



Pennsylvania
Department of
Environmental Protection

SOUTHWEST REGIONAL OFFICE – AIR QUALITY PROGRAM

MEMO

TO 63-01011 / PA-63-01011B

FROM Devin P. Tomko, P.E./DPT
Air Quality Engineer

THROUGH Mark R. Gorog, P.E./MRG
Regional Program Manager

Sheri L. Guerrieri, P.E./slg
Environmental Engineer Manager

DATE May 2, 2025

RE Response to Comments, Protests, and Testimony
MarkWest Liberty Midstream & Resources, LLC – Harmon Creek Gas Plant
Smith Township, Washington County
AUTH 1514603 APS 1130132 PFID 819388 Facility Status: Synthetic Minor
AUTH 1471222 APS 1066962 PFID 819388 Facility Status: Major (*Application Replaced*)

On January 19, 2024, the Department received a *major facility Plan Approval application* from MarkWest Liberty Midstream & Resources, LLC (“MarkWest”) to construct and operate air contamination sources and air cleaning devices which comprise the proposed DeEthanizer II and 330 MMscfd Harmon Creek Cryo III project at the Harmon Creek Gas Plant (“Harmon Creek”). The application was determined to be administratively complete via email on January 31, 2024. After review of MarkWest’s responses to the Department’s initial technical deficiency letter dated May 28, 2024, second initial technical deficiency letter/pre-denial letter dated November 12, 2024, and discussions at a Department-hosted meeting at Department’s Central Office in the Rachel Carson State Office Building on December 4, 2024, significant revisions to the project were proposed (the proposed project would no longer result in the facility becoming major for VOCs since it will incorporate a vapor recovery unit (VRU) to capture emissions from proposed equipment maintenance blowdowns, closed drain tank loadout operations, dry seal vents associated with the proposed centrifugal compressors, and the proposed pig receiver; low-emissions valves; and an enhanced facility-wide leak detection and repair (LDAR) program). A complete revised application was requested by the Department and received from MarkWest on January 17, 2025. The initial *major facility Plan Approval application* was replaced in eFACTS with a *minor facility Plan Approval application* on January 17, 2025.

On February 8, 2025, notice of the Department’s intent to issue Plan Approval PA-63-01011B to MarkWest for construction and temporary operation sources and controls comprising the proposed DeEthanizer II and 330 MMscfd Harmon Creek Cryo III project was published in the *Pa. Bulletin* pursuant to the requirements of 25 Pa. Code § 127.44-45. Additional information regarding the Department’s review of the application for PA-63-00631B can be found in the Department’s technical deficiency letters dated May 28, 2024, and November 12, 2024, and in the Department’s Plan Approval application review memo dated February 10, 2025.¹ In conjunction with the notice of intent to issue Plan Approval PA-63-01011B, notice of a public conference and

¹ <https://www.pa.gov/agencies/dep/newsroom/2025-02-10-dep-to-hold-public-hearing-on-draft-air-quality-plan-approval-for-gas-processing-plant-in-washington-county.html>

hearing pursuant to the requirements of 25 Pa. Code § 127.48 was also published in the *Pa. Bulletin* on February 8, 2025. The public conference and hearing were held on Tuesday, March 11, 2025, from 6:30pm – 8:30pm at the Burgettstown Area Middle/High School Campus, LGI Room, 100 Bavington Road, Burgettstown, PA 15021.

Written comments (and revisions thereto) on the proposed action were received via email from MarkWest on March 3, 4, and 14, 2025. MarkWest also provided written responses to the statements made at the public conference and hearing via email on March 20, 2025.

During the 30-day public comment period required under 25 Pa. Code § 127.44(f)(2), public comments were received from representatives of four (4) non-government organizations (NGOs) on behalf of area residents and other NGOs as identified in each comment letter. Protests were received from approximately 220 individuals during the public comment period (which closed on March 11, 2024), and during the 10-day period allotted for persons submit a written statement and exhibits if they are unable to attend the public conference and hearing pursuant to 25 Pa. Code § 127.49(c) (which closed on March 21, 2025). Five (5) of the protests were received after the 10-day post-hearing comment period but have been included in the application record for consideration pursuant to 25 Pa. Code § 127.47(b). One (1) written statement was received from one (1) NGO during the 10-day post-hearing comment period established pursuant to 25 Pa. Code § 127.49(c). The hearing transcript, as reported by Amber Garbinski Kostick of Sargent’s Court Reporting Service, Inc., was received by the Department on April 4, 2025, and will be maintained as part of the application record. This comment-response document provides a response to each comment, protest, and written or oral statement received in response to the Department’s proposed action and the public conference and hearing held regarding the proposed action.

Comments from MarkWest

The following comments on the proposed plan approval were received from MarkWest via email on March 3, 4, and 14, 2025. The comments have been edited for completeness and to improve readability, but the nature of each has been maintained. The Department’s responses follow each comment. Copies of MarkWest’s comment emails (and any attachments) are included in Appendices A, B, and C.

1. **COMMENT:** MarkWest has requested a correction to the legal entity name on Page 1 of the Department’s Review Memo (“memo”) from “MarkWest Liberty Midstream & Resources, LLC” to “MarkWest Liberty Midstream & Resources, L.L.C.”.

RESPONSE: Although the legal entity name identified by MarkWest is correct and was confirmed using the *Pennsylvania Department of State - Business Entity Search*², per the Department’s Office of Administration (now the Department’s Office of Program Integration) Bureau of Information Technology *Department Policy & Procedures Data Standards for Names & Addresses* (Data Management Division; August 1995, Rev. October 22, 2018), no punctuation is utilized when entering a business or government name into eFACTS. The designated abbreviation for “limited liability corporation” in the *Data Standards for Names & Addresses* policy is “LLC”. To maintain consistency between the memo and the Department’s databases (and the plan approval), the Department has not made the requested change.

² <https://www.pa.gov/agencies/dos/programs/business/information-services/record-searches.html>

2. **COMMENT:** MarkWest proposed semi-annual OGI on connectors to reduce the fugitive emissions associated with Harmon Creek 3, which will also reduce emissions associated with the existing equipment. Due to the detection level of OGI cameras versus Method 21, the Department decided that OGI, with a 10,000 ppm detection level, was insufficient to enforce the proposed reductions. Thus, MarkWest agreed to conduct semi-annual Method 21 on connectors with a detection threshold of 500 ppm. However, the review memo also refers to semi-annual OGI on page 3. MarkWest believes this is a typo and requests removal as the 60% reduction expected to be achieved using semi-annual OGI is expected to be higher with the lower detection level that Method 21 provides.

RESPONSE: The Department acknowledges the typographical error.

3. **COMMENT:** Page 4 of the memo indicates “Cryo II” instead of “Cryo III”.

RESPONSE: The Department acknowledges the typographical error.

4. **COMMENT:** MarkWest noted that contrary to Page 9 of the memo, which indicates that the “...Plan Approval will require MarkWest to measure...all blowdowns and ESDs”, blowdowns and ESDs are not measured.

RESPONSE: The final form condition in the proposed plan approval requires that MarkWest “...shall maintain records of the date, time, duration, volume of natural gas released, and emissions from each unplanned and uncontrolled blowdown and emergency shutdown at the facility.” As such, the comment is moot.

5. **COMMENT:** On Page 9 of the memo, MarkWest has requested that the term “compressor station” is removed.

RESPONSE: The Department acknowledges the typographical error.

6. **COMMENT:** MarkWest requested that the date that notification of the proposed project was provided to the Smith Township Supervisors and the Washington County Commissioners is updated from January 17, 2024, to January 19, 2024.

RESPONSE: Per the supplied UPS tracking information for the County and Municipal notification letters, the Department concurs.

7. **COMMENT:** Regenerative heaters are considered process heaters and are thus exempt from Db/Dc.

RESPONSE: The Department disagrees. The proposed Cryo Plant III 21.75 MMBtu/hr regenerative heater does not meet the 40 CFR § 60.41c definition of *process heater* which is “a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.” The “Process Flow Narrative – Harmon Creek” provided with the initial and revised applications received from MarkWest on January 19, 2024, and November 26, 2024, states that:

“The removal of the entrained water works by passing the gas through a tower packed with material that has a high affinity for water so that the water is removed from the gas stream by absorbing into the media. Three towers of each unit are used in parallel with two receiving gas while the third is being regenerated. The regenerative heaters are used to heat dry natural gas which desorbs the water from the media thus regenerating the tower and making it available for dewatering of the inlet gas. The gas used for regeneration is then cooled to condense the water and remove it from the system, after which the gas is re-routed to the inlet of the plant for processing.”

Since the natural gas heated by the regenerative heater does not initiate or promote a chemical reaction in which the gas participates as a reactant or catalyst and actually functions similarly to the triethylene glycol (TEG) in a TEG natural gas dehydrator (removes water from natural gas), the proposed Cryo Plant III 21.75 MMBtu/hr regenerative heater is not a process heater and is therefore a *steam generating unit* subject to the applicable requirements of 40 CFR Part 60 Subpart Dc—*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. By definition in § 60.41c, a *steam generating unit* means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium.

8. **COMMENT:** The word “tank” was omitted from the second sentence of the second paragraph on Page 12 of the memo.

RESPONSE: The Department acknowledges the typographical error.

9. **COMMENT:** Per § 60.5400b, “as an alternative to the standards in this section, you may comply with the requirements in § 60.5401b.” MPLX is complying with § 60.5401b at Harmon Creek. The requirement to monitor per § 60.5401b is stated in the sentence before the language removed.

RESPONSE: The Plan Approval has been revised as appropriate to reflect the alternate compliance path selected by MarkWest.

Additionally, while evaluating the requested change, the Department reviewed the Plan Approval for accuracy with respect to Subpart OOOOb and determined that applicable requirements were inadvertently omitted. The Plan Approval has been revised to include, by reference, the omitted requirements.

10. **COMMENT:** On Page 15 of the memo, remove “not” since the fugitives are subject to OOOOb.

RESPONSE: The Department acknowledges the typographical error.

11. **COMMENT:** Page 17 of the memo is missing the term “Department”.

RESPONSE: The Department acknowledges the typographical error.

12. **COMMENT:** On Page 18 of the memo, the 40 CFR § 60.5400b language needs to be replaced with § 60.5401b. (Refer to Comment 6.)

RESPONSE: The Plan Approval has been updated to reflect the compliance path selected by MarkWest.

13. **COMMENT:** On Page 1 of the proposed Plan Approval, MarkWest has requested a correction to the facility owner name (Refer to Comment 1) and correcting the responsible official (R.O.) name from “Robert W Shough” to “Robert W. Shough III”.

RESPONSE: As noted in the Department’s response to Comment 1, the Department’s *Data Standards for Names & Addresses* notes that no punctuation is utilized when also entering an individual’s name into eFACTS and name suffix data should be limited to data that identifies generation (e.g., Jr, Sr, III, IV, etc.). Per the *Data Standards for Names & Addresses*, the R.O. name has been updated in eFACTS to “Robert W Shough III” but displays as “Robert W Shough” in the Plan Approval. Please note that the name of the designated R.O. was identified as “Robert W. Shough” on documents supplied with the application.

14. **COMMENT:** On Page 4, Section A.—*Plan Approval Inventory List* of the proposed Plan Approval, MarkWest has noted that the electric compressors are electric-driven and thus have no fuel material.

RESPONSE: The *fuel/material* column in Section A of the Plan Approval designates the fuel combusted OR material handled by the associated source. The column is populated when a Source Classification Code (SCC) is applied to a source in AIMS. An SCC is necessary to facilitate emissions reporting. The Department has not made the requested change(s).

15. **COMMENT:** On Page 4, Section A.—*Plan Approval Inventory List* of the proposed Plan Approval, MarkWest has noted that Source IDs 405 and 406 are not sources. Cryos and deeths are not sources under the [40 CFR Part 60 Subpart] OOOO regulations. Fugitive components and equipment such as storage vessels, heaters, and compressors are sources within the cryo and deeth and are captured throughout the permit. However, listing the cryo and deeth as a source causes confusion as the trains themselves are not sources.

RESPONSE: The Department disagrees. Per 40 CFR § 60.5365a(f) (Subpart OOOOa) and § 60.5365b(f) (Subpart OOOOb), “[t]he group of all equipment within a process unit at an onshore natural gas processing plant is an affected facility...”, where a *process unit* is defined in relevant parts in 40 CFR § 60.5430a (Subpart OOOOa) and § 60.5430b (Subpart OOOOb) as the “...components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.” Source IDs 405 and 406 will remain in the subject Plan Approval consistent with the applicable regulations and Plan Approval PA-63-01011 for Cryo II (AUTH ID 1400239; issued on April 12, 2023).

Additionally, while evaluating the requested change, the Department has determined that the plant flare is also an affected facility under Subpart OOOOb and has included the applicable requirements in the Plan Approval by reference.

16. **COMMENT:** On Page 5 of the Plan Approval, Source ID 605 should be “CO2 Recip Compressor Rod Packing”

RESPONSE: The referenced source name has been revised as requested.

17. **COMMENT:** On Page 12 of the Plan Approval, MarkWest requested corrections to n-hexane and CO₂e limits.

RESPONSE: The differences are due to the number of significant digits used in the calculations. The values have been corrected as requested except that the decimals have been truncated from the limit for CO₂e.

18. **COMMENT:** Page 14 Daily fractional gas analysis samples are taken with the GC including VOC and the total C6+. However, these do not include speciated HAPs. MPLX is proposing one sample per year including speciated HAPs to use for emissions inventory and 12-month rolling totals. Quarterly samples, in addition to the daily GC samples and an annual grab sample, do not provide any added benefit.

RESPONSE: The requirement to conduct a fractional gas analysis performed on the inlet gas to the facility at a minimum of once per quarter of each calendar year was included in PA-63-01011B for Harmon Creek III to verify the accuracy of the gas composition data used in potential-to-emit and actual emissions calculations. Therefore, the condition will remain as proposed.

19. **COMMENT:** On page 17, we are proposing that the language be updated to “annual” rather than “quarterly.”

RESPONSE: See the Department’s response to Comment 18.

20. **COMMENT:** On page 17, the cryo (Source ID 405) and deeth (Source ID 406) should not be listed as sources

RESPONSE: See the Department’s Response Comment 15.

