



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: April 18, 2024      Effective Date: March 10, 2026  
Revision Date: March 10, 2026      Expiration Date: April 18, 2027  
Revision Type: Modification

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 23-0119K

Federal Tax Id - Plant Code: 23-3102655-3

Owner Information

Name: ENERGY TRANSFER MKT & TERM LP  
Mailing Address: 100 GREEN ST  
MARCUS HOOK, PA 19061-4800

Plant Information

Plant: ENERGY TRANSF MKT & TERM LP/MARCUS HOOK TERM  
Location: 23      Delaware County      23825      Marcus Hook Borough  
SIC Code: 4226 Trans. & Utilities - Special Warehousing And Storage, Nec

Responsible Official

Name: EDWARD G HUMAN  
Title: VP-MARCUS HOOK OPR  
Phone: (610) 859 - 1912      Email: EDWARD.HUMAN@energytransfer.com

Plan Approval Contact Person

Name: KEITH GRAVER  
Title: SR SPECIALIST-ENV COMPLI  
Phone: (610) 859 - 1276      Email: keith.graver@energytransfer.com

[Signature] \_\_\_\_\_  
JILLIAN A. GALLAGHER, SOUTHEAST REGION AIR PROGRAM MANAGER



### Plan Approval Description

(a) This plan approval is for the installation and temporary operation of the following ethane chilling process equipment to accommodate an expansion of the ethane chilling capacity at the facility from approximately 75,000 bbl/day to approximately 85,000 bbl/day:

- (1) A new (fourth) refrigeration train, consisting of a mixed refrigerant liquid compressor and heat exchanger, ethane chiller, and related equipment, in parallel with the three existing ethane chiller trains at the facility.
- (2) A new boil-off gas (BOG) system, consisting of a compressor, chiller, and related equipment.
- (3) New piping, fugitive emissions components, and process vents associated with (a)(1)–(2), above.
- (4) Updated piping and fugitive emissions components for certain existing ethane chilling process equipment (i.e., the feed metering, feed heating, amine treatment, and demethanizer off-gas systems).

(b) In addition, this plan approval accounts for emissions from the following:

- (1) Operational, maintenance, and emergency connections from (a)(1), above, to the West Cold Flare (Source ID C01) permitted under Title V Operating Permit No. 23-00119 and Plan Approval No. 23-0119E (revised).
- (2) Operational, maintenance, and emergency connections from (a)(2), above, to the Project Phoenix Cold Flare (Source ID C04) authorized under Plan Approval No. 23-0119J.
- (3) Additional steam demand on the three existing auxiliary boilers (1 and 3–4; Source IDs 031 and 033–034) permitted under Title V Operating Permit No. 23-00119 and Plan Approval No. 23-0119E (revised) by certain existing ethane chilling process equipment (i.e., the dehydrators and water/ethylene glycol system utility), as well as for maintenance purposes, to support the additional ethane throughput through new and existing ethane chilling process equipment.

(c) This plan approval has been modified to memorialize the surrender/retirement of nitrogen oxides (NO<sub>x</sub>) Emission Reduction Credits (ERCs) and volatile organic compound (VOC) ERCs, as specified in Condition # 004(a)–(c), Section C, of this plan approval.



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Note: These same sub-sections are repeated for each source!

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**SECTION A. Plan Approval Inventory List**

| Source ID | Source Name                                                     | Capacity/Throughput | Fuel/Material |
|-----------|-----------------------------------------------------------------|---------------------|---------------|
| 400       | NAT GAS LIQUIDS (NGLS) FUGITIVE EMISS COMPS<br>28LAER LDAR REQS |                     |               |
| 401       | ADD'L NGLS FUGITIVE EMISSIONS COMPONENTS<br>LDAR REQS (VOCS)    |                     |               |
| 501       | ADD'L FUGITIVE EMISSIONS COMPONENTS LDAR<br>REQUIREMENTS (GHGS) |                     |               |

