Turner, Thomas

From: Dickens, Brian
Sent: Monday, October 22, 2018 10:15 AM
To: 'Kavalec, James'
Subject: FW: Mark West Pigging settlement
Attachments: DENVER-#610048-v1-DN_2-1_Lodged_Consent_Decree.pdf

Jim:

When we spoke last week you asked me about ambient monitoring under the MarkWest CD.
See below for an update,

From: Loukeris, Constantinos
Sent: Thursday, October 18, 2018 8:28 AM
To: Dickens, Brian <dickens.brian@epa.gov>; Topinka, Natalie <topinka.natalie@epa.gov>
Subject: RE: Mark West Pigging settlement

Hi Brian,

We have not received a plan yet regarding the fenceline monitoring to be performed at the Humphreys Compressor Station. Under the CD, MarkWest needs to submit that plan within 120 days of the effective date (July 2018), and we have not reached that deadline yet. Once we approve the plan, they will install and operate the system for at least 2 years. If they want, they may want to look at the consent decree itself, as it lays out some additional information regarding this monitoring SEP.

Hope this helps,

Kosta

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. MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., and OHIO GATHERING COMPANY, L.L.C., Defendants.	Civil Action No. 2:18-cv-00520-LPL CONSENT DECREE

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WHEREAS, Plaintiffs the United States of America ("United States"), on behalf of the United States Environmental Protection Agency ("EPA"), and the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP"), simultaneously with the lodging of this Consent Decree, filed a complaint pursuant to Section 113(b) of the Clean Air Act ("Act"), 42 U.S.C. § 7413(b). The complaint seeks injunctive relief and civil penalties for violations of the Clean Air Act's Prevention of Significant Deterioration ("PSD") provisions, 42 U.S.C. §§ 7490-7492; the Non-Attainment New Source Review ("NSR") provisions, 42 U.S.C. §§ 7501-7515; and the state implementation plans ("SIPs") adopted thereunder by the Commonwealth of Pennsylvania and the State of Ohio, and approved by EPA pursuant to Section 110 of the Act, 42 U.S.C. § 7410, at certain compressor stations and at stand-alone pigging stations ("stand-alone facilities") owned and operated by Defendants MarkWest Liberty Midstream & Resources, L.L.C. and Ohio Gathering Company, L.L.C., (collectively, "MarkWest") in the Marcellus Shale and Utica Shale formations in Pennsylvania and Ohio;

WHEREAS, PADEP is the agency of the Commonwealth of Pennsylvania charged with the implementation and enforcement of the Air Pollution Control Act, 35 P.S. § 4001 *et seq.*;

WHEREAS, MarkWest is engaged in natural gas gathering operations in western Pennsylvania and eastern Ohio;

WHEREAS, this is the first civil enforcement action brought by the United States or PADEP concerning emissions from natural gas pig launchers and receivers at compressor stations or at stand-alone facilities;

WHEREAS, MarkWest has investigated and evaluated the development, design, fabrication, and testing of new technologies for sampling and estimating volatile organic

compound ("VOC") emissions from pig launcher and receiver operations and alternatives for reducing VOC emissions from natural gas pig launchers and receivers at compressor stations and stand-alone facilities;

WHEREAS, MarkWest has undertaken numerous design enhancements of launchers and receivers at compressor stations and stand-alone facilities in Pennsylvania and Ohio that have substantially reduced VOC, methane, and ethane emissions, including the design, installation and/or operation of high-to-low pressure natural gas transfer lines, pig ramps, and liquid drains;

WHEREAS, MarkWest expressly denies and does not admit any liability to the United States or PADEP arising out of the conduct, transactions or occurrences alleged in the Complaint; and

WHEREAS, the Parties acknowledge that this Consent Decree has been negotiated by all Parties in good faith and will avoid litigation among the Parties, and the Court, by entering this Consent Decree, finds that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, and with the consent of the Parties,

IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties, pursuant to 28 U.S.C. §§ 1331, 1345, 1355 and 1367, and Section 113(b) of the Act, 42 U.S.C. § 7413(b). Venue is proper in this judicial district pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c), and 1395(a), because violations alleged

in the Complaint are alleged to have occurred, and MarkWest conducts business, in this judicial district. MarkWest consents to and shall not challenge entry of this Consent Decree or this Court's jurisdiction to enter and enforce this Decree, and further consents to venue in this judicial district solely for the purpose of entering and enforcing this Consent Decree.

2. For purposes of this Consent Decree, MarkWest agrees that the Complaint states claims upon which relief may be granted.

II. APPLICABILITY AND SALES OR TRANSFERS OF OWNERSHIP AND OPERATION INTERESTS

3. The obligations of this Consent Decree apply to and are binding upon the United States, PADEP, and MarkWest, and any of their respective successors or assigns, or other entities or persons otherwise bound by law.

4. In the event that MarkWest proposes to sell or transfer ownership or operation, in whole or in part, of any of the Covered Facilities, to an entity unrelated to MarkWest ("Third Party"), MarkWest shall notify the Third Party in writing of the existence of this Consent Decree prior to the closing of such sale or transfer. MarkWest shall send a copy of this written notification to the United States and PADEP pursuant to Section XVIII (Notices) prior to the proposed closing.

5. MarkWest shall condition any sale or transfer, in whole or part, of ownership or operation of any of the Covered Facilities upon the execution by the Third Party of a modification to this Consent Decree to make the terms and conditions of this Consent Decree related to the ownership or operation of the transferred Covered Facilities applicable to the Third Party. No earlier than thirty (30) Days after giving notice to a successor in interest pursuant to Paragraph 4, MarkWest may file a motion to modify this Consent Decree with the Court to make

the terms and conditions of the Consent Decree related to the ownership or operation of the transferred Covered Facilities applicable to the Third Party. MarkWest shall be released from the requirements of this Consent Decree with respect to the transferred Covered Facilities unless the Court finds that the Third Party does not have the financial or technical ability to comply with the requirements of this Consent Decree.

6. This Consent Decree shall not be construed to impede the sale or transfer of any asset or interest between MarkWest and any Third Party so long as the requirements of this Consent Decree are met.

7. Paragraphs 3-5 shall not be construed to affect or apply to mergers or other corporate transactions in which MarkWest is acquired by a Third Party and the surviving entity, by operation of law, assumes all of MarkWest's assets and liabilities pursuant to the Consent Decree relating to the Covered Facilities.

8. MarkWest shall (a) provide a copy of this Consent Decree to all officers of MarkWest and managers who will be responsible for implementation of the terms of this Consent Decree, and ensure that any employees and contractors whose duties might reasonably include compliance with any provision of this Consent Decree are made aware of those requirements of this Consent Decree that fall within such persons' duties; and (b) place an electronic version of the Consent Decree on its internal environmental website. MarkWest shall be responsible for ensuring that all employees and contractors involved in performing any work pursuant to this Consent Decree perform such work in compliance with the requirements of this Consent Decree.

9. In any action to enforce this Consent Decree, MarkWest shall not raise as a defense to liability or stipulated penalty the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree. This Section does not preclude MarkWest from holding any employee, agent, or contractor who is alleged to have not complied with this Consent Decree liable for their actions. Nothing herein shall preclude MarkWest, in an action to enforce this Consent Decree pursuant to Paragraph 78, from raising the failure of any contractor to take any actions necessary to comply with the provisions of this Consent Decree as a mitigating factor with regard to any non-injunctive relief sought.

III. DEFINITIONS

10. For purposes of this Consent Decree, every term expressly defined by this Section shall have the meaning given that term herein. Every other term used in this Decree that is defined in the Act, 42 U.S.C. § 7401 *et seq.*, or in the regulations promulgated pursuant to the Act, but not defined in this Section, shall mean in this Decree what such term means under the Act or those regulations.

a. "CD Emissions Reductions" shall mean any VOC emissions reductions that result from any projects, controls, or any other actions used to comply with this Consent Decree at any of the facilities listed on Appendices 1, 3 (with the exception of Route 18), or 4.

b. "Commercially and Operationally Appropriate" shall mean that: (1) fewer than 50% of anticipated pigging events at the pig launcher or receiver will be for pipeline inspection purposes; and (2) the costs of installing a shorter barrel at the pig launcher or receiver

would not be unreasonably disproportionate to the benefits of VOC emissions reductions achieved by use of a shorter barrel.

c. "Commercially Reasonable and Technically Feasible" shall mean that connection of a high pressure launcher or receiver to a low pressure line does not require MarkWest to: (1) use more than 100 feet of piping to achieve such a connection; (2) connect to a low pressure line located outside the fenceline of the facility where the high pressure launcher or receiver will be located; or (3) incur costs that would be unreasonably disproportionate to the benefits of VOC emissions reductions achieved by the installation and operation of such a connection to a low pressure line.

d. "Complaint" shall mean the complaint filed by the United States and PADEP in this action.

e. "Compressor Stations" shall mean the compressor stations identified in Appendices 1 and 4 to this Consent Decree.

f. "Consent Decree" or "Decree" shall mean this Decree and all appendices attached hereto (listed in Section XXVII (Appendices)).

g. "Covered Facilities" shall mean all MarkWest facilities identified in Appendices 1-5.

h. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

i. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

j. "Effective Date" shall have the definition provided in Section XIX (Effective Date).

k. "Flare" shall mean a combustion device used to control emissions from equipment in VOC service.

l. "Jumper Line" shall mean an enclosed piping system attached to the vent line of a pig launcher or receiver that routes the contents of a pig launcher or receiver into a lower pressure gathering system.

m. "Liquid or Residue Gas Service" shall refer to any pipelines downstream of a MarkWest processing plant that convey natural gas liquids or processed natural gas (residue gas).

n. "MarkWest" shall mean Ohio Gathering Company, L.L.C., and MarkWest Liberty Midstream & Resources, L.L.C.

o. "Mobile Flare" shall mean a trailer-mounted flare.

p. "Ohio SIP" shall mean the federally-approved State Implementation Plan ("SIP") adopted by the State of Ohio.

q. "Ohio VOC Permitting Threshold" shall mean, for Ohio air contaminant sources, actual VOC emissions exceeding 10 pounds per day from an air contaminant source, or potential VOC emissions from an air contaminant source alone or in combination with similar sources at the same facility in excess of 25 tons per year.

r. "PADEP" shall mean the Commonwealth of Pennsylvania, Department of Environmental Protection.

s. "Paragraph" shall mean a portion of this Decree identified by an Arabic numeral.

t. "Parties" shall mean the United States, PADEP, and MarkWest.

u. "Party" shall mean the United States, PADEP, or MarkWest.

v. "Pennsylvania SIP" shall mean the federally-approved State Implementation Plan ("SIP") adopted by the Commonwealth of Pennsylvania.

w. "Pigging" shall mean the process of introducing and subsequently removing a specialized device (called a "pig") into a natural gas pipeline to push liquids through the pipeline into a slug catcher and/or designated system.

x. "Pig Ramp" shall mean a device installed inside the barrel of a pig receiver designed and intended to prevent liquid accumulation in the barrel and minimize release of volatile liquids into the environment during retrieval of the pig.

y. "Project Dollars" shall mean MarkWest's direct costs incurred in implementing the Supplemental Environmental Projects identified in subparagraphs b. and c. of Paragraph 28 to the extent that such costs: (i) comply with the requirements set forth in Section VI and (ii) constitute MarkWest's direct payments associated with such projects or MarkWest's external costs for contractors, vendors, and equipment. Project Dollars shall not include MarkWest's internal personnel costs incurred to oversee the implementation of the Supplemental Environmental Projects identified in subparagraphs b. and c. of Paragraph 28.

z. "Real Gas Law" shall mean $PV = (m/M_w)RTZ$ where:

P = pressure inside the pipe (psfa) pound per square foot actual

V = actual volume of pipe (ft^3)

m = mass of material (lb)

M_w = molecular weight of the mixture (lb/lbmol)

R = universal gas constant (1545 psfa*ft3/lbmol*°R^{-1})

T = temperature of mixture (°R)

Z = compressibility factor (unitless)

Solving for mass yields: $m = PVM_w/(RTZ)$.

aa. "Section" shall mean a portion of this Decree identified by a Roman numeral.

bb. "Stand-Alone Facilities" shall mean the MarkWest sites where natural gas pig launchers and/or receivers are located that are identified in Appendices 3, 5, and 6.

cc. "System" shall mean all of MarkWest's pig launchers and receivers in Pennsylvania and Ohio.

dd. "United States" shall mean the United States of America, acting on behalf of EPA.

ee. "VOC" or "VOCs" shall mean volatile organic compounds, as defined in 40 C.F.R. § 51.100(s), and which does not include methane or ethane.

IV. INJUNCTIVE RELIEF

11. Emission Calculations. For purposes of compliance with the Consent Decree, MarkWest shall calculate the mass of VOC emissions from pigging operations at facilities listed in Appendices 1 through 5 using the Real Gas Law multiplied by a factor of 1.2.

12. Pennsylvania Compressor Stations. No later than the Effective Date, at the MarkWest Compressor Stations identified in Appendix 1, MarkWest shall:

a. connect each high pressure pig launcher and receiver by Jumper Lines to a low pressure gathering line;

b. operate Jumper Lines to depressurize such launchers and receivers prior to opening the launcher or receiver hatch; and

c. install and use Pig Ramps in pig receivers.

