

VANCE

N2688-RVV-20161223

FORTISTAR Methane Group

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

December 23, 2016

Mr. Scott Miller
Jackson District Supervisor
Air Quality Division
State of Michigan Department of Environmental Quality
301 East Louis Glick Highway
Jackson, MI 49201-1556



VIA OVERNIGHT DELIVERY AND ELECTRONIC MAIL

Subject: Response to Violation Notice, N2688, Washtenaw County (December 14, 2016)
Arbor Hills Landfill, 10690 Six Mile Road, Northville, MI

Dear Mr. Miller:

I am writing on behalf of Arbor Hills Energy LLC (“Arbor”) in response to the above violation notice (“NOV”).

The NOV indicated, in relevant part, that landfill gas odors have been observed downwind of the Arbor Hills Landfill (“Landfill”) on December 5 and December 10, 2016.

On the dates in question, Arbor’s landfill gas to energy facility, comprised of, among other elements, three EGT-Typhoon turbine engines and three duct burners associated with those engines and one Solar Taurus Gas Turbine (collectively, the “Facility”) was operating within the emissions parameters of its Renewable Operating Permit No. MI-ROP-N2688-2011 (“ROP”) and consistent with Michigan and federal law and regulations.

Any emissions identified as a violation of Michigan Administrative Code §336.1901(b), therefore, cannot be attributed to the activities of Arbor or the Facility.

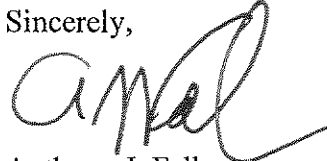
Furthermore, Michigan Administrative Code §299.4433(1)(c) does not apply to Arbor. This rule applies to “the owner and operator of a type II landfill” who must ensure that, among other things, “gases generated by the facility do not create a nuisance...”. The Facility is not a “facility” as defined in Section 299.4103 of the MAC, and Arbor is neither the owner nor the operator of the Arbor Hills Landfill.

As you are aware, Arbor is subject, with Advanced Disposal Services (ADS) and BFI, to Findings of Violation by the United States Environmental Protection Agency, Region 5 (“EPA”), issued on September 29, 2016. As directed by EPA, and as noted by MDEQ in the NOV, we have

assisted BFI and ADS in formulating a joint Corrective Action Plan ("Plan") to, among other things, upgrade the gas collection and control system at the Landfill. That Plan is attached hereto.

As always, we appreciate the opportunity to provide this response, and if the information provided above needs to be supplemented, or if you have any questions or concerns, please feel free to contact me.

Sincerely,



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

Attachment

Cc (by e-mail):

Kenneth Ruffatto, US EPA
Sara Loiacono, US EPA
Andre Daugavietis, Esq., US EPA
Nathan Frank, US EPA
Dave Vladic, BFI
Niki Wuestenberg, BFI
Christina Pearse Bossick, BFI
Kelly Rooney, Advanced Disposal
Jay Warzinski, Advanced Disposal
Dave Rettell, Advanced Disposal
Philip Comella, Esq., Freeborn & Peters
Mack McGuffey, Esq., Troutman Sanders
Diane Kavanaugh Vetort, MDEQ
Alexander Whitlow, MDEQ

— Lawrence E. Bean, MDEQ
Thomas J. Gesicki, FMG
Thomas Kelly, FMG
Don Ross, FMG
Suparna Chakladar, FMG



December 23, 2016

Nathan Frank, Section Chief
Kenneth Ruffatto, Environmental Engineer
Sara Loiacono, Environmental Scientist
Andre Daugavetis, Esq.
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

**RE: Arbor Hills Landfill Findings of Violation
Collaborative Plan for Corrective Action**

Dear Nathan, Ken, Sara, and Andre:

As requested, attached is a collaborative plan for corrective action at the Arbor Hills Landfill. All parties have all reviewed this letter and the enclosure and agree that the actions listed will ensure ongoing compliance with EPA's performance standards and continue to reduce the potential risk of odors from the landfill. The parties are simultaneously proposing these same actions in response to the Notice of Violation issued by MDEQ to the landfill on December 14, 2016.

The enclosed plan contemplates the items contained in the Advanced Disposal letter of November 17, 2016 that it sent to the other parties, EPA, and MDEQ. In that letter, ADS not only outlined certain activities that it was undertaking at the landfill, but also recommended certain activities for BFI's gas collection and control system. BFI, Fortistar, and ADS have worked collaboratively to address those recommendations in light of the efforts that BFI and Fortistar were already making. The enclosed plan thus reflects all parties' combined recommendations and commitments for corrective action at Arbor Hills as a whole.

During our discussions, the parties also determined that some landfill gas flow data previously provided to EPA only reported gas flow to turbines. As such, some of the values underestimated actual gas collection efficiency. The attached information confirms that gas collection rates were much higher than previously reported—74.4%, 74.1%, and 80.4% of LANDGEM modeled generation on a normalized basis for September, October, and November 2016, respectively. Enclosed with this letter is a table containing a complete updated gas flow information.

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AdvancedDisposal.com

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Please note that some of the proposed corrective actions depend on certain contingencies, and may require re-evaluation if those contingencies are not satisfied. In particular, as the Agency is aware, Advanced has proposed installing a temporary 3,000 cfm flare at the northwest corner of the landfill as an interim control device in that area. Advanced has purchased the flare and it was delivered to the site on December 22nd. It will take Advanced approximately two to three weeks to complete the preparatory work, including construction of the pad, piping connections, service hook-ups, and instrumentation, before the flare can be operational. Nevertheless, Advanced cannot commence construction on this project until it receives the appropriate approvals from the MDEQ and confirmation that the project will not adversely affect other pending permit applications previously submitted by Fortistar and BFI. Thus, we would appreciate prompt action from the EPA and MDEQ in issuing all necessary approvals for this measure, so that we can put it into operation at the earliest possible opportunity. Although we cannot guarantee it will be completely successful, it is something that can be done as soon as MDEQ and EPA approve it. In addition, please note that unforeseen circumstances may also require the parties to re-evaluate some of the actions proposed. If any significant changes are made to the corrective action plan, the parties will notify EPA and MDEQ.