**PERMIT MAPS**

**SECTION B. General Plan Approval Requirements****#001 [25 Pa. Code § 121.1]****Definitions**

Words and terms that are not otherwise defined in this plan approval shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

**#002 [25 Pa. Code § 127.12b (a) (b)]****Future Adoption of Requirements**

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

**#003 [25 Pa. Code § 127.12b]****Plan Approval Temporary Operation**

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 30 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

**#004 [25 Pa. Code § 127.12(a) (10)]****Content of Applications**

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

**#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]****Public Records and Confidential Information**

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the

**SECTION B. General Plan Approval Requirements**

competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

**#006 [25 Pa. Code § 127.12b]****Plan Approval Terms and Conditions**

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

- (i) A justification for the extension,
- (ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

**#007 [25 Pa. Code § 127.32]****Transfer of Plan Approvals**

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

**#008 [25 Pa. Code § 127.12(a)(4) & 35 P.S. § 4008 & § 114 of the CAA]****Inspection and Entry**

(a) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.

**SECTION B. General Plan Approval Requirements**

(c) Nothing in this plan approval condition shall limit the ability of the Environmental Protection Agency to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

**#009 [25 Pa. Code 127.13a]****Plan Approval Changes for Cause**

This plan approval may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

(a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.

(b) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.

(c) The permittee fails to submit a report required by this plan approval.

(d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

**#010 [25 Pa. Code §§ 121.9 & 127.216]****Circumvention**

(a) The permittee, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.

(b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this plan approval, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

**#011 [25 Pa. Code § 127.12c]****Submissions**

Reports, test data, monitoring data, notifications shall be submitted to the:

Regional Air Program Manager

PA Department of Environmental Protection

(At the address given on the plan approval transmittal letter or otherwise notified)

**#012 [25 Pa. Code § 127.12(a)(9) & 40 CFR Part 68]****Risk Management**

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

**SECTION B. General Plan Approval Requirements**

- (i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
- (ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or the Environmental Protection Agency concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this plan approval condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

**#013 [25 Pa. Code § 121.7]****Prohibition of Air Pollution**

No person may permit air pollution as that term is defined in the Air Pollution Control Act (35 P.S. §§ 4001-4015).

**#014 [25 Pa. Code § 127.25]****Compliance Requirement**

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.



## SECTION C. Site Level Plan Approval Requirements

### I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

### II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

### III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

### IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

### V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

### VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

### VII. ADDITIONAL REQUIREMENTS.

#### # 001 [25 Pa. Code §127.12b]

##### Plan approval terms and conditions.

(a) The permittee shall comply with all existing requirements specified in Plan Approval No. 23-0119J, except that Condition # 002(a)(1)–(2), Section C, of Plan Approval No. 23-0119J, shall no longer apply.

(b) For any fugitive emissions components that are subject to the VOC leak detection and repair (LDAR) requirements specified in Section D (under Source IDs 400–401), of this plan approval, and the greenhouse gas (GHG) LDAR requirements specified in Section D (under Source ID 501), of this plan approval, concurrently, the permittee shall, in all cases, apply the more stringent requirements.

#### # 002 [25 Pa. Code §127.12b]

##### Plan approval terms and conditions.

The offsetting NO<sub>x</sub> and VOC ERCs identified in this plan approval are approved for use at this facility in accordance with the requirements of 25 Pa. Code Chapter 127, Subchapter E, including 25 Pa. Code §§ 127.205–127.210.

#### # 003 [25 Pa. Code §127.208]

##### ERC use and transfer requirements.

[Additional authority for this plan approval condition is derived from 25 Pa. Code §§ 127.206(d) and 127.210(a).]