13. Pennsylvania Compressor Station Dehydrator Flares. At the MarkWest Compressor Stations identified in Appendix 2, MarkWest shall replace existing dehydrator flares with enclosed air-assisted flares. The replacement enclosed air-assisted flare system shall include a 3 horsepower blower (with a variable frequency drive), a single point burner tip, a gas enrichment stream and shutdown/startup control logic panels, and shall raise regenerator off-gas Btu value to ensure a clean burn. These flares shall achieve a minimum 98% destruction and removal efficiency ("DRE").

14. Pennsylvania Stand-Alone Facilities. No later than the Effective Date, MarkWest shall implement those elements of injunctive relief identified in this Paragraph that apply, as specified in Appendix 3, to each specific pig launcher and receiver located at each of the MarkWest Stand-Alone Facilities identified in Appendix 3. Where applicable, MarkWest shall:

a. connect high pressure pig launchers and receivers by Jumper Lines to a low pressure gathering line;

b. operate Jumper Lines to depressurize such launchers and receivers prior to opening the launcher or receiver hatch; and

c. install and use Pig Ramps in pig receivers.

15. Pennsylvania Launcher/Receiver Smith Tee Emissions Flare Replacement. At the Smith Tee Stand-Alone Facility (the location of which is identified in Appendix 3) in Pennsylvania, MarkWest shall replace the existing flare with a new "candlestick" flare. The replacement candlestick flare system shall be designed to (a) provide smokeless and low heat radiation flaring, (b) maintain its pilot light in winds up to 50 mph, and (c) generate a hydrocarbon gas-air mixture using an air inspirator ignition.

16. Loffert (Joe Cain) Pennsylvania Stand-Alone Facility. At the Loffert (Joe Cain) Stand-Alone Facility (the location of which is identified in Appendix 3), MarkWest shall continue to operate the redesigned and modified discharge piping installed in 2016.

17. Closure of Drugmand, Stewart Route 50, and Graham Header Stations. No later than twelve (12) months after the Effective Date, MarkWest shall permanently close and cease operations of all launchers and receivers located at the Drugmand Station (located at 40.32917258600, -80.28226258100) and Stewart Route 50 Station (located at 40.28446667, -80.35458611) and all high pressure launchers and receivers located at the Graham Header Station (located at 40.83600748440, -80.08065377390). MarkWest shall permanently remove all pig launchers and receivers that are subject to this Paragraph. Until MarkWest permanently ceases operations of the referenced launchers and receivers, MarkWest shall continue to use the existing Pig Ramps, Jumper Lines, and Flares to reduce VOC emissions during pigging operations.

18. Ohio Compressor Stations. No later than the Effective Date, MarkWest shall implement those elements of injunctive relief identified in this Paragraph that apply, as specified

in Appendix 4, to each specific pig launcher and receiver located at each of the MarkWest Compressor Stations identified in Appendix 4. Where applicable, MarkWest shall:

a. connect high pressure pig launchers and receivers by Jumper Lines to a low pressure gathering line;

b. operate Jumper Lines to depressurize such launchers and receivers prior to opening the launcher or receiver hatch;

c. install and use Pig Ramps in pig receivers; and

d. when necessary to ensure that VOC emissions do not exceed the Ohio VOC Permitting Threshold, use a Mobile Flare to control VOC emissions.

19. Ohio Stand-Alone Facilities. No later than the Effective Date, MarkWest shall implement those elements of injunctive relief identified in this Paragraph that apply, as specified in Appendix 5, to each specific high pressure launcher and receiver located at each of the MarkWest Stand-Alone Facilities identified in Appendix 5. Where applicable, MarkWest shall:

a. connect high pressure pig launchers and receivers by Jumper Lines to a low pressure gathering line;

b. operate Jumper Lines to depressurize such launchers and receivers prior to opening the launcher or receiver hatch;

c. install and use Pig Ramps in pig receivers; and

d. when necessary to ensure compliance with the Ohio SIP, use a Mobile Flare to control VOC emissions.

20. New Launchers and Receivers. For pig launchers and receivers constructed in Pennsylvania and Ohio after the Effective Date and prior to Termination, MarkWest shall, subject to the exception in subparagraph e., below:

a. connect each high pressure pig launcher or receiver by Jumper Lines to a low pressure gathering line where such connection is Commercially Reasonable and Technically Feasible;

b. use Jumper Lines to depressurize such launchers and receivers prior to opening the launcher or receiver hatch;

c. at each new receiver, install and use a Pig Ramp or, with prior EPA written approval, technology that achieves equivalent emissions reductions;

d. at high pressure pig launchers and receivers, use shorter barrels than those presently used in the System, provided that the high pressure pig launcher or receiver is not in Liquid or Residue Gas Service and use of a shorter barrel is Commercially and Operationally Appropriate; and

e. in the event that MarkWest determines that any of the requirements in subparagraphs a., b., or d. above would pose a material adverse risk to worker safety, MarkWest may inform EPA of such risk and the reasons therefore, and upon written approval by EPA be excused from that requirement.

21. Existing Receivers. MarkWest shall install Pig Ramps in all pig receivers located at the Stand-Alone Facilities identified in Appendix 6.

22. At each high pressure pig launcher and receiver that MarkWest currently operates in Pennsylvania and Ohio that is not located at a Covered Facility, MarkWest shall connect such

high pressure pig launcher and receiver by pipe to a low pressure gathering line where such connection is Commercially Reasonable and Technically Feasible and operate such Jumper Lines to depressurize such launchers and receivers prior to opening the launcher or receiver hatch.

23. Liquid Containment Enhancement. For each launcher or receiver located at any MarkWest Compressor Station or Stand-Alone Facility identified in Appendices 1, 3, 4, 5, or 6, and each new launcher or receiver constructed after the Effective Date but prior to Termination in Pennsylvania and Ohio, MarkWest shall install and use liquid containers with grounded steel receptacles that are covered at all times when not in use.

V. CIVIL PENALTY

24. No later than thirty (30) Days after the Effective Date, MarkWest shall pay as a civil penalty $610,000. MarkWest shall pay 80% of this penalty to the United States, and 20% to PADEP. MarkWest shall pay interest on any amount past due, at the rate specified in 28 U.S.C. § 1961.

25. Federal Payment Instructions. MarkWest shall make the penalty payment to the United States at https://www.pay.gov to the U.S. Department of Justice account, in accordance with instructions provided to MarkWest by the Financial Litigation Unit ("FLU") of the United States Attorney's Office for the Western District of Pennsylvania after the Effective Date. The payment instructions provided by the FLU will include a Consolidated Debt Collection System ("CDCS") number that MarkWest shall use to identify this payment, as well as any others required to be made in accordance with this Consent Decree. The FLU will provide payment instructions to MarkWest to:

Christopher L. Rimkus
Managing Counsel – Operations
MarkWest Energy Partners, L.P.
1515 Arapahoe St., Suite 1600
Denver, CO 80202
Christopher.rimkus@markwest.com

MarkWest may change the individual to receive payment instructions on its behalf by providing written notice of such change in accordance with Section XVIII (Notices). At the time of payment, MarkWest shall send notice that payment has been made to the United States and EPA in accordance with Section XVIII (Notices). Such notice shall state that it is for the civil penalty owed pursuant to the Consent Decree, and shall reference the CDCS number, the civil action number, and DOJ Case No. 90-5-2-1-11374.

26. Pennsylvania Payment Instructions. The MarkWest penalty payment to Pennsylvania shall be made by Electronic Funds Transfer in accordance with instructions to be provided to MarkWest by PADEP. The payment instructions will include ABA and Account numbers that MarkWest shall use to identify all payments required to be made to PADEP in accordance with this Consent Decree. PADEP will provide the payment instructions to:

Christopher L. Rimkus
Managing Counsel – Operations
MarkWest Energy Partners, L.P.
1515 Arapahoe St., Suite 1600
Denver, CO 80202
Christopher.rimkus@markwest.com

MarkWest may change the individual to receive payment instructions on its behalf by providing written notice of such change in accordance with Section XVIII (Notices). At the time of payment, MarkWest shall send notice that payment has been made to PADEP. This notice shall include (a) the name, address, phone number and entity making payment, (b) the civil action

number of this case, (c) the reference/confirmation number and advice number of the transmittal, (d) the amount of the payment, (e) the date of the payment, and (f) the sending bank's Federal identification number.

27. Not Tax Deductible. MarkWest shall not deduct any penalties paid under this Section or Section XII (Stipulated Penalties) in calculating its federal, state, or local income tax.

VI. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

28. MarkWest shall perform the following Supplemental Environmental Projects in accordance with all provisions of this Section:

a. Innovation Transfer and Emission Control Education. MarkWest will disseminate and make available for use by other oil and gas companies its proprietary design for Pig Ramps, which has been shown to reduce liquid accumulation and emissions from pig launcher and receiver operations. In order to promote the rapid adoption of this innovative device, MarkWest will make available on a public website, no later than six (6) months after the Effective Date, a royalty-free license and information on the Pig Ramp design. MarkWest will also provide educational presentations and host four demonstration or training sessions per year over a three-year period (for a total of 12 sessions), with technical staff available in-person at each session, to demonstrate and encourage the installation and adoption of the technologies developed by MarkWest to reduce VOC emissions from pig launchers and receivers throughout the oil and gas industry. In conjunction with such presentations and demonstrations, MarkWest will develop comprehensive and detailed educational materials on the effective installation, maintenance, and use of Pig Ramps and Jumper Lines to reduce VOC emissions from pig launchers and receivers. Within twelve (12) months of the Effective Date, MarkWest will make

any such materials available on the same website provided for in this Paragraph for the publication of a royalty-free Pig Ramp license and information on Pig Ramp design.

b. Humphreys Compressor Station Ambient Air Monitoring SEP. In accordance with Appendix 7, MarkWest shall install and operate, for a period of at least seven hundred twenty (720) days, one (1) meteorological station and two (2) air sampling stations for sampling and analyzing speciated and total VOCs and reduced sulfur compounds ("RSCs"). One air sampling station will be located upwind and the other downwind of the Humphreys Compressor Station ("HCS") in Barnesville, Ohio. Within one hundred twenty (120) days of the Effective Date, MarkWest shall submit a plan ("Humphreys Monitoring Plan") to EPA for approval to conduct an ambient air monitoring SEP ("Humphreys SEP") near the HCS in accordance with the requirements of this subparagraph and Appendix 7. Following EPA approval of the Humphreys Monitoring Plan, MarkWest shall install and operate the meteorological and air sampling stations in accordance with the approved Humphreys Monitoring Plan and Appendix 7. MarkWest shall submit quarterly information reports and annual reports to EPA as required by the approved Humphreys Monitoring Plan and Appendix 7.

c. Harmon Creek Ambient Air Monitoring SEP. In accordance with Appendix 8, MarkWest shall install and operate, for a period of at least seven hundred twenty (720) days, one (1) meteorological station and three (3) VOC air sampling stations located around the proposed Harmon Creek Gas Processing Plant ("Harmon Creek") in Smith Township, Washington County, Pennsylvania. Within one hundred twenty (120) days of the Effective Date, MarkWest shall submit a plan ("Harmon Creek Monitoring Plan") to EPA and PADEP, for approval by EPA in consultation with PADEP, to conduct an ambient air monitoring SEP near

Harmon Creek in accordance with the requirements of this subparagraph and Appendix 8. Following EPA approval (in consultation with PADEP) of the Harmon Creek Monitoring Plan, MarkWest shall install and operate the meteorological and air sampling stations in accordance with the approved Harmon Creek Monitoring Plan and Appendix 8. MarkWest shall submit quarterly information reports and annual reports to EPA and PADEP as required by the approved Harmon Creek Monitoring Plan and Appendix 8.

d. MarkWest shall spend not less than $2,000,000 in Project Dollars to implement the SEPs described in subparagraphs b. and c.

29. With regard to the SEPs identified in Paragraph 28, MarkWest certifies the truth and accuracy of each of the following:

a. That all cost information provided to EPA in connection with EPA's approval of the SEPs is complete and accurate and that MarkWest in good faith estimates that the cost to implement the SEPs is $2,400,000;

b. That, as of the date of executing this Consent Decree, MarkWest is not required to perform or develop the SEPs by any federal, state or local law, or regulation and is not required to perform or develop the SEPs by agreement, grant, or as injunctive relief awarded in any other action in any forum;

c. That the SEPs are not projects that MarkWest was planning or intending to construct, perform or implement other than in settlement of the claims resolved in this Decree;

d. That MarkWest has not received and will not receive credit for the SEPs in any other enforcement action;

e. That MarkWest will not receive any reimbursement for any portion of the SEPs from any other person;

f. That MarkWest is not a party to any open federal financial assistance transaction that is funding or could fund the same activity as the SEPs. For purposes of these certifications, the term "open federal financial assistance transaction" refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee, or other mechanism for providing federal financial assistance whose performance period has not yet expired.

