

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA and
COMMONWEALTH OF PENNSYLVANIA,
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Plaintiffs,

v.

Civil Action No.

MARKWEST LIBERTY MIDSTREAM
& RESOURCES, L.L.C. and
OHIO GATHERING COMPANY, L.L.C.,

Defendants.

COMPLAINT

Plaintiffs, the United States of America, by authority of the Attorney General of the United States and acting at the request of the Administrator of the United States Environmental Protection Agency (“EPA”), and the Commonwealth of Pennsylvania, Department of Environmental Protection (“PADEP”) (collectively “Plaintiffs”), allege:

NATURE OF ACTION

1. This is a civil action against MarkWest Liberty Midstream & Resources, L.L.C. (“MarkWest Liberty”) and Ohio Gathering Company, L.L.C. (“Ohio Gathering”) (collectively “MarkWest” or “Defendants”) pursuant to Section 113(b) of the Clean Air Act (the “Act”), 42 U.S.C. § 7413(b), and Section 4(1), (10) of the Pennsylvania Air Pollution Control Act, Act of January 8, 1960, P.L. 2119 (1959), as amended, 35 P.S. § 4004(1), (10).

2. Plaintiffs seek injunctive relief and civil penalties for violations of the Act and Pennsylvania’s federally-approved State Implementation Plan (“Pennsylvania SIP”) at

MarkWest Liberty compressor stations and stand-alone pigging stations in Pennsylvania.

3. In addition, the United States seeks injunctive relief and civil penalties for violations of the Act and Ohio's federally-approved State Implementation Plan ("Ohio SIP") at Ohio Gathering compressor stations and stand-alone pigging stations in Ohio.

JURISDICTION AND VENUE

4. This Court has jurisdiction over the subject matter of this action pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1331 (Federal Question), 1345 (United States as Plaintiff), and 1355 (Fine, Penalty, or Forfeiture).

5. This Court has supplemental jurisdiction over the state law claims asserted by PADEP pursuant to 28 U.S.C. § 1367.

6. Venue is proper in this District under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because some of the violations which are the basis of this Complaint occurred in this District and some of the facilities at issue are owned and operated by MarkWest Liberty in this District.

NOTICES

7. Notice has been given to MarkWest and the appropriate air pollution control agencies in the Commonwealth of Pennsylvania and the State of Ohio as required by Section 113 of the Act, 42 U.S.C. § 7413.

DEFENDANTS

8. MarkWest Liberty is a limited liability corporation with its principal place of business in Pennsylvania. It provides midstream services to the natural gas industry in the Marcellus Shale in Pennsylvania.

9. Ohio Gathering is a limited liability corporation with its principal place of

business in Ohio. It provides midstream services to the natural gas industry in the Utica Shale in Ohio.

10. MarkWest Liberty is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e).

11. Ohio Gathering is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e).

STATUTORY AND REGULATORY BACKGROUND

12. The Clean Air Act establishes a regulatory scheme to protect and enhance the quality of the nation’s air so as to promote the public health and welfare and the productive capacity of its population. 42 U.S.C. § 7401(b)(1).

A. National Ambient Air Quality Standards

13. Section 108 of the Act, 42 U.S.C. § 7408, directs EPA to identify air pollutants that “may reasonably be anticipated to endanger public health or welfare” and to issue air quality criteria based on “the latest scientific knowledge” about the effects of the pollutants on public health and the environment. These pollutants are known as “criteria pollutants.”

14. Section 109 of the Act, 42 U.S.C. § 7409, requires EPA to establish national ambient air quality standards (“national standards” or “NAAQS”) for criteria pollutants.

15. Ground-level ozone, commonly known as “smog,” is one of six criteria pollutants for which EPA has promulgated national standards, due to its adverse effects on human health and the environment.

16. Ozone is not emitted directly from sources of air pollution. Ozone is a photochemical oxidant, formed when certain chemicals in the ambient air react in the presence of sunlight. These chemicals – volatile organic compounds (“VOC”) and nitrogen oxides (“NOx”)

– are called “ozone precursors.” Sources that emit ozone precursors are regulated to reduce ground-level ozone. See 62 Fed. Reg. 38,856 (July 18, 1997).

17. Under Section 107(d) of the Act, 42 U.S.C. § 7407(d), each state is required to designate areas where the air quality is better or worse than the NAAQS for each criteria pollutant, or where the air quality cannot be classified due to insufficient data. An area that does not meet the NAAQS is called a “nonattainment” area.

18. Section 184(a) of the Act, 42 U.S.C. § 7511c(a), created an Ozone Transport Region (“OTR”), which includes all of Pennsylvania. Pursuant to Section 184(b)(2) of the Act, 42 U.S.C. § 7511c(b)(2), a stationary source located in the OTR that emits or has the potential to emit 50 or more tons per year of VOC is a “major stationary source” and is subject to the requirements for major sources located in a moderate ozone nonattainment area.

