



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 07 2016

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, L.L.C.
43050 Industrial Park Road
Cadiz, Ohio 43907

Re: Finding of Violation
MarkWest Energy Partners L.P and
MarkWest Utica EMG, L.L.C.
Summerfield, Ohio

Dear Ms. McBurney:

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to MarkWest Energy Partners L.P. and MarkWest Utica EMG, L.L.C. (collectively MarkWest or you) under Sections 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3). We find that you are violating the following at your Seneca Gas Plant in Summerfield, Ohio: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); and (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a - 60.490 (Subpart VVa).

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply, and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference. The EPA contact in this matter is Constantinos Loukeris. You may call him at (312) 353-6198 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

A handwritten signature in cursive script that reads "Sara Brunema". The signature is written in black ink and has a fluid, connected style.

Edward Nam
Acting Director
Air and Radiation Division

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:)

MarkWest Energy Partners, L.P and)
MarkWest Utica EMG, L.L.C.)
Summerfield, Ohio)

FINDING OF VIOLATION

Proceedings Pursuant to)
the Clean Air Act,)
42 U.S.C. §§ 7401 et seq.)

EPA-5-16-OH-16

FINDING OF VIOLATION

The U.S. Environmental Protection Agency finds that MarkWest Energy Partners, L.P. and MarkWest Utica EMG, L.L.C. (collectively "MarkWest") is violating the Clean Air Act (CAA) and its implementing regulations at the company's Seneca Facility in Summerfield, Ohio. Specifically, MarkWest is violating: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); and (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a-60.490 (Subpart VVa).

Regulatory Authority

New Source Performance Standard Subpart OOOO

1. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate regulations establishing New Source Performance Standards (NSPS).
2. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.
3. EPA promulgated Subpart OOOO on September 23, 2013. 78 Fed. Reg. 58435.
4. Subpart OOOO at 40 C.F.R. § 60.5365 states that an owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which construction, modification, or reconstruction commenced after August 23, 2011 is subject to the applicable provisions of Subpart OOOO. Section 60.5365(f) states that the group of all equipment, except compressors, within a process unit is an affected facility. Section 60.5365(f)(3) further provides that the equipment within a process unit of an affected facility located at onshore natural gas process plants and described in paragraph

(f) of this section are exempt from Subpart OOOO if they are subject to and controlled according to Subparts VVa, GGG, or GGGa of 40 C.F.R. Part 60.

5. Subpart OOOO at 40 C.F.R. § 60.5430 defines “process unit” to mean “components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.”
6. Subpart OOOO at 40 C.F.R. § 60.5430 defines a “natural gas processing plant (gas plant)” as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.”
7. Subpart OOOO at 40 C.F.R. § 60.5400 sets forth equipment standards that apply to affected facilities at an onshore natural gas processing plant. This section applies to the group of all equipment, except compressors, within a process unit.
8. Subpart OOOO at 40 C.F.R. § 60.5400(a) states a subject owner or operator must comply with the equipment leak standard requirements of specific portions of Subpart VVa at 40 C.F.R. §§ 60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a., except as provided in § 60.5401.
9. Subpart OOOO at 40 C.F.R. § 60.5400(d) states that a subject owner or operator must comply with the provisions of 40 C.F.R. § 60.485a of Subpart VVa except as provided in § 60.5400(f).
10. Subpart OOOO at 40 C.F.R. § 60.5400(e) states that a subject owner or operator must comply with the provisions of §§ 60.486a and 60.487a of Subpart VVa except as provided in §§ 60.5401, 60.5421, and 60.5422 of Subpart OOOO.
11. Subpart OOOO at 40 C.F.R. § 60.5400(f) states that a subject owner or operator must use the following provision instead of 40 C.F.R. § 60.485a(d)(1): “Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service.”
12. Subpart OOOO at 40 C.F.R. § 60.5401(b) states that each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in 40 C.F.R. § 60.485a(b) except as provided in 40 C.F.R. § 60.5400(c) and in paragraph (b)(4) of this section, and 40 C.F.R. § 60.482-4a(a) through (c) of subpart VVa.
13. Subpart OOOO at 40 C.F.R. § 60.5401(b) further provides that if an instrument reading of 500 ppm or greater is measured, a leak is detected, and when a leak is detected, it must be repaired as soon as practicable, but not later than 15 days after it is detected, except as provided in § 60.482-9a. In addition, § 60.5401(b) provides that a first attempt at repair must be made no later than 5 calendar days after each leak is detected. Section 60.5401(b)(4)(i) provides that any pressure relief device that is located in a

nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are on-site, instead of within 5 days as specified in paragraph (b)(1) of this section and § 60.482-4a(b)(1) of Subpart VVa; however, no pressure relief device described in paragraph (b)(4)(i) of this section must be allowed to operate for more than 30 days after a pressure release without monitoring.

NSPS Subpart VVa

14. EPA promulgated NSPS Subpart VVa on November 16, 2007 (Subpart VVa). See 72 Fed. Reg. 64883.
15. Subpart VVa at 40 C.F.R. § 60.482-1a(a) states “[e]ach owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§ 60.482-1a through 60.482-10a or § 60.480a(e) for all equipment within 180 days of initial startup.”
16. Subpart VVa at 40 C.F.R. § 60.482-1a(b) states “[c]ompliance with §§ 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in § 60.485a.”
17. Subpart VVa at 40 C.F.R. § 60.482-2a(a)(1) states “[e]ach pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b), except as provided in § 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period.”
18. Subpart VVa at 40 C.F.R. § 60.482-2a(a)(2) states that “[e]ach pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in § 60.482-1a(f).”
19. Subpart VVa at 40 C.F.R. § 60.482-11a(a) states “[t]he owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup.”
20. Subpart VVa at 40 C.F.R. § 60.482-11a(d) states that “[w]hen a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected” from a connector.
21. Subpart VVa at 40 C.F.R. § 60.482-7a(d)(2) states that “[a] first attempt at repair shall be made no later than 5 calendar days after each leak is detected” from a valve.

22. Subpart VVa at 40 C.F.R. § 60.482-6a(a)(1) states that “[e]ach open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.482-1a(c) and paragraphs (d) and (e) of this section.
23. Subpart VVa at 40 C.F.R. § 60.482-6a(a)(2) states that “[t]he cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.”
24. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(1) states that “[e]ach valve shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b) and shall comply with paragraphs (b) through (e) of this section.”
25. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(2) states that “[a] valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii).”
26. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(2)(i) states that a facility must “[m]onitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.”
27. Subpart VVa at 40 C.F.R. § 60.485a(b) states “[t]he owner or operator shall determine compliance with the standards in §§ 60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows: (1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of Appendix A-7 of this part.”
28. Subpart VVa at 40 C.F.R. § 60.482-4a(a) states that “[e]xcept during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in § 60.485a(c).”
29. Subpart VVa at 40 C.F.R. § 60.482-4a(b) states that “[a]fter each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in § 60.482-9a.” Further, 40 C.F.R. § 60.482-4a(b) provides that “[n]o later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in § 60.485a(c).”
30. Subpart VVa at 40 C.F.R. § 60.482-4a(c) provides that “[a]ny pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 C.F.R. § 60.482-10a is exempted from the requirements of paragraphs (a) and (b) of [§ 60.482-4a].”

31. Subpart VVa at 40 C.F.R. § 60.482-10a(a) states that “[o]wners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.” § 60.482-10a(m) provides that “[c]losed vent systems and control devices used to comply with this subpart shall be operated at all times when emissions may be vented to them.”
32. The NSPS Appendix A-7, at 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1, sets forth the technique which must be used to determine if there is a leak from a valve.