30. SEP Completion Report. Within thirty (30) Days after completion of a SEP, MarkWest shall submit a SEP Completion Report to the United States and PADEP in accordance with Section XVIII (Notices) of this Consent Decree. Each SEP Completion Report shall contain the following information:

a. A detailed description of the SEP as implemented;

b. A description of any problems encountered in completing the SEP and solutions thereto;

c. An itemized list of all eligible SEP costs expended;

d. Certification that the SEP has been fully implemented pursuant to the provisions of this Decree; and

e. To the extent feasible, a description of the environmental or public health benefits resulting from implementation of the SEPs.

31. The United States may, in its sole discretion, require MarkWest to provide information in addition to that described in Paragraph 30 ("SEP Completion Report") in order to evaluate MarkWest's SEP Completion Report.

32. After receiving a SEP Completion Report, the United States will notify MarkWest whether or not MarkWest has satisfactorily completed the SEP. If MarkWest has not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section XII (Stipulated Penalties) of this Consent Decree.

33. MarkWest may invoke dispute resolution under Section XIV of the Decree (Dispute Resolution) regarding EPA's determination of (i) whether MarkWest has satisfactorily performed a SEP and (ii) the amount of eligible SEP costs. No other disputes arising under this Section are subject to Dispute Resolution.

34. MarkWest shall ensure that each submission required under this Section is signed by a MarkWest official with knowledge of the SEP and bears the certification language set forth in Paragraph 63.

35. If MarkWest references the SEPs under this Consent Decree in any press conference, press release, or similar formal public statement, MarkWest shall include language in substantially the following form: "This project was undertaken in connection with the settlement of an enforcement action under the Clean Air Act brought by the United States and PADEP against certain MarkWest entities."

36. For federal income tax purposes, MarkWest agrees that it will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing the SEPs.

VII. COMMONWEALTH-ONLY COMMUNITY ENVIRONMENTAL PROJECT

37. In order to settle the matters contained herein, and in addition to the PADEP portion of the civil penalty identified in Section V (Civil Penalty), MarkWest shall, as a Commonwealth-Only Community Environmental Project ("CEP"), permanently transfer

ownership to PADEP of the equipment used in the Harmon Creek Ambient Air Monitoring SEP, identified in Paragraph 38, below (hereinafter "Monitoring Equipment CEP").

38. Within sixty (60) days of the completion of the Harmon Creek Ambient Air Monitoring SEP (Paragraph 28.c), MarkWest shall permanently transfer ownership of the following equipment ("Equipment") to PADEP, for PADEP's use within Pennsylvania:

Compound Analyzer	Consolidated Analytical Systems (CAS) AirmOzone Auto-Gas Chromatograph (GC) (along with ancillary equipment needed to operate it (i.e. stuff in the box))
Wind Speed/Direction	R.M. Young Model 05305 Wind Monitor AQ
Temperature and Delta Temperature	R.M. Young Platinum RTD Model 41342 ambient temperature sensor
Temperature and Delta Temperature	R.M. Young Model 43502 aspirated radiation shield
Relative Humidity	Campbell Scientific Inc (CSI) EE181 relative humidity/temperature probe
Solar Radiation	Hukseflux LP02
Net Radiation	Kipp & Zonen NR-LITE net radiometer
Barometric Pressure	CS106 Vaisala PTB110 barometer
10-Meter Tower	Model UT30 10-meter guyed aluminum tower
Telecommunications	Sierra Wireless RV50 modem (Verizon)
Data Acquisition System	Campbell Scientific, Inc. CR1000x data acquisition system

39. The Monitoring Equipment CEP falls within the definition of CEP in PADEP's "Policy for the Acceptance of Community Environmental Projects in Conjunction with Assessment of Civil Penalty" (Technical Guidance Document Number 012-4180-001).

40. PADEP has determined that the Monitoring Equipment CEP will provide a substantial public health and environmental benefit to Pennsylvania and that the Monitoring Equipment CEP is not something that MarkWest is otherwise legally required to do.

41. MarkWest shall not deduct any costs incurred in connection with or in any way associated with the Monitoring Equipment CEP for any tax purpose or otherwise obtain favorable tax treatment for those costs. If requested to do so by PADEP, MarkWest shall submit an affidavit of the corporate officer responsible for the financial affairs of MarkWest certifying that MarkWest has not deducted or otherwise obtained favorable tax treatment of any of the costs of the Monitoring Equipment CEP.

42. MarkWest agrees that whenever it publicizes, in any press conference, press release, or similar formal public statement, the Monitoring Equipment CEP, it will state that the Monitoring Equipment CEP was undertaken as part of the settlement of an enforcement action with PADEP.

VIII. PERMITS

43. Pennsylvania Appendix 1 and Appendix 3 Facilities. For each Pennsylvania Compressor Station identified on Appendix 1 with the exception of Baker, Redd, and Tupta Day, and each Pennsylvania Stand-Alone Facility identified on Appendix 3 with the exception of Route 18, MarkWest will submit complete applications to PADEP, using PADEP application forms, seeking to incorporate as "applicable requirements" the injunctive relief listed in Paragraphs 12 through 16 of this Consent Decree into non-Title V state-only operating permits ("SOOPs") for those Covered Facilities that are federally enforceable and will survive termination of this Consent Decree. VOC emissions from pigging operations in the SOOP

applications shall be determined in accordance with Paragraph 11. If, after the Effective Date, PADEP issues a revised version of its January 2015 General Plan Approval and/or General Operating Permit BAQ-GPA/GP-5 (Natural Gas Processing Stations, Processing Plants, and Transmission Stations) ("GP-5"), MarkWest will submit complete applications to PADEP, using PADEP application forms, seeking authorization to operate Baker, Redd, and Tupta Day Compressor Stations under the revised GP-5.

44. Permits to be Issued by PADEP. PADEP will review and act on such permit applications submitted by MarkWest. Any challenges to PADEP's issuance or denial of a permit application must be filed with the Pennsylvania Environmental Hearing Board.

45. Ohio Compressor Stations. For each Ohio Compressor Station identified on Appendix 4, MarkWest will submit complete applications to the Ohio Environmental Protection Agency ("OEPA") seeking to incorporate as "applicable requirements" the injunctive relief identified in Paragraph 18 (Ohio Compressor Stations) of the Consent Decree into non-Title V Permits to Install and Operate that are federally enforceable and will survive termination of this Consent Decree.

46. Other Covered Ohio Stand-Alone Facilities. For each pig launcher and receiver identified in Appendix 5, MarkWest will submit complete applications to OEPA seeking coverage under Ohio General Permit GP 21.1 (Pigging at an Oil and Gas Compressor Station/Other Site).

IX. PROHIBITION ON NETTING CREDITS OR OFFSETS FROM REQUIRED CONTROLS

47. Prohibitions. MarkWest shall neither generate nor use any CD Emissions Reductions: (i) as netting reductions; (ii) as emissions offsets; or (iii) to apply for, obtain, trade, or sell any emission reduction credits in any permit application.

48. Outside the Scope of the Prohibitions. Nothing in this Section is intended to prohibit MarkWest from seeking to, nor PADEP or Ohio EPA from denying MarkWest's request to:

a. Use or generate emission reductions from emissions units that are covered by this Consent Decree to the extent that the proposed emissions reductions represent the difference between CD Emissions Reductions and more stringent control requirements that MarkWest may elect to accept for those emissions units in a permitting process, except as provided in this Paragraph;

b. Use or generate emissions reductions from emissions units that are not subject to an emission limitation or control requirement pursuant to this Consent Decree; or

c. Use CD Emissions Reductions for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding Prevention of Significant Deterioration and non-attainment New Source Review rules, but including, for example, Reasonably Achievable Control Technology ("RACT") rules that apply to MarkWest); provided, however, that MarkWest shall not be allowed to trade or sell any CD Emissions Reductions.

X. THIRD PARTY VERIFICATION

49. Third-Party Audit. MarkWest will retain, at its expense, a qualified third-party consultant, not employed by MarkWest or any of its subsidiary or affiliated companies (a "Third Party Auditor"), to lead an audit team to perform the audit described in this Section. The audit team shall include, for coordination of onsite inspection activities only, at least one MarkWest employee or contractor familiar with the Compressor Stations and Stand-Alone Facilities being audited. MarkWest shall make available to the Third-Party Auditor all of MarkWest's non-privileged records requested by the Third-Party Auditor that are reasonably related to the scope of the audit required under this Section. MarkWest may, however, require that the Third-Party Auditor execute a confidentiality agreement prior to providing any documents or records containing Confidential Business Information. MarkWest shall provide the Third-Party Auditor with access to those Compressor Stations and Stand-Alone Facilities that are the subject of the audit required by this Section and shall provide all reasonable assistance to allow the Third-Party Auditor to conduct the audit required by this Section, including making employees, affiliates, or contractors available to answer questions or provide information.

50. Third-Party Auditor Selection Process. Within sixty (60) Days after the Effective Date, MarkWest shall notify the United States and PADEP in writing of MarkWest's recommended Third-Party Auditor and provide statements of qualification for that consultant for performance of the services as Third-Party Auditor. Such statements of qualification shall identify those other services, in addition to those to be performed as Third-Party Auditor, that may be performed for MarkWest in the foreseeable future. EPA, in consultation with PADEP, may disapprove of MarkWest's recommended Third-Party Auditor if it determines that the

consultant lacks the necessary qualifications to serve as Third-Party Auditor. EPA shall state the reasons for its disapproval of the consultant as Third-Party Auditor in writing, and the MarkWest recommendation and EPA approval process will be repeated with MarkWest having thirty (30) Days from the date of disapproval to propose an alternate consultant and provide statements of qualification. In the event a consultant is not approved within thirty (30) Days of MarkWest's first submission under this Paragraph, all deadlines in this Section shall be extended by the total number of Days it takes to approve the consultant minus thirty (30) Days. For example, if it takes forty-five (45) Days to approve the consultant, MarkWest's deadlines would be extended by fifteen (15) Days (*i.e.*, 45 – 30 = 15).

51. MarkWest shall ensure that the Third-Party Auditor complies with the following terms: (a) the Third-Party Auditor shall provide written advance notice as soon as practicable to MarkWest, the United States, and PADEP in the event that the Third-Party Auditor is unable to continue to serve as the Third-Party Auditor under this Consent Decree; (b) the Third-Party Auditor shall provide EPA and PADEP with a written advance schedule of any facility visits, telephone calls, or other meetings with MarkWest or its agents or contractors and shall invite EPA and PADEP to participate in person or by teleconference; (c) the Third Party Auditor shall use the Real Gas Law, as defined herein, and calculate VOC emissions consistent with Paragraph 11 (Emission Calculations); (d) the Third-Party Auditor shall promptly disclose to the United States and PADEP any conflicts of interests for it or its subcontractors that may arise with respect to its performance of the audit and, in the event of a conflict, the Third-Party Auditor shall take any and all action to resolve such conflict; and (e) the individual Third-Party audit team personnel who conducted or otherwise participated in auditing services pursuant to this

Consent Decree shall not accept employment by MarkWest for a period of at least one (1) year following completion of the audit.

52. Scope of Audit. Within eighteen (18) months of the Effective Date, the Third-Party Auditor shall conduct an audit of the installation and operation of the injunctive relief required pursuant to Section IV to determine compliance with this Consent Decree at a total of five (5) of the Compressor Stations or Stand-Alone Facilities identified in Appendices 1 and 3, except the Baker, Redd, and Tupta Day Compressor Stations, and a total of five (5) Compressor Stations or Stand-Alone Facilities identified in Appendices 4 and 5.

53. Third-Party Audit Report. Within twenty-one (21) months of the Effective Date, the Third-Party Auditor shall simultaneously provide a draft Audit Report to MarkWest, EPA, and PADEP. Within forty-five (45) Days after receipt of the draft Audit Report, MarkWest shall provide comments on the draft Audit Report, if any, to the Third-Party Auditor, EPA, and PADEP. As part of such comments, MarkWest shall, if needed, identify within the draft Third-Party Audit Report any Confidential Business Information ("CBI"), and such information shall be designated by the Third-Party Auditor as CBI in the final Third-Party Audit Report submitted to EPA and PADEP. EPA and PADEP shall treat the draft Third-Party Audit Report, in its entirety, as CBI. The Third-Party Auditor shall provide in writing its basis for accepting or rejecting the comments of MarkWest on the draft Third-Party Audit Report. Within twenty-four (24) months of the Effective Date, the Third-Party Auditor shall submit a Third-Party Audit Report to MarkWest, EPA and PADEP. The Third-Party Audit Report shall identify any requirement of the injunctive relief specified in Section IV where MarkWest is not in compliance and, for each such requirement: (i) provide a detailed description of the basis for this conclusion

regarding noncompliance, including a summary of any relevant oral communications between the Third-Party Auditor and any of MarkWest's officers, agents, or employees; and (ii) attach relevant supporting documentation.

54. Response to Third-Party Audit Report. Within one hundred twenty (120) Days after receiving the Third-Party Audit Report, MarkWest shall (1) serve on the United States and PADEP a schedule for remedying any deficiencies identified in the Third-Party Audit Report, and/or (2) serve a notice on the United States and PADEP that MarkWest disputes the Third-Party Auditor's findings, in whole or part, and specifies the factual, technical, or legal basis of that disagreement. Any disagreement between the United States and MarkWest and/or PADEP and MarkWest over MarkWest's response to the Third-Party Audit Report shall be resolved according to the Dispute Resolution provisions of the Consent Decree in Section XIV.