19. At all times relevant to this action, the MarkWest Liberty compressor stations and stand-alone pigging stations in Pennsylvania that are the subject of this action were located in the OTR.

B. Nonattainment New Source Review Requirements

20. Part D of Title I of the Act, 42 U.S.C. §§ 7501-7515, sets forth requirements for obtaining a permit to construct or modify a major stationary source located in a nonattainment area. These provisions are referred to herein as the Nonattainment New Source Review or “NNSR” program. Section 110(a)(2) of the Act, 42 U.S.C. § 7410(a)(2), requires that each state implementation plan include the permit program required by Part D.

21. Section 173(a) of the Act, 42 U.S.C. § 7503(a), prohibits the construction and operation of a “major emitting facility” in a nonattainment area unless a permit has been issued that comports with the requirements of Section 173, including the requirement that the facility

employ Lowest Achievable Emission Rate (“LAER”) for each pollutant subject to regulation under the Act that is emitted from the facility.

22. The federal regulations implementing the NNSR program are found at 40 C.F.R. § 51.165.

C. Title V Operating Permits

23. Title V of the Act, 42 U.S.C. §§ 7661-7661f, establishes an operating permit program for certain sources, including “major sources.” The purpose of Title V is to ensure that all “applicable requirements” for compliance with the Act are collected in one place.

24. Pursuant to Section 502(a) of the Act, 42 U.S.C. § 7661a(a), it is unlawful for a major source to operate without or in violation of a permit issued pursuant to Title V of the Act, 42 U.S.C. § 7661 et seq. See also 40 C.F.R. § 70.7(b).

25. The Pennsylvania Title V operating permit program was approved by EPA on July 30, 1996. See 61 Fed. Reg. 39,597 (July 30, 1996). These regulations are currently codified at 25 Pa. Code §§ 127.401-127.464 and 127.501-543.

D. State Implementation Plans

26. Section 110(a) of the Act, 42 U.S.C. § 7410(a), requires each state to adopt and submit to EPA for approval a plan that provides for the attainment, maintenance and enforcement of the NAAQS for each criteria pollutant in each air quality control region within the state. This plan is known as a state implementation plan or “SIP.” Section 110(a)(2) of the Act, 42 U.S.C. § 7410(a)(2), requires that each SIP include enforceable emissions limitations to assure attainment of the NAAQS.

27. After enforceable state emissions limitations are approved by EPA, these SIP provisions (or “SIP rules”) are federally enforceable under Sections 113(a) and (b) of the Act, 42

U.S.C. §§ 7413(a) and (b).

1. Pennsylvania SIP

28. As required by the Act, Pennsylvania has adopted regulations to provide for the attainment, maintenance, and enforcement of the national standards.

29. The Pennsylvania SIP prohibits the construction or modification of an air contamination source, except under circumstances not applicable here, unless the construction or modification has been approved by PADEP. 25 Pa. Code § 127.11.

30. The Pennsylvania SIP also prohibits the operation of a stationary air contamination source unless PADEP has issued a permit to operate the source, except under circumstances not applicable here. 25 Pa. Code § 127.402(a).

31. The Pennsylvania SIP provisions implementing the federal NNSR program are generally found at 25 Pa. Code §§ 127.201 – 127.218.

32. At all times relevant to this Complaint, the Pennsylvania SIP provisions referenced in this section have been federally enforceable.

2. Ohio SIP

33. As required by the Act, Ohio has adopted regulations to provide for the attainment, maintenance, and enforcement of the national standards.

34. The Ohio SIP requires that a source obtain a permit to install and operate (“PTIO”) prior to construction or modification if it is a major source that emits more than 100 tons per year of VOC. Ohio Admin. Code 3745-31-02(A)(1)(a).

35. The Ohio SIP requires that a source obtain a minor source PTIO prior to construction or modification if it is a source below the major source threshold but above the “de minimis” threshold, except under circumstances not applicable here. OAC 3745-31-02(A)(1)(b).

36. The Ohio SIP requires that “de minimis” sources record and maintain daily records to show that emissions stay below the “de minimis” threshold on a daily basis as set forth at OAC 3745-15-05(B), (D), and (E). OAC 3745-15-05(D) provides that a source that fails to record and maintain daily records is not exempt from the minor source PTIO requirements. Accordingly, a violation of OAC 3745-15-05 is also a violation of OAC 3745-31-02(A)(1)(b).

37. At all times relevant to this Complaint, the Ohio SIP provisions referenced in this section have been federally enforceable.

FACTUAL BACKGROUND

38. MarkWest provides midstream field services to the natural gas industry.

39. Midstream services connect upstream exploration and production to downstream consumers. These services include gathering raw natural gas from producers at the wellhead, separating the hydrocarbons into dry gas (primarily methane) and natural gas liquids (“NGL”), and transporting the separated dry gas and NGL to downstream users.