21. **COMMENT:** On page 23, the “total combined methanol usage” for the facility is 150 gallons or 50 gallons per tank.

RESPONSE: The Department acknowledges the error. The methanol limitation has been revised as requested.

22. **COMMENT:** On page 24, the Cryo plant (Source ID 405) is not a source.

RESPONSE: See the Department's Response Comment 15.

23. **COMMENT:** On page 25, the De-Ethanizer (Source ID 406) is not a source.

RESPONSE: See the Department's Response Comment 15.

24. **COMMENT:** On page 23, As stated in 60.5400b, "as an alternative to the standards in this section, you may comply with the requirements in 60.5401b. MPLX is complying with 60.5401b at Harmon Creek and not 60.5400b.

RESPONSE: The Plan Approval has been revised as appropriate to include the alternative applicable requirements by reference.

25. **COMMENT:** On Page 39, "Regenerative" should be removed from (i) so it is clear that all permitted heaters must comply with this requirement, as there are also HMO heaters in this section.

RESPONSE: The condition has been revised as requested.

26. **COMMENT:** On Page 40, the Cryo (Source ID 405), De-Eth (Source ID 406), and blowdowns and venting (Source IDs 602, 603, and 604) are not sources under NSPS OOOOb.

RESPONSE: See the Department's Response Comment 15.

27. **COMMENT:** On Page 40, Source ID 605 should be "CO2 Recip Compressor Rod Packing"

RESPONSE: The Department has made the requested correction.

28. **COMMENT:** On Page 45, Source ID 604 is not proposed to be routed to the VRU. The residue centrifugal compressor dry seal vents included in the PTE vent to atmosphere. Each residue compressor venting emissions results in 0.34 tpy VOC and are discussed in the BAT analysis provided on 7/26/2024.

RESPONSE: The Department concurs that residue centrifugal compressor dry seal vents were proposed to vent to atmosphere as noted in the BAT analysis provided on July 26, 2024. However, via email on December 12, 2024, MarkWest committed to installing the VRU system and provided a revised BAT analysis (email attachment) which did not specify that the residue gas compressor dry seal vents would vent to atmosphere. *Table 1 - Potential VOC emissions from the HC3 project uncontrolled versus controlled by a VRU* in the BAT analysis appears to include all "Dry Seal Vents".

The permit map in the Plan Approval has been revised to reflect that the residue gas centrifugal compressor dry seal vents (Source ID 604) will vent to atmosphere.

Comments from Matt Shorraw on behalf of Physicians for Social Responsibility of Pennsylvania

The following written testimony on the proposed plan approval was received from Matt Shorraw on behalf of Physicians for Social Responsibility of Pennsylvania (PSRP) via email on March 13, 2025. The Department's responses follow each topic included in the testimony. Copies of PSRP email (and any attachments) are included in Appendix D.

29. **COMMENT:** My name is Matt Shorraw, and I am speaking on behalf of Physicians for Social Responsibility of PA—a statewide organization that uplifts the voices of Pennsylvania's physicians and advocates on issues relating to public health and the environment. I rise to speak against the proposed expansion of the MarkWest Harmon Creek Gas Processing Plant and the dangerous “slice-and-dice” permitting tactic that allows fossil fuel companies to bypass regulatory scrutiny while putting our health, environment, and property rights at risk.

For too long, corporations like MarkWest and Energy Transfer have exploited this loophole—dividing massive fossil fuel projects into smaller segments to evade full environmental reviews. This deceptive practice conceals the cumulative impact of pollution, allowing unchecked emissions that poison our air, contaminate our water, and strip communities of their economic and land rights.

RESPONSE: It is the Department's understanding that the comment refers to a minor source of regulated pollutants transitioning to a major source of regulated pollutants. Becoming a major source would have subjected the facility to review under both 40 CFR §52.21(r)(4) (related to Prevention of Significant Deterioration) and 25 Pa. Code § 127.203(e)(2) (related to Nonattainment New Source Review); each regulation would apply to the source as though construction had not yet commenced on the source.

In this case, per its revised application, Harmon Creek has proposed to accept additional emissions restrictions which will limit the facility's PTE to below the major source thresholds such that it will be classified as a synthetic minor facility. All emissions from the Harmon Creek facility have been considered in the review of the subject Plan Approval application. See also the Department's Response to Comment 72.

30. **COMMENT:** The MarkWest Harmon Creek facility has a documented history of air pollution violations, with frequent flaring events that release volatile organic compounds (VOCs), nitrogen oxides, and other harmful pollutants. These toxins trigger asthma attacks, stunt lung development in children, and increase the risk of chronic respiratory diseases and cancer. The disturbing rise in childhood cancer cases in southwestern Pennsylvania should be a wake-up call, yet regulators continue to assess fossil fuel projects in isolation, ignoring their combined toxic burden.

RESPONSE: No violations related to visible emissions events associated with flare operations have been documented by the Department since May 3, 2021. The flaring of gas from the facility mitigates worker and community safety threats and significantly reduces VOC emissions. See also the Department's Response 2 to Comment 44.

The Department acknowledges the commentor's concerns. The Department is committed to ensuring that facilities comply with the Clean Air Act, the Air Pollution Control Act, State and Federal regulations, and permits to protect public health and the environment. See also the Department's Response to Comment 72.

31. **COMMENT:** Beyond the health risks, this unchecked expansion threatens property owners and small businesses who depend on clean air, water, and land for their livelihoods. Industrial pollution diminishes property values, damages farmland, and forces families into impossible choices—either endure worsening conditions or attempt to sell homes that have lost their worth, often leading to financial hardship. Many are left with no viable option but to abandon land that has been in their families for generations. Economic freedom means the right to control our own land without the encroachment of industries that degrade its value and livability.

RESPONSE: The Department does not have the authority to impose county or local zoning ordinances that would restrict industrial development. Such authority is entrusted to representatives of the county, municipality, or township in which a project is proposed to be located.

32. **COMMENT:** This "slice-and-dice" permitting approach has been challenged before, including at the Marcus Hook Industrial Complex, where regulators ultimately recognized that segmented permits were part of a single, larger project. The same applies here: the cumulative pollution from MarkWest and surrounding industrial operations must be considered as a whole—not in misleading fragments that disguise the true risks.

RESPONSE: See the Department's response to Comment 29.

33. **COMMENT:** We cannot allow fossil fuel companies to game the system while our communities bear the consequences. Doing the bare minimum in regard to regulation is unacceptable and negligent.

RESPONSE: See the Department's response to Comment 29.

34. **COMMENT:** I urge this body to:

- a. End "slice-and-dice" permitting by requiring full environmental impact reviews for projects contributing to cumulative pollution.

RESPONSE: See the Department's Responses to Comments 29 and 71.

- b. Strengthen air, water, and land protections to reflect the real, combined risks of multiple industrial facilities.

RESPONSE: An ambient air monitoring station currently exists in Houston, PA (40.268963°, -80.243995) and was added as part of the Department's *Annual Ambient Air Monitoring Network Plan* due to natural gas development in the area. Any resident with suggestions regarding the Department's monitoring network or the locations of monitoring stations is encouraged to provide input on the proposed *2025 Annual Ambient Air Monitoring Network Plan* when the notice is published in the *Pa. Bulletin*. The Department expects the notice to be published in June or July 2025. Comments may be submitted using the Department's *eComment* system at <http://www.ahs.dep.pa.gov/eComment> or by email to ecomment@pa.gov. Written comments may be submitted to the Policy Office, Department of Environmental Protection, Rachel Carson State Office Building, P.O. Box 2063, Harrisburg, PA 17105-2063." See also the Department's Response to Comment 29.

- c. Protect economic and land rights by holding polluters accountable for the long-term harm they inflict on communities and ensuring that local residents—not corporations—have control over their property and quality of life.

RESPONSE: See the Department’s Response to Comment 31 and Protest 77 (Protestant 104).

- d. Take the cumulative health risks of impacted residents—including vulnerable groups such as the elderly, children, immunocompromised individuals, and pets—into consideration when making decisions.

RESPONSE: See the Department’s Response to Comment 34(b).

- e. Properly monitor air quality and obtain accurate readings in the immediate vicinity, not by using data from Clairton-Liberty, New Florence, or other distant data.

RESPONSE: See the Department’s Response to Comment 34(b).

35. **COMMENT:** Every child deserves clean air. Every family has the right to safe drinking water. Every landowner should be able to maintain and benefit from their property without industrial encroachment. And every community deserves transparency and accountability. The public health and economic crises caused by fossil fuel pollution are preventable—but only if we stop allowing corporations to manipulate the system at the expense of our future.

RESPONSE: See the Department’s Response to Comment 29 and Response 2 to Comment 44.

Documents from Cathy Lodge

The summary of the email and documentation provided in the following comment on the proposed plan approval was received via email through Eric Gustafson, P.E. (Regional Director - DEP Southwest Regional Office) on March 17, 2025. The Department’s response follows the summary of the supplied documents and accompanying comments. Copies of the email (and 2 or 4 attachments) are included in Appendix E. Two (2) large attachments (“20241121-Rover-Bulger-Delivery-Meter-Station-Project-FERC-Authorization (003)” and “Rover pipeline FERC 20241031-5360_Builder-Public Vol I Harmon Creek_10_31_24 (1) (006)” totaling 512 pages (21 megabytes (MB)) were also attached to the email. These documents were omitted from the Appendix E PDF binder file since they are publicly available via the Federal Energy Regulatory Commission website at the following links:

- <https://www.ferc.gov/media/c-2-cp24-88-000>
- https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20241031-5360

36. **COMMENT:** Based on the Department’s assessment, Cathy Lodge asserts that MarkWest owns the Harmon Creek Meter Station located at the Rover Bulger Compressor Station.

RESPONSE: The Harmon Creek Meter Station located at the Rover Bulger Compressor Station and the interconnecting pipeline between Mark West Harmon Creek and the Harmon Creek Meter Station at

the Rover Bulger Compressor Station are owned by Rover Pipeline, LLC. See also the Department's Response to Comment 71.

Comments from Emily Wildman on behalf of Clean Air Action (CAA)

The following protest and written comments on the proposed plan approval were prepared by Sean G. Hoffmann on behalf of Clean Air Action (CAA) and were received via email from Emily Wildman of CAA on March 21, 2025. The Department's responses follow each topic included in the protest and accompanying comments. A copy of the CAA email (and any attachments) is included in Appendix F.

37. **COMMENT:** As citizens of Pennsylvania and advocates for clean air as a right in accordance with Article I, Section 27 of the Pennsylvania Constitution, Clean Air Action ("CAA") objects to the Pennsylvania Department of Environmental Protection ("DEP") issuing the Air Quality Plan Approval 63-01011B ("Permit") for Markwest's Harmon Creek Gas Plant ("Harmon Creek Facility") before the public has had sufficient opportunity to participate in the [decision-making] process.

RESPONSE: Given the public interest in the proposed project, the Department exercised its discretion and provided for additional opportunity for public participation by holding a public conference and hearing within the local community on March 11, 2025.

38. **COMMENT:** The Harmon Creek Facility is a large petrochemical manufacturing site in Washington County, Pennsylvania with plans to expand in the area. Notably, there are inherent health risks associated with the toxic plastic manufacturing emissions produced by the Harmon Creek Facility, which include respiratory illness and even cancer.

RESPONSE: The MarkWest Harmon Creek facility does not manufacture plastics.

39. **COMMENT:** CAA asks that the Permit be assigned "Opt-In" status under DEP's Environmental Justice Policy ("EJP"), which requires enhanced public participation, because the Permit authorizes construction of a facility that has the potential to emit above major source thresholds.

An Opt-In project is defined under EJP as the following:

Opt-In Project — A project requiring permits, authorizations, or approvals from DEP that otherwise does not automatically trigger this policy through requiring a permit listed in Appendix C, but which DEP determines should be evaluated utilizing this policy based on identified community concerns, present or anticipated environmental impacts, or reasonably anticipated significant adverse community environmental burden.³

The Harmon Creek Facility is located within an Environmental Justice area as identified by the DEP with a Pennsylvania Environmental Justice Mapping and Screening Tool (PennEnviroScreen⁴) score of 94. The threshold to trigger Opt-In enhanced public participation for a synthetic minor permit is any

³ Pennsylvania Department of Environmental Protection, Environmental Justice Policy (Sep. 16, 2023), <https://www.pa.gov/agencies/dep/public-participation/office-of-environmental-justice/public-participation-policy.html>

⁴ <https://gis.dep.pa.gov/PennEnviroScreen/>

score greater than 80. Opt-in projects must go through an enhanced public participation process that includes measures such as additional public hearings and or additional public meetings beyond the standard required public hearing.

RESPONSE: See the Department's Response to Comment 37.

40. **COMMENT:** If the Permit is approved, the Harmon Creek Facility is likely to emit above the major source thresholds. Between that and its associated Environmental Justice score of 94, the public has [significant] interest in this facility's pending expansion. For the reasons above, CAA objects to the [issuance] of the Permit for the Harmon Creek Facility until the public has had sufficient opportunity to weigh in on and participate in the [decision-making] process.

RESPONSE: See the Department's response to Comment 46.

41. **COMMENT:** Thank you for your time and consideration.

RESPONSE: The Department acknowledges and appreciates your commentary.

Comments from Lisa Hallowell on behalf of Environmental Integrity Project (EIP)

The following protest and written comments on the proposed plan approval were prepared by Lisa Hallowell on behalf of Environmental Integrity Project (EIP), other environmental groups, and local residents, and were received via email on March 21, 2025. For the record, the comments provided by EIP were not submitted to the reviewer as specified in the notice of intent to issue published in the *Pa. Bulletin* on February 8, 2025. Since the information contained Item I. is factual in nature and serves to provide background information related to the application and associated timelines, and does not convey commentary or protest the proposed action, no response thereto has been provided by the Department. The Department has also not provided responses to statements and information provided in the comment letter that duplicate information in the application record in order to focus on the nature and content of the protest and commentary. Additionally, given the repetitive structure of the comment letter, the Department has not provided responses to the summary comments designated as Items 1 thru 3 on page 1 of the letter and has responded to the parallel and more comprehensive comments designated as Items II. – IV., and VI. included later in the comment letter. However, since Item 4 on page 1 of the letter contains additional commentary beyond that included in Item V., the Department has included a response to Item 4 with its response to Item V (See Comment 69). The Department's responses follow each topic included in the protest and comments. A complete copy of the EIP email (and any attachments) is included in Appendix G.