55. The United States and PADEP shall not be bound by any Third-Party Audit Report generated pursuant to this Consent Decree. The United States and/or PADEP may accept or reject, in whole or in part, the Third-Party Auditor's findings, conclusions, and/or recommendations. If the United States or PADEP determines that MarkWest is in violation of any Consent Decree requirement for which stipulated penalties are provided under Section XII (Stipulated Penalties), MarkWest shall be subject to the assessment of such penalties, regardless of the Third-Party Audit Report, in accordance with the provisions of Section XII (Stipulated Penalties), and subject to MarkWest's right to invoke the provisions of Section XIV (Dispute Resolution).

56. MarkWest may terminate its contract with the Third-Party Auditor only for good cause shown and with the consent of the United States, in consultation with PADEP; such

consent not to be unreasonably withheld. For the purposes of this Paragraph, "good cause" includes, but is not limited to, incompetence, fraudulent actions, and any failure by the Third-Party Auditor to comply with all applicable laws and MarkWest policies relating to (1) worker health and safety, or (2) environmental compliance and protection. In the event MarkWest terminates its contract with the Third-Party Auditor, MarkWest shall select a new consultant consistent with the process in Paragraph 50.

57. Except as otherwise provided herein, the Third-Party Audit Report shall not be subject to any privilege or the attorney work product doctrine. Nothing in this Section shall prevent MarkWest from designating as CBI portions of the Third-Party Audit Report or other documents prepared by the Third-Party Auditor.

XI. RECORDKEEPING AND REPORTING

58. Status Reports. After the Effective Date and until termination of the Consent Decree, MarkWest shall submit periodic reports ("Status Reports") on the status of the injunctive relief and SEPs required by the Consent Decree. The first such Status Report shall cover the first six-month period after the Effective Date and shall be due within sixty (60) Days after the end of the six-month period. Each subsequent Status Report shall cover a one (1) year period and shall be due within sixty (60) Days after the end of annual period covered. Each Status Report shall contain the following information:

a. The date(s) of replacement of any Dehydrator Flares at compressor stations listed in Appendix 2 of this Decree, as required by Paragraph 13.

b. The date of the replacement of the candlestick flare at the Smith Tee facility, as required by Paragraph 15.

c. The status of the closure of launchers and receivers located at the Drugmand, Stewart Route 50, and Graham Header facilities. If the facility is closed, provide the date the facility ceased operation, as required by Paragraph 17.

d. The date of any SEP Completion Reports submitted under Paragraph 30. Also, identify for which SEP the completion report was submitted.

e. For any new launcher or receiver constructed after the Effective Date but prior to the Termination Date of this Decree, as provided in Paragraph 20, provide the date(s) and location of any:

i. Jumper Lines installed;

ii. Pig Ramps installed;

iii. An explanation for not installing Jumper Lines or Pig Ramps;

iv. Any instances where a Jumper Line was not used prior to opening the hatch;

v. An explanation for not using shorter barrels at high pressure launchers and receivers.

f. For each launcher or receiver subject to the requirements of Paragraphs 12, 14, 18 and 19, provide, as applicable to each specific pig launcher or receiver, the date(s) and locations of:

i. Jumper Lines installed;

ii. Pig Ramps installed; and

iii. Liquid Containment Vessels installed.

g. Copies of each permit application submitted to PADEP pursuant to Paragraph 43.

h. Copies of each permit application or application seeking coverage under a general permit submitted to OEPA pursuant to Paragraphs 45 and 46.

i. Date on which OEPA granted any permit or approval to operate under a general permit in response to applications submitted pursuant to Paragraphs 45 and 46.

j. Date that any Jumper Line was installed pursuant to the requirements of Paragraph 22.

k. Dates that Pig Ramps were installed for each receiver as required by Paragraph 21.

l. Dates that a Mobile Flare was operated as required by Paragraphs 18 and 19.

m. Status update for the HCS and Harmon Creek monitoring SEPs as set forth in Paragraph 28.b. and c. until those SEPs are completed.

59. Maintenance of Consent Decree Records. MarkWest shall maintain records necessary to demonstrate compliance with this Consent Decree.

60. Pigging Event Records. For each pigging event that occurs at a launcher or receiver subject to the requirements of Paragraphs 12, 14, 18, and 19, MarkWest shall maintain records of the following information:

a. Identification number of the launcher or receiver;

b. Location of the launcher or receiver;

c. Date and time of pigging;

d. The launcher or receiver pressure prior to venting to the atmosphere, and prior to routing emissions to a flare, where applicable;

e. Gas composition data representative of the composition of gas at the facility. This data shall be updated at least annually;

f. In the case of pig launchers and receivers identified in Appendices 4 and 5, whether a Mobile Flare was used as required by Paragraphs 18 and 19; and

g. In the case of pig launchers and receivers identified in Appendices 4 and 5, any additional records necessary to demonstrate that the emissions from each launcher and receiver did not exceed the emissions threshold applicable to each launcher and receiver under Paragraphs 18 and 19.

61. Whenever any violation of this Consent Decree, or any other event affecting MarkWest's performance under this Decree, may pose an immediate threat to public health or welfare or the environment, MarkWest shall notify EPA and PADEP orally or by electronic transmission as soon as possible, but no later than 24 hours after MarkWest first knew of the violation or event.

62. All reports pursuant to this Section shall be submitted to the persons designated in Section XVIII of this Consent Decree (Notices).

63. Certification. Each report submitted by MarkWest under this Decree shall be signed by an official of MarkWest and include the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant

> penalties for submitting false information, including the possibility of fine and imprisonment for knowingly and willfully submitting a material false statement.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

64. The reporting requirements of this Consent Decree do not relieve MarkWest of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit or requirement.

65. Any information provided pursuant to this Consent Decree may be used by the United States or PADEP in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

XII. STIPULATED PENALTIES

66. MarkWest shall be liable for stipulated penalties for violations of this Consent Decree as specified below, unless excused under Section XIII (Force Majeure) of the Decree, or reduced or waived by the United States or the United States and PADEP (in the case of violations at Facilities located in Pennsylvania) pursuant to Paragraph 72. For violations occurring at Facilities in Pennsylvania, stipulated penalties are due to both the United States and PADEP, with fifty percent (50%) of the total amount of stipulated penalties paid to the United States, and fifty percent (50%) to PADEP. For violations occurring at Facilities in Ohio, one hundred percent (100%) of the penalty shall be paid to the United States.

67. Tier 1 Stipulated Penalties. The following stipulated penalties shall accrue per violation per Day for each violation of the following requirements of this Consent Decree: (1) connection of high pressure to low pressure Jumper Lines under Paragraphs 12.a., 14.a., 18.a.,

and 19.a.; (2) use of Jumper Lines before depressurizing under Paragraphs 12.b., 14.b., 18.b., and 19.b; (3) installation of dehydrator flares at Compressor Stations pursuant to Paragraph 13; (4) replacement of the flare at the Smith Tee Stand-Alone Facility under Paragraph 15; (5) operation of the redesigned and modified discharge piping at Loffert (Joe Cain) Pennsylvania Stand-Alone Facility pursuant to Paragraph 16; and (6) closure of pig launchers and receivers at the Drugmand, Stewart Route 50, and Graham Header Stations pursuant to Paragraph 17.

Penalty Per Violation Per Day	Period of Noncompliance
$2,250	1st through 14th Day
$3,500	15th through 30th Day
$5,000	31st Day and beyond.

68. Tier 2 Stipulated Penalties. The following stipulated penalties shall accrue per violation per Day for each violation of each of the following requirements of this Consent Decree: (1) installation and use of Pig Ramps under Paragraphs 12.c., 14.c., 18.c., and 19.c.; and (2) timely submission of Status Reports under Paragraph 58:

Penalty Per Violation Per Day	Period of Noncompliance
$500	1st through 14th Day
$1,000	15th through 30th Day
$1,500	31st Day and beyond.

69. Stipulated Penalties for SEPs. The following stipulated penalties shall accrue per Day for each violation of the following SEP requirements, as set forth in Paragraph 28.a-c. of this Consent Decree: (1) failure to timely submit SEP work plans required by Paragraph 28.b and .c. (2) failure to timely make available on a public website a royalty-free license and/or

information on the Pig Ramp design; (3) failure to timely make available on a public website materials on the effective installation, maintenance, and use of Pig Ramps and Jumper Lines; (4) failure to install the air sampling or meteorological stations at HCS and Harmon Creek as required by Paragraph 28.b. and c.; (5) material failure to operate the monitoring or meteorological stations as required by Paragraph 28.b. and c.; (6) failure to timely provide the meteorological data and/or sampling data as set forth in Paragraph 28.b. and c.; and (7) failure to timely submit a SEP Completion Report pursuant to Paragraph 30:

Penalty Per Day of Violation	Period of Noncompliance
$500	1st through 14th Day
$1,000	15th through 30th Day
$2,500	31st Day and beyond.

70. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree. The penalties that accrue for each violation or failure to perform an obligation do not increase from one period of noncompliance to the next unless the violations or failures to perform are continuous.

71. MarkWest shall pay stipulated penalties to the United States and PADEP within thirty (30) Days of a written demand by the United States and/or PADEP.

72. Either the United States or PADEP may, in the unreviewable exercise of their respective discretion, reduce or waive stipulated penalties otherwise due them under this Consent Decree.

73. Stipulated penalties shall continue to accrue during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or MarkWest does not seek judicial review of EPA's written position provided pursuant to Paragraph 87, MarkWest shall pay the stipulated penalties determined to be owing, together with interest, to the United States and PADEP within thirty (30) Days of the effective date of the agreement or the expiration of Paragraph 88's period for seeking judicial resolution of a dispute.

b. If the dispute is appealed to the Court and the United States and/or PADEP prevail, MarkWest shall pay all penalties determined by the Court to be owing, together with interest, within sixty (60) Days of receiving the Court's decision or order, except if the District Court's decision is appealed, and then as provided in Subparagraph c., below.

c. If any Party appeals the District Court's decision, MarkWest shall pay all penalties determined to be owing by the final decision of the appellate court, together with interest, within thirty (30) Days of receiving the final appellate court decision.

74. If MarkWest fails to pay stipulated penalties according to the terms of this Consent Decree, MarkWest shall be liable for interest on such penalties, as provided in 28 U.S.C. § 1961, accruing from the date payment became due until full payment is made.

75. MarkWest shall pay stipulated penalties owing to the United States in accordance with the procedures for payment of civil penalties specified in Paragraph 25. The transmittal letter required by Paragraph 25 shall specify that the payment is for stipulated penalties.

76. MarkWest shall pay stipulated penalties due under this Consent Decree to PADEP in accordance with the procedures for payment of civil penalties specified in Paragraph 26.

77. The payment of stipulated penalties and interest, if any, shall not alter in any way MarkWest's obligation to complete the performance of the requirements of this Consent Decree.

78. Subject to the provisions of Section XVI (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States and PADEP for MarkWest's violations of this Consent Decree or applicable law. Where a violation of this Decree is also a violation of relevant statutory or regulatory requirements, MarkWest shall be allowed a credit for any stipulated penalties paid against any statutory penalties imposed for such violation under the applicable federal or state requirement.

XIII. FORCE MAJEURE

79. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from a cause or causes beyond the control of MarkWest, of any entity controlled by MarkWest, or of MarkWest's contractors, that delays or prevents the performance of any obligation under this Decree despite MarkWest's best efforts to fulfill the obligation. The requirement that MarkWest exercise "best efforts to fulfill the obligation" includes using reasonable efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred in order to minimize

delay and any adverse effects of the delay to the greatest extent possible. Force majeure does not include MarkWest's financial inability to perform any obligation under this Decree.

80. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, for which MarkWest intends or may intend to assert a claim of force majeure, MarkWest shall provide notice orally or by electronic transmission within three (3) Days of when MarkWest first knew that the event might cause a delay to the addresses provided in Section XVIII of this Consent Decree (Notices). Within fifteen (15) Days of this initial notification, MarkWest shall provide in writing to EPA and, if the event involves a facility in Pennsylvania, PADEP, to the extent available: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to mitigate the delay or the effect of the delay; and MarkWest's rationale for attributing such delay to a force majeure event if it intends to assert such a claim. MarkWest shall include with any notice all available documentation necessary to support the claim that the delay was attributable to a force majeure. Any material failure to comply with the above requirements that prejudices EPA's ability to assess MarkWest's claim of force majeure shall preclude MarkWest from asserting any claim of force majeure for that event for the period of time of such failure to comply.

81. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force

majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify MarkWest in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

82. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify MarkWest in writing of its decision.

83. If MarkWest elects to invoke the dispute resolution procedures set forth in Section XIV (Dispute Resolution) of this Consent Decree with regard to a force majeure event, it shall do so no later than thirty (30) Days after receipt of EPA's notice. In any such proceeding, MarkWest bears the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that MarkWest complied with the requirements of Paragraphs 79 and 80. If MarkWest carries this burden, the delay at issue shall be deemed not to be a violation of the affected obligation of this Decree.

XIV. DISPUTE RESOLUTION

84. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve any dispute arising under or with respect to this Consent Decree.