40. As part of its midstream operations, MarkWest owns and operates pipelines, pig launchers and receivers, compressor stations, and storage tanks.

41. MarkWest, like other midstream companies, must keep its pipelines free from excessive liquids buildup. It does this by “pigging” the lines, as often as daily. Pigging involves inserting a cylindrical device known as a “pig” into a pipeline through a pig launcher. The pipeline pressure behind the pig pushes the pig through the pipeline, pushing liquids ahead of the pig as it goes. The pig is removed at designated points on the pipeline known as pig receivers.

42. To insert or remove a pig, the pig launcher/receiver must be isolated from the rest of the pipeline so that the launcher or receiver can be opened. Opening a pig launcher or receiver results in emissions of various pollutants, including VOC.

GENERAL ALLEGATIONS

43. At all times relevant to the Complaint, MarkWest Liberty owned and operated the compressor stations identified in Table A, below.

Table A. MarkWest Liberty Compressor Stations

Name	Latitude	Longitude
3 Brothers	40.33119792490	-80.38033471710
Brigich	40.28964213860	-80.23951772010
Carpenter	40.11364210760	-80.48247261960
Dryer	40.24287923210	-80.46833245070
Fulton	40.28485243400	-80.30122700440
Godwin	40.24572395910	-80.31131155010
Hoskins	40.17991189320	-80.41232597640
Johnston	40.27515606030	-80.23270970570
Lowry	40.24932187010	-80.36840279130
Royal Oak	40.76560317060	-80.03657298740
Shaw	40.23917195340	-80.28146975710
Smith	40.41698982380	-80.35687488560
Stewart	40.28269070850	-80.34980728680
Trillith	40.85454091700	-80.10256057730
Voll	40.83941511830	-80.05602366480
Welling	40.19014693410	-80.35981800720

44. At all times relevant to the Complaint, MarkWest Liberty owned and operated the stand-alone pigging stations identified in Table B, below.

Table B. MarkWest Liberty Stand-Alone Pigging Stations

Name	Latitude	Longitude
Drugmand	40.32917258600	-80.28226258100
Graham Header	40.83600748440	-80.08065377390
Huntington Farms	40.24179301380	-80.31836096160
Loffert (Joe Cain)	40.35937332930	-80.31124654080
Post Road	40.16793683830	-80.39937478710
Smith Tee	40.22352411360	-80.45690851150
Wilhelm	40.10854085660	-80.44762638940

45. At all times relevant to the Complaint, Ohio Gathering owned and operated pig launchers and receivers at each of the compressor stations identified in Table C, below.

Table C. Ohio Gathering Compressor Stations

Name	Latitude	Longitude
Arrowhead	40.175580	-81.073237
Barnesville West	40.009219	-81.181596
Harrison West	40.209936	-81.217978
Humphreys	39.906906	-81.188574
Lake	40.278232	-81.181580
Morristown	50.058737	-81.096102
Tri-County	39.939357	-81.227774

46. At all times relevant to the Complaint, Ohio Gathering owned and operated the stand-alone pigging stations identified in Table D, below.

Table D. Ohio Gathering Stand-Alone Pigging Stations

Name	Latitude	Longitude
70T	40.047342	-81.143914
513	40.002087	-81.301192
Marshall Road	40.109600	-81.333299
Shannon	40.015606	-81.191986
McGee	39.945758	-81.234022
Scott Hill	40.213707	-81.199295
Smyrna McClelland	40.199200	-81.245391
Blaze	40.109623	-81.296475
Boston McCort	39.921722	-81.207956
Neff	39.994326	-81.385291
Wheatley	39.910131	-81.201674
BK Stephens	40.195014	-81.172019
Oxford Siefert	40.028938	-81.305076

FIRST CLAIM FOR RELIEF

(NNSR Violations – MarkWest Liberty Pennsylvania Compressor Stations)

47. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

48. The compressor stations identified in Table A to the Complaint are “major emitting facilities” and “major stationary sources” within the meaning of the Act for VOC and as defined in the Pennsylvania SIP.

49. MarkWest Liberty commenced construction and operation of one or more of the compressor stations identified in Table A to the Complaint without first obtaining a NNSR

permit, in violation of the Act and the Pennsylvania SIP, 25 Pa. Code §§ 127.201.

50. Unless restrained by an order of the Court, these violations are likely to continue.

51. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), MarkWest Liberty is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

SECOND CLAIM FOR RELIEF

(Title V Violations – MarkWest Liberty Pennsylvania
Compressor Stations and Stand-Alone Pigging Stations)

52. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

53. The compressor stations identified in Table A to the Complaint are or were “major sources” of VOC for purposes of the Title V operating permit program.

54. MarkWest failed to obtain Title V operating permits for one or more of the compressor stations identified in Table A to the Complaint, in violation of the Act and the Pennsylvania SIP, 25 Pa. Code §§ 127.402(a) and 127.501.