42. **COMMENT:** The Draft Permit Fails to Establish Enforceable Restrictions to Ensure that This Facility Will Not Emit VOCs Above the Major Source Threshold.

RESPONSE: The Department disagrees in part. The restrictions established in the proposed Plan Approval in conjunction with the methods(s) of compliance are sufficient to limit the potential to emit (PTE) of the facility to below the major source thresholds for all criteria and hazardous air pollutants. Per 25 Pa. Code § 121.1, *potential to emit* is defined as:

“The maximum capacity of a source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and limitations on hours of operation or on the type or amount of material combusted, stored or processed shall be treated as part of the design if the limitation or the effect it would have on emissions is Federally enforceable or legally and practicably enforceable by an operating permit condition. The term does not include secondary emission from an offsite facility.”

See also the Department’s Responses to Comments 49 and 72.

43. **COMMENT:** The Draft Permit claims that this will be a “synthetic minor” facility with restrictions to keep its VOC emissions below the major source threshold, but it does not include enforceable restrictions to ensure VOCs will not exceed 50 tons per year.

RESPONSE: The Department disagrees. The Plan Approval includes annual synthetic minor emissions limits which are below the major source thresholds. Compliance with these limits shall be demonstrated by a combination of short-term emissions restrictions, stack testing, monitoring, gas sampling, process modeling, manufacturer guarantees, calculations using appropriate emissions factors, and recordkeeping and reporting requirements. See also the Department’s Responses to Comments 49 and 72.

44. **COMMENT:** This facility, according to MarkWest’s initial application, has the ability to emit more VOCs than the major source threshold of 50 tpy—64.65 tpy. See Revised Application, at pdf p. 89. This would have required MarkWest to get a federal permit and undergo MAJOR SOURCE new source review for this expansion. However, the Draft Permit says the facility will only have a potential to emit (“PTE”) of 48.33 tpy of VOCs, just under the 50 tpy threshold, based on the claim that this is a synthetic minor source of VOC emissions.

RESPONSE: The initial major facility Plan Approval application was replaced with a revised minor facility Plan Approval application since the PTE would be less than the major source threshold for VOC emissions (and for all other criteria and HAP emissions). The replacement application qualifies for a minor facility plan approval since the facility PTE will remain below major source thresholds by implementing the following two (2) primary means of emissions reductions. See also the Department’s Response to Comment 72.

1. MarkWest will implement and enhanced facility-wide leak detection and repair (LDAR) program on connector and flange components and utilize low-emissions (low-e) valves in support of elective fugitive emissions reductions of 90% on connectors and 99% on valves which, in conjunction, contribute to a reduction in PTE for VOCs at the facility to below the major source thresholds. In response to a request from the Department, MarkWest provided via email on April 14, 2025, examples of specifications and certifications for low-e valves. MarkWest also provided documentation in support of its proposed elective fugitive emissions reductions which utilizes the *EPA Average Emission Factor Approach*, the *TCEQ 28VHP Reductions* (which includes design specifications) and the *EPA Correlation Approach*. MarkWest tracks screening value data for leaking components using LeakDAS V5 software based on actual measurements obtained during LDAR monitoring activities. LeakDAS V5 uses the *EPA Correlation Approach*, which provides an equation to predict a mass emission rate as a function of the screening value for each component type. The correlations developed by EPA relating to screening values to mass emission rates for petroleum industry process units are presented in Table 2-10 of EPA’s *1995 Protocol for Equipment Leak Emission Estimates* (EPA-453/R-95-017; November 1995). MarkWest used actual emissions

from LeakDAS collected during reporting years 2020 through 2024 to establish the fugitive emissions estimate provided in the revised Plan Approval application. The annual fugitive emission reductions for connectors and valves across these five years are consistent and range from 95.28% to 95.65% for connectors and 99.56% to 99.65% for valves and therefore validate and support the proposed elective fugitive emissions reductions of 90% on connectors and 99% on valves.

2. MarkWest has committed to utilizing a vapor recover unit (VRU) system to capture 100% of emissions that were initially proposed to be controlled by the existing plant flare (including those from maintenance blowdowns, closed drain tank loadout operations, dry seal vents associated with the proposed centrifugal compressors, and the proposed pig receiver), with emissions due to VRU maintenance downtime (estimated at approximately 5% of the year or 438 hours) being sent to the existing plant flare. Establishing the use of a VRU as BAT for the primary control strategy for various emissions sources in the natural gas processing source category will reduce the reliance on flaring and the combustion emissions and aesthetic impacts associated therewith. In conjunction with installation and operation of the VRU, the Plan Approval also now incorporates the following condition which limits flare throughput to the volume proposed by MarkWest via email on January 17, 2025:

“Annual plant flare throughput (including sweep and purge gas) shall not exceed 116.518 MMscf in any consecutive 12-month period.”

45. **COMMENT:** The Draft Permit does not include any restrictions on operation or other emissions limits to ensure this facility will not emit above 50 tpy of VOCs and as such this facility cannot be permitted as a synthetic minor source.

RESPONSE: The Department has revisited the Plan Approval Conditions and has included additional short-term emissions restrictions. See the Department’s Responses to Comments 42 and 49.

46. **COMMENT:** DEP and MarkWest claim that the installation of a Vapor Recovery Unit (“VRU”), as well as changes to its LDAR estimates and program, alone and without any other restrictions, are “restrictions” that will make this facility, which otherwise had the admitted PTE for VOCs of 64.65 tpy, a “synthetic minor” facility with a PTE of only 48.33 tpy. See, for example, DEP’s Review Memo, which discusses that the VRU constitutes BAT for control of emissions instead of the plant flare and then states:

“MarkWest also further refined (reduced) estimates for fugitive emissions using historic leak detection and repair (LDAR) emissions reduction data and enhancing its LDAR program to include semi-annual Method 21 leak detection. The Department will also require semi-annual LDAR using optical gas imaging (OGI). The resulting VOC emissions reductions have lowered the project potential to emit (PTE) to less than the major source thresholds which will be practicably enforceable by the imposition of synthetic minor Plan Approval restrictions.”

RESPONSE: The emissions data documented in Table 4 of the memo clearly demonstrates that the facility will remain a minor source of air emissions. See also the Department’s Response 2 to Comment 44.

47. **COMMENT:** Review Memo, at 3 (emphasis added). Given that the VOC emissions from the Process Flare (Source C601) had been estimated in the initial application to be 13.34 tpy, and that the VOC PTE in the revised application was 12.01 tpy, the installation of the VRU, only reduced the VOC PTE for this project by 1.33 tpy. See Revised Application. The Fugitive Emissions (Source 701), however, had a VOC PTE of 20.01 tpy in the initial application but only a VOC PTE of 4.86 tpy in the revised application, so DEP and MarkWest are attributing the overwhelming majority of the VOC emissions reductions in PTE to the changes to the LDAR program. Because the VRU unit alone does not reduce the PTE of VOCs nearly enough for this source to have a PTE below 50 tpy, the DEP and MarkWest are also, therefore, relying entirely on the claimed reductions in VOC PTE from their LDAR program changes for their claim that the permit has enforceable restrictions that make this a synthetic minor source of VOC emissions.

RESPONSE: Implementation of the enhanced LDAR program and a VRU both contribute to reducing the VOC PTE to below major source thresholds. Please also note that the use of a VRU has environmental benefits beyond emissions reductions. See also the Department's Response 2 to Comment 44.

48. **COMMENT:** However, the proposed LDAR changes, aside from being unclearly drafted and lacking data to support VOC PTE reductions (which are discussed in the next two subsections below), are not "restrictions" that are federally enforceable nor are they approved methods for claiming a source is a synthetic minor source of emissions. As provided above, DEP's own permits provide that a source that has the potential to emit above a major source threshold can be permitted as a synthetic minor source of emissions by "taking a restriction in the hours of operation, an emission limitation, or any other approved method" and having that restriction be federally enforceable. DEP, State-Only Operating Permit Application Instructions, at 1, available at <https://greenport.pa.gov/elibrary/PDFProvider.ashx?action=PDFStream&docID=11534&chksum=&revision=1&docName=STATE+ONLY+PERMIT+APPLICATION-INSTRUCTIONS&nativeExt=pdf&PromptToSave=False&Size=261817&ViewerMode=2&overlay=0#:~:text=Synthetic%20Minor%20facilities%20are%20facilities,taken%20must%20be%20federally%20enforceable>.

DEP and MarkWest have provided no support to prove that monitoring or any kind, or especially that monitoring that is required less frequently than continuously, can, alone, serve as a "restriction" for purposes of reducing potential to emit to make an otherwise major emissions source a synthetic minor source.

RESPONSE: See the Department's Response 1 to Comment 44 and Response to Comment 63.

49. **COMMENT:** The Draft Permit does not include a restriction that fits into these restriction categories, nor have MarkWest nor DEP provided any example of how changing its LDAR requirements are an "approved method" of restricting emissions to below major source thresholds. While increased monitoring could be a means for assuring compliance with a limit in a permit, DEP's and MarkWest's claims that monitoring alone (and especially monitoring requirements that are unclear) are the restriction itself that will lower the facility's potential to emit VOC emissions by 15 tons per year to below the major source threshold, is both legally and factually not supported by the supporting documents.

RESPONSE: The Department has revisited the LDAR section of the proposed Plan Approval and concurs that restrictions were omitted. The following conditions will be included in the Plan Approval:

“Actual VOC emissions from connectors and valves at the facility shall be calculated semi-annually using the EPA Correlation Approach to demonstrate compliance with the requirement to achieve a 90 percent emissions reduction on connectors and a 99 percent emissions reduction on valves compared to the EPA Average Emission Factor Approach.”

“VOC emissions from fugitive emissions components shall not exceed 4.86 tons in any consecutive 12-month period.”

The following recordkeeping item has also been added to Section D., Source Level Plan Approval Requirements, Source ID 701, Source Name: FUGITIVES, Condition #001:

“Records of the semi-annual connector and valve emissions reduction percentages.”

The enhanced LDAR program, the use of low-e valves, the implementation of the Texas Commission on Environmental Quality (TCEQ) *28VHP LDAR Program*, and the implementation of the piping construction standards specified in the TCEQ *Air Permit Technical Guidance for Chemical Sources - Fugitive Guidance* (APDG 6422v2; Revised 6/2018) are the methods of compliance by which the limitations and reductions will be achieved, and also satisfy the application of BAT to the project.

See also the Department’s Response to Comment 72.

50. COMMENT: DEP and MarkWest have provided no support to prove that monitoring or any kind, or especially that monitoring that is required less frequently than continuously, can, alone, serve as a “restriction” for purposes of reducing potential to emit to make an otherwise major emissions source a synthetic minor source.

RESPONSE: See the Department’s Response 1 to Comment 44, and the Responses to Comments 49 and 63.

51. COMMENT: In fact, decades-old EPA guidance established that proper methods of restricting potential to emit⁵ include “restrictions on hours of operation and on the amount of materials combusted or produced,” but that even permit limitations, namely “blanket restrictions on actual emissions” “did not reflect the type of permit conditions which restricted operations or production such as limits on hours of operation, fuel consumption, or final product,” for the purposes of properly reducing PTE in an enforceable way. Terrell Hunt & John S. Seitz, U.S. Environmental Protection Agency (“EPA”), *Guidance on Limiting Potential to Emit in New Source Permitting* (June 13, 1989), https://www3.epa.gov/ttn/atw/pte/june13_89.pdf (citing *n United States v. Louisiana-Pacific Corporation*, 682 F. Supp. 1122 (D. Colo. Oct. 30, 1987)). If blanket emissions limits are not enforceable as a practical matter, then monitoring requirements without any associated emissions limits

⁵ Note that federal regulations define “potential to emit” as “the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of fuel combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.” 40 C.F.R. § 52.21(b)(4), 51.165(a)(1)(iii), 51.166(b)(4).

at all are, a fortiori, not enforceable as a practical matter and cannot be the primary basis for an otherwise major source of emissions being redesignated as a synthetic minor.

RESPONSE: See the Department's Response to Comment 49.

52. **COMMENT:** EPA also explained in the 2014 Hu Honua Order that “[o]ne of the key concepts in evaluating the enforceability of PTE limits is whether the limit is enforceable as a practical matter.” Id. at 10 (citing 2002 Pencor-Masada Order at 4–7). There, EPA stated that:

“In order for an emission limit to be enforceable as a practical matter, the permit must clearly specify how emissions will be measured or determined for purposes of demonstrating compliance with the limit. See, e.g., 2014 Hu Honua Order at 10. Thus, such limitations must be supported by monitoring, recordkeeping, and reporting requirements ‘sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action.’ 2002 Pencor-Masada Order at 7. Further, in general terms, to effectively restrict a facility’s PTE under the relevant major stationary source threshold, a permit’s emission limits must apply at all times to all actual emissions....”

Hu Honua Order, at 20. Monitoring requirements alone, without any permit limitations, or operating restrictions, and especially those that only apply quarterly, semiannually, or bimonthly, are plainly not akin to limits that “apply at all times” that could qualify as practically enforceable restrictions on PTE. As such, DEP must deny this permit and require the Harmon Creek III expansion to apply for a major source plan approval permit or require actual federally enforceable restrictions that apply at all times that will ensure VOC reductions to below the major source threshold.

RESPONSE: The Department understands the concept of “enforceable as a practical matter” and has revised the applicable Plan Approval conditions as appropriate. See the Department's Response to Comment 49.

53. **COMMENT:** The Draft Permit's synthetic minor designation is based upon the claim that the Method 21 and OGI monitoring in the permit will achieve a 90% reduction in the VOC PTE, but that is not supported by the supporting materials by MarkWest or DEP.

RESPONSE: The restrictions proposed by MarkWest have been demonstrated to be achievable in practice based on the data provided in the application and supplemental materials. See the Department's Response 1 to Comment 44.