85. Informal Dispute Resolution. Any dispute subject to dispute resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when MarkWest disputes a decision of the United States and sends the United States and PADEP a written Notice of Dispute. Such Notice of Dispute shall state clearly

the matter in dispute. The period of informal negotiations shall not exceed ninety (90) Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States, after consultation with PADEP, shall be considered binding unless, within ninety (90) Days after the conclusion of the informal negotiation period, MarkWest invokes formal dispute resolution procedures as set forth below.

86. Formal Dispute Resolution. MarkWest shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and PADEP a written Statement of Position regarding the matter in dispute. The MarkWest Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting MarkWest's position and any supporting documentation relied upon by MarkWest.

87. The United States, after consultation with PADEP, shall serve its Statement of Position within forty-five (45) Days of receipt of MarkWest's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on MarkWest unless MarkWest files a motion for judicial review of the dispute in accordance with the following Paragraph.

88. MarkWest may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XVIII of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within thirty (30) Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph.

The motion shall contain a written statement of MarkWest's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

89. The United States shall respond to MarkWest's motion within the time period allowed by the Local Rules of this Court for responses to dispositive motions. MarkWest may file a reply memorandum to the extent permitted by the Local Rules.

90. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 85 and 86 above pertaining to a matter that involves EPA's exercise of discretion under this Consent Decree, MarkWest shall have the burden of proof based on the administrative record (including the Parties' Statements of Position) and the applicable standard of review as set forth in the Administrative Procedure Act, 5 U.S.C. § 500 *et seq*.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraphs 85 and 86 above, MarkWest shall bear the burden of demonstrating that its position complies with this Consent Decree.

91. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of MarkWest under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 73 above. If

MarkWest does not prevail on the disputed issue, subject to the Court's order, stipulated penalties shall be assessed and paid as provided in Section XII (Stipulated Penalties).

XV. INFORMATION COLLECTION AND RETENTION

92. The United States and PADEP, and their respective representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility identified on Appendices 1-6, at all reasonable times, upon presentation of proper credentials, to:

a. monitor the progress of activities required under this Decree;

b. verify any data or information submitted to the United States or PADEP in accordance with the terms of this Decree;

c. obtain samples and, upon request, splits of any samples taken by MarkWest or its representatives, contractors, or consultants related to MarkWest's performance of its obligations under this Decree;

d. obtain documentary evidence, including photographs and similar data; and

e. assess MarkWest's compliance with this Decree.

93. Upon request, MarkWest shall provide EPA, PADEP, or their authorized representatives, splits or duplicates of any samples taken by MarkWest in performing its obligations under this Decree. EPA or PADEP shall provide MarkWest splits of any samples taken by EPA or PADEP or their authorized representatives.

94. Until two (2) years after the termination of this Consent Decree, MarkWest shall retain, and shall instruct its contractors and agents performing work under this Consent Decree to preserve all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents'

possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to MarkWest's performance of its obligations under this Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or PADEP, MarkWest shall provide copies of any non-privileged documents, records, or other non-privileged information required to be maintained under this Paragraph to the United States or PADEP.

95. At the conclusion of the information-retention period provided in the preceding Paragraph, MarkWest shall notify the United States and PADEP at least sixty (60) days prior to the destruction of any records subject to the requirements of this Section and, upon request by the United States or PADEP, MarkWest shall deliver any such documents, records, or other information to EPA and PADEP.

96. MarkWest may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If MarkWest asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by MarkWest. However, no documents, records, or other information created or generated in order to comply with the requirements of this Consent Decree shall be withheld on grounds of privilege.

97. MarkWest may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2 or applicable state law. As to any information that MarkWest seeks to protect as CBI, MarkWest shall follow the procedures set forth in 40 C.F.R. Part 2 or applicable state law.

98. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or PADEP pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of MarkWest to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XVI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

99. This Consent Decree resolves the civil and administrative claims that the United States may have against MarkWest for the following violations of the Clean Air Act through the date of lodging:

a. With respect to the Pennsylvania Compressor Stations identified on Appendix 1, the Pennsylvania Stand-Alone Facilities (with the exception of Route 18) identified in Appendix 3, and the Drugmand, Stewart Route 50, and Graham Header Stations identified in Paragraph 17, failure to comply with (i) the PSD provisions, 42 U.S.C. §§ 7490-7492; (ii) the NSR provisions, 42 U.S.C. §§ 7501-7515; (iii) the Title V provisions, 42 U.S.C. §§ 7661-7661f; and (iv) provisions of the Pennsylvania SIP implementing Pennsylvania's PSD permitting program, NSR permitting program, Title V permitting program, and Plan Approval and Operating Permit programs;

b. With respect to the Pennsylvania Stand-Alone Facilities identified in Appendix 6 and the Route 18 Stand-Alone Facility identified in Appendix 3, failure to comply with the provisions of the Pennsylvania SIP implementing Pennsylvania's Plan Approval and Operating Permit programs;

c. With respect to the Ohio Compressor Stations identified on Appendix 4, failure to comply with (i) the PSD provisions with respect to VOC, 42 U.S.C. §§ 7490-7492; (ii) the Title V provisions, 42 U.S.C. §§ 7661-7661f; and (iii) the provisions of the Ohio SIP implementing Ohio's Title V operating permit program and Ohio's permit to install and operate program;

d. With respect to the Ohio Stand-Alone Facilities identified in Appendix 5, failure to comply with the provisions of the Ohio SIP implementing Ohio's minor source permit to install and operate program; and

e. With respect to the Ohio Stand-Alone Facilities identified in Appendix 6, failure to comply with the provisions of the Ohio SIP implementing Ohio's minor source permit to install and operate program, and failure to comply with the recordkeeping provisions of the Ohio SIP.

100. This Consent Decree resolves all of PADEP's civil claims against MarkWest pursuant to Sections 9.1 and 13.6(a) of the Air Pollution Control Act ("APCA"), 35 P.S. §§ 4009.1 and 4013.6(a), through the date of lodging for the following violations of the APCA and its implementing regulations:

a. With respect to the Pennsylvania Compressor Stations identified in Appendix 1, the Pennsylvania Stand-Alone Facilities (with the exception of Route 18) identified

in Appendix 3, and the Drugmand, Stewart Route 50, and Graham Header Stations identified in Paragraph 17, failure to comply with (i) the Plan Approval and Operating Permit programs; (ii) the PSD permitting program; (iii) the NSR permitting program; and (iv) the Title V permitting program.

b. With respect to the Pennsylvania Stand-Alone Facilities identified on Appendix 6 and the Route 18 Stand-Alone Facility identified in Appendix 3, failure to comply with the Plan Approval and Operating Permit programs.

101. The United States and PADEP reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraphs 78, 99 and 100. This Consent Decree does not limit the rights of the United States or PADEP to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraphs 99 and 100. The United States and PADEP further retain all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, any MarkWest facility, whether related to the violations addressed in this Decree or otherwise.

102. In any subsequent administrative or judicial proceeding initiated by the United States or PADEP for injunctive relief, civil penalties, or other appropriate relief relating to the facilities subject to this Consent Decree or MarkWest's alleged violations, MarkWest shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or PADEP in the

subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraphs 99 and 100.

103. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. MarkWest is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits; and MarkWest's compliance with this Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and PADEP do not, by their consent to the entry of this Decree, warrant or aver in any manner that MarkWest's compliance with any aspect of this Decree will result in compliance with provisions of the Act, the APCA, or with any other provisions of federal, state, or local laws, regulations, or permits.

104. This Consent Decree does not limit or affect the rights of MarkWest, of the United States, or of PADEP against any third parties not party to this Decree, nor does it limit the rights of third parties not party to this Decree against MarkWest, except as otherwise provided by law.

105. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Decree.

106. MarkWest expressly denies and does not admit any liability to the United States or PADEP arising out of the conduct, transactions or occurrences alleged in the Complaint. Nothing in this Consent Decree shall be construed as an admission of MarkWest's liability, nor shall MarkWest's performance of any obligation under this Decree be considered any admission

of liability. This Consent Decree shall not be admissible against MarkWest in any administrative or judicial proceeding, except in a proceeding initiated by the Parties to enforce this Decree.

XVII. COSTS

107. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and PADEP shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due, but not paid, by MarkWest.

XVIII. NOTICES

108. Unless otherwise specified herein, whenever notifications, submissions, statements of position, or communications are required by this Consent Decree (referred in this Paragraph as a "notice" or "notices"), they shall be made electronically as described below, unless such notices are unable to be uploaded to the CDX electronic system (in the case of EPA) or transmitted by email (in the case of any other party). For all notices to EPA, MarkWest shall register for the CDX electronic system and upload such notices at https://cdx.epa.gov/epa_home.asp. Any notice that cannot be uploaded or electronically transmitted via email shall be provided in writing to the addresses below:

As to the United States by email:	eescdcopy.enrd@usdoj.gov Re: DJ# 90-5-2-1-11374
As to the United States by mail:	EES Case Management Unit Environment and Natural Resources Division U.S. Department of Justice Box 7611 Ben Franklin Station Washington, D.C. 20044-7611 Re: DOJ No. 90-5-2-1-11374

As to EPA:

Director, Air Enforcement Division
Office of Civil Enforcement
U.S. EPA Headquarters, MC 2242A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

And

For notices relating to Ohio facilities:

U.S. EPA Region V
77 W. Jackson Boulevard
Chicago, IL 60604
Attn: Compliance Tracker
R5airenforcement@epa.gov

And

For notices relating to Pennsylvania facilities:

Director, Air Enforcement
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103

As to PADEP:

Mark R. Gorog, P.E.
Regional Manager
Department of Environmental Protection
Air Quality Program
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222
Phone: 412.442.4150
Fax: 412.442.4194
mgorog@pa.gov

And

Lori McNabb
Environmental Group Manager
Department of Environmental Protection – Field Operations
Air Quality Program

Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335
Phone: 814.332.6634
Fax: 814.332.6121
lmcnabb@pa.gov

As to MarkWest:

General Counsel
MPLX LP
200 East Hardin Street
Findlay, Ohio 45840
lawdepartment.notices@markwest.com

Managing Counsel – Operations
MarkWest Energy Partners, L.P.
1515 Arapahoe St., Suite 1600
Denver, CO 80202
Christopher.rimkus@markwest.com

And

Environmental Director – Northeast Operations
MarkWest Energy Partners, L.P.
1515 Arapahoe St., Suite 1600
Denver, CO 80202
Robert.mchale@markwest.com

109. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

110. Notices submitted pursuant to this Section shall be deemed submitted upon electronic transmission or mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XIX. EFFECTIVE DATE

111. The Effective Date of this Consent Decree is the date upon which this Consent Decree is entered by the Court or a motion to enter the Decree is granted, whichever is first, as recorded by the Court's docket.

XX. RETENTION OF JURISDICTION

112. The Court shall retain jurisdiction over this case, until termination of this Consent Decree pursuant to Section XXII (Termination), for the purpose of (a) resolving disputes arising under this Decree pursuant to Section XIV (Dispute Resolution), (b) entering orders modifying this Decree pursuant to Section XXI (Modification), or (c) effectuating or enforcing compliance with the terms of this Decree.

XXI. MODIFICATION

113. The terms of this Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

114. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section XIV (Dispute Resolution). The Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XXII. TERMINATION

115. After MarkWest has fulfilled its obligations to (a) pay the civil penalty in Paragraph 24, (b) implement all injunctive relief, (c) obtain permits pursuant to Section VIII (Permits); (d) implement the Third Party Verification program and submit a satisfactory Third-Party Audit Report; (e) complete all SEPs, (f) complete the Commonwealth-only Community Environmental Project, and (g) pay any stipulated penalties not waived or reduced by the United States or PADEP under Section XII (Stipulated Penalties) pursuant to Paragraph 72, MarkWest

may send to the United States and PADEP a Request for Termination, which shall be certified in accordance with Paragraph 63, stating that MarkWest has satisfied those requirements, together with all reasonably necessary supporting documentation.

116. Following receipt by the United States and PADEP of MarkWest's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether MarkWest has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with PADEP, agrees that the Decree may be terminated, the Parties shall submit for the Court's approval a joint stipulation terminating the Decree.

117. If the United States, after consultation with PADEP, does not agree that the Decree may be terminated, MarkWest may invoke Dispute Resolution under Section XIV of this Decree (Dispute Resolution). However, MarkWest shall not seek Dispute Resolution of any dispute regarding termination until sixty (60) Days after service of its Request for Termination.

XXIII. PUBLIC PARTICIPATION

118. This Consent Decree will be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Decree is inappropriate, improper, or inadequate. MarkWest consents to entry of this Decree without modification without further notice and agrees not to withdraw from or oppose entry of this Decree by the Court or to challenge any provision of the Decree, unless the United States has notified MarkWest in writing that it no longer supports entry of the Decree or has modified the Decree.

XXIV. SIGNATORIES/SERVICE

119. Each undersigned representative of MarkWest, PADEP, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

120. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

121. MarkWest agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree. MarkWest agrees to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. MarkWest need not file an answer to the Complaint in this action unless or until the Court expressly declines to enter this Decree.

XXV. INTEGRATION

122. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree. There are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Consent Decree.