55. Unless restrained by an order of the Court, these violations are likely to continue.

56. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), MarkWest Liberty is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

THIRD CLAIM FOR RELIEF

(Pennsylvania SIP Violations – MarkWest Liberty Pennsylvania Stand-Alone Pigging Stations)

57. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

58. MarkWest Liberty constructed the stand-alone pigging stations identified in Table B to the Complaint without first obtaining a plan approval from PADEP, in violation of the Act and the Pennsylvania SIP, 25 Pa. Code § 127.11.

59. MarkWest Liberty operated the stand-alone pigging stations identified in Table B

to the Complaint without obtaining an operating permit, in violation of the Act and the Pennsylvania SIP, 25 Pa. Code § 127.402.

60. Unless restrained by an order of the Court, these violations are likely to continue.

61. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), MarkWest Liberty is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

FOURTH CLAIM FOR RELIEF

(Pennsylvania SIP Violations – MarkWest Liberty Pennsylvania Stand-Alone Pigging Stations)

62. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

63. Pursuant to 25 Pa. Code § 127.14(a)(8), PADEP may exempt from permitting “[o]ther sources and classes of sources determined to be of minor significance by the Department.”

64. Pursuant to 25 Pa. Code § 127.14(a)(8), Pennsylvania has identified exemptions to the permitting requirements for certain sources with emissions of minor significance. See Technical Guidance Document (“TGD”) No. 275-2101-003 (July 26, 2003, amended August 10, 2013).

65. MarkWest Liberty constructed one or more of the stand-alone pigging stations identified on Appendix A to the Complaint without obtaining a permit from PADEP or seeking an exemption pursuant to 25 Pa. Code § 127.14 and TGD No. 275-2101-003.

66. At such stand-alone pigging stations, MarkWest Liberty has violated 25 Pa. Code § 127.11, which prohibits the construction of an air contamination source unless it has been approved by PADEP, and 25 Pa. Code § 127.402(a), which prohibits a person from operating a stationary air contamination source unless PADEP has issued a permit to operate the source.

67. Unless restrained by an order of the Court, these violations are likely to continue.

68. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), MarkWest Liberty is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

FIFTH CLAIM FOR RELIEF

(Ohio SIP Violations – Failure to Include Emissions
from Pigging Operations at Ohio Gathering Compressor Stations)

69. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

70. There are pig launchers and/or pig receivers at each of the compressor stations identified in Table C to the Complaint.

71. These pig launchers and receivers are “sources” within the meaning of the Ohio SIP.

72. Ohio Gathering failed to include the emissions from one or more of these sources in its applications for permits to install and operate, in violation of the Act and the Ohio SIP, OAC 3745-31-02(A)(1)(a).

73. Unless restrained by an order of the Court, these violations are likely to continue.

74. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), Ohio Gathering is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

SIXTH CLAIM FOR RELIEF

(Ohio SIP Violations – Failure to Obtain Permits
to Install and Operate for Ohio Gathering Stand-Alone Pigging Stations)

75. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

76. Ohio Gathering constructed and/or operated one or more of the stand-alone pigging stations identified in Table D to the Complaint without first obtaining a permit to install and operate, in violation of the Act and the Ohio SIP, Ohio Admin. Code 3745-31-02(A)(1)(b).

77. Unless restrained by an order of the Court, these violations are likely to continue.

78. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), Ohio Gathering is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

SEVENTH CLAIM FOR RELIEF

(Ohio SIP Violations – Failure to Obtain Permits
to Install and Operate for Ohio Gathering “De Minimis” Stations)

79. Paragraphs 1 through 46 are re-alleged and incorporated herein by reference.

80. Ohio Gathering failed to record and maintain daily records to show that emissions stayed below the “de minimis” threshold on a daily basis at one or more of the “de minimis” stand-alone pigging stations in Ohio identified on Appendix A to the Complaint, in violation of the Act and the Ohio SIP, Ohio Admin. Code 3745-15-05(B), (D), and (E).

81. Unless restrained by an order of the Court, these violations are likely to continue.

82. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), Ohio Gathering is liable for injunctive relief and civil penalties of up to the statutory maximum per day for each violation. See 83 Fed. Reg. 1190 (January 10, 2018).

PRAYER FOR RELIEF

WHEREFORE, based on the allegations contained in paragraphs 1 through 82 above, Plaintiffs request that this Court:

A. Permanently enjoin Defendants from further violating the Act, the Pennsylvania SIP, and the Ohio SIP;

B. Order Defendants to take appropriate actions to remedy, mitigate, and offset the harm to public health and the environment caused by violations of the Act, the Pennsylvania SIP, and the Ohio SIP;

C. Assess a civil penalty against Defendants for each violation of the applicable provisions of the Act, the Pennsylvania SIP, and the Ohio SIP of up to the statutory maximum per day for each violation;

