



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
JACKSON DISTRICT OFFICE



LIESL EICHLER CLARK
DIRECTOR

October 22, 2019

CERTIFIED MAIL-7017 3380 0000 4105 8933
RETURN RECEIPT

Mr. Anthony Falbo, Senior Vice President-Operations
Fortistar Methane Group
Arbor Hills Energy LLC
5087 Junction Road
Lockport, NY 14094

SRN: N2688, Washtenaw County

Dear Mr. Falbo:

VIOLATION NOTICE

On October 16, 2019, the Michigan Department of Environment, Great Lakes and Energy, EGLE, Air Quality Division (AQD), received the most recent landfill gas well liquid level reports for the 2nd and 3rd quarters of 2019 from Advanced Disposal Services, Arbor Hills Landfill Inc. (ADS) located at 10690 West Six Mile Road, Northville Michigan. These reports were reviewed to determine the Company's 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) and the associated Air Pollution Control Rules, the conditions of Renewable Operating Permit (ROP) number MI-ROP-N2688-2011a; and Permit to Install (PTI) permit 79-17.

After reviewing the reports, AQD staff observed the following violation relevant to Fortistar Methane Group-Arbor Hills Energy LLC (Company) whom are the contracted operators of the landfill gas collection system (GCCS) and part of the same stationary source as ADS:

Process Description	Rule/Permit Condition Violated	Comments
GCCS	40 CFR 60.759 Standards of Performance for Municipal Solid Waste Landfills (NSPS WWW); 40 CFR 63.6(e)(1)(i) National Emissions Standards for Hazardous Air Pollutants (NESHAP Subpart AAAA)	The GCCS ability to collect landfill gas continues to be impaired at least in part due to high liquid levels in the gas wells and has further degraded during the most recent quarter. This problem was first identified in 2016 and continues to worsen. This violation was previously cited in Violation

		Notice (VN) dated 3/14/19. It was also cited by the United States Environmental Protection Agency Region V (USEPA) on September 29, 2016.
--	--	---

New Source Performance Standards (NSPS), Subpart WWW requires proper well design to properly handle water/leachate condensate in landfill gas wells. NESHAP Subpart AAAA requires the owner or operator to operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Reports on the liquid level in the gas wells were submitted by ADS from liquid level sounding data obtained in the 2nd and 3rd quarters of 2019. (Specific well information that shows how much of the well screen was actually covered by liquid was not provided in the two reports.) It is noted that the design for vertical gas extraction wells includes an estimated radius of influence (ROI), which is based in part on the length of perforated pipe available for gas flow. A substantially flooded well will be limited in its ROI and this will lead to gaps in gas collection coverage and lead to surface breakouts of landfill gas. Furthermore, the long-term presence of liquid can contribute to fouling of the stone and well screen, reducing the effectiveness of these wells over time. Finally, the presence of high levels of liquid in the landfill raises concerns about landfill slope stability.

Review of the liquid level data of about 300 wells for which liquid levels data were available for both quarters showed a substantial increase over a 3-month period. This is a continuation of a trend that has been ongoing since at least 2016.

The liquid levels increased despite a new gas well dewatering program implemented by ADS in the Spring of 2019, which included repairing/installing new liquid well pumps and an improvement in the air pressure across the landfill used to activate the pumps. This program appears to have had some success at the top of the landfill in the elevated temperature area but has been unsuccessful so far in the lower elevations. The overall increase in liquid levels is likely due to a combination of factors including an inadequately designed dewatering program, higher than normal precipitation during the period and the approximately 50 acres of relatively flat active face, under daily cover, now located at the top of the landfill where precipitation infiltration is likely occurring instead of entering the storm water system. All of this coincided with the continued occurrence of numerous locations on the surface of the landfill where methane levels were measured/identified as exceeding the regulatory limit of 500 parts per million.

Furthermore, it should also be noted that the following gas wells were reported to be pinched or otherwise impaired based on the most recent information submitted by ADS

Mr. Anthony Falbo
Fortistar Methane Group
Arbor Hills Energy LLC

3

October 22, 2019

AHEW0L08, AHEW0L09, AHW204R2, AHW223R4*, AHW227R2, AHW231R4, AHW233R2, AHW234R2, AHW235R3, AHW255R2, AHWW0281*, AHWW0299, AHWW0301, AHWW0303*, AHWW0305*, AHWW306, AHWW413, AHWW414, AHWW416*, AHWW0439, AHWW214R, AHWW252, AHW272R2. *These were listed as pinched in 3/14/19 VN as well.

In addition to investigating the adequacy of the current dewatering program, the Company shall conduct an evaluation in conjunction with ADS, of the pinched wells noted above to determine which are no longer viable based on the depth of the pinch/obstruction and the available gas quality/vacuum/flow data, etc.

Please initiate actions necessary to correct the cited violation and submit a written response to this Violation Notice by November 13, 2019. The written response should include: the dates the violation occurred; an explanation of the causes and duration of the violation; whether the violation is 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.

Please submit written response to the DEQ, AQD Jackson District, at 301 East Louis B Glick Highway Jackson, Michigan 49201 and submit copy to Ms. Jenine Camilleri, Enforcement Unit Supervisor at the DEQ, AQD P.O. Box 30260, Lansing, Michigan 48909-7760.

If the Company 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.

If you have any questions regarding the violation or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely,



Mike Kovalchick
Senior Environmental Engineer
Air Quality Division
517-416-5025

cc: Mr. Scott Miller, EGLE
cc/via e-mail:

Mr. Brian Sanders, ADS
Mr. Anthony Testa, ADS
Mr. Jay Warzinski, ADS
Ms. Suparna Chaklader, Fortistar
Mr. Nathan Frank, USEPA

Mr. Anthony Falbo
Fortistar Methane Group
Arbor Hills Energy LLC

4

October 22, 2019

Ms. Sarah Marshall, USEPA
Mr. Kenneth Ruffatto, USEPA
Mr. Neil Gordon, Department of Attorney General
Ms. Mary Ann Dolehanty, EGLE
Mr. Chris Ethridge, EGLE
Ms. Jenine Camillari, EGLE
Mr. Jeff Rathbun, EGLE
Ms. Diane Kavanaugh Vetort, EGLE
Mr. Lonnie Lee, EGLE
Mr. Larry Bean, EGLE
Mr. Greg Morrow, EGLE
Ms. Alexandria Clark, EGLE
Ms. Melinda Shine, EGLE
Ms. Ambrosia Brown, EGLE