54. **COMMENT:** In a January 17 email, MarkWest states that, because EPA has estimated that a semi-annual OGI monitoring program can achieve a 60% reduction in emissions, they can expect this incremental increase from the 75% reduction at connectors expected from their LDAR program, based on TCEQ's estimates. See Email from Allie M. Juarez, MarkWest to Mark Gorog, PADEP, et al, Re: [External] Harmon Creek Plan Approval Reductions (Jan. 17, 2025 11:20:28AM) (“January 17th Email”).

MarkWest has stated in its application that it will follow the Texas Commission on Environmental Quality's (“TCEQ”) 28VHP LDAR program. See Revised Application, at Attachment D (pdf p. 104 & Fugitive Emissions Calculation Table n.C) & January 17th Email, at pdf p. 212). TCEQ's 75% reduction credit is for annual Method 21 alone if following their 28VHP Requirements. 28VHP requires annual

monitoring of connectors and flanges. See TCEQ, Air Permit Technical Guidance for Chemical Sources Fugitive Guidance, APDG 6422, at 8, 21 (June 2018) (“APDG 6422”), <https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/fugitiveguidance.pdf>. While APDG 6422 refers specifically to Method 21 as the monitoring method, the TCEQ’s “New Source Review (NSR) Boilerplate Special Conditions” for Fugitives for “Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP” allow for use of alternative work practices (i.e., OGI) as specified in TAC § 115.358. See TCEQ, New Source Review (NSR) Boilerplate Special Conditions” for Fugitives for “Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP, https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/bpc_rev28vhp.pdf (last visited Mar. 21, 2025).

According to the TSD, MarkWest would need to conduct Method 21 monitoring as frequently as monthly in order to achieve the proposed reductions. Id. at 41 (in which the TSD states a 92% reduction would be achieved for monthly Method 21 monitoring).

As such, the less frequent monitoring in the Draft Permit does not support a 90% reduction in VOC emissions.

Furthermore, although MarkWest included a table showing “actual” reductions (calculated using EPA correlation equations) of approximately 95% resulting from Method 21 monitoring, they provided no underlying data to support these values. See January 17th Email, at 2. In addition, APDG 6422, the source of the 28VHP LDAR program, states that “the use of various correlation equations developed by EPA for estimating fugitive emissions is not accepted for permitting purposes.” APDG 6422 at 6.

RESPONSE: See the Department’s Response to Comment 53.

If actual emissions or emissions reduction percentages are imposed as emissions restrictions, the emissions restriction and emissions reduction percentages establish potential to emit as defined in 25 Pa. Code § 121.1. Further, the Department, in its discretion, may accept any method it deems acceptable to estimate PTE from a source or category of sources. In this case, the Department has accepted MarkWest’s methodology for determining PTE for fugitive emissions and has, as noted in the Department’s Response to Comment 49, revised the condition(s) to include numerical restrictions and minimum emissions reductions applicable to fugitive emissions as well as corresponding recordkeeping requirements.

55. **COMMENT:** MarkWest did not support its claim that it should receive a 99% emissions reduction for use of low-emission valves and does not clearly require existing valves to be switched despite claiming the credits for doing so. The Review Memo explains that “MarkWest’s proposal to implement BAT for the control of fugitive emissions is two-fold and incorporates both low-emissions valves and welded or flanged connections,” citing the TCEQ’s APDG 6422 guidance, and states that “MarkWest has estimated that the use of Low-Emissions Valves will reduce fugitive emissions from valves by 99% or greater as compared to EPA AP-42 emissions factors.” Review Memo, at 18. However, MarkWest provided no data to support these reductions, and the only “data” included is the table in the January 18th Email showing “actual” reductions calculated using data from the existing LDAR program and using EPA correlation equations. See January 17th Email, at 2. As noted above, APDG 6422 states that the correlation equations developed by EPA for estimating fugitive emissions should not be used for permitting purposes. APDG 6422 at 6.

RESPONSE: Section D. Condition #009, which requires the use low-e valves for valves 1” or greater, has been refined to require all new valves to be meet low-e specifications and any replaced or reworked valves to also meet low-e specifications.

The LDAR data collected by MarkWest between 2020 and 2024 demonstrates that an emissions reduction of greater than 99% from valves is achievable in practice. See also the Department’s Response 1 to Comment 44 and Responses to Comment 54.

56. **COMMENT:** Furthermore, the Draft Permit does not require that existing valves at the Harmon Creek I and II plants are replaced with low-emission valves. Note, in contrast, that the MarkWest Consent Decree, has explicit language requiring replacement with low-emission valves when doing replacements/repairs that was not included in this Draft Permit. See Consent Decree, U.S. et al. v. MPLX LP et al, Civil. Action No. 3:18-cv-2526, at 34 (N.D. Ohio 2018), <https://www.epa.gov/sites/default/files/2018-11/documents/mplx-cd.pdf>. If existing valves are not required to be replaced, then MarkWest should not be able to claim higher reduction credit for existing valves or should be required to replace those valves (and not get higher reduction credit until replaced). While the Draft Permit does include a requirement to replace with a low-e valve or low-e packing, options are provided, and it is unclear if this applies to existing sources.

Also, the 28VHP boilerplate conditions provide for the incorporation of sealless/leakless valves at a plant not by providing additional emission reduction credits, but by adjusting the monitoring requirements. TCEQ, New Source Review (NSR) Boilerplate Special Conditions” for Fugitives for “Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP, Section F https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/bpc_rev28vhp.pdf (last visited Mar. 21, 2025).

RESPONSE: See the Department’s Responses to Comment 55.

57. **COMMENT:** MarkWest’s Revised Application included total numbers of components such as connectors, pumps, and valves that changed compared with the numbers of components listed in the initial application submitted for the Harmon Creek III/DeEthanizer II plan approval application. MarkWest did not explain why these numbers changed but did associate significant reductions in VOC PTE emissions with these sources. The Table below shows a summary of the components included in the Fugitive Emissions Calculation tables in both versions provided to support the initial and Revised Applications. The number of components of each type changes between the original and revised tables. The table also shows that the change for pressure relief valves has the largest contribution to the reduced VOC PTE (a reduction of 7.81 tpy), where the component count has changed from 8,115 to 283 (less than 4% of the original count). The second largest contribution to the reduced VOC PTE is from valves (a reduction of 3.93 tpy). Although there was only a small change in the percent reduction assumed due to the low-e valves (97% v 99%) and the total number of valves is similar, there are changes to the assumed composition of the gases emitted from each valve. For example, there is an approximately 40% reduction in the estimated number of valves emitting gases that are 100% VOC (3,537 in the original estimate and 2,126 in the revised estimate), with many of those valves presumably assumed to be emitting gases that are 51.4% VOC or less.

DEP needs to require MarkWest to provide clarification and specificity regarding why the numbers of the components changed between the initial application and the Revised Application, and, to the extent that the reductions in emissions were due to the reductions in numbers of components, a detailed

explanation and review is needed to evaluate potential emissions and assure enforceability of the permit's requirements.

RESPONSE: Per an email from MarkWest on April 23, 2025, the change in fugitive emissions component counts reflects the actual "as-built" component counts for Harmon Creek as maintained in LeakDAS and the projected component counts associated with the Harmon Creek Cryo III/DeEthanizer II project. The component counts previously utilized were estimates based on component counts for similar facilities. MarkWest's response to the Department's request for clarification is included in Appendix G-1.

58. **COMMENT:** Furthermore, DEP and MarkWest have not even clarified the exact monitoring frequencies that will be required for VOCs from fugitive sources, making it impossible for DEP to claim MarkWest's VOC emissions PTE will be reduced by the amount claimed. MarkWest is claiming that although its initial application for Harmon Creek III estimated an annual VOC PTE of 64.65 tpy, its final application only has a VOC PTE of 48.33 tpy. The majority of the reductions in VOC PTE are due to MarkWest's claim that it will reduce VOCs from Source ID 701, Fugitive Emissions, by 15.15 tons per year (from 20.01 tpy to 4.86 tpy) – a 76% reduction – without adding any pollution capture controls but simply by changing their leak detection and repair ("LDAR") requirements. However, the permit is unclear regarding whether more frequent monitoring is actually being required, and MarkWest did not provide sufficient data or explanation to support the large reductions they claim this will achieve.

RESPONSE: The required monitoring frequencies are specified in Section D., Source Name: FUGITIVES, Source ID 701, Condition #002 (Plan Approval pg. 31) as noted in Comment 59. The Department concurs with the methodology utilized by MarkWest to demonstrate that the claimed reductions are valid and has revised the Plan Approval to include additional requirements. See the Department's response to Comment 49.

59. **COMMENT:** The permit requires bi-monthly optical gas imaging ("OGI") surveys as well as LDAR using Method 21 conducted only: semiannually for connectors/flanges, quarterly for pressure relief and valves, and monthly for pumps. See Draft Permit, at 31.

RESPONSE: This statement is accurate regarding the LDAR monitoring type and frequencies for the identified fugitive emissions components.

60. **COMMENT:** As set forth above, DEP and MarkWest claim this will increase estimated leak emission reductions from 75% to 90% of the average leak rate at each connector. Email from Allie M. Juarez, MarkWest to Mark Gorog, PADEP, et al, Re: [External] Harmon Creek Plan Approval Reductions (Jan. 17, 2025, 11:20:28AM). The basis for this reduction, as described in a January 17, 2025 email to PADEP is adding a semi-annual OGI program to their LDAR program (increasing estimated leak emission reductions from 75% to 90% of the average leak rate at each connector) MarkWest also commits to using "low-e" valves, as required in a 2018 consent decree associated with other MarkWest facilities to increase estimated leak emission reductions from 97% to 99% of the average leak rate at each valve). See id. On January 23, MarkWest revised their proposed LDAR program to change the semi-annual LDAR program from OGI to Method 21 despite the discussion in the January 17, 2025 email stating that the basis for the original 75% reduction is Method 21 monitoring. See Email from Allie M. Juarez, MarkWest, to Mark Gorog, DEP, et al, Re: [External] RE: Harmon Creek Plan Approval Reductions (Jan. 23, 2025, 2:28:56 PM) (stating "As discussed, MPLX is now proposing to

conduct the additional semi-annual monitoring and leak repair on connectors and flanges using Method 21 rather than OGI.”).

RESPONSE: Regardless of the pre-decisional communications between MarkWest and the Department, the increased monitoring applicable to connectors and flanges using Method 21 will increase from annually (once per year) as initially proposed to semi-annually (twice per year) per the proposed Plan Approval. See Comment 59. Please be aware that Method 21 requires a minimum detection level (500 ppmv) that is significantly more sensitive than that of OGI (10,000 ppmv).

The analyzer used to conduct Method 21 monitoring at Harmon Creek is a Thermo Scientific TVA2020 Flame Ionization Detector (FID) which has the following capabilities:

- Linear Range: 1.0 to 50,000 ppm of methane
- Accuracy: $\pm 10\%$ of reading or ± 1.0 ppm, whichever is greater, from 1.0 to 10,000 ppm.
- Repeatability: $\pm 2\%$ at 500 ppm of methane.
- Minimum Detectable Limit: 0.5 ppm of methane

61. **COMMENT:** First, it is unclear whether what is being required is actually more frequent monitoring than what would have previously been required when the VOC PTE was established at 64.65 tpy.

RESPONSE: See Comment 59.

62. **COMMENT:** Specifically:

- a. The initial application says that MarkWest would conduct its LDAR Program monitoring at a monitoring frequency of “Quarterly/Annually” at connectors (see Revised Application, at pdf p.132) (note that it is unclear if the “/” means “and” or “or”); MarkWest’s January 17, 2025 email after their meeting with DEP in December (referenced in the preceding paragraph) states that MarkWest would “add” semi-annual OGI for connectors, which MarkWest then revised to instead propose semi-annual Method 21 monitoring in their January 23, 2025 (also referenced in the preceding paragraph);

RESPONSE: For the identified fugitive emissions components type, quarterly corresponds to OGI (10,000 ppmv detection level) and annually corresponds to Method 21 (500 ppmv detection level).

- b. DEP’s review memo states that DEP is requiring an enhanced LDAR program by requiring semi-annual Method 21 monitoring (in addition to semi-annual OGI) to supersede quarterly OGI as previously required (see Review Memo, at 18); and

RESPONSE: This statement is accurate regarding the LDAR monitoring type and frequencies for the identified fugitive emissions components.

- c. The Draft Permit requires semi-annual Method 21 monitoring for connectors in addition to bi-monthly OGI Surveys required pursuant to 40 CFR § 60.5400b(b)(1).

RESPONSE: This statement is accurate regarding semi-annual Method 21 monitoring for connectors. However, contrary to its application, in its comments on the proposed Plan

Approval received via email on March 3 and 4, 2025, MarkWest indicated that it will comply with the alternative GHG and VOC standards for process unit equipment affected facilities specified in 40 CFR § 60.5401b. The proposed Plan Approval will be revised as appropriate.

63. **COMMENT:** However, if MarkWest's plan initially was to conduct monitoring surveys quarterly and their plan now is to conduct monitoring surveys either semi-annually or quarterly (as it is unclear whether the two types of surveys happen at the same time), DEP must require MarkWest to explain how more leaks will be detected and repaired, and DEP must revise the permit to make clear exactly how many monitoring surveys of each type will be conducted and specify whether they will or can overlap in timing or not.

RESPONSE: The Department has included the following condition in the Plan Approval to address the scheduling and potential overlap of monitoring surveys:

“Within 90 days of Plan Approval issuance, a site specific LDAR monitoring plan shall be submitted that specifies the monitoring methods, frequencies, and minimum durations between monitoring surveys for each type of fugitive emissions component.”

64. **COMMENT:** In addition, MarkWest did not provide data to support that the proposed changes to its monitoring program will achieve the VOC emissions reduction percentages they claim. As such, this source does not qualify for permitting as a synthetic minor permit because the Draft Permit fails to establish enforceable restrictions to ensure that the facility will not exceed the major source threshold.

RESPONSE: See the Department's Response to Comment 49.