D. Award Plaintiffs their costs of this action; and

E. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted,

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Appendix A**Pennsylvania**

Stand-Alone Facility	Coordinates
1. Airport L/R Site	40.37395927760, -80.30305865130
2. Amwell Meter Site	40.14614613440, -80.20302966240
3. Best Site L/R Site	40.23147156770, -80.33893228910
4. Brenckle Header	40.84400668670, -80.01438657980
5. Bowen Rd L/R Site	40.35620228600, -80.29091780790
6. Drugmand L/R Site	40.32121915270, -80.30277507650
7. Meter Site Greco	40.09104915880, -80.20974335020
8. Houston National Fuel M&R Site	40.24940452070, -80.34876507660
9. Lowry Meter Station & L/R Site	40.24942497510, -80.34873637460
10. Mounts Road L/R Site	40.13289991020, -80.31682797040
11. Hoskins L/R Station	40.24945714620, -80.26379790300
12. Patterson Rd (Avella) L/R Site	40.27381420040, -80.42744742360
13. ROW Bame	40.81714493130, -80.08961472930
14. ROW Bare	40.41178582760, -80.35589611000
15. ROW Behm	40.79583936330, -80.04148611180
16. ROW Best	40.23164739230, -80.33641676650
17. ROW Breakneck	40.77764731670, -80.08564275290
18. Claysville Taylorstown Rd L/R Site	40.14849469170, -80.40984054650

Stand-Alone Facility		Coordinates	
19.	Fallen Timber Rd L/R Site	40.27072933350,	-80.49157469860
20.	Hillcrest Ln L/R Site	40.21167059680,	-80.34995610710
21.	Scenic Dr (Chase) L/R Site	40.19905575650,	-80.44969751100
22.	Fox Road (Cravat Coal) L/R Site	40.20519747190,	-80.42570011420
23.	Oakleaf Rd L/R Site	40.25409971610,	-80.37131701950
24.	Lynn Portal Rd L/R Site	40.25874697060,	-80.36964903040
25.	Grimes L/R Site	40.13299991620,	-80.43109470140
26.	McGowan Rd L/R Site	40.14279324820,	-80.22140131220
27.	Buck Run Rd L/R Site	40.18536844860,	-80.44308026640
28.	Brush Run Rd L/R Site	40.20720289960,	-80.37080643150
29.	Scenic Dr (Falconi) L/R Site	40.26595604250,	-80.46084767610
30.	Deerfield Rd L/R Site	40.11630590800,	-80.27285940870
31.	ROW Hamilton	40.85929594380,	-80.14286462350
32.	Pleasant Valley Rd (Hanes) L/R Site	40.16377825080,	-80.34140927220
33.	Buck Run Rd (Hercules) L/R Site	40.13837364120,	-80.42497159930
34.	Toll Gate Rd L/R Site	40.10314260290,	-80.46782350840
35.	ROW JRGL	40.84398338570,	-80.10487271690
36.	Hackney Station Rd L/R Site	40.03182652570,	-80.21131940660
37.	Valleyview Rd L/R Site	40.40304581570,	-80.33243646710
38.	Sugar Run Rd	40.23188521750,	-80.47933489330
39.	Meddings Rd (Little) L/R Site	40.26507985420,	-80.23774634660

Stand-Alone Facility		Coordinates	
40.	ROW LL Property	40.84029348320,	-80.08598831230
41.	Walker Rd L/R Site	40.35085903180,	-80.42689905960
42.	Strope Rd L/R Site	40.33513883610,	-80.44326981090
43.	Nickolay Rd L/R Site	40.30167354440,	-80.40734222390
44.	McMaster L/R Site	40.31124638210,	-80.30097450590
45.	Caldwell Rd L/R Site	40.28261382140,	-80.35555972230
46.	ROW Pallack	40.85004087970,	-80.08157787530
47.	ROW Parees	40.38722027540,	-80.30502008320
48.	Scenic Dr (Pete Zappi) L/R Site	40.20364205010,	-80.44809086520
49.	McAdams Rd (Phelean) L/R Site	40.09539268620,	-80.22951699520
50.	Carns Lane L/R Site	40.32423905170,	-80.36576671750
51.	ROW Powell	40.74363745330,	-79.9604929242
52.	Patterson Rd (R. Margaria) L/R Site	40.28723537050,	-80.43589296710
53.	Agape Rd (Rukavina) L/R Site	40.26725418690,	-80.36329205560
54.	Fox Rd (Rush) L/R Site	40.22866432510,	-80.42395307960
55.	Patterson Ln (L/R) Site	40.22064084750,	-80.33797828550
56.	Joffre Cherry Valley Rd L/R Site	40.35359238190,	-80.33301815770
57.	ROW Scumming	40.75341364380,	-79.99506226040
58.	Dille Rd (Strawn) L/R Site	40.04603091090,	-80.24107217480
59.	ROW Varner	40.17378970270,	-80.46539519780
60.	Lynn Rd L/R Site	40.22840547500,	-80.32462392150