(a) In accordance with 25 Pa. Code § 127.206(d), the permittee is required to surrender/retire 2.94 tons/yr of NO<sub>x</sub> ERCs and 45.31 tons/yr of VOC ERCs, determined as follows, for use at this facility prior to the commencement of operation of the sources and equipment authorized under this plan approval:

(1) NO<sub>x</sub> ERCs Required: [63.15 tons/yr (aggregated emissions increase determined in accordance with 25 Pa. Code §§ 127.203a and 127.203(b)(1)(i))] × [offset ratio of 1.3:1 (as indicated in 25 Pa. Code § 127.210(a))] = 82.09 tons/yr – [79.15 tons/yr (NO<sub>x</sub> ERCs previously surrendered/retired for sources and equipment related to the NGLs processing, storage, and distribution operations at the facility)].

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(2) VOC ERCs Required: [183.92 tons/yr (aggregated emissions increase determined in accordance with 25 Pa. Code §§ 127.203a and 127.203(b)(1)(i))] × [offset ratio of 1.3:1 (as indicated in 25 Pa. Code § 127.210(a))] = 239.10 tons/yr – [193.79 tons/yr (VOC ERCs previously surrendered/retired for sources and equipment related to the NGLs processing, storage, and distribution operations at the facility)].

(b) The NOx ERCs and VOC ERCs to be surrendered to/retired by the Department in (a), above, shall be properly generated, certified by the Department, and processed through the registry no later than the date approved by the Department for commencement of operation of the sources and equipment authorized under this plan approval.

**# 004 [25 Pa. Code §127.208]****ERC use and transfer requirements.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.210(a)–(b).]

(a) This plan approval authorizes the use and transfer of 2.94 tons/yr of certified NOx ERCs<sup>1</sup> from the permanent shutdown of sources at the Energy Transfer Marketing & Terminals, L.P. (ETMT)—Belmont Terminal facility, located in the City of Philadelphia, Philadelphia County, and currently permitted under State Only (Natural Minor) Operating Permit No. OP17-000056, for offset purposes in accordance with 25 Pa. Code § 127.208(2).

(b) This plan approval authorizes the use and transfer of 45.31 tons/yr of certified VOC ERCs, as follows, from the permanent shutdown of sources at the ETMT—Darby Creek Tank Farm facility, located in Darby Township, Delaware County, and previously permitted under Title V Operating Permit No. 23-00011, for offset purposes in accordance with 25 Pa. Code § 127.208(2):

| Source (Former Source ID)  | Amount of Certified VOC ERCs Used (Date Generated) |
|----------------------------|----------------------------------------------------|
| Tank DC-17 (Source ID 121) | 0.47 tons/yr (February 21, 2020)                   |
| Tank DC-18 (Source ID 122) | 2.65 tons/yr (February 22, 2020)                   |
| Tank DC-20 (Source ID 124) | 2.65 tons/yr (February 24, 2020)                   |
| Tank DC-3 (Source ID 108)  | 4.16 tons/yr (February 25, 2020)                   |
| Tank DC-21 (Source ID 125) | 2.64 tons/yr (February 25, 2020)                   |
| Tank DC-5 (Source ID 110)  | 2.36 tons/yr (February 26, 2020)                   |
| Tank DC-4 (Source ID 109)  | 2.39 tons/yr (February 28, 2020)                   |
| Tank DC-6 (Source ID 111)  | 2.36 tons/yr (February 28, 2020)                   |
| Tank DC-23 (Source ID 127) | 2.36 tons/yr (March 1, 2020)                       |
| Tank DC-13 (Source ID 117) | 2.63 tons/yr (March 2, 2020)                       |
| Tank DC-14 (Source ID 118) | 2.63 tons/yr (March 4, 2020)                       |
| Tank DC-16 (Source ID 120) | 2.64 tons/yr (March 4, 2020)                       |
| Tank DC-27 (Source ID 131) | 2.11 tons/yr (March 6, 2020)                       |
| Tank DC-24 (Source ID 128) | 2.32 tons/yr (March 11, 2020)                      |
| Tank DC-10 (Source ID 114) | 2.65 tons/yr (July 21, 2020)                       |
| Tank DC-11 (Source ID 115) | 2.64 tons/yr (July 23, 2020)                       |
| Tank DC-12 (Source ID 116) | 2.65 tons/yr (July 26, 2020)                       |
| Tank DC-35 (Source ID 141) | 3.00 tons/yr <sup>1</sup> (August 11, 2020)        |