65. **COMMENT:** The evidence MarkWest provided was a report by EPA which contradicts MarkWest's claim that semi-annual (or quarterly) monitoring would increase leak reductions from 75% to 90%. The report states that semi-annual Method 21 can achieve a 75% reduction in leaks and that semiannual OGI can achieve 60%. (This increases to 83% and 80%, respectively, if conducted quarterly). There is no discussion of what would be expected if the surveys were conducted at the same time, and, anyway, it is unclear if that is what is being proposed or if MarkWest is proposing that the monitoring will effectively be quarterly with two different methods being used. Certainly, there is not support in the EPA report for MarkWest's claim that semi-annual (or quarterly) monitoring would increase leak reductions from 75% to 90%.

RESPONSE: See the Department's Response to Comment 49.

66. **COMMENT:** As discussed in Section I.B, above, the Draft Permit fails to make clear whether OGI and Method 21 monitoring will be occurring in overlapping or alternating frequencies. This omission, aside from making it impossible to confirm whether the stated reduction in VOC PTE will be achievable and thereby frustrating DEP's claim that this is a synthetic minor source, also makes enforcement of these requirements practically impossible. DEP must require that the Draft Permit specifies exactly which types of VOC monitoring (Method 21 or OGI) will be occurring at each type of emission point (including each Fugitive Emissions source, such as connectors), at which frequency, and whether the two types of monitoring will be conducted sometimes simultaneously or never simultaneously. Otherwise, the public and DEP will not be able to understand the presumed monitoring frequencies at

which the VOC emissions reductions claimed would be expected, not be able to determine whether the monitoring being conducted is complying with the permit’s requirements, and not being able to obtain sufficient information to determine whether the actual emissions of VOCs from the facility are in excess of permit limits.

RESPONSE: See the Department’s Response to Comment 49.

67. **COMMENT:** The Department should revise the Draft Permit to require MarkWest to install air pollution monitors at the perimeter of the facility to measure emissions from the facility, including VOCs, NO_x, PM, SO_x, and hazardous air pollutants such as benzene. Fenceline monitors are needed to ensure compliance with the facility-wide emissions limitations for those pollutants. The facility is a significant source for many of these pollutants which pose a danger to the health of neighboring communities.

For example, a report conducted by MarkWest showed concentrations of benzene downwind of the facility exceeded levels that can cause acute adverse health impacts dozens of times in 2020. Benzene is known to cause leukemia after prolonged exposure, and it also causes a range of noncancer health effects after shorter exposures, including bone marrow damage, depressed immune function, and neurotoxicity. Studies in mice show that exposure in utero can result in long-term reductions in blood cell production after birth. To protect against non-cancer health effects, the California Environmental Protection Agency recommends that exposures to benzene stay below Reference Exposure Levels, or RELs, which are defined as “the concentration level at or below which no adverse non-cancer health effects are anticipated for the specified exposure duration.”⁶ For short-term, hourly exposures, benzene concentrations should be below 27 micrograms per cubic meter (µg/m³) or 8.5 parts per billion (ppb).

According to the Harmon Creek 2019-2022 Final Fence-line Monitoring Report, submitted to the Department by MarkWest on October 10, 2022, measured benzene concentrations at the Downwind #2 monitoring station exceeded this hourly concentration threshold dozens of times during March and April of 2020. The highest measured concentration, 36.3 ppb on April 4, 2020, was more than four times the REL and there were 23 additional measured concentrations that were more than two times the REL.⁷

Threshold (ppb)	Reference	Max Hourly Benzene Concentration (ppb)			Hourly Exceedances at Downwind #2
		Upwind	Downwind #1	Downwind #2	
8.5	CA Acute REL	1.8	6.6	36.3	60

⁶ California Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments at 1– 6 (Feb. 2015).

⁷ In the response to comments for the previous expansion of this facility for Harmon Creek II, DEP responded to a comment regarding these emissions as follows: this (see p 160 here): “After further investigation of the Downwind Station #2 (DW #2), it appears that the data from March 19, 2020 – May 5, 2020 is invalid due to a malfunction of a blown FID nozzle which resulted in unusable data. The Department understands that the malfunction of the Station was repaired during the spring of 2020. The validity of the data, along with the final fence line monitoring report as a whole, will be further investigated with the Environmental Protection Agency and will [be] documented on a separate path.” DEP, Comment and Response Document, Harmon Creek Gas Plant (Apr. 11, 2023), at 15 (Response to Comment 10). Commenters have not seen followup documentation regarding the resolution or further investigation of this information. The review memo for the Harmon Creek II Permit, DEP adjusted the PM PTE for these sources, using the manufacturer guarantees for PM emission rates. See Harmon Creek II Review Memo, at 16 n.2 (Nov. 23, 2022). This resulted in higher PM PTE for these sources.

These alarmingly high benzene concentration levels, suggesting emissions well above the proposed facility-wide emissions levels in the Draft Permit, demonstrate the need for fenceline monitoring to ensure the facility is complying with its emissions limitations for all pollutants and to protect public health in the surrounding communities. The EPA has recognized the need for fenceline monitoring to protect the public from benzene emissions by requiring fenceline monitoring for certain industrial facilities in recent rules. See 40 C.F.R. § 63.658 (benzene fenceline monitoring requirements for refineries); 40 C.F.R. § 63.314 (benzene fenceline monitoring requirements for coke oven batteries). As discussed above, the facility's questionable claims regarding the proposed reduction in fugitive VOC emissions and insufficient monitoring to ensure the facility remains below the major source threshold for VOCs in practice further support a need for the installation of fenceline air pollution monitors to capture the reality of the facility's VOC emissions. In addition, there are no EPA or DEP or other government-placed air monitoring stations in the local area of the Harmon Creek facility. The Department should require MarkWest to install fenceline air pollution monitors for these pollutants in the Draft Permit.

RESPONSE: In a letter signed by Karen Melvin, Director – Enforcement and Compliance Assurance Division, U.S. Environmental Protection Agency, Region 3, on October 12, 2023, determined that MarkWest had satisfactorily completed the Supplemental Environmental Project (SEP) required by Consent Decree entered on July 9, 2018, between the United States, Commonwealth of Pennsylvania Department of Environmental Protection (PADEP), and MarkWest Liberty Midstream & Resources, LLC/Ohio Gathering Company, LLC (MarkWest). In response to Footnote 7 related to Downwind Monitor #2 downtime, EPA concluded that "...the invalid data was not significant enough to require additional data gathering to satisfy the SEP requirements." A copy of the letter is included in Appendix G-2. See also the Department's Response to Comment 34(b).

68. **COMMENT:** DEP used outdated estimates for its PM PTE calculations from existing heaters without an explanation or justification. DEP must explain why the PM PTE from existing heaters was reduced in the Review Memo for Harmon Creek III after having been raised during the review process for the Harmon Creek II permit.

For most of the existing heaters (Sources 031, 033, 034, 036, and 035 but not 037), MarkWest has incorporated PM PTE estimates based on AP-42 emission factors in the Review Memo. In the review memo for the Harmon Creek II Permit, DEP adjusted the PM PTE for these sources, using the manufacturer guarantees for PM emission rates. See Harmon Creek II Review Memo, at 16 n.2 (Nov. 23, 2022). This resulted in higher PM PTE for these sources.

The Revised Application does not reflect this upward adjustment and has PM PTE estimates for the heaters based on AP-42, resulting in a 3.07 tpy decrease in PM PTE (see table below). However, for the new heaters, MarkWest has used the manufacturer guarantee rather than AP-42 to estimate PM PTE.

RESPONSE: The statement regarding the use of outdated emissions factors is false. The manufacturer guarantees utilized in the application are current; the AP-42 emissions factors for External Natural Gas Combustion in AP-42 Chapter 1, Section 1.4, are outdated and have not been updated since 1998. The use of manufacturer guarantees and AP-42 emissions factors are both appropriate methods for establishing PTE and enforceable emissions restrictions. Manufacturer emissions guarantees are preferable unless unavailable, in which case AP-42 emissions factors would be utilized. Further, in Table 1.4-2, the total and condensable PM factors carry a "D" rating (below average) and the filterable PM factor carries a "B" rating (above average), which results in a combined mathematical average rating

of “D”. Per the Introduction to AP-42⁸, a “D” rated factor is “...developed from A-, B- and/or C-rated test data from a small number of facilities, and there may be reason to suspect that these facilities do not represent a random sample of the industry. There also may be evidence of variability within the source population.” The change from AP-42 emissions factors to manufacturer emissions guarantees is acceptable and provides a more refined, site-specific estimate of the PTE for PM.

69. **COMMENT:** This facility and this operator have a history of air pollution, black smoking events and other upsets, and noncompliance that should disqualify this facility from being allowed to expand and further increase the pollution it will emit into the community.

RESPONSE: See the Department’s response to Comment 70. After further review of the Proposed Plan Approval in response to the above comment, it was discovered that conditions applicable to the plant flare were inadvertently omitted. The following regulatory language and conditions have been added to the Plan Approval, which address flare emissions:

- a. The applicable requirements of 40 CFR Part 60 Subpart A – *General Provisions* in 40 CFR § 60.18 and other requirements applicable to the plant flare as specified in PA-63-01011 have been included in Section D, Source Level Plan Approval Requirements, Source ID C601, Source Name: Plant Flare. The permit map for Source ID C601 has also been updated to include the plant flare stack.
- b. The following additional conditions have also been included:
 1. The owner or operator shall conduct visible emissions observations using either the methods in paragraph (1) of this section or, alternatively, the methods in paragraph (2) of this section. The owner or operator must record and report any instances where visible emissions are observed for more than 5 minutes during any 2 consecutive hours as specified in § 60.18(c)(1).
 - a. At least once per day for each day a process is routed to the flare, conduct visible emissions observations using an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A-7. If at any time the owner or operator sees visible emissions while a process is routed to the flare, even if the minimum required daily visible emission monitoring has already been performed, the owner or operator shall immediately begin an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A-7. If visible emissions are observed for more than one continuous minute during any 5-minute observation period, the observation period using Method 22 at 40 CFR part 60, appendix A-7 must be extended to 2 hours or until 5-minutes of visible emissions are observed. Daily 5-minute Method 22 observations are not required to be conducted for days the flare does not receive any volumetric flow from any process.
 - b. Use a video surveillance camera to continuously record (at least one frame every 15 seconds with time and date stamps) images of the flare flame and a reasonable distance above the flare flame at an angle suitable for visual emissions observations. The owner or operator must provide real-time video surveillance camera output to the

⁸ https://www.epa.gov/system/files/documents/2024-01/introduction_2024.pdf

control room or other continuously manned location where the camera images may be viewed at any time.

2. The owner or operator must record and report any instances where visible emissions are observed for more than 5 minutes during any 2 consecutive hours as specified in § 60.18(c)(1).
3. Emissions of VOC from the flare stack shall not exceed 12.01 tons during any consecutive 12-month period, updated monthly.

70. **COMMENT:** The Harmon Creek facility already has a history of documented air pollution complaints and noncompliance that should disqualify it from DEP’s approval of a plan approval to further expand this facility. For example, the facility reported three emergency shutdowns that resulted in large flaring events in 2022.

- See Email from Philip Jereza, Marathon Petroleum, to Steven Mieszkowski, DEP, Re: Courtesy Notification (Jan. 24, 2022 8:09 AM) (regarding emergency shutdown on January 22, 2022 causing “larger than normal flare”);
- Email from Philip Jereza, Marathon Petroleum, to Steven Mieszkowski, DEP, Re: Malfunction Notification (Jan. 12, 2022 8:54 PM) (regarding emergency shutdown on January 5, 2022);
- Philip Jereza, Marathon Petroleum, to Ana Hensel, DEP, Re: Courtesy Notification (Dec. 24, 2022 1:55:31 PM) (regarding emergency shutdown on December 23, 2022 causing “larger than normal flare”).
- A July 23, 2024 Inspection Report lists 11 Malfunctions, stating “Experienced larger than normal flare due to maintenance actions on the following dates: 4/2/2024, 2/14/2024, 1/3/2024, 3/15/2024, 4/26/2024, 11/15/2023, 10/3/2023, 12/21/2023, 9/27/2023, and 7/11/2023.
- On 6/13/2023, a malfunction occurred with Heater H-1769 (S036), and a larger than normal flare occurred on 12/23/2023 because of frozen equipment.” DEP, Inspection Report, Harmon Creek Gas Plant, at 5 (July 23, 2024) (inspector Pamela Trovato).

Additional large flares were observed and documented by community members and Commenters. For example, on January 23, 2024, a large flare occurred from approximately 2:30 pm to at least 8:00 am the following morning (see January 2324, 2024 BreatheCam footage⁹) and another large flare occurred on May 24, 2024.

DEP should not permit the unfettered expansion of this or any facility that has already demonstrated that it has not complied with air pollution laws and permits.

RESPONSE: Although the referenced emergency shutdowns, maintenance, and malfunctions resulted in flaring events, no associated air quality violations were documented. This fact demonstrates that the facility and air pollution control equipment are and were operated in a manner consistent with good operating and air pollution control practices for minimizing emissions in accordance with 25 Pa. Code § 127.25, 40 CFR § 60.5370a(b), and 40 CFR § 60.5370b(b). Given the lack of violations during the events, the flare combusted the vented VOCs, HAPs, and CH₄ as designed and thus minimized the emission of these pollutants into the atmosphere. The flaring of vented gas mitigates potential safety

⁹<https://breathecam.org/#v=1077.01164,1282.20253,3.494,pts&t=727.52&ps=50&bt=20240123104504&et=20240124055956&d=2024-01-23&s=cryocam>

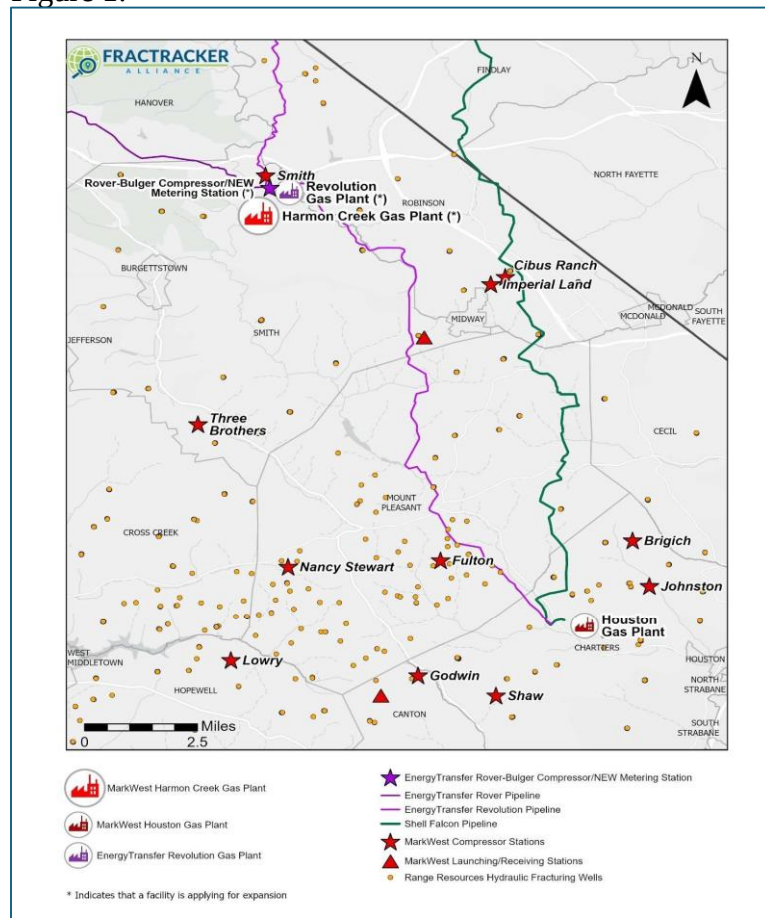
threats and significantly reduces emissions of VOCs, HAPs, and CH₄ into the atmosphere. See also the Department's Response to Comment 69.