Should you have any questions regarding this correspondence, please call me at your earliest convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly Rooney", is written over a horizontal line.

Kelly Rooney

Enclosures

cc: Tom Kelly, Counsel, FMG
Don Ross, Counsel, FMG
Suparna Chakladar, FMG
Phil Comella, Counsel, ADS
Jay Warzinski, ADS
Dave Rettell, ADS
Kelly Rooney, ADS
Scott Miller, MDEQ
Trent Cornell, Counsel, BFI
Dave Vladic, BFI
Mack McGuffey, Counsel, BFI

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ARBOR HILLS LANDFILL
Collaborative Corrective Action Plan
Submitted December 23, 2016

Phase 5-Ongoing construction (Gas System and Flares)

- Five (5) New well (WW-295, WW-296, WW-298, WW-326, WW-327)
- Twenty-two (22) Replacement gas extraction well (EW-23R, EW-25R, WW-16R4, WW-147R2, WW-149R3, WW-158R2, WW-171R3, WW-172R2, WW-173R4, WW-174R3, WW-203R, WW-206R2, WW-215R, WW-218R, WW-222R3, WW-223R, WW-237R2, WW-277R, WW-249R, WW-250R, WW-253R2, WW-254R2)
- 1,550 feet of 6-inch lateral piping
- 1,200 feet of 12-inch lateral piping
- 2,400 feet of 18-inch sub header piping connecting the east side of west to the west side of west creating a new piping "loop" to improve vacuum distribution at the north end of the facility
- Eleven (11) pneumatic pump in wells (EW-19R, WW-148R, WW-239R, WW-251R, WW-252R, WW-264R, WW-266, WW-272R, WW-273R, WW-275, WW-326)
- 3,760 feet of 2-inch airline
- 3,870 feet 3-inch force main line
- Replace chimney drain in the NE corner of Cell 4B two drip legs with condensate sumps and 12 inch pipe, creating a new piping "loop" to improve vacuum distribution at the north end of the facility
- Replace condensate sump ECS-1 with larger sump
- Delivery of 4,000 cfm blower skid for backup of existing blowers
- Reevaluation of well spacing performed by third party will add two (2) additional wells to enhance wellfield (WW-328 and TGW-19)
- Vacuum distribution evaluation by third party professional engineer along the south side on the landfill and railroad tracks
- Design of approximately 4,900 feet of 24-inch header pipe along north side of Cell 4, future Cell 6 and Arbor Hills East and associated sumps and installation airline and force main
- Evaluating and improving sump on south side of railroad tracks to minimize vacuum drop in this area

Anticipated 2017 Work

Gas System and Flares

- ADS is prepared to install a new 3,000 cfm temporary candlestick flare at the northwest corner of the landfill once it receives the necessary approvals from the MDEQ and confirmation that the flare will not adversely affect other pending permit applications (i.e., Arbor Hills Energy, LLC, PTI Application 110-16, submitted June 7, 2016, and BFI Waste Services of North America, LLC, PTI Application 197-16, submitted Nov. 30, 2016). ADS has already delivered the flare to the site and it can be made operational by mid-January if the approval to install it is provided quickly.

- Permitting and installation of new 5,000 cfm Utility Flare and associated piping
- Replace NW drip leg with condensate sump
- Installation of 24-inch header pipe along north side of Cell 4 (C &D) and associated sumps and installation airline and force main
- Replace existing gas wells, laterals, airline and force main as necessary
- Install Seven (7) Caisson gas extraction wells in Cell 4 prior to NSPS requirement (dependent on waste filling in the new Cell 4D by ADS)
- Connect Cell 4 C and D caisson wells to the active collection system

Leachate System Enhancements

- New 550,000 gallon leachate tank installation. Odor control for new leachate tank will be installed prior to operation in 2017. The odor control system has been purchased with delivery expected December 28, 2016
- Odor control for BFI's two existing 50,000 gallon leachate tanks has Carbtrol carbon filters installed.
- Arbor Hills East Leachate lift station has Carbtrol carbon filter installed
- Arbor Hills West Leachate lift station has activated carbon filter installed
- ADS is installing activated carbon filter on the existing 300,000 gallon leachate tank.

Landfill Enhancements

- ADS will be installing 20 acres final cover along the southern slope
- ADS will be installing an odor control system before the end of the year.
- ADS will be expanding the temporary cap placed in 2016 by 10 acres

ARBOR HILLS LANDFILL
Updated Landfill Gas Flow Data

Month	LANDGEM Modeled Generation ^a	Average Gas Flow (scfm)	Normalized Average Flow (scfm)	Average Methane Content	Normalized Collection Efficiency
January 2016	10030	5613	5872	52.31%	59%
February 2016	10030	6449	6601	51.18%	66%
March 2016	10030	7001	7371	52.64%	73%
April 2016	10030	7330	7229	49.31%	72%
May 2016	10030	7537	7462	49.50%	74%
June 2016	10030	7577	7336	48.41%	73%
July 2016	10030	6913	6277	45.40%	63%
August 2016	10030	8023	6820	42.50%	68%
September 2016	10030	8310	7462	44.90%	74%
November 2016	10030	8606	8067	46.87%	80%
December 2016 ^b	10030	8764	7889	45.01%	79%

^a April 2016 GCCS Design Plan

^b Based on data available (through December 20, 2016).