Findings of Fact

33. MarkWest owns and operates an onshore natural gas processing plant, at 26645 Zep Road East, Summerfield, Ohio, called the Seneca Gas Plant (SGP), which removes natural gas liquids from field gas.
34. On November 4, 2013, MarkWest notified Ohio EPA that the SGP is subject to Subpart OOOO (and by reference Subpart VVa).
35. EPA conducted an inspection of the SGP on April 25-28, 2016 (April 2016 inspection).
36. During the April 2016 inspection, EPA reviewed records indicating that MarkWest did not calibrate their portable volatile organic compound (VOC) monitor with the appropriate calibration gas prior to performing Method 21 monitoring of pumps for the following months:
 - a. October 2014;
 - b. November 2014;
 - c. December 2014;
 - d. January 2015;
 - e. February 2015;
 - f. March 2015; and
 - g. September 2015.
37. During the April 2016 inspection, EPA observed greater than 10,000 parts per million (ppm) of VOC from an open-ended valve or line not properly connected into a dew point analyzer in the Seneca 3 process unit. In addition, EPA imaged significant hydrocarbons from this sample line using a FLIR® infrared camera.
38. During the April 2016 inspection, EPA observed the following valves that were insulated such that Method 21 could not be performed at the surface of the valve where leakage could occur: Tag# 179EE in Inlet; Tag# 909, 910, 925, 924, 939, 1013, 1009, and 868 in Seneca 1; Tag# 2157, 1620, 1618 in Seneca 2; and Tag# 2850, 2755, and 2756 in Seneca 3.
39. During the April 2016 inspection, EPA reviewed records indicating MarkWest did complete a weekly visual inspection for four pumps for three weeks in August 2015.

40. During the April 2016 inspection, EPA observed pressure relief devices that are routed through a vent system to a flare.
41. On May 19, 2016 (May 2016 Letter), MarkWest submitted follow-up information requested during the April 2016 inspection.
42. In the May 2016 Letter, MarkWest indicated that they were unable to retrieve any records of weekly visual pump inspections for February 2014.
43. During the April 2016 inspection, EPA observed three open-ended valves or lines, with Tag# 758, 759, and 1038 that did not have sealed closure devices.
44. From MarkWest's leak detection and repair (LDAR) database provided during the April 2016 inspection, EPA identified the following number of connectors that were not monitored initially within 12 months:

Process Unit	Number of Connectors	Start-Up of Process Unit	Initial Monitoring Date
Flare	84	October 2013	January 2016
Inlet	1,135	October 2013	June 2015
Seneca 1	1,580	October 2013	June 2015
Seneca 1	113	October 2013	August 2015
Seneca 1	166	October 2013	February 2016
Seneca 2	11	February 2014	June 2015
Seneca 2	120	February 2014	August 2015
Seneca 2	432	February 2014	February 2016
Seneca 3	105	July 2014	October 2015

45. From MarkWest's LDAR database provided during the April 2016 inspection, EPA identified the following number of valves that were not monitored initially within 30 days:

Process Unit	Number of Valves	Start-Up of Process Unit	Initial Monitoring Date
Flare	27	October 2013	March 2014
Flare	2	October 2013	August 2015
Inlet	441	October 2013	March 2014
Inlet	204	October 2013	June 2015
Seneca 1	842	October 2013	March 2014
Seneca 1	124	October 2013	June 2015
Seneca 1	62	October 2013	August 2015
Seneca 2	782	February 2014	November 2014
Seneca 2	43	February 2014	June 2015
Seneca 2	97	February 2014	July 2015
Seneca 3	893	July 2014	February 2015
Seneca 3	56	July 2014	June 2015
Seneca 3	60	July 2014	October 2015

46. From MarkWest's LDAR database provided during the April 2016 inspection, EPA identified the follow pressure relief valves that leaked above 500 ppm:

Process Unit	Tag Number	Date	Concentration (ppm)
Inlet	00019	July 27, 2015	6,264
Seneca 1	01183	April 18, 2015	954
Seneca 2	02031	December 11, 2014	16,393
Seneca 4	03711	August 27, 2015	1,291
Seneca 4	03804	January 21, 2016	144,695

47. In reviewing MarkWest's leak history, EPA discovered the following leaks that did not have a first attempt at repair within 5 days:

Tag #	Date	Component Type
03446	July 9, 2015	Valve
01212	July 31, 2015	Connector
02090	June 18, 2015	Connector

48. For the monthly and quarterly monitoring events since March 2014, MarkWest reported an average of 2.39 as the percentage of valves leaking in the Seneca 1, Seneca 2, and Seneca 3 process units, whereas EPA found a 4.66% leaking rate during the April 2016 inspection.
49. MarkWest operates pilot designed pressure relief devices throughout the SGP. These pilot pressure relief devices are designed to release gas directly to the atmosphere from the pilot vents with any overpressure greater than 1 percent and up to 15 percent prior to actuating the main pressure-relief valve to the flare.
50. During the April 2016 inspection, EPA identified a pilot designed pressure relief device (Tag # 00689) at the Seneca 1 process unit venting to the atmosphere instead of the flare header using a portable VOC instrument (1,900 ppm), and confirmed by MarkWest tagging the pressure relief device as leaking.