XXVI. FINAL JUDGMENT

123. Upon approval and entry of this Consent Decree by the Court, this Decree shall constitute a final judgment of the Court as to the United States, PADEP, and MarkWest under Fed. R. Civ. P. 54 and 58.

XXVII. 26 U.S.C. SECTION 162(f)(2)(A)(ii) IDENTIFICATION

124. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability), Paragraph 8, Section IV (Injunctive Relief), Paragraphs 11 – 23, Section VIII (Permits), Paragraphs 43 - 46, Section X (Third Party Verification), Paragraphs 49 – 54, Section XI (Recordkeeping and Reporting), Paragraphs 58(a)-(c) and (e) – (l), 59 – 60, and 62 – 63, and Section XIV (Information Collection and Retention), Paragraphs 92 - 95, is restitution or required to come into compliance with law.

XXVIII. APPENDICES

125. The following appendices are attached to and part of this Consent Decree:

"Appendix 1" is a list of MarkWest compressor stations in Pennsylvania subject to Paragraph 12;

"Appendix 2" is a list of MarkWest compressor stations in Pennsylvania subject to Paragraph 13;

"Appendix 3" is a list of MarkWest Stand-Alone Facilities in Pennsylvania subject to Paragraph 14;

"Appendix 4" is a list of MarkWest Compressor Stations, and specific launchers and receivers at each of those Compressor Stations, in Ohio subject to Paragraph 18;

"Appendix 5" is a list of MarkWest Stand-Alone Facilities, and specific launchers and receivers at each of those Stand-Alone Facilities, in Ohio subject to Paragraph 19;

"Appendix 6" is a list of MarkWest Stand-Alone Facilities in Pennsylvania and in Ohio subject, as applicable, to Paragraphs 21 and 23;

"Appendix 7" is the Humphreys Ambient Air Monitoring SEP for the Humphreys Compressor Station in Ohio; and

"Appendix 8" is the Harmon Creek Ambient Air Monitoring SEP for the Harmon Creek Gas Processing Plant in Pennsylvania.

Dated and entered this _____ day of _____, 2018.

_____

UNITED STATES DISTRICT JUDGE
Western District of Pennsylvania

THE UNDERSIGNED PARTY enters this Consent Decree in this action captioned *United States, et al. v. MarkWest Liberty Midstream & Resources, L.L.C., et al.*

FOR PLAINTIFF UNITED STATES OF AMERICA:

Date: 4/20/18

JEFFREY H. WOOD
Acting Assistant Attorney General
Environment & Natural Resources Division
United States Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530

Date: 4/20/18

MARK C. ELMER
Senior Counsel
Environmental Enforcement Section
Environment & Natural Resources Division
United States Department of Justice
999 18th Street, South Terraces, Suite 370
Denver, Colorado 80202

THE UNDERSIGNED PARTY enters this Consent Decree in the action captioned *United States, et al. v. MarkWest Liberty Midstream & Resources, L.L.C., et al.*

FOR U.S. ENVIRONMENTAL PROTECTION AGENCY:

Date: April 16, 2018

ROSEMARIE KELLEY
Director, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Washington, DC 20460

Date: April 16, 2018

for APPLE CHAPMAN
Deputy Director, Air Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Washington, DC 20460

Date: April 16, 2018

KATHRYN PIRROTTA CABALLERO
Senior Attorney, Air Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Washington, DC 20460

THE UNDERSIGNED PARTY enters this Consent Decree in the action captioned *United States, et al. v. MarkWest Liberty Midstream & Resources, L.L.C., et al.*

FOR U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 3:

4/16/2018
Date

Cecil Rodrigues for CS
COSMO SERVIDIO
Regional Administrator
United States Environmental Protection Agency, Region III

4/15/18
Date

Mary B Coe
MARY B. COE
Regional Counsel
Office of Regional Counsel
United States Environmental Protection Agency, Region III
Philadelphia, PA 19103

4/16/18
Date

Douglas J. Snyder
DOUGLAS J. SNYDER
Assistant Regional Counsel
Office of Regional Counsel
United States Environmental Protection Agency, Region III
Philadelphia, PA 19103

THE UNDERSIGNED PARTY enters this Consent Decree in the action captioned *United States, et al. v. MarkWest Liberty Midstream & Resources, L.L.C., et al.*

FOR U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5:

4/19/2018
Date

T. LEVERETT NELSON
Regional Counsel
Office of Regional Counsel
United States Environmental Protection Agency, Region V
Chicago, IL 60604

THE UNDERSIGNED PARTY enters this Consent Decree in the action captioned *United States, et al. v. MarkWest Liberty Midstream & Resources, L.L.C., et al.*

FOR PLAINTIFF COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:

4/16/18
Date

GEORGE HARTENSTEIN
Deputy Secretary for Waste Air
Radiation and Remediation
Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17101

Apr. 14, 2018
Date

ALEXANDRA C. CHIARUTTINI
Chief Counsel
Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17101

April 19, 2018
Date

MICHAEL J. HEILMAN
Assistant Regional Counsel
Department of Environmental Protection
Office of Chief Counsel
400 Waterfront Drive
Pittsburgh, PA 15222

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of *United States, et al. v. MarkWest Liberty Midstream & Resources, L.L.C., et al.*

FOR DEFENDANT MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C.

Date: April 13, 2018

MICHAEL J. HENNIGAN
President
MarkWest Liberty Midstream & Resources, L.L.C.

FOR DEFENDANT OHIO GATHERING COMPANY, L.L.C.

Date: April 13, 2018

MICHAEL J. HENNIGAN
President
Ohio Gathering Company, L.L.C.

APPENDIX 1

Pennsylvania Compressor Stations Subject to Paragraph 12

Compressor Station	Coordinates
1. 3 Brothers	40.33119792490, -80.38033471710
2. Baker	40.08051389, -80.222575
3. Brigich	40.28964213860, -80.23951772010
4. Carpenter	40.11364210760, -80.48247261960
5. Dryer	40.24287923210, -80.46833245070
6. Fulton	40.28485243400, -80.30122700440
7. Godwin	40.24572395910, -80.31131155010
8. Hoskins	40.17991189320, -80.41232597640
9. Johnston	40.27515606030, -80.23270970570
10. Lowry	40.24932187010, -80.36840279130
11. Redd	40.14328889, -80.19907778
12. Royal Oak	40.76560317060, -80.03657298740
13. Shaw	40.23917195340, -80.28146975710

Compressor Station	Coordinates
14. Smith	40.41698982380, -80.35687488560
15. Stewart	40.28269070850, -80.34980728680
16. Trillith	40.85454091700, -80.10256057730
17. Tupta Day	40.11326944, -80.22364167
18. Voll	40.83941511830, -80.05602366480
19. Welling	40.19014693410, -80.35981800720

Appendix 2

Pennsylvania Compressor Stations Subject to Paragraph 13

Compressor Station	Coordinates
1. 3 Brothers	40.33119792490, -80.38033471710
2. Carpenter	40.11364210760, -80.48247261960
3. Royal Oak	40.76560317060, -80.03657298740
4. Smith	40.41698982380, -80.35687488560
5. Trillith	40.85454091700, -80.10256057730
6. Welling	40.19014693410, -80.35981800720

Appendix 3

Applicability of Injunctive Relief in Paragraph 14 to Launchers and Receivers at Pennsylvania Stand-Alone Facilities

Stand-Alone Facility	¶ 14.a.-b. Apply? (Install and Use Jumper Line)	¶ 14.c. Applies? (Install and Use Pig Ramp)	Coordinates
1. Huntington Farms			40.24179301380, -80.31836096160
a. Godwin to Huntington Farms HP Receiver	Yes	Yes	
b. Huntington Farms to Houston HP Launcher	Yes	No	
c. Huntington Farms to Welling HP Launcher	Yes	No	
d. Huntington Farms to Shaw HP Launcher	Yes	No	
e. Lowry to Huntington Farms HP Receiver	Yes	Yes	
f. Lowry Meter to Huntington Farms LP Receiver	No	Yes	

Stand-Alone Facility	¶ 14.a.-b. Apply? (Install and Use Jumper Line)	¶ 14.c. Applies? (Install and Use Pig Ramp)	Coordinates
2. Loffert (Joe Cain)			40.35937332930, -80.31124654080
a. 3 Bros to Loffert (Joe Cain) HP Receiver	Yes	Yes	
b. Loffert (Joe Cain) to Drugmand HP Launcher	Yes	No	
c. Smith to Loffert (Joe Cain) HP Receiver	Yes	Yes	
d. Airport to Loffert (Joe Cain) LP Receiver	No	Yes	
e. Malinky LP Receiver	No	Yes	
3. Post Road			40.16793683830, -80.39937478710
a. Hoskins to Post Road HP Receiver	No	Yes	
4. Route 18			40.33220420730, -80.36049705900
a. Stewart to Rt 18 HP Receiver	No	Yes	

Stand-Alone Facility	¶ 14.a.-b. Apply? (Install and Use Jumper Line)	¶ 14.c. Applies? (Install and Use Pig Ramp)	Coordinates
b. Carns to Rt 18 LP Receiver	No	Yes	
c. Inches to Rt 18 LP Receiver	No	Yes	
5. Smith Tee			40.22352411360, -80.45690851150
a. Dryer to Smith Tee HP Receiver	No	Yes	
b. Smith Tee to Hoskins HP Launcher	No	No	
c. Smith Tee to Lowry HP Launcher	No	No	
6. Wilhelm			40.10854085660, -80.44762638940
a. Welling to Wilhelm HP Receiver	Yes	Yes	
b. Wilhelm to Carpenter HP Receiver	Yes	Yes	
c. Wilhelm to Majorsville HP Launcher	Yes	No	

Stand-Alone Facility	¶ 14.a.-b. Apply? (Install and Use Jumper Line)	¶ 14.c. Applies? (Install and Use Pig Ramp)	Coordinates
d. Claysville to Wilhelm LP Receiver	No	Yes	
e. Greathouse to Wilhelm LP Receiver	No	Yes	
f. Hamilton to Wilhelm LP Receiver	No	Yes	

Appendix 4

Applicability of Injunctive Relief in Paragraph 18 to Launchers and Receivers at Ohio Compressor Stations

Compressor Station	¶ 18.a.-b. Apply? (Install and Use Jumper Line)	¶ 18.c. Applies? (Install and Use Pig Ramp)	¶ 18.d. Applies? (Use of Mobile Flare as Necessary)	Coordinates
1. Arrowhead				40.175580, -81.073237
a. 70T to Arrowhead HP Receiver	Yes	Yes	Yes	
b. Arrowhead to Cadiz Launcher	Yes	No	Yes	
c. Wagner to Arrowhead Receiver	No	Yes	No	
d. Darla to Arrowhead Receiver	No	Yes	No	
e. Miller Road to Arrowhead Receiver	No	Yes	No	
2. Barnesville West				40.009219, -81.181596
a. Barnesville West 12" Launcher	Yes	No	Yes	
b. Magee to Barnesville West Receiver	No	Yes	No	
c. 70T to Barnesville West Receiver	No	Yes	No	
3. Harrison West				40.209936, -81.217978
a. Harrison West to Cadiz Launcher	Yes	No	Yes	
b. Scott Hill to Harrison West Receiver	No	Yes	No	
c. Clay 20" Receiver	No	Yes	No	
4. Humphreys				39.906906, -81.188574
a. Humphreys to Tri-County Launcher	Yes	No	Yes	
b. Wheatley to Humphreys Receiver	No	Yes	Yes	

Compressor Station	¶ 18.a.-b. Apply? (Install and Use Jumper Line)	¶ 18.c. Applies? (Install and Use Pig Ramp)	¶ 18.d. Applies? (Use of Mobile Flare as Necessary)	Coordinates
c. Stronz Receiver	No	Yes	No	
d. Stuzman Receiver	No	Yes	No	
5. Lake				40.278232, -81.181580
a. Lake to Cadiz Launcher	Yes	No	Yes	
b. Central to Lake Receiver	No	Yes	No	
c. Kinsey Receiver	No	Yes	No	
d. Boy Scout Receiver	No	Yes	No	
6. Morristown				40.058737, -81.096102
a. Morristown 12" Launcher	Yes	No	Yes	
b. Morristown 20" Receiver	No	Yes	No	
7. Tri-County				39.939357, -81.227774
a. Shannon to Tri-County Receiver	Yes	Yes	Yes	
b. Tri-County to Seneca Launcher	Yes	No	Yes	
c. Tri-County to McCort 20" Launcher	No	No	Yes	
d. Humphreys to Tri-County Receiver	Yes	Yes	Yes	
e. Tri-County to Magee Launcher	No	No	Yes	

Appendix 5

Applicability of Injunctive Relief in Paragraph 19 to Launchers and Receivers at Stand-Alone Facilities in Ohio