Stand-Alone Facility		Coordinates	
61.	ROW Warner	40.84397086940,	-80.11171987180
62.	ROW West	40.75104115670,	-79.97716026150
63.	Dille Rd (Whitmer) L/R Site	40.04048742890,	-80.23640364280
64.	Sharp Meter Site (Ridge Ave L/R Site)	40.26769369990,	-80.21010761160
65.	Swain Hill	40.81898776310,	-80.08484177090
66.	Temple T L/R Site	40.22417625130,	-80.44906886280
67.	Agape Rd (Triple) L/R Site	40.26804165920,	-80.36563975230
68.	Well Pad Bare	40.40342650950,	-80.37723290090
69.	Well Pad Behm	40.79672204020,	-80.03451440360
70.	Well Pad BNBC	40.77079850210,	-80.10355358670
71.	Well Pad Breakneck	40.77075318260,	-80.10355581720
72.	Well Pad Burgh	40.87569389260,	-80.12625895460
73.	Well Pad Carol Baker	40.23009012030,	-80.27796334060
74.	Well Pad Carson B	40.84625933330,	-80.03219656250
75.	Well Pad Chase	40.20175530230,	-80.46770417890
76.	Durkacs L/R Site	40.283977778,	-80.229130555
77.	Well Pad Eleanor West	40.20710177410,	-80.38557015700
78.	Well Pad Ferree	40.72843685230,	-79.90603378450
79.	Well Pad Franklin 2	40.14094073750,	-80.26221722840
80.	Well Pad Gilliland	40.84241439010,	-80.03392781810
81.	Well Pad John Miller	40.21521587750,	-80.31559765760

Stand-Alone Facility		Coordinates	
82.	Well Pad Kraeer	40.21816609360,	-80.45752184520
83.	Well Pad Lynn	40.82164973840,	-79.96377223130
84.	Well Pad MCC	40.34397056500,	-80.43256951140
85.	Well Pad McElhinney	40.77986241940,	-80.01889964030
86.	Well Pad Meyer	40.77357077330,	-80.08385907690
87.	Well Pad Midler A	40.29650600530,	-80.41270793020
88.	Well Pad Paxton	40.25621631280,	-80.24725325410
89.	Well Pad Plesniak	40.87216680500,	-80.08007954920
90.	Well Pad Pollana	40.30559829300,	-80.36009428140
91.	Well Pad R. Margaria	40.28531146480,	-80.43233486240
92.	Well Pad Stebbins	40.79463038620,	-79.96722033100
93.	Well Pad Stefkovich	40.27733921230,	-80.45377227360
94.	Well Pad Talarico	40.79264245230,	-80.08005861390
95.	Well Pad Worstell	40.27474883780,	-80.21630888150
96.	Well Pad Aloe	40.36361111,	-80.2692444
97.	Well Pad Imperial East	40.38121944,	-80.25612778
98.	Well Pad Imperial North	40.3847611,	-80.27874444
99.	Well Pad Charelli	40.3543667,	-80.28129722
100.	Well Pad Drugmand	40.32065,	-80.3023578
101.	Well Pad Franklin 1	40.15145556,	-80.25371667
102.	Well Pad June Hoskins	40.24821111,	-80.2627001

Stand-Alone Facility		Coordinates	
103.	Well Pads Wylie	40.26177222,	-80.27190833
104.	Well Pad Avella Lands	40.27136944,	-80.43052778
105.	Well Pad Breese	40.14353611,	-80.39037778
106.	Well Pad Campbell	40.27816389,	-80.48513611
107.	Well Pad Chappel	40.21136111,	-80.35252778
108.	Well Pad Cravit Coal	40.20503611,	-80.42930833
109.	Well Pad CC 41-44	40.25441944,	-80.37799167
110.	Well Pad CC 6-9, 25	40.25972778,	-80.38564167
111.	Well Pad Old McDonald	40.12071111,	-80.43345013
112.	Well Pad Earl Redd	40.14277778,	-80.22141111
113.	Well Pad Falconi	40.26966389,	-80.50097221
114.	Well Pad Folly Hollow	40.11380833,	-80.26863056
115.	Well Pad Georgetti	40.24512222,	-80.48410833
116.	Well Pad McAdoo	40.21458333,	-80.49498056
117.	Well Pad Goettle	40.23987778,	-80.46559444
118.	Well Pad Kennedy	40.23206389,	-80.48385556
119.	Well Pad Hanes	40.16891944,	-80.35004722
120.	Well Pad Hercules	40.14573611,	-80.42516944
121.	Well Pad Hunter	40.09600278,	-80.47336945
122.	Well Pad Kearny	40.02977222,	-80.21465833
123.	Well Pad Kendall	40.40645556,	-80.32643333
124.	Well Pad MCC West	40.33761389,	-80.44501944