(c) The NOx ERCs and VOC ERCs indicated in (a)–(b), above, respectively, have been properly generated, previously certified and approved by the Department, and entered by the Department into its ERC Registry system, in accordance with the provisions of 25 Pa. Code §§ 127.206–127.207 and 127.209, respectively. In addition, these NOx ERCs and VOC ERCs satisfy the use and transfer requirements of 25 Pa. Code § 127.208; will provide emission offsets at the required ratio of 1.3:1, in accordance with 25 Pa. Code § 127.210(a); and satisfy the offset requirements specified in Condition # 003(a)–(b), Section C, of this plan approval, and Condition # 002(a)–(b), Section C, of Plan Approval No. 23-0119J.

<sup>1</sup> The Department previously certified and approved the generation of 8.33 tons/yr of NOx ERCs from the permanent shutdown of the ETMT—Belmont Terminal facility on November 10, 2020, and 3.36 tons/yr of VOC ERCs from the permanent shutdown of Tank DC-35 at the ETMT—Darby Creek Tank Farm facility on August 11, 2020. The remaining 5.39 tons/yr of NOx ERCs and 0.36 tons/yr of VOC ERCs will remain available for use through their respective 10-year expiration dates, pursuant to 25 Pa. Code § 127.206(g).

**SECTION C. Site Level Plan Approval Requirements****# 005 [25 Pa. Code §127.208]****ERC use and transfer requirements.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.206(f)–(g).]

Upon the issuance of this plan approval, the NO<sub>x</sub> ERCs and VOC ERCs indicated in Condition # 004(a)–(b), Section C, of this plan approval, respectively, are no longer subject to their 10-year expiration dates established pursuant to 25 Pa. Code § 127.206(f).

**VIII. COMPLIANCE CERTIFICATION.**

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

**IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 400

Source Name: NAT GAS LIQUIDS (NGLS) FUGITIVE EMISS COMPS 28LAER LDAR REQS

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall ensure that the gas analyzer used for instrument monitoring of fugitive emissions components (i.e., valves, connectors, relief valves, open-ended valves or lines, pumps, compressors, agitators, sampling connection systems, and instrumentation systems) that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, conforms to the requirements specified in EPA Method 21, with the following modifications:

(a) Section 7.1.2: The permittee shall calibrate the gas analyzer with methane.

(b) Section 8.1.1: The permittee shall determine the response factor of the instrument for a specific VOC of interest. However, if the permittee is monitoring a mixture of VOCs, the permittee shall calculate the response factor for the average composition of the process fluid, except when all the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the permittee may calibrate the gas analyzer with one of the VOCs to be measured, or any other VOC, so long as the instrument has a response factor of less than 10 for each of the VOCs to be measured.

**III. MONITORING REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall perform auditory, visual, and/or olfactory (AVO) inspections for all connectors that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, on at least a weekly basis by operating personnel walk-through.

**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition # 007(a)–(b), Section D (under Source IDs 400–401), of this plan approval, the permittee shall monitor all connectors that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions on at least a quarterly basis using an approved gas analyzer with a directed maintenance program (i.e., repair and maintenance of components assisted simultaneously by the use of the approved gas analyzer such that a minimum leak concentration is obtained).

(b) In lieu of the monitoring frequency specified in (a), above, the permittee may monitor the connectors on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

(c) In lieu of the monitoring frequency specified in (b), above, the permittee may monitor the connectors on an annual basis if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

(d) If the percent of connectors leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to the quarterly monitoring indicated in (a), above, until the facility again qualifies for the alternative monitoring schedules indicated in (b)–(c), above.