Violations

51. MarkWest failed to perform Method 21 properly on 14 insulated valves listed in paragraph 38, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(a)(1) (and by reference § 60.485(b)) and 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1.
52. MarkWest failed to perform initial monthly monitoring of all valves, including bleeder valves from 5-way assemblies, listed in paragraph 45 within 30 days for each process unit at the SGP after the initial startup date, in violation of 40 C.F.R. §§ 60.5400(a), 60.482-7a(a)(2), and 60.482-7a(a)(1).
53. MarkWest failed to perform the initial monthly monitoring of all pumps in each process unit at the SGP within 30 days after the end of the startup period, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-2a(a)(1).
54. MarkWest failed to perform annual monitoring on all connectors identified paragraph 44, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-11a(a).

55. MarkWest failed to seal each closure device associated with an open-ended valve or line per paragraph 43 with a cap, blind flange, plug, or a second valve, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-6a(a)(2).
56. MarkWest failed to perform weekly visual inspections on pumps in each of the process units at the SGP for the period of October 2013 through February 2014, and for 4 pumps over 3 weeks in August 2015, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482a(a)(2).
57. MarkWest failed to make timely first attempts at repairs within 5 days on the valve listed in paragraph 47 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(d)(2).
58. MarkWest failed to make timely first attempts at repairs within 5 days on the connectors listed in paragraph 47 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-11a(d).
59. Based on pressure relief device design information and VOC monitoring conducted during the April 2016 inspection and per paragraph 46, MarkWest has failed to comply with closed vent and control device requirements for pressure relief devices at the SGP, in violation of 40 C.F.R. §§ 60.5400(a), § 60.482-4a(c), § 60.482-10a(a).
60. For the open-ended valve or line venting to the atmosphere per paragraph 37, MarkWest has failed to place a cap, a blind flange, a plug, or a second valve at the open-ended valve or line, in violation of 40 C.F.R. §§ 60.5400(a) and § 60.482-6a(a)(1).\
61. MarkWest failed to perform Method 21 properly on valves per paragraph 48, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(a)(1), and 40 C.F.R. Part 60 Method 21, §§ 8.3.1 and 8.3.1.1, from at least March 2014 through March 2016.

Enforcement Authority

62. Sections 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3), provide that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement or prohibition of, *inter alia*, an applicable SIP or permit, any rule promulgated under the NSPS requirements of Section 111(e) of the CAA, 42 U.S.C. § 7411(e), Title V of the CAA, 42 U.S.C. §§ 7661-7661f, or any rule or permit issued thereunder, the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

Environmental Impact of Violations

63. MarkWest's above-referenced violations have caused excess emissions of VOC.
64. Excess VOC emissions can cause eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to the liver, kidney, and central nervous system. Some organics can cause cancer in animals and some are suspected or known to cause cancer in humans.

65. VOC emissions are a precursor to ground-level ozone. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.

9-8-16

Date

Sara Brunema
for Edward Nam
Acting Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Finding of Violation, No. EPA-5-16-OH-16, by Certified Mail, Return Receipt Requested, to:

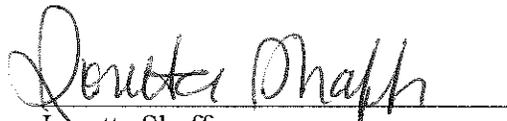
Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, LLC
43050 Industrial Park Road
Cadiz, Ohio 43907

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43266-1049

Melisa Witherspoon
APC Manager, Southeast District Office
Ohio Environmental Protection Agency
2195 Front Street
Logan, Ohio 43138

On the 8 day of September 2016.



Loretta Shaffer
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7674 0838