Stand-Alone Facility		Coordinates	
125.	Well Pad McIntyre	40.29370278,	-80.39157778
126.	Well Pad Minichi	40.30496389,	-80.32689444
127.	Well Pad McMasters	40.31078056,	-80.30234722
128.	Well Pad Ohio Valley	40.27660556,	-80.34920833
129.	Well Pad Johnston	40.27631389,	-80.23965278
130.	Well Pad Painter	40.27277222,	-80.25871111
131.	Well Pad Parees	40.39088611,	-80.299152778
132.	Well Pad Pete Zappi	40.20325556,	-80.44185833
133.	Well Pad Phelan	40.09114722,	-80.24646389
134.	Well Pad Rukavina	40.26523333,	-80.36197501
135.	Well Pad Rush	40.22270556,	-80.41881111
136.	Well Pad R. Carslise	40.21708056,	-80.33216389
137.	Well Pad Sasso	40.36851111,	-80.35763889
138.	Well Pad Strawn	40.04582222,	-80.25218888
139.	Well Pad Varner	40.172416667,	-80.46723056
140.	Varner to E. Zappi Launcher	40.17558889,	-80.46682503
141.	Well Pad Ward	40.22967003,	-80.32365278
142.	Well Pad Whitmer	40.02379167,	-80.24307502
143.	Well Pad Costanzo	40.26727222,	-80.35452778
144.	Well Pad Yanavich	40.21778333,	-80.26991667
145.	Well Pad Dorothy Green	40.19993611,	-80.47827501
146.	Well Pad Troyer Farms	40.28809722,	-80.21635833

Stand-Alone Facility	Coordinates
147. Well Pad Khouri	40.20993889, -80.40015015
148. Well Pad Kopko	40.21137778, -80.29239724
149. Well Pad Kraeer West	40.21553333, -80.46209722
150. Well Pad Carnes Donald	40.28363889, -80.38654723
151. Well Pad Lehman	40.29895555, -80.37828333
152. Well Pad Kancel	40.28785556, -80.41620278
153. Well Pad W. Cowden	40.30847503, -80.37043611
154. Well Pad CC 17-19, 45-47	40.26315002, -80.40854722
155. Well Pad Photon	40.26468333, -80.21717505
156. Well Pad L. Smith	40.12773611, -80.34577801
157. ROW L. Smith L/R	40.11939442, -80.34563611
158. Well Pad A&D Ferguson	40.29096667, -80.24841667
159. Well Pad Engle	40.30635278, -80.23452504
160. Well Pad Bloom	40.84400691, -80.01438658
161. Well Pad Bricker	40.85586944, -80.02126111
162. Well Pad Graham	40.83919444, -80.05586667
163. Well Pad Shipley	40.82048333, -80.00895556
164. Well Pad Ballie Trust	40.76065556, -80.08748065
165. Well Pad Lamperski	40.80330833, -80.02951111
166. Well Pad R. Knauf	40.80346111, -80.06258889
167. Well Pad Burr-Brennan	40.87219167, -80.04880833
168. Well Pad Ceasar	40.88700833, -80.09868889

Stand-Alone Facility		Coordinates	
169.	Well Pad Flinner	40.89144167,	-80.07206667
170.	Well Pad Hamilton	40.85896944,	-80.14835005
171.	Well Pad L&L Properties	40.83417502,	-80.08932503
172.	Well Pad Pallack	40.85868333,	-80.09930556
173.	Well Pad Schilling	40.75428334,	-79.99429722
174.	Well Pad Reno	40.73497781,	-79.89145278
175.	Well Pad West	40.74006111,	-79.99027503
176.	Well Pad R. Double	40.79726112,	-80.08143056
177.	Well Pad JRGL	40.81681389,	-80.12953611
178.	Well Pad Powell	40.76466944,	-79.94619167
179.	Well Pad Perry	40.87980556,	-80.18103611
180.	Well Pad Warner	40.84784722,	-80.11418333
181.	Well Pad Bell	40.76255556,	-80.13437222
182.	Well Pad Bame	40.80087222,	-80.09644278
183.	Well Pad Alex Paris	40.29338333,	-80.46162222
184.	Well Pad Bedillion Day	40.11590833,	-80.22677222
185.	Well Pad Bigley	40.13135833,	-80.18826388
186.	Well Pad Burkett	40.32740555,	-80.45561111
187.	Well Pad Carns	40.32583888,	-80.37212777
188.	Well Pad Clingerman	40.25311388,	-80.32005833
189.	Well Pad Farabee	40.06371666,	-80.20518888
190.	Well Pad Gillett	40.18281666,	-80.36071067