71. **COMMENT:** DEP failed to require or conduct a single-source aggregation analysis to determine whether this facility should be aggregated with the Harmon Creek Meter Station or other nearby emissions sources.

The Harmon Creek III expansion and facility are in an environmental justice area that is already saturated with a profusion of oil and gas industrial sites, many of which are connected, yet DEP failed to conduct or include an analysis of whether the Harmon Creek facility should be aggregated as a single source with any of the very nearby pollution sources. A notable example is the Harmon Creek Meter Station, which recently applied for an expansion with FERC and will directly connect with this facility. The Harmon Creek Meter Station is on the same road as Harmon Creek – Point Pleasant Road. The documents submitted to FERC regarding the meter station's expansion are available through FERC's website. See Rover Pipeline LLC Notice of Application and Establishing Intervention Deadline Rover-Bulger CS and Harmon Creek MS Expansion Project, Docket No. CP25-12-000 (Nov. 21, 2024), <https://www.federalregister.gov/documents/2024/11/21/2024-27144/rover-pipeline-llc-notice-of-application-and-establishing-intervention-deadline>.

For a map showing just some of the nearby oil and gas facilities, please see Figure 1, created by FracTracker Alliance.

Figure 1:



RESPONSE: The Department inadvertently omitted a *Source/Facility Determination*, which evaluates source aggregation, from its review memo for the Harmon Creek Cryo III/DeEthanizer II project. The *Source/Facility Determination* is provided below.

Source/Facility Determination:

Whether emissions from Harmon Creek and emissions from any other exploration, extraction, production, gathering, processing, or transmission activities should be considered a single source have been examined to determine the applicability of permitting requirements established by the Non-Attainment New Source Review (NA-NSR), Prevention of Significant Deterioration (PSD), and Title V permitting programs of the Clean Air Act (CAA).

On June 3, 2016, EPA finalized revisions to regulations applicable to permitting of stationary sources of air pollution under NSR and Title V (81 FR 35622). This final rule clarified the meaning of the term *adjacent* used to determine the scope of a *stationary source* for purposes of NA-NSR and PSD, and the scope of the term *major source* in the title V operating permit program in the onshore oil and natural gas sector. According to the revised meaning of the term *adjacent*, EPA considers equipment/activities adjacent if they are on the same site, or on sites that share equipment and are within a quarter mile (¼-mile) of each other. Sources located beyond ¼-mile are not considered adjacent. Further, equipment/activities located within a ¼-mile that are not sharing equipment are also not considered adjacent.

On June 9, 2018, the Department published a notice in the Pennsylvania Bulletin rescinding its *Guidance for Performing Single Stationary Source Determinations for Oil and Gas Industries* (270-0810-006; October 6, 2012) due to the issuance of the above EPA regulatory revisions. EPA's revised meaning of the term adjacent is less stringent than the Department's rescinded guidance which also considered properties located beyond ¼-mile on a case-by-case basis.

Using the revised EPA regulatory provisions for single source determinations in the oil and natural gas sector, the Department has evaluated the facility location using eMapPA and has confirmed there are no facilities owned and operated (under common control) by MarkWest that are considered *adjacent* to Harmon Creek. This determination also considered the nearby Rover Pipeline LLC, Bulger Compressor Station, the Rover-MarkWest Interconnect and Rover-MarkWest Meter Station. Per email from MarkWest on April 28, 2025, “[w]hile the Rover-owned Interconnect may receive natural gas from MarkWest facilities, neither the natural gas nor the Rover Interconnect facilities and Rover residue gas pipeline is owned by MarkWest.” Therefore, there are no additional emissions of regulated pollutants which should be aggregated with those of Harmon Creek.

The following are written protests and comments on the proposed Plan Approval received by the Department via email. The list of Protestants is included in Appendix H to this memo.

72. **PROTESTANTS 1-99:** I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized

communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: The Department acknowledges the Protestants’ concerns. The Department is committed to ensuring that facilities comply with the Clean Air Act, the Air Pollution Control Act, State regulations, and permits to protect public health and the environment.

Emissions from the expanded facility are limited in accordance with BAT and applicable regulations. Limiting emissions, as this plan approval does, fosters protection of the environment and the public.

Although emissions of methane will increase with the proposed project, the Plan Approval imposes BAT that will minimize methane emissions to the maximum extent practicable. As noted on Page 4 of the Department Review Memo (February 10, 2025), “[n]ew sources shall control the emission of air pollutants to the maximum extent, consistent with the best available technology as determined by the Department as of the date of issuance of the Plan Approval for the new source.” *Best available technology* (BAT) is defined in 25 Pa. Code § 121.1 as “[e]quipment, devices, methods or techniques as determined by the Department which will prevent, reduce or control emissions of air contaminants to the maximum degree possible and which are available or may be made available.”

Although emissions of benzene and formaldehyde will increase with the proposed project, the PTE values for these pollutants are 0.01 TPY and 0.03 TPY, respectively, which are well below the exemption threshold of 0.5 TPY for any single hazardous air pollutants (HAP) as specified in Exemption 38(c)(c)(ii) for oil and gas exploration, development, and production facilities and associated equipment in the Department’s published list of *Air Quality Permit Exemptions* (275-2101-003; July 1, 2021). Again, the Plan Approval imposes BAT that will minimize benzene and formaldehyde emissions to the maximum extent practicable. Further, the potential to emit all HAPs is far below major source thresholds for HAP, which would require additional measures to ensure the protection of public health.

Given the presence of *wet* [natural] gas¹⁰ in the Southwestern Pennsylvania Marcellus shale region, the gas must be processed to the heavier hydrocarbon fraction (ethane (C2) and propane+ (C3+)) to ensure safe, efficient, and environmentally responsible operation of domestic natural gas appliances and commercial and industrial equipment. The use of cryogenic gas processing allows the ethane and propane+ fractions to be separated and delivered to other downstream customers for direct use and/or distribution for fuels or to other industry segments for further processing. For example, ethane, propane, and butane (and also liquified petroleum gas (LPG), which contains primarily propane and butane with potentially small amounts of ethane) are used as fuels in compatible equipment, with propane being essential for portable use and rural domestic cooking and heating fuel. Ethane and propane are also both used as chemical feedstocks for the production the plastics and resins necessary for the manufacture of solar panels and wind turbine blades, thus, given current manufacturing techniques, the equipment necessary for “clean energy” solutions (non-fossil fuel-based) are significantly dependent on the products obtained from natural gas processing.

¹⁰ “Natural gas that contains less methane (typically less than 85% methane) and more ethane and other more complex hydrocarbons.” (Schlumberger Energy Glossary, <https://glossary.slb.com/en/>.)

73. **PROTESTANT 100:** I am terrified and I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

74. **PROTESTANT 101:** PA already has forever chemicals in our water!!! STOP THIS MADNESS!!! YOUR GREED US LITERALLY KILLING US!!! I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: Air emissions from the proposed project have been minimized through the application and employment of BAT. See the Department's Response to Comment 72.

75. **PROTESTANT 102:** I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations. STOP THE DESTRUCTION OF THIS PLANET!

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

76. **PROTESTANT 103:** I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County,

increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

ARE YOU GUYS asleep at the switch? Are you not aware of the harm PLASTICS and Oil products do to our environment. We need to BAN PLASTICS and now, if we hope to have a future HUMAN RACE. It's in everything and is affecting our health, especially the health of babies and children. Plastics affect our HORMONES, which is causing infertility in both men and women. Little girls, age 8, are getting their periods. It is causing cancer, auto-immune diseases, diabetes, and a whole host of other diseases. In addition, the WASTE from plastic cannot be re-cycled and is building up in our oceans and on the beaches. It's polluting our food. Animals and fish, that we eat, are loaded with plastic. WHAT IS IT GOING TO TAKE FOR YOU PEOPLE TO STOP THIS MADNESS? Try doing some RESEARCH into the HARMS of Plastic and Oil products on LIFE ! So, I guess, you'll get your PROFIT and the hell with the planet and everybody else! DO YOU HAVE CHILDREN, GRANDCHILDREN? Soon the human race will be no more because of YOUR GREED ! There are OTHER WAYS to produce things! Go back to cardboard detergent boxes, glass soda bottles, glass shampoo bottles, GLASS EVERYTHING! Stainless steel, bamboo, come on, use your BRAINS and be the first to go back to the "Good Old days" without PLASTICS ! In the "Graduate", the "future" was "plastic" but now it's BACK TO THE FUTURE! Go back to glass/cardboard, wax paper, Hey, how about using WAX as a container or rubber! Any inventors out there ????? Something "new" that can take over for plastics!

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99) and the Response to Comment 38.

77. **PROTESTANT 104:** As a resident of Pennsylvania and someone who is living in what was a quiet and environmentally clean part of the state but is now a natural gas industrial area, I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: See the Department's Response to Comment 31 and Protest 72 (Protestants 1-99).

78. **PROTESTANT 105:** I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air

quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations. Our state is far behind other states in developing clean energy, and we're losing out not only through the damage caused by fossil fuel extraction and use, but through the loss of good jobs and innovation in clean energy production.

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

79. **PROTESTANTS 106 - 108:** I understand that The PA Department of Environmental Protection (DEP) is currently reviewing the Harmon Creek Facility's Air Quality Plan Approval permit 63-01011B. The health risks associated with the toxic plastic manufacturing emissions produced by the Harmon Creek Facility include respiratory illness and even cancer. The expansion of MarkWest's Harmon Creek Gas Plant in Smith Township, PA would bring more dangerous air pollution and perpetuate existing environmental health impacts to the Washington County, PA area residents. In light of DEP's notice error, as well as the Harmon Creek Facility's documented levels of harmful emissions, DEP should not permit this dangerous polluter to expand. Thank you for your time and attention to this important issue.

RESPONSE: See the Department's Response to Comment 38 and Protest 72 (Protestants 1-99).

80. **PROTESTANT 109:** Your opposition to the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant is imperative. Such an egregious project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents~ far too many from historically marginalized communities already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. We need the PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

81. **PROTESTANT 110:** Particularly as GHG emission reduction efforts are undermined at the national level, I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in this part of Western Pennsylvania, increasing air pollution, methane emissions, and environmental harm. The expansion will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions and not following this "energy independence" nonsense perpetuated

by climate change deniers across the Commonwealth. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

82. **PROTESTANT 111 - 196:** I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations.

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

83. **PROTESTANT 197:** I strongly oppose the proposed permit for the expansion of MarkWest's Harmon Creek Gas Plant. This project would further entrench fossil fuel infrastructure in Washington County, increasing air pollution, methane emissions, and environmental harm. The expansion will worsen air quality by releasing hazardous pollutants like benzene and formaldehyde, known to cause respiratory diseases and cancer. Additionally, it will lock in fossil fuel dependence for decades, harming local communities and accelerating climate change. Residents—many from historically marginalized communities—already suffer disproportionately from pollution-related health issues. Approving this permit would perpetuate these injustices. Pennsylvania should be prioritizing clean energy solutions, not expanding fossil fuel operations that threaten public health and the environment. I urge PA DEP to reject this permit and instead invest in a just transition toward renewable energy that protects our communities and future generations. Thank you for your help to PROTECT OUR PLANET and the NEIGHBORHOODS where our Families and Children Lives!!! GO GREEN PA for Good Jobs and a Great Economy!!!! LET FINALLY GET IT DONE FOR FUTURE GENERATIONS - YOUR LEGACY!

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

84. **PROTESTANT 198:** Our planet is DYING. Stop it[.]

RESPONSE: See the Department's Response to Protest 72 (Protestants 1-99).

85. **PROTESTANT 199:** I understand that The PA Department of Environmental Protection (DEP) is currently reviewing the Harmon Creek Facility's Air Quality Plan Approval permit 63-01011B. The health risks associated with the toxic plastic manufacturing emissions produced by the Harmon Creek Facility include respiratory illness and even cancer. The expansion of MarkWest's Harmon Creek Gas Plant in Smith Township, PA would bring more dangerous air pollution and perpetuate existing environmental health impacts to the Washington County, PA area residents. DEP's failure to adequately inform communities of the public participation process due to the error in the initial notice does not

allow affected residents to provide meaningful input, which is required. In light of DEP's notice error, as well as the Harmon Creek Facility's documented levels of harmful emissions, DEP should not permit this dangerous polluter to expand. DEP's failure to Thank you for your time and attention to this important issue.

RESPONSE: The Department's notice for the proposed action which published in the *Pennsylvania Bulletin* on February 8, 2025, met the requirements of 25 Pa. Code § 127.45(b) and a new notice was not required. The notice clearly identified the proposed new sources, the Best Available Technology applicable thereto, and the post-project potential-to-emit for the facility. See also the Department's Responses to Comments 37 and 38.