Stand-Alone Facility	¶ 19.a.-b. Apply? (Install and Use Jumper Line)	¶ 19.c. Applies? (Install Pig Ramp)	¶ 19.d. Applies? (Use of Mobile Flare as Necessary)	Coordinates
1. 70T				40.047342, -81.143914
a. Shannon to 70T Receiver	Yes	Yes	Yes	
b. 70T to Arrowhead Launcher	Yes	No	Yes	
c. Morristown 12" Receiver	Yes	Yes	Yes	
2. 513 Station				40.002087, -81.301192
a. 513 to Magee Launcher	No	No	Yes	
b. Neff Receiver	No	Yes	Yes	
c. Flesher Receiver	No	Yes	Yes	
3. BK Stevens Station				40.195014, -81.172019
a. BK Stevens Launcher	No	No	Yes	
b. Michael 12" Receiver	No	Yes	No	
4. Blaze Station				40.109623, -81.296475
c. Blaze Road Launcher	No	No	Yes	
d. Lawson Receiver	No	Yes	No	
5. Marshall Road Station				40.109600, -81.333299
a. Guernsey 20" Launcher	No	No	Yes	
b. Blaze Road Receiver	No	Yes	Yes	
c. Guernsey 12" Receiver	No	Yes	No	
6. Smyrna McClelland Station				40.199200, -81.245391
a. Guernsey 20" Receiver	No	Yes	Yes	
b. Clay 12" Receiver	No	Yes	No	
c. Clay 20" Launcher	No	No	No	
7. Boston McCort Receiver Station				39.921722, -81.207956
a. McCort to Wheatley	No	No	Yes	

Stand-Alone Facility	¶ 19.a.-b. Apply? (Install and Use Jumper Line)	¶ 19.c. Applies? (Install Pig Ramp)	¶ 19.d. Applies? (Use of Mobile Flare as Necessary)	Coordinates
Launcher				
b. Tri-County to McCort 20" Receiver	No	Yes	Yes	
c. McCort 12" Receiver	No	Yes	No	
8. McGee Station				39.945758, -81.234022
a. 513 to McGee Receiver	No	Yes	Yes	
b. McGee to Barnsville West Launcher	No	No	Yes	
c. Tri-County to McGee Receiver	No	Yes	Yes	
d. Brothers Receiver	No	Yes	No	
9. Neff Station				39.994326, -81.385291
a. Neff Launcher	No	No	Yes	
b. Shugert Daddy Receiver	No	Yes	No	
c. Onega Receiver	No	Yes	No	
d. Detweiler Receiver	No	Yes	No	
10. Oxford Siefert Station				40.028938, -81.305076
a. Flesher Launcher	No	No	Yes	
b. Karen Receiver	No	Yes	No	
11. Shannon				40.015606, -81.191986
a. Shannon to Tri-County Receiver	Yes	Yes	Yes	
b. Shannon to 70T Launcher	Yes	No	Yes	
Barnesville West 12" Receiver	Yes	Yes	Yes	
12. Scott Hill Station				40.213707, -81.199295
a. Scott Hill to Harrison West Launcher	No	No	No	

Stand-Alone Facility	¶ 19.a.-b. Apply? (Install and Use Jumper Line)	¶ 19.c. Applies? (Install Pig Ramp)	¶ 19.d. Applies? (Use of Mobile Flare as Necessary)	Coordinates
b. BK Stevens Receiver	No	Yes	No	
c. Scott Hill to Yoder Launcher	No	No	No	
13. Wheatley Station				39.910131, -81.201674
a. McCort to Wheatley Receiver	No	Yes	Yes	
b. Wheatley to Humphreys Launcher	No	No	Yes	

Appendix 6

Pennsylvania and Ohio Stand-Alone Facilities Subject to Paragraph 21

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 (Phelan) L/R Site	40.09539268620,	-80.22951699520
50.	Carns Lane L/R Site	40.32423905170,	-80.36576671750
51.	ROW Powell	40.74363745330,	-79.96049292420
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 Schilling	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, -81296972
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, -81434505

	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

APPENDIX 7

HUMPHREYS AMBIENT AIR MONITORING SEP FOR THE HUMPHREYS COMPRESSOR STATION IN OHIO

A. General Requirements

1. Pursuant to Section VI of the Consent Decree, and in accordance with the specifications and provisions in this Appendix, MarkWest will install, operate, and maintain an ambient air monitoring system ("AAMS") at the Humphreys Compressor Station and provide data as required by this Appendix and the Consent Decree.

2. Within 120 Days of the Effective Date, MarkWest shall submit to EPA for review and approval a plan (the "Humphreys Monitoring Plan") that shall include, at a minimum:

   a. An identification of the location of the meteorological station required by this Appendix and how this location meets this Appendix's requirements.

   b. Compliance with the monitoring requirements in 40 C.F.R. Part 58, Appendix E, and in accordance with the NATTS guidance document available at https://www3.epa.gov/ttnamti1/files/ambient/airtox/NATTS%20TAD%20Revision%203_FINAL%20October%202016.pdf

   c. A Quality Assurance Project Plan ("QAPP") that describes the Quality Assurance/Quality Control procedures, specifications, and other technical activities to be implemented to ensure: (i) that the results of this SEP meet project specifications; and (ii) the accuracy, validity, representativeness, and usability of the data obtained by all monitoring equipment, including the stationary equipment and systems identified in Section B of this Appendix (Stationary Equipment Requirements). The QAPP shall follow the outline and guidance in the EPA publication entitled "QA Handbook for Air Pollution Measurement Systems, Volume II, Ambient Air Quality Monitoring Program," EPA-454/B-13-003, May 2013.

   d. A description of the implementation of Data Availability (Paragraph 17) requirements of this Appendix.

   e. A schedule, with a start date contingent upon approval of the Humphreys Monitoring Plan, for expeditiously purchasing, installing, upgrading, and commencing operation of specifically-identified systems and equipment that met all requirements of this Appendix.

3. Upon EPA approval of the Humphreys Monitoring Plan, in compliance with the

schedule in the approved Humphreys Monitoring Plan, MarkWest shall purchase or lease all equipment specified in the Humphreys Monitoring Plan, shall complete the installation of all such equipment, and shall upgrade all systems or stations as set forth in the approved Humphreys Monitoring Plan.

4. MarkWest shall promptly correct deficient implementation of its Humphreys Monitoring Plan. Any disputes related to the Humphreys Monitoring Plan or this Appendix shall be resolved pursuant to the procedures set forth in Section XIII (Dispute Resolution) of the Consent Decree.

5. MarkWest may seek EPA approval to modify the Humphreys Monitoring Plan at any time during the effective period of this Consent Decree.

B. Stationary Equipment Requirements

6. Overview. The AAMS shall include:

   a. A meteorological station to monitor meteorological parameters (Paragraph 7);

   b. Upwind and downwind stations to monitor air pollutants (Paragraphs 8-12); and

   c. A Data Acquisition System for all upwind, downwind, and meteorological stations (Paragraph 13).

7. Instruments for Measuring and Recording Wind Speed, Wind Direction, Ambient Temperature, and Barometric Pressure. Specific meteorological parameters will be continuously monitored to obtain data representative of the meteorological conditions at each facility. The data set produced shall be adequate to correlate hourly block average conditions and thirty-minute rolling average conditions (collected on a five-minute basis) with pollutant measurements and transport.

   a. Continuously measured meteorological parameters shall include hourly block average and thirty-minute rolling average horizontal wind speed and wind direction, the standard deviation of horizontal wind direction (sigma theta), air temperature, and barometric pressure. Wind speed and direction shall be measured at a height of approximately 10 meters. Temperature and barometric pressure shall be measured at a height of 2 to 3 meters. The sensors shall, to the extent practicable, be positioned away from, or above, obstructions such as buildings, trees, and process units that may interfere with wind direction measurements.

   b. Wind direction and sigma theta measurement data shall be auto-corrected to True North, rounded to the nearest whole degree. Wind speed data shall be reported in meters per second, rounded to the nearest tenth.

c. Air temperature data shall be reported in degrees Fahrenheit or Celsius, rounded to the nearest tenth of a degree.

d. Barometric pressure data may be in any unit of pressure.

8. Air Pollutant Monitoring Stations: Equipment and Pollutant Measurement Capability. MarkWest shall install continuous auto-gas chromatographs for VOCs and separate continuous instruments for reduced sulfur compounds at each upwind and downwind monitoring station so that each station has each of the following:

a. Instruments capable of measuring and recording the concentrations of the following compounds in the air at a minimum detection level of 1.0 part per billion by volume (ppbV): propane, butane, pentane, hexane, benzene, toluene ethylbenzene, xylene and all of its isomers, and total VOCs. The data will be recorded as hourly block averages.

b. Instruments capable of measuring and recording the concentrations of reduced sulfur compounds at a minimum detection level of 1.0 ppbV. The data will be recorded as hourly block averages.

c. The continuous measurement of the compounds listed in Subparagraph 8.a. above, shall be accomplished using an auto-Gas Chromatograph ("GC"). The automated GCs shall be operated and maintained in accordance with the manufacturer's recommendations and shall have a measurement range of 1.0 to 500 ppbV for all gases.

d. The continuous measurement of reduced sulfur compounds, listed in Subparagraph 8.b. above, shall be accomplished using Teledyne API T102 Total Reduced Sulfur (TRS) analyzers. The instruments shall be operated and maintained in accordance with the manufacturer's recommendations, shall be operated in high sensitivity mode, and shall have a measurement range of 1.0 to 50 ppbV.

9. Air Pollutant Monitoring Stations: Temperature-Controlled Shelter: Each air pollutant monitoring station shall be operated inside a temperature-controlled equipment shelter.

a. The temperature within each shelter shall be continuously monitored and recorded using a calibrated resistance temperature detector ("RTD") and microprocessor or PC-based data acquisition system.

b. The climate control system for each monitoring shelter will be capable of maintaining a stable temperature within the range of 20°C to 30°C.

c. The monitoring shelters shall measure approximately 8 feet wide by 12 feet

long by 8 feet high.

d. Each shelter shall be anchored to the ground and be electrically grounded for safety.

e. The shelter walls and roofs will have a minimum insulation rating of R11.

f. Each shelter will be equipped with electrical service panels, interior electrical distribution circuits, lighting, workbench and sufficient space for housing, operating, and maintaining the monitoring instruments. All electrical wiring and appurtenances will conform to the National Electric Code (NEC).

10. Air Pollutant Monitoring Station Locations. The air pollutant monitoring stations shall be located at the following coordinates and identified as follows:

a. Humphreys Facility Upwind: Latitude: Longitude

b. Humphreys Facility Downwind: Latitude: Longitude

11. Air Pollutant Monitoring Systems Sampler Inlet Requirements. The sampler inlets for each monitoring station shall comply with the following requirements:

a. The sampler inlets should be 2 to 5 meters above ground and have unrestricted airflow 270 degrees around the sample inlet or 180 degrees if the sampler is on the side of a building.

b. The sampler inlets should be >20 meters from the dripline of any tree(s).

c. The sampler inlets should be >1 meter away from supporting structures and walls.

d. The distance from a sampler probe to an obstacle, such as a building, should be at least twice the height the obstacle protrudes above the sampler, probe, or monitoring path.

e. The sampler inlets should be away from minor sources, to avoid undue influences from minor sources. The separation distance is dependent on the height of the minor source's emission point, the type of fuel or waste burned, and the quality of the fuel.

12. Air Pollutant Monitoring Stations – Prohibition on Moving. MarkWest shall not move the pollutant monitoring stations to a new location without prior written approval by EPA. Movement of the pollutant monitoring station components for maintenance shall not be restricted by this Paragraph.

13. Data Acquisition System (DAS). A DAS will be used to log all numerical data generated by the air pollutant analyzers and weather instruments using a common time-stamp. The DAS also will be programmed to correct pollutant concentration data to standard temperature and pressure, and to automatically correlate pollutant data with wind direction. The DAS outputs shall be in a file format that can be used in common spreadsheet programs.

14. Nothing in this Appendix shall preclude the use of any other, additional fence line monitoring equipment and/or of monitoring other, additional pollutants at the fence line.

C. Operation of AAMS

15. MarkWest shall comply with all terms of this Appendix and the Humphreys Monitoring Plan, including but not limited to operating and maintaining the monitors, equipment, and systems described herein, for a period of no less than a total of 720 days.

16. Quality Assurance/Quality Control (QA/QC). MarkWest shall ensure that all data collected by the AAMS are subjected to the approved QA/QC procedures on a quarterly basis. The QA/QC procedures for a given quarter's data shall be completed by no later than the end of the quarter following the quarter within which the data were collected.

17. Data Submission. MarkWest shall provide Relevant Data on a quarterly basis, within 45 days of the end of each calendar quarter. For purposes of this Paragraph, "Relevant Data" shall mean the hourly block averages of propane, butane, pentane, hexane, benzene, toluene ethylbenzene, xylene and all of its isomers, total VOCs, and reduced sulfur compounds, wind speed, and wind direction that are collected during periods at all times. MarkWest shall submit the data in a manner that allows pollutant concentrations, wind speed, and wind direction to be viewed concurrently and indicate that these data meet the QA/QC procedures in Subparagraph C.16 of this Appendix. All numerical data shall be presented in a format that can be used in common spreadsheet programs. MarkWest shall maintain the Relevant Data collected through the AAMS as required by the Consent Decree.