Stand-Alone Facility		Coordinates	
191.	Well Pad Godwin	40.24441389,	-80.30912499
192.	Well Pad Noble-Greathouse	40.10858889,	-80.44535564
193.	Well Pad Inches	40.34806667,	-80.36915556
194.	Well Pad John Day	40.12205834,	-80.21701670
195.	Well Pad Kearns	40.20641389,	-80.41984722
196.	Well Pad Lindley	40.03942778,	-80.29100833
197.	Well Pad Lois Miller	40.24075833,	-80.36516944
198.	Well Pad O'Donnell	40.23306944,	-80.35092230
199.	Well Pad Mele	40.25098889,	-80.29406944
200.	Buffalo Creek Launcher	40.17696388,	-80.40658333
201.	Prospect Road Launcher	40.80188333,	-80.05266944
202.	Well Pad Malinky	40.36193889,	-80.30718611
203.	Cowden Pad	40.329463888,	-80.282280555
204.	Elm Rd.	40.283461111,	-80.314280555
205.	Well Pad Constance Zappi	40.179097222,	-80.406086111
206.	Well Pad Little	40.255397222,	-80.236719444

Ohio

	Stand-Alone Facility	Coordinates
1.	Bolton Launcher Station	39.938144, -81.206353
2.	Wright Station	39.933098, -81.208784
3.	Caston Miller Receiver Station	40.130142, -81.323137
4.	Coal Run Eagle Creek Station	40.067335, -81.099467
5.	Eagle Creek Receiver Station	40.080931, -81.115004
6.	Groh Receiver Station	40.112375, -81.366465
7.	Heavillin Road Station	40.268289, -81.148645
8.	Inherst Station	39.889863, -81.177801
9.	Leatherwood Station	39.966288, -81.273205
10.	Greenlawn Road Station	39.985663, -81.287137
11.	Jones Station	39.79069, -81.059774
12.	Kinsey Station	40.289319, -81.279951
13.	Crum Road Station	39.861991, -81.045932
14.	National OCO Road Station	40.083685, -81.016877
15.	Miller Road Station	40.109296, -81.070266
16.	Eldon Road Station	39.950794, -81.259223
17.	Oak Hill Road Station	40.100566, -81.021299
18.	Old Piedmont Kimble Station	40.197874, -81.193600
19.	Ripley Station-2	40.144020, -81.305489
20.	Buskirk Lane Detweiler Station	39.994646, -81.393084

	Stand-Alone Facility	Coordinates
21.	Stutzman Station-2	39.891061, -81.171815
22.	Mt. Olivett Shugert Station - 3	40.038708, -81.146225
23.	Tyson Receiver Station	40.187745, -81.162444
24.	Westhawk Station	39.843335, -81.030991
25.	Wagner Station	40.1735277, -81.07825
26.	Boyscout Station	40.25867025, -81.21354888
27.	Mt. Olivett Shugert Station	40.04909476, -81.12826697
28.	BK Stephens-2	40.18575333, -81.1665594
29.	Stout Station	40.18622222, -81.20461111
30.	Clay Station	40.17324326, -81.22616504
31.	Noble Station	39.94673422, -81.28760737
32.	Marshall Road Station	40.1072222, -81.3307222
33.	Clark South Station	39.893337, -81.145224
34.	Shriver Station	39.840238, -81.046996
35.	Ohio 556 Station	39.856315, -80.996473
36.	Hudson Road Station	39.861175, -81.017864
37.	Trembly Ridge Road Station	39.809928, -81.040442
38.	Vozar Station	40.198232, -81.207992
39.	Caston Station	40.133954, -81.326833
40.	Lawson LND Station	40.127986, -81.296972
41.	Bedway Station	40.076193, -81.024371
42.	McGee Station	39.94562771, -81.23406919

	Stand-Alone Facility	Coordinates
43.	Miller Station	40.12941667, -81.31125
44.	Puskarich Station	40.202308, -81.16281
45.	Bahmer Station	39.94816886, -81.20429452
46.	Red Hill Tarbert Station	40.201221, -81.179773
47.	Lake LND Stattion	40.148834, -81.297728
48.	Brothers Station	39.95147891, -81.21878497
49.	Triple B Station	40.06924617, -81.07527801
50.	Hayes Station	40.044293, -81.121239
51.	Shugert Daddy Station	40.00523641, -81.41198983
52.	Jones Launcher Station	40.25474023, -81.16676636
53.	Amanda Station	39.8886365, -81.17061957
54.	Wesley Station	39.89328118, -81.15947025
55.	Michael Station	40.19500259, -81.17202306
56.	Darla Station	40.17793958, -81.07410902
57.	Karen Station	40.02580771, -81.29045958
58.	Detweiler Station	39.98857029, -81.38588845
59.	Groh Station	40.11030961, -81.37014543
60.	Onega Station	39.99941027, -81.43802381
61.	Cadiz Road Piedmont Clay Station	40.17769444, -81.23427778
62.	J Anderson Station	39.974759, -81.270049
63.	J Hall Station	39.991753, -81.260724
64.	Stiers Station	39.951932, -81.434505

	Stand-Alone Facility	Coordinates
65.	Swallie Station	40.039191, -81.139875
66.	Milliken Station	40.174307, -81.239336
67.	Stronz Station	39.931337, -81.123607