceedance of the 12-month rolling emissions in tons per year for SOx of both the EUTURBINE1-S3 (EGT-1) and the associated EUDUCTBURNER1-S3 and EUTURBINE3-S3 (EGT-3) and the associated EUDUCTBURNER3-S3. The emissions generated from these units are calculated by using the most recent stack test data.

As previously stated in our letter dated September 30, 2015, SOx is not created due to the combustion of landfill gas in our turbines and is rather a bypass of total sulfur in the raw landfill gas that we have no control over. Arbor Hills Energy LLC contests MDEQ's choice of Method 6C to determine SOx emission from the turbines and associated equipment. While the apparent benefit of Method 6C is that effluent concentration and values are available on a real-time basis, the analyzers are quick to fail in the field with the photo multiplier tube and associated components. Method 6C has a lot of variability in the calibration gases, calibrations, system bias, etc. that can add uncertainty and variability to the results. Oxygen, water vapor, nitrogen etc. can provide interference that can cause skewing of results obtained. Fuel gas analysis provides about 100 - 1,000 times better detection limits versus Method 6C since fuel gas analysis has detection limits in ppb versus ppm limits in Method 6C. The preference of fuel gas analysis versus Method 6C is also evident in the NSPS Subpart KKKK regulation which calls for a CEMS for NOx analysis but requires use of ASTM fuel gas analytical methods for sulfur / total sulfur in the fuel gas versus measurement of SO<sub>2</sub> in the exhaust gas.

Most state agencies that we have worked with and all source test vendors we have spoken to recognize fuel gas analyses performed on the inlet gas as being more true and accurate versus Method 6C in the exhaust gas. Michigan DEQ also acknowledged and accepted the use of fuel gas analysis in the past years as all our source testing has been conducted using this method. Thus there is precedent for use of Fuel Analysis method of SOx determination. Based on general industry and regulatory agency accepted practice, we request that the Michigan DEQ continue to rely on fuel analysis as in the past to document compliance of the turbines with the SOx emission limit.

We have not relied on Method 6C to demonstrate compliance at this facility. Arbor Hills Energy LLC provided the 12-month rolling emissions for SOx using the results from the fuel gas analysis which showed compliance with the permitted limits.

Ms. Kavanaugh Vetort MDEQ September 30, 2015

If you have any questions regarding this response, please contact Suparna Chakladar at your convenience at (951) 833-4153.

Sincerely,

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Anthony J. Falbo Senior Vice President - Operations FORTISTAR Methane Group Arbor Hills Energy LLC

cc: Scott Miller, DEQ Lynn Fiedler, DEQ Mary Ann Dolehanty, DEQ Teresa Seidel, DEQ Thomas Hess, DEQ Suparna Chakladar, FMG



RICK SNYDER GOVERNOR

## STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY



JACKSON DISTRICT OFFICE

DAN WYANT DIRECTOR

## November 6, 2015

## <u>CERTIFIED MAIL – 7007 3020 0002 7737 4498</u> <u>RETURN RECEIPT REQUESTED</u>

Mr. Anthony J. Falbo, Senior VP -Operations FORTISTAR Methane Group Arbor Hills Energy, LLC 5087 Junction Road Lockport, NY 14094

Dear Mr. Falbo:

SRN: N2688, Washtenaw County

## VIOLATION NOTICE

On May 13, 2015, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), received a performance test results report from Arbor Hills Energy, LLC (AHE) located at 10611 West 5 Mile Road, Northville, Michigan. The purpose of the performance testing conducted on March 10 and 11, 2015, was to determine AHE EUTURBINE1-S3 and EUTURBINE3-S3 (European Gas Turbines) compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules and the conditions of Renewable Operating Permit (ROP) number MI-ROP-N2688-2011 and Consent Order AQD number 16-2015.

On September 11, 2015, the AQD issued a VN to AHE citing SO<sub>2</sub> Test Results that exceeded pounds per hour emission limits for two Turbines and associated ductburners in FGTURBINES-S3 and FGDUCTBURNERS-S3. The AQD requested AHE demonstrate their compliance status with the SO<sub>2</sub> 12-month rolling average emission limit as part of their VN response. On October 2, the AQD received AHE's response. AQD staff noted the following based on AHE submitted records:

	Rule/Permit	_
Process Description	Condition Violated	Comments
EUTURBINE1-S3 EUTURBINE3-S3	ROP, FGTURBINES-S3, Condition 1. SO <sub>2</sub> tons per year (TPY) emission limit based on 12-month rolling average as determined at the	Company's calculations based on 5/13/15 test data indicate EUTURBINE1 exceeded SO <sub>2</sub> limit of 12.5 TPY as of June 2015.
	end of each calendar month.	EUTURBINE3 exceeded SO <sub>2</sub> limit of 12.5 TPY as of April 2015.
EUDUCTBURNER1-S3 EUDUCTBURNER3-S3	ROP, FGDUCTBURNERS- S3, Condition 1. SO2 TPY	Company's calculations based on 5/13/15 test data

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emission limit based on 12- month rolling average as determined at the end of each calendar month.	indicate EUDUCTBURNER1 exceeded SO <sub>2</sub> limit of 1.5 TPY as of March 2015.
	EUDUCTBURNER3 exceeded SO2 limit of 1.5 TPY as of April 2015.

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Arbor Hills Energy response included the AQD requested 12 month rolling SO<sub>2</sub> emission calculations based on the test result emission factors. This acknowledges AHE submitted two versions of their 12 month rolling calculations. The first set of Tables show calculated emissions based on the AHE fuel analysis factor and these indicate compliance with emission limits. The second set of Tables show calculated emissions based on the AQD accepted and calculated emission factors from Method 6C (M6C) test data and these indicate non-compliance with the emission limits cited here and in the September 11, 2015 Violation Notice.

Please initiate actions necessary to correct the cited violations and submit a written response to this Violation Notice by November 30, 2015. The written response should include: the dates the violations occurred; an explanation of the causes and duration of the violations; whether the violations are ongoing; a summary of the actions that have been taken and are proposed to be taken to correct the violations and the dates by which these actions will take place; and what steps are being taken to prevent a reoccurrence.

If Arbor Hills Energy believes the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

Thank you for your attention to resolving the violations cited above. If you have any guestions regarding the violation or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely.

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Diane Kavanaugh Vetort Senior Environmental Quality Analyst Air Quality Division 517-780-7864

cc: Mr. Scott Miller, DEQ cc/via e-mail: Ms. Suparna Chakladar, VP FORTISTAR Methane Group

> Ms. Lynn Fiedler, DEQ Ms. Mary Ann Dolehanty, DEQ Ms. Teresa Seidel, DEQ Mr. Thomas Hess, DEQ