86. **PROTESTANT 200:** I understand that The PA Department of Environmental Protection (DEP) is currently reviewing the Harmon Creek Facility's Air Quality Plan Approval permit 63-01011B. The health risks associated with the toxic plastic manufacturing emissions produced by the Harmon Creek Facility include respiratory illness and even cancer. The expansion of MarkWest's Harmon Creek Gas Plant in Smith Township, PA would bring more dangerous air pollution and perpetuate existing environmental health impacts to the Washington County, PA area residents. In light of DEP's notice error, as well as the Harmon Creek Facility's documented levels of harmful emissions, DEP should not permit this dangerous polluter to expand. This facility's permit should be [considered] Major Source. Thank you for your time and attention to this important issue.

RESPONSE: See the Department's Response to Protest 85 (Protestant 199). With a facility-wide, post-project PTE less than the major source thresholds for all for criteria and hazardous air pollutants, the facility does not meet the regulatory criteria for a "major source". See also the Department's Responses to Comments 38 and 42.

87. **PROTESTANTS 201 and 202:** I understand that The PA Department of Environmental Protection (DEP) is currently reviewing the Harmon Creek Facility's Air Quality Plan Approval permit 63-01011B. The health risks associated with the toxic plastic manufacturing emissions produced by the Harmon Creek Facility include respiratory illness and even cancer. The expansion of MarkWest's Harmon Creek Gas Plant in Smith Township, PA would bring more dangerous air pollution and perpetuate existing environmental health impacts to the Washington County, PA area residents. In light of DEP's notice error, as well as the Harmon Creek Facility's documented levels of harmful emissions, DEP should not permit this dangerous polluter to expand. Thank you for your time and attention to this important issue.

RESPONSE: See the Department's Responses to Comment 38 and Protest 85 (Protestant 199).

88. **PROTESTANT 203:** I am writing to voice my strong opposition to the Harmon Creek Gas Plant in Washington, PA. As an employee of a local small business, I am deeply concerned about the significant health and environmental risks this facility poses—not just to me, but to my animals, my clients, my employees and our entire community. Cryogenic gas plant facilities release harmful pollutants, including volatile organic compounds (VOCs), nitrogen oxides (NOx), particulate matter (PM2.5), and hazardous air toxins such as benzene, formaldehyde, and toluene. These pollutants are known to cause serious health problems, including:

- Increased Cancer Risk
- Heart Disease and Stroke
- Respiratory Illnesses: Such as asthma, bronchitis, and chronic obstructive pulmonary disease (COPD).
- Neurological Effects: Such as, cognitive impairments, headaches, dizziness, and developmental disorders in children.
- Compromised Immune System and Birth Defects

Beyond the immediate health risks, this facility threatens our local environment and water supply, further exacerbating long-term health issues. Washington County residents should not have to endure increased illness, environmental degradation, and declining property values so that corporations can profit at our expense. I urge you to reject this harmful project and prioritize the well-being of our community. We deserve sustainable, responsible development that protects our health and future, not industries that put our lives at risk.

RESPONSE: See the Department’s Response to Protest 72 (Protestants 1-99).

89. **PROTESTANT 204:** Because of all the KNOWN health risks, DEP should not permit this dangerous polluter to expand. Unless you fully understand those risks and listen to the residents who are at risk, you have no basis to approve this permit.

RESPONSE: See the Department’s Response to Protest 72 (Protestants 1-99).

90. **PROTESTANTS 205 - 214:** I am writing to urge the PADEP to deny permit PA-63-01011B for the MarkWest Liberty Midstream & Resources, LLC Harmon Creek Gas Processing Plant.

- a. This permit comes when [MarkWest] has still yet to demonstrate compliance for the existing two plants on this site. There is a previous history of malfunctions, visible emissions, violations, and flaring on this site. This permit should not be approved when [MarkWest] has a proven record showing noncompliance.

RESPONSE: See the Department’s Response to Comment 30.

- b. This proposed expansion should be reviewed as a major source. The permit would authorize a large addition of potential emissions that can exceed major source thresholds. The controls that would make this into a synthetic minor source are not sufficient to ensure emissions would not exceed the thresholds.

RESPONSE: See the Department’s Response to Comment 44 and the Department’s Response to Protest 86 (Protestant 200).

- c. In addition to concerns around this facility, the Harmon Creek Processing Plant is located in close proximity to the Revolution Cryogenic plant which has had compliance issues and is also applying for an expansion permit. The surrounding community is already an environmental justice area with a score of 94th percentile on the EJ screener. There is a large existing pollution burden on this area and further expansions are an unnecessary environmental risk to nearby ecosystems and communities.

RESPONSE: Comments regarding the compliance issues and expansion permit application at the ETC Northeast Pipeline, LLC, Revolution Cryogenic Plant are outside the scope of this action. The merits of the application for the ETC Northeast Pipeline, LLC, Revolution Cryogenic Plant will be addressed during the Department's review thereof. See also the Department's Response to Comment 37.

- d. I encourage the PADEP to have two separate dates for the public hearing and public conference. Collapsing both events into one two-hour session undermines the public's ability to participate in this process. PADEP should reschedule the public hearing for an evening two weeks after the public conference to fully allow residents to be notified of and participate in such events.

RESPONSE: See the Department's Response to Comment 37.

91. **PROTESTANT 215:** DENY THIS CATASTROPHE WAITING-TO-HAPPEN !!!!! I am writing to urge the PADEP to deny permit PA-63-01011B for the MarkWest Liberty Midstream & Resources, LLC Harmon Creek Gas Processing Plant.

This permit comes when [MarkWest] has still yet to demonstrate compliance for the existing two plants on this site. There is a previous history of malfunctions, visible emissions, violations, and flaring on this site. This permit should not be approved when [MarkWest] has a proven record showing noncompliance.

This proposed expansion should be reviewed as a major source. The permit would authorize a large addition of potential emissions that can exceed major source thresholds. The controls that would make this into a synthetic minor source are not sufficient to ensure emissions would not exceed the thresholds.

In addition to concerns around this facility, the Harmon Creek Processing Plant is located in close proximity to the Revolution Cryogenic plant which has had compliance issues and is also applying for an expansion permit. The surrounding community is already an environmental justice area with a score of 94th percentile on the EJ screener. There is a large existing pollution burden on this area and further expansions are an unnecessary environmental risk to nearby ecosystems and communities.

I encourage the PADEP to have two separate dates for the public hearing and public conference. Collapsing both events into one two-hour session undermines the public's ability to participate in this process. PADEP should reschedule the public hearing for an evening two weeks after the public conference to fully allow residents to be notified of and participate in such events.

RESPONSE: See the Department's Response to Protest 90 (Protestants 205 – 214).

The following are summaries of oral testimony presented at the hearing held by the Department on Tuesday, March 11, 2025, from 6:30pm – 8:30pm at the Burgettstown Area Middle/High School Campus. The Hearing Transcript, which includes the list of participants, is included in Appendix I to this memo. MarkWest’s response to each set of oral testimony made at the hearing is included in Appendix I-1.

92. HEARING TESTIMONY 1: Concerns were raised regarding the:

- a. Purported health risks of the facility.

RESPONSE: See paragraphs 1-4 of Department’s Response to Protest 72 (Protestants 1-99).

- b. Concentration of natural gas infrastructure in the vicinity of the facility.

RESPONSE: See the Department’s response to Comment 31.

- c. Health impacts of VOCs.

RESPONSE: See paragraphs 1-4 of Department’s Response to Protest 72 (Protestants 1-99).

- d. Proximity of a school to the facility.

RESPONSE: See the Department’s Responses to Comments 31 and 71.

- e. Facility being permitted as a minor source

RESPONSE: See the Department’s Responses to Comments 43, 44, 45, 46, 47, and 49.

- f. Proposed controls are not sufficient to designate the facility as a synthetic minor source

RESPONSE: See the Department’s Responses to Comments 44 and 49.

- g. Failure by Mark West to demonstrate compliance for Harmon Creek I and II.

RESPONSE: MarkWest is not in violation and has not shown a lack of intention or ability to comply with the Air Pollution Control Act, the regulations under the act, or a plan approval operating permit or order of the Department. In the Department’s inspection report for a full compliance evaluation (FCE) of GP5-63-01011B (Harmon Creek I) and PA-63-01011 (Harmon Creek II) conducted on July 13, 2024, no violations were noted, thus compliance was demonstrated at the time of the inspection. In the inspection report for initial operating permit inspection (IPI) PA-63-01011 (Harmon Creek II) also conducted on July 13, 2024, the Department determined that “...the authorized sources and controls were constructed in accordance with and are in compliance with the plan approval and terms and conditions.”

- h. History of non-compliance, flaring, and black smoke.

RESPONSE: See the Department’s Responses to Comments 69 and 70 and the Department’s Response to Comment 92 (Hearing Testimony 1(g)) above.

- i. Environmental justice meeting and public hearing should be held on two separate days to allow the public to incorporate what it learned that the meeting into its comments.

RESPONSE: The Department will consider the suggested meeting and hearing arrangement for future projects when it has determined that a hearing is necessary.

93. HEARING TESTIMONY 2: Concerns were raised regarding:

- a. The purported sidestepping of the Title V permitting program and its existence to ensure accountability and environmental protection.

RESPONSE: See the Department's Responses to Comments 43, 44, 45, 46, 47, and 49.

- b. The Business operated by the individual which strives to create a calm and safe environment for dogs and owners in the midst of the noise of heavy machinery and constant hum of natural gas extraction operations, which disrupts the training process.

RESPONSE: See the Department's Response to Comment 31. Natural gas extraction, per se, is not authorized by this Plan Approval.

- c. The purported toxic fumes in the air and claims that a dog fighting an antibiotic and steroid resistant respiratory illness and client that lives near the plant with "the same" mystery respiratory illness.

RESPONSE: The testimony presented does not provide sufficient data or information to connect the reported conditions to air emissions from the Harmon Creek Plant. The Department suggests that the Pennsylvania Department of Health may be a more suitable agency to consider these concerns.

94. HEARING TESTIMONY 3: Concerns were raised regarding:

- a. The lack of enforceable restrictions in the proposed Plan Approval to limit the facility's PTE to below major source thresholds.

RESPONSE: See the Department's Responses to Comments 44 and 49.

- b. Chronic upsets and noncompliance at the facility.

RESPONSE: See the Department's Responses to Comments 69 and 70.

- c. Fugitive emissions reductions attributed to changing its leak detection and repair requirements without supporting data.

RESPONSE: See the Department's Response 1 to Comment 44 and the Responses to Comments 49, 53, 54, and the Department's Response to Protest 72 (Protestants 1-99).

- d. The lack of sufficient monitoring to ascertain whether the facility will emit VOCs above the major source thresholds.

RESPONSE: See the Department’s Response 1 to Comment 44 and the Responses to Comments 49 and 53.

- e. The prioritization of public health protection from chronic polluters like the Harmon Creek Plant.

RESPONSE: See the Department’s Response to Comment 30.

- f. The purported use of “magic math” to “attempt to qualify for a minor source permit instead of requiring the full data disclosures that would likely prove that [Harmon Creek] is indeed a major source.”

RESPONSE: See the Department’s Response 1 to Comment 44 and the Responses to Comments 45, 46, and 49.

95. HEARING TESTIMONY 4: Concerns were raised regarding:

- a. MarkWest’s signage prohibiting citizens from taking photos of the Harmon Creek plant from a public road.

RESPONSE: This concern is outside the scope of the proposed action.

- b. The Department not acting in a responsible manner by holding the hearing to accept testimony on the proposed Plan Approval immediately following the public meeting.

RESPONSE: See the Department’s Response to Comment 92 Hearing Testimony 1(i).

- c. The concentration of natural gas infrastructure in the vicinity of the Harmon Creek plant and in an Environmental Justice (EJ) Area.

RESPONSE: See the Department’s response to Comments 31 and 71.

- d. That an approval to expand the Harmon Creek Plant should take into consideration air pollution from the surrounding natural gas facilities.

RESPONSE: See the Department’s response to Comment 71.

- e. An extension of the comment period for 30 days after the public conference and hearing.

RESPONSE: Per 25 Pa. Code § 127.49(c) and the Department’s *Pa. Bulletin* notice of the Public Hearing and Conference published on February 8, 2025, persons may submit “...a written statement and exhibits within 10 days [after the hearing to the Department].” Additionally, per 25 Pa. Code § 127.47(b), “[t]he Department is not required to consider protests filed subsequent to the time designated in § 127.46 (relating to filing protests), but it may consider them if filed prior to issuance of a plan approval...”

96. HEARING TESTIMONY 5: Concerns were raised regarding:

- a. That the Harmon Creek Plant should be considered for a major facility permit.

RESPONSE: See the Department's Responses to Comments 43, 44, 45, 46, 47, and 49.

- b. That Harmon Creek Plant is in an EJ area with PennEnviroScreen score in the 96th percentile and adjacent to an area with a score in the 99th percentile.

RESPONSE: The Department concurs with the data presented in the testimony.

- c. That the Department should have opted the application into the additional procedures and protections of the Department's *Environmental Justice Policy* (September 16, 2023; 015-0501-002)

RESPONSE: See the Department's Response to Comment 39.

97. HEARING TESTIMONY 6: Concerns were raised regarding:

- a. The concentration and overburdening of natural gas infrastructure in the vicinity of the Harmon Creek plant and in an Environmental Justice (EJ) Area.

RESPONSE: See the Department's Responses to Comments 31 and 71. The Department concurs that the Harmon Creek Plant is located in an Environmental Justice Area.

- b. The location of natural gas infrastructure near people's homes.

RESPONSE: See the Department's Response to Comment 31.

- c. That the application for the Harmon Creek Plant expansion was initially for a major facility Plan Approval then later for a minor source Plan Approval.

RESPONSE: The initial major facility Plan Approval application was replaced with a minor facility Plan Approval application on January 17, 2025. See also the Department's Responses to Comments 43, 44, 45, 46, 47, and 49.

- d. Not having the public meeting on a separate day from the hearing.

RESPONSE: See the Department's Response to Comment 92 Hearing Testimony 1(i).

- e. Noncompliance and a history of noncompliance at the Harmon Creek Plant.

RESPONSE: See the Department's Response to Comment 30 and the Department's Response to Comment 92 Hearing Testimony 1(i).