18. Annual Reports. MarkWest shall prepare and submit at least two annual reports. These reports will detail the operation of the VOC, RSC, and meteorological equipment as well as any maintenance and service work performed at each monitoring location. These reports will contain data summaries, a summary of any problems encountered in the monitoring project and the status of any current problems and corrective actions performed, a summary of any meetings or correspondence addressing the monitoring program, a synopsis of percent recovery including brief explanations of missing data, overall data recovery, quality control, and all quality assurance documentation. Each report will include a fully quality□ assured hourly data file in Excel format and an Adobe Acrobat PDF copy of the

formalized report. Each report will be provided within 45 days of the end of each year-long monitoring period.

APPENDIX 8

AMBIENT AIR MONITORING SEP FOR THE HARMON CREEK GAS PROCESSING PLANT IN THE VICINITY OF SMITH TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA

A. General Requirements

1. Pursuant to Section VI of the Consent Decree, and in accordance with the specifications and provisions in this Appendix, MarkWest will install, operate, and maintain an ambient air monitoring system in the vicinity of the proposed Harmon Creek Gas Processing Plant ("HC") in Smith Township, Washington County, Pennsylvania and provide data as required by this Appendix and the Consent Decree (hereinafter the "Harmon Creek Monitoring System").

2. Within 120 Days of the Effective Date, MarkWest shall submit to EPA and PADEP for review and, following consultation with PADEP, approval by EPA a plan (the "Harmon Creek Monitoring Plan") that shall include, at a minimum:

    a. The proposed location of the meteorological station required by this Appendix, a discussion of how the location meets the siting criteria discussed below, the specifications of the station, a discussion of how these specifications meet the data measurement criteria discussed below, and the proposed date for installation and operation. Before submitting the complete Harmon Creek Monitoring Plan, MarkWest may submit a separate plan for installing the meteorological station in order to speed installation and operation of the station.

    b. A description of the three VOC monitors to be installed, how this monitoring equipment meets the criteria discussed below, and a schedule for proposing the specific locations of this monitoring equipment.

    c. Compliance with the monitoring requirements in 40 C.F.R. Part 58, Appendix E, and in accordance with the NATTS guidance document available at https://www3.epa.gov/ttnamti1/files/ambient/airtox/NATTS%20TAD%20Revision%203_FINAL%20October%202016.pdf

    d. A Quality Assurance Project Plan ("QAPP") that describes the Quality Assurance/Quality Control procedures, specifications, and other technical activities to be implemented to ensure: (i) that the results of this SEP meet project specifications; and (ii) the accuracy, validity, representativeness, and usability of the data obtained by all monitoring equipment, including the stationary equipment and systems identified in Section B of this Appendix (Stationary Equipment Requirements). The QAPP shall follow the outline and guidance in the EPA publication entitled "QA Handbook for Air

Pollution Measurement Systems, Volume II, Ambient Air Quality Monitoring Program," EPA-454/B-13-003, May 2013.

e. A description of the implementation of Data Availability (Paragraph 17) requirements of this Appendix.

f. A schedule, with a start date contingent upon approval of the Harmon Creek Monitoring Plan, for (i) expeditiously purchasing, installing, upgrading, and commencing operation of specifically-identified systems and equipment that meet all requirements of this Appendix and (ii) completing the monitoring and submitting a final report to EPA and PADEP.

3. Upon EPA approval, after consultation with PADEP, of the Harmon Creek Monitoring Plan, MarkWest shall purchase all equipment specified in the plan, shall complete the installation of all such equipment, and shall upgrade all systems or stations as set forth in the schedule in the approved plan.

4. MarkWest shall promptly correct deficient implementation of its Harmon Creek Monitoring Plan. Any disputes related to the plan or this Appendix shall be resolved pursuant to the procedures set forth in Section XIII (Dispute Resolution) of the Consent Decree.

5. MarkWest may seek EPA approval to modify the Harmon Creek Monitoring Plan at any time during the effective period of this Consent Decree. EPA will consult with PADEP on any such request.

B. Stationary Equipment Requirements

6. Overview. The Harmon Creek Monitoring System shall include:

a. A meteorological station to monitor meteorological parameters (Paragraph 7);

b. Three air pollutant monitoring stations: one located a short distance upwind of HC ("Upwind Station"), one located a short distance downwind of HC ("Near Downwind Station"), and one located further downwind (approximately 1 – 3 km) of HC ("Far Downwind Station") (collectively referred to as "Air Pollutant Monitoring Stations") (Paragraphs 8-12); and

c. A Data Acquisition System for all Air Pollutant Monitoring Stations and the meteorological station (Paragraph 13).

7. Instruments for Measuring and Recording Wind Speed, Wind Direction, Ambient Temperature, and Barometric Pressure. Specific meteorological parameters will be continuously monitored to obtain data representative of the meteorological conditions at HC. The data set produced shall be adequate to correlate hourly block

average conditions and thirty-minute rolling average conditions (collected on a five-minute basis) with pollutant measurements and transport.

a. Continuously measured meteorological parameters shall include hourly block average and thirty-minute rolling average horizontal wind speed and wind direction, the standard deviation of horizontal wind direction (sigma theta), air temperature, and barometric pressure. Wind speed and direction shall be measured at a height of approximately 10 meters. Temperature and barometric pressure shall be measured at a height of 2 to 3 meters. The sensors shall, to the extent practicable, be positioned away from, or above, obstructions such as buildings, trees, and process units that may interfere with wind direction measurements.

b. Wind direction and sigma theta measurement data shall be auto-corrected to True North, rounded to the nearest whole degree. Wind speed data shall be reported in meters per second, rounded to the nearest tenth.

c. Air temperature data shall be reported in degrees Fahrenheit or Celsius, rounded to the nearest tenth of a degree.

d. Barometric pressure data may be in any unit of pressure.

8. Air Pollutant Monitoring Stations: Equipment and Pollutant Measurement Capability. MarkWest shall install the following equipment at each of the Air Pollutant Monitoring Stations:

a. Instruments capable of measuring and recording the concentrations of the following compounds in the air at a minimum detection level of 1.0 part per billion by volume (ppbV): C_2 to C_6 (i.e. from ethane through 1,3-butadiene up to benzene) and up to 32 compounds from C_6 to C_{12} (hexane, dimethylbutane, diethylbenzene, naphthalene, dodecane, BTEX, and halogen compounds), and total VOCs. The VOC data will be recorded as hourly averages.

b. An auto gas chromatograph ("GC") shall be employed to accomplish the continuous measurement of the compounds listed in Subparagraph 8.a. above. The automated GC shall be operated and maintained in accordance with the manufacturer's recommendations and shall have a measurement range of 1.0 to 500 ppbV for all gases.

9. Air Pollutant Monitoring Stations: Temperature-Controlled Shelter: Each air pollutant monitoring station shall be operated inside a temperature-controlled equipment shelter.

a. The temperature within each shelter shall be continuously monitored and recorded using a calibrated resistance temperature detector ("RTD") and

microprocessor or PC-based data acquisition system.

b. The climate control system for each monitoring shelter will be capable of maintaining a stable temperature within the range of 20°C to 30°C.

c. The monitoring shelters shall measure approximately 8 feet wide by 8 feet long by 8 feet high.

d. Each shelter shall be anchored to the ground and be electrically grounded for safety.

e. The shelter walls and roofs will have a minimum insulation rating of R11.

f. Each shelter will be equipped with electrical service panels, interior electrical distribution circuits, lighting, workbench and sufficient space for housing, operating, and maintaining the monitoring instruments. All electrical wiring and appurtenances will conform to the National Electric Code (NEC).

10. Air Pollutant Monitoring Systems Sampler Inlet Requirements. The sampler inlets for each monitoring station shall comply with the following requirements:

a. The sampler inlets should be 2 to 5 meters above ground and have unrestricted airflow 270 degrees around the sample inlet or 180 degrees if the sampler is on the side of a building.

b. The sampler inlets should be >20 meters from the dripline of any tree(s).

c. The sampler inlets should be >1 meter away from supporting structures and walls.

d. The distance from a sampler probe to an obstacle, such as a building, should be at least twice the height the obstacle protrudes above the sampler, probe, or monitoring path.

e. The sampler inlets should be away from minor sources, to avoid undue influences from minor sources. The separation distance is dependent on the height of the minor source's emission point, the type of fuel or waste burned, and the quality of the fuel.

f. Each Air Pollutant Monitoring System shall be housed in a climate controlled monitoring shelter and shall draw air through a sampling tube that meets the criteria at https://www3.epa.gov/ttn/amtic/files/ambient/pams/newtad.pd.

11. Air Pollutant Monitoring Stations – Prohibition on Moving. MarkWest shall not

move the pollutant monitoring stations to a new location without prior written approval by EPA, following consultation with PADEP. Movement of the pollutant monitoring station components for maintenance shall not be restricted by this Paragraph.

12. Data Acquisition System ("DAS"). A DAS will be used to log all numerical data generated by the air pollutant analyzers and weather instruments using a common time-stamp. The DAS also will be programmed to correct pollutant concentration data to standard temperature and pressure, and to automatically correlate pollutant data with wind direction. The DAS outputs shall be in a file format that can be used in common spreadsheet programs.

13. Nothing in this Appendix shall preclude the use of any other, additional fence line monitoring equipment and/or of monitoring other, additional pollutants at the fence line.

C. Operation of Harmon Creek Monitoring System

14. MarkWest shall comply with all terms of this Appendix and the Harmon Creek Monitoring Plan, including but not limited to operating and maintaining the monitors, equipment, and systems described herein, for a period of no less than a total of 720 days.

15. Quality Assurance/Quality Control ("QA/QC"). MarkWest shall ensure that all data collected by the Harmon Creek Monitoring System are subjected to the approved QA/QC procedures on a quarterly basis. The QA/QC procedures for a given quarter's data shall be completed by no later than 45 days following the end of the quarter in which the data were collected.

16. Quarterly Submissions. MarkWest shall provide Relevant Data on a quarterly basis, within 45 days of the end of each calendar quarter. For purposes of this Paragraph, "Relevant Data" shall mean the quality assured hourly block averages of compounds identified in Table A, attached, and all meteorological data collected (see Paragraph 7). MarkWest shall submit the data in a manner that allows pollutant concentrations and meteorological data to be viewed concurrently and indicate that these data meet the QA/QC procedures in Paragraph 15 of this Appendix. All numerical data shall be presented in a format that can be used in common spreadsheet programs. MarkWest shall maintain and retain the Relevant Data collected through the Harmon Creek Monitoring System as required by the Consent Decree. In addition to the Relevant Data, MarkWest shall provide the following information on a quarterly basis: a summary of any problems encountered in the monitoring project and the status of any current problems and corrective actions performed, a summary of any meetings or correspondence addressing the monitoring program, a synopsis of percent recovery including brief explanations of missing data, overall data recovery, quality control, and all quality assurance documentation, as well the results of any Performance Audits performed during the

quarter.

17. Final Report. Within 90 days of the conclusion of the monitoring period, MarkWest shall prepare and submit a Final Report. The Final Report shall describe the Harmon Creek Monitoring System sampling, compile all data collected, including meteorology, chemical compounds, and QA/QC, and interpret and analyze the data collected by the Harmon Creek Monitoring System.

TABLE A

Compound	Parameter Code
Carbon disulfide	42153
Dodecane	43141
Ethane	43202
Ethene	43203
Propane	43204
Propene	43205
Ethyne	43206
Butane	43212
Isobutane	43214
trans-2-Butene	43216
cis-2-Butene	43217
Pentane	43220
Isopentane	43221
1-Pentene	43224
trans-2-Pentene	43226
cis-2-Pentene	43227
3-methylpentane	43230
n-hexane	43231
n-heptane	43232
Octane	43233
Nonane	43235
Decane	43238
Cyclopentane	43242
Isoprene	43243
2,2,-Dimethylbutane	43244
1-Hexene	43245
2,4-Dimethylpentane	43247
Cyclohexane	43248
3-Methylhexane	43249
2,2,4-Trimethylpentane	43250
2,3,4-Trimethylpentane	43252
3-Methylheptane	43253
Methylcyclohexane	43261
Methylcyclopentane	43262
2-methylhexane	43263

Compound	Parameter Code
1-Butene	43280
2,3-Dimethylbutane	43284
2-methylpentane	43285
2,3-Dimethylpentane	43291
Acrolein	43505
Acetone	43551
2-Butanone (MEK)	43552
2-Hexanone	43559
Chloromethane	43801
Chloroform	43803
Carbon tetrachloride	43804
Trichlorofluoromethane	43811
1,1,1-Trichloroethane	43814
Tetrachloroethene (PERC)	43817
1,1,2-Trichloro-1,2,2-trifluoroethane	43821
Dichlorodifluoromethane	43823
Trichloroethylene (TCE)	43824
Methylene chloride	43860
Undecane	43954
2-Methylheptane	43960
m&p-Xylene	45109
Benzene	45201
Toluene	45202
Ethylbenzene	45203
o-Xylene	45204
1,3,5-Trimethylbenzene	45207
1,2,4-Trimethylbenzene	45208
Propylbenzene	45209
Isopropylbenzene	45210
1-Ethyl-2-Methylbenzene	45211
1-Ethyl-3-Methylbenzene	45212
1-Ethyl-4-methylbenzene	45213
m-Diethylbenzene	45218
p-Diethylebenzene	45219
Styrene	45220
1,2,3-Trimethylbenzene	45225

Compound	Parameter Code
Tetrahydrofuran (THF)	46401