98. HEARING TESTIMONY 7: Noted that comments would be submitted by email.

RESPONSE: No written comments were received via email from this witness.

99. **HEARING TESTIMONY 8:** Concerns were raised regarding:

- a. The Department “helping” MarkWest with its application.

RESPONSE: The Department’s role in the project has been as a regulator, and not an advocate. The regulator role includes identifying deficiencies in the application, asking questions, and requesting additional information to ensure that the application meets the applicable requirements of Title 25 of the Pennsylvania Code. In a technical deficiency letter dated May 28, 2024, the Department identified extensive deficiencies in MarkWest’s initial application for Plan Approval pursuant to 25 Pa. Code § 127.12(a). A second technical deficiency letter and pre-denial letter was sent by the Department via email to MarkWest on November 12, 2024, which identified areas in which the application remained technically deficient and identified additional deficiencies pursuant to 25 Pa. Code § 127.12(a)(2, 3, 5, and 10) and also § 127.12(a)(4). The Department’s evaluation of the responses to the technical deficiencies and related negotiations with MarkWest resulted in the implementation of new BAT requirements for the natural gas processing segment and an enhanced LDAR strategy which will significantly reduce post-project emissions from the facility as compared that proposed in the initial application.

- b. The Department’s failure to issue Notices of Violation (NOVs) at the Harmon Creek Plant.

RESPONSE: The Department has sent NOVs to MarkWest for past noncompliance at the Harmon Creek Plant and anticipates sending NOVs for any future noncompliance.

- c. An email confidentiality request for the flare specifications.

RESPONSE: A determination regarding the referenced request for confidentiality pursuant to 25 Pa. Code § 127.12(d) is pending.

100. **HEARING TESTIMONY 9:** Concerns were raised regarding:

- a. The Department serving industry and not the citizens or its concerns.

RESPONSE: The Department is committed to ensuring that facilities comply with the Clean Air Act, the Air Pollution Control Act, State and Federal regulations, and permits to protect public health and the environment. Given the public interest in the proposed project, the Regional Office exercised its discretion and provided for additional opportunity for public participation by holding a public conference and hearing within the local community on March 11, 2025. The comments received were reviewed and resulted in the inclusion of additional conditions in the Plan Approval. See also the Department’s Response to Comment 99 (Hearing Testimony 8(a)).

- b. Claims that the replacement of the major source Plan Approval application with that for a minor source Plan Approval was done “deceptively” to stay below the major source thresholds.

RESPONSE: See the Department’s Responses to Comments 43, 44, 45, 46, 47, and 49.

101. **HEARING TESTIMONY 10:** Concerns were raised regarding:

- a. Not considering the Plan Approval application a “trigger permit”.

RESPONSE: MarkWest’s application for a minor source Plan Approval is not a trigger permit under the Department’s *Environmental Justice Policy* (September 16, 2023; 015-0501-002).

- b. Claims that the project will affect peoples’ health.

RESPONSE: The Department is committed to ensuring that facilities comply with the Clean Air Act, the Air Pollution Control Act, State and Federal regulations, and permits to protect public health and the environment.

- c. The lack of air monitoring in the area.

RESPONSE: See the Department’s Response to Comment 34(b).

- d. The need for more precise instruments to evaluate the air quality in the area.

RESPONSE: See the Department’s Response to Comment 34(b).

Comments from Sarah Martik on behalf of Center for Coalfield Justice (CCJ)

The following protest and written comments on the proposed plan approval were prepared by Sarah Martik on behalf of Clean Air Action (CAA) and were received via email from Nina Victoria on March 21, 2025. Given the structure of the comment letter, the Department has compiled the letter designated as Items 1. The Department’s responses follow each topic included in the protest and accompanying comments. A copy of the CCJ email (and any attachments) is included in Appendix J.

102. **COMMENT:** MarkWest must reapply for a Title V permit. MarkWest did not apply for a Title V permit because the expansion’s emissions are estimated to be just below the threshold that would require it. However, we understand that MarkWest initially planned to apply for a Title V permit but backtracked. Given this context and past experience with operators in the region, and past experiences of violations at this specific facility, it is very likely that MarkWest will emit above the threshold of their proposed permit, and, therefore, would require a Title V permit. Thus, the DEP should require MarkWest to apply for a Title V permit now rather than later to better protect this community.

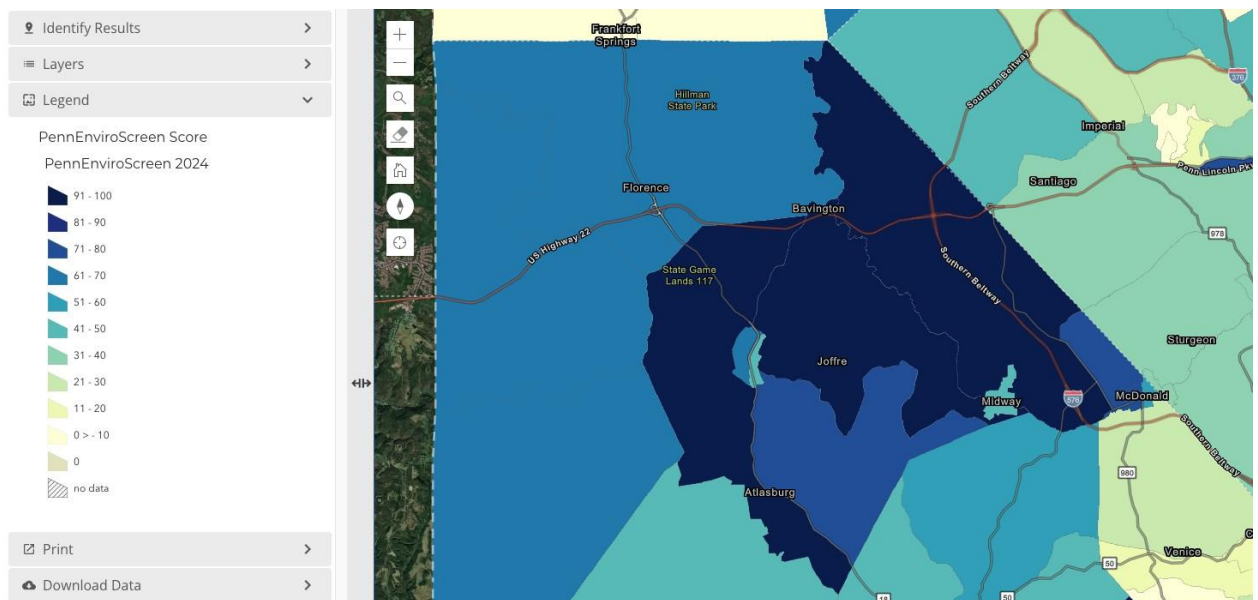
RESPONSE: See the Department’s Responses to Comments 43, 44, 45, 46, 47, and 49.

103. **COMMENT:** The project area is one of the most overburdened in the state with many cumulative impacts, and this expansion must be opted into the Environmental Justice Policy. The Harmon Creek plant is only one of several sources of pollution within this community: there is

another cryogenic plant¹¹, a compressor station¹², several unconventional well pads¹³, and several abandoned/orphaned wells, in addition to the associated infrastructure like pipelines. All of these sources contribute to this area's significant environmental burden, and failing to consider this within the context of the Harmon Creek application puts people at increased exposure risk.

RESPONSE: See the Department's Responses to Comments 34(b), 71, and 72.

104. **COMMENT:** Here, PennEnviroScreen identifies three of the four census block groups within one mile of the project as EJ areas, including the block group (Block Group 1, Census Tract 7137) that contains the project, yet this permit was not opted into the full benefits of the Environmental Justice Policy.



Block Group 1, Census Tract 7137, is disadvantaged to the 94th percentile for all block groups in Pennsylvania. They received a score of 92 for toxic air emissions and a 96 for compressor stations - which approval of this application would only make worse. Other indicators that affect living conditions where this block group received high scores include unconventional oil and gas wells (89), hazardous waste and storage sites (90), coal mining (85), and mining concerns (91). This block group has a population with high incidents of heart disease.

Block Group 2, Census Tract 7140, ranks in the 96th percentile for disadvantaged block groups. Again, they are disproportionately exposed to high levels of toxic air emissions (89) and compressor stations (89), but they are also exposed to high levels of traffic (96). This block group received an environmental effect¹⁴ score of 100 due to the impact of unconventional gas wells (93), hazardous waste and storage sites (92), coal mining (84), and mining concerns (97). There is also a high unemployment rate here, receiving a score of 91.

¹¹ *Revolution Cryogenic Plant*, ENVTL. INTEGRITY PROJECT OIL AND GAS WATCH (accessed March 11, 2025) <https://oilandgaswatch.org/facility/1033>.

¹² *Bulger Compressor Station Site Details*, PA. DEPT. OF ENVTL. PROT. (accessed March 11, 2025) https://www.ahs.dep.pa.gov/eFACTSWeb/searchResults_singleSite.aspx?SiteID=790359.

¹³ *PA Oil and Gas Mapping*, PA. DEPT. OF ENVTL. PROT. (accessed March 11, 2025) <https://gis.dep.pa.gov/PaOilAndGasMapping/OilGasWellsStrayGasMap.html>

¹⁴ A score for a group of indicators.

Block Group 2, Census Tract 7137, is one of the most disadvantaged block groups in the state, placed in the 99th percentile. It received a score of 96 for both toxic air emissions and traffic while receiving scores of 90 for toxic water emissions and 86 for compressor stations. This block group also received an environmental effects score of 100 since residents are affected by conventional gas wells (80), unconventional gas wells (87), hazardous waste and storage sites (91), and mining concerns (96). In addition, there are many children under five in this block group (96), and there are high rates of heart disease (85).

The only block group within one mile of the project that is not an EJ area is Block Group 2, Census Tract 7110. However, this block group still received high scores for toxic air emissions (92), conventional gas wells (86), and mining concerns (94).

RESPONSE: The Department appreciates the information regarding the referenced Census Tracts and concurs that the Harmon Creek Plant is located in an Environmental Justice Area.

105. **COMMENT:** The communities near the Bulger Creek Compressor station are already exposed to pollution. Pollution from compressor stations can cause burning eyes and throat, skin irritation, headaches, nausea, vomiting, cancer, and cardiovascular and respiratory risks (which many people in these block groups already have).¹⁵ Pipelines and unconventional gas wells, which are likely to increase in the area to feed the expansions, come with additional health impacts. Unconventional gas wells increase the risk of groundwater contamination, exposing nearby residents to radioactivity, salts, and chemicals used in fracking fluid.¹⁶ This means residents in these block groups are exposed through the air they breathe and the water they drink. Additionally, pollutants from all the related infrastructure can have health impacts up to 10 miles.¹⁷

Thus, it is evident that the communities near this project are already disproportionately burdened by numerous cumulative impacts, and additional burdens from expanding this facility must not be accepted or imposed, and at the bare minimum, they should be required to apply for a Title V permit.

RESPONSE: See the Department's Responses to Comment 72. Comments regarding the increased risk of groundwater contamination associated with unconventional gas wells are outside the scope of this action. Regarding Title V permitting, see the Department's Responses to Comments 43, 44, 45, 46, 47, and 49.

¹⁵ *Compressor Stations in the Northeast: A Guide to Protecting Your Health and the Environment*, Env't. Health Project (Feb. 15, 2023) <https://www.environmentalhealthproject.org/post/compressor-stations-in-the-northeast-a-guide-to-protecting-your-health-and-the-environment>; Curtis D Davis et. al., *Community Health Impacts from Natural Gas Pipeline Compressor Stations*, GEOHEALTH (Oct. 31, 2023) <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023GH000874>.

¹⁶ *Environmental Impacts of Natural Gas*, UNION OF CONCERNED SCIENTISTS (updated May 9, 2023) <https://www.ucsusa.org/resources/environmental-impacts-natural-gas>.

¹⁷ Cynthia Walker, Ph.D, *Air Pollution from Pennsylvania Shale Gas Compressor Stations - Report*, FRACTRACKER ALLIANCE (March 19, 2020) <https://www.fracktracker.org/2020/03/air-pollution-pennsylvania-compressor-stations/>; Spencer Levering, *Pitt studies link unconventional natural gas developments to childhood cancer, asthma attacks*, THEPITTNEWS (Sept. 7, 2023) <https://pittnews.com/article/182127/news/pitt-studies-link-unconventional-natural-gas-developments-to-childhood-cancer-asthma-attacks/>.

106. **COMMENT:** However, it is clear that additional burdens are likely to be imposed anyway, and the DEP did not choose to opt this permit into their Environmental Justice Policy, finalized in 2023. The Environmental Justice meeting that was held just prior to this comment period did not give residents enough time to react to information and form comments to give at this hearing. At the very least, the environmental justice meeting and the hearing should have been held on separate days. The Environmental Justice Policy offers much more than one meeting to learn the basics about a project. The Environmental Justice Policy recommends a tailored outreach approach for each community, easy-to-understand documents in an accessible place, enhanced inspection and enforcement, and more. This community has not been given what they deserve from the DEP, and the DEP should rectify that.

Thank you for your consideration, please feel free to reach out with questions at any time.

RESPONSE: See the Department's Response to Comment 37 and 92(i) (Hearing Testimony 1). The Department acknowledges and appreciates your commentary.

CONCLUSION AND RECOMMENDATION

Based on its application for plan approval, supporting documentation, calculations, and proposed technology, MarkWest Liberty Midstream & Resources, LLC, has demonstrated that the proposed construction of the DeEthanizer II and 330 MMscfd Harmon Creek Cryo III and associated equipment at the Harmon Creek Gas Plant meets the applicable requirements of 25 Pa. Code Chapter 127. I recommend issuance of Plan Approval PA-63-01011B with the special conditions therein proposed and revisions noted in this document for a term of 18 months from the date of issuance. Notice of the Department's final action on the subject application will be published in the *Pa. Bulletin*. Pursuant to 25 Pa. Code §127.51(b), a copy of the Plan Approval disposition (including this memo and attachments) will be provided to each protestant who submitted comments within the timeframe specified in §127.46. Notice of the Plan Approval disposition to any commentors or protestants for which contact information was not provided will be provided via the *Pa. Bulletin*.