**SECTION D. Source Level Plan Approval Requirements**

(e) The permittee shall calculate the percentage of leaking connectors in (a), above, using the following equation:

$$C_p = (C_l + C_s) \times 100 \div C_t$$

Where:

$C_p$  = The percentage of leaking connectors for the monitoring period.

$C_l$  = The number of connectors found leaking by the end of the monitoring period, either by EPA Method 21 or sight, sound, and smell.

$C_s$  = The number of connectors for which repair has been delayed and are listed on the facility shutdown log.

$C_t$  = The total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including difficult-to-monitor and unsafe-to-monitor connectors.

**# 004 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition #s 005 and 007, Section D (under Source ID 400), of this plan approval, the permittee shall monitor all valves that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions on at least a quarterly basis using an approved gas analyzer with a directed maintenance program.

(b) In lieu of the monitoring frequency specified in (a), above, the permittee may monitor valves in gas and light liquid service on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

(c) In lieu of the monitoring frequency specified in (b), above, the permittee may monitor valves in gas and light liquid service on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

(d) If the percent of valves leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to the quarterly monitoring indicated in (a), above, until the facility again qualifies for the alternative monitoring schedules indicated in (b)–(c), above.

(e) The permittee shall calculate the percentage of leaking valves in (a), above, using the following equation:

$$V_p = (V_l + V_s) \times 100 \div V_t$$

Where:

$V_p$  = The percentage of leaking valves for the monitoring period.

$V_l$  = The number of valves found leaking by the end of the monitoring period, either by EPA Method 21 or sight, sound, and smell.

$V_s$  = The number of valves for which repair has been delayed and are listed on the facility shutdown log.

$V_t$  = The total number of valves in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including difficult-to-monitor and unsafe-to-monitor valves.

[Note: A more stringent requirement for the timeframe within which to monitor valves is specified in Condition # 009, Section D (under Source ID 401), of this plan approval.]

**# 005 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee is not required to monitor sealless/leakless valves, including, but not limited to, welded bonnet bellows and diaphragm valves.

(b) The permittee is not required to monitor any existing relief valves that are subject to the LDAR requirements specified in

**SECTION D. Source Level Plan Approval Requirements**

Section D (under Source IDs 400–401), of this plan approval, and equipped with a rupture disc and a pressure-sensing device (e.g., a pressure gauge) between the relief valve and rupture disc to monitor disc integrity, except that the permittee shall monitor the readings of each pressure-sensing device to verify disc integrity on at least a quarterly basis.

**# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee is not required to monitor the equipment indicated in Condition # 019, Section D (under Source ID 400), of this plan approval, and Condition # 008(b), Section D (under Source ID 401), of this plan approval. Except as specified in Condition # 008(c), Section D (under Source ID 401), of this plan approval, the permittee shall monitor all other (existing) pump, compressor, and agitator seals that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions on at least a quarterly basis using an approved gas analyzer with a directed maintenance program.

[Note: A more stringent requirement for the timeframe within which to monitor existing pumps is specified in Condition # 008(a), Section D (under Source ID 401), of this plan approval.]

**# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition #s 004(b) and 007, Section D (under Source ID 401), of this plan approval, the permittee shall monitor all difficult-to-monitor<sup>2</sup> fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions on at least an annual basis using an approved gas analyzer with a directed maintenance program.

(b) If an unsafe-to-monitor<sup>3</sup> fugitive emissions component is not considered safe to monitor within a calendar year, then the permittee shall monitor the component as soon as possible during safe-to-monitor times.

<sup>2</sup> As indicated in 40 CFR Part 60, Subpart VVa, the term "difficult-to-monitor" means that monitoring personnel would need to be elevated more than 2 meters (7 feet) above a permanent support surface to perform monitoring.

<sup>3</sup> As indicated in 40 CFR Part 60, Subpart VVa, the term "unsafe-to-monitor" means that monitoring personnel would be exposed to an immediate danger as a consequence of performing the monitoring.

**# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall re-monitor any replaced fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, for leaks within 15 calendar days after being returned to service.

**IV. RECORDKEEPING REQUIREMENTS.****# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall maintain records of all AVO inspections performed in Condition # 002, Section D (under Source ID 400), of this plan approval, for connectors that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, in the operator's log or equivalent.

[Note: The requirement in this condition is met by complying with Condition # 011, Section D (under Source ID 401), of this plan approval.]

**SECTION D. Source Level Plan Approval Requirements****# 010 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall maintain records of the following information for the instrument monitoring performed for fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval:

- (1) The dates and times.
- (2) The test methods.
- (3) The instrument readings.

(b) The permittee shall maintain records of the times that it performed the instrument monitoring for no less than 95% of the instrument readings in (a)(3), above.

**# 011 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall maintain records of the readings of the pressure-sensing devices indicated in Condition # 005(b), Section D (under Source ID 400), of this plan approval, in the operator's log or equivalent, except for those pressure-sensing devices that are continuously monitored with alarms.

**# 012 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall maintain records of the following information for each repair of fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, including the first attempt at repair:

- (a) The date(s) of the repair.
- (b) The results of the repair.
- (c) Justification for any delay of repair.
- (d) The corrective action(s) taken.

**# 013 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall maintain records of all fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and qualify for delay of repair on a delay of repair list.

**V. REPORTING REQUIREMENTS.****# 014 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

When the permittee determines that the cumulative daily emission rate of all fugitive emissions components that are

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subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, on the delay of repair list, as calculated in Condition # 023(c), Section D (under Source ID 400), of this plan approval, multiplied by the number of days until the next scheduled unit shutdown is equal to or greater than the total emissions from a unit shutdown, the permittee shall notify the Department of such determination within 15 calendar days. (Based on the number and severity of tagged leaks awaiting shutdown, the Department may require early unit shutdown or other appropriate action.)

**VI. WORK PRACTICE REQUIREMENTS.****# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall ensure that construction of new and reworked piping, valves, relief valves, pump systems, and compressor systems that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, conforms to all applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

**# 016 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall ensure that no new and reworked underground process pipelines contain any buried valves, such that fugitive emission monitoring is rendered impractical. The permittee shall ensure that all new and reworked buried connectors are welded.

**# 017 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall ensure that new and reworked piping connections that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, are welded or flanged, except that screwed (i.e., threaded) connections are permissible on piping smaller than 2 inches in diameter. The permittee shall perform gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure prior to installation or returning fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, to service, or shall monitor the components for leaks using an approved gas analyzer within 15 calendar days after being returned to service. The permittee shall make adjustments as necessary to obtain leak-free performance.

[Note: A more stringent requirement for the timeframe within which to monitor piping connections for leaks is specified in Condition # 018(a), Section D (under Source ID 401), of this plan approval.]

**# 018 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

To the extent that good engineering practice will permit, the permittee shall ensure that new and reworked valves and piping connections that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, are so located to be reasonably accessible for leak-checking during plant operation. The permittee shall identify difficult-to-monitor and unsafe-to-monitor valves, as approved by the Department, in a list maintained on-site and made readily available to the Department upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in Condition # 025(b), Section D (under Source ID 400), of this plan approval.

**# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall ensure that all new and replacement pumps, compressors, and agitators installed at this facility that

**SECTION D. Source Level Plan Approval Requirements**

are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, are equipped with a shaft sealing system that prevents or detects emissions of VOCs from the seal. These seal systems may include, but are not limited to, dual mechanical seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system.

(b) In lieu of a shaft sealing system for new and replacement pumps, the permittee may instead install submerged pumps or sealless pumps, including, but not limited to, diaphragm, canned, or magnetic-driven pumps.

[Note: Additional requirements for the shaft sealing system in (a), above, are specified in Condition # 019(a), Section D (under Source ID 401), of this plan approval.]

**# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) For each existing relief valve that is subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and equipped with a rupture disc but not a pressure-sensing device, the permittee shall install and maintain a pressure-sensing device between the relief valve and rupture disc to monitor disc integrity.

(b) The permittee shall ensure that any leaking rupture discs are replaced at the earliest opportunity, but no later than the next process shutdown.

[Notes: A requirement with a timeframe within which to install the pressure-sensing device in (a), above, is specified in Condition # 014(a), Section D (under Source ID 401), of this plan approval. A more stringent requirement for the timeframe in (b), above, within which to replace leaking rupture discs is specified in Condition # 021(b), Section D (under Source ID 401), of this plan approval.]

**# 021 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

Except as specified in Condition # 022(b)(1)–(2), Section D (under Source ID 401), of this plan approval, the permittee shall ensure that each open-ended valve or line that is subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, is equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, the permittee shall ensure that both valves are closed. If the isolation of equipment for hot work or the removal of a fugitive emissions component for repair or replacement results in an open-ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permittee shall complete either of the following actions within that time period:

(a) The permittee shall install a cap, blind flange, plug, or second valve on the line or valve.

(b) For a plant or unit turnaround lasting up to 45 calendar days, the permittee shall monitor the open-ended valve or line once for leaks above background using an approved gas analyzer. For all other situations, the permittee shall monitor the open-ended valve or line once within 72 hours following the creation of the open-ended line using an approved gas analyzer, and monthly thereafter. For turnarounds and all other situations, leaks are indicated by readings of equal to or greater than 500 parts per million, by volume (ppmv), and must be repaired within 24 hours or the permittee shall install a cap, blind flange, plug, or second valve on the line or valve.

[Note: A more stringent requirement for the timeframes within which to monitor the open-ended valve or line or install a cap, blind flange, plug, or second valve is specified in Condition # 018(b), Section D (under Source ID 401), of this plan approval.]

**# 022 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

**SECTION D. Source Level Plan Approval Requirements**

Except as specified in Condition # 026, Section D (under Source ID 401), of this plan approval, the permittee shall ensure that any fugitive emissions component that is subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and found to be leaking during an AVO inspection is repaired or monitored using an approved gas analyzer within 15 calendar days<sup>4</sup> to determine whether the component is leaking VOCs at a concentration of equal to or greater than 500 ppmv. If the component is found to be leaking VOCs at a concentration of equal to or greater than 500 ppmv, it shall be subject to the repair and replacement requirements specified in Condition #s 008, 012–014, 021, and 023, Section D (under Source ID 400), of this plan approval, and Condition #s 012, 016–017, 019–021, and 023, Section D (under Source ID 401), of this plan approval.

<sup>4</sup> In accordance with Condition # 023(a), Section D (under Source ID 400), of this plan approval, the permittee is still required to make a first attempt at repair within 5 calendar days.

**# 023 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition # 015(a), Section D (under Source ID 401), of this plan approval, the permittee shall ensure that damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and found to be leaking VOCs at a concentration of equal to or greater than the applicable ppm threshold specified in Section D (under Source IDs 400–401), of this plan approval, or found to be leaking during an AVO inspection (e.g., dripping process fluids) are tagged and replaced or repaired. The permittee shall make a first attempt to repair the leak within 5 calendar days. The permittee shall repair a leaking fugitive emissions component as soon as practicable, but no later than 15 calendar days after the leak is found.

(b) If the repair of a fugitive emissions component would require a unit shutdown that would create more emissions than the repair would eliminate, then the permittee may delay the repair until the next scheduled shutdown. The permittee shall identify by tagging all leaking components for which repair is delayed until the next scheduled shutdown.

(c) The permittee shall calculate the cumulative daily emissions from all fugitive emissions components on the delay of repair list indicated in Condition # 013, Section D (under Source ID 400), of this plan approval, using EPA's Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-107) and using the emission factors in Table 2-1, or other Department- or EPA-approved equivalent.

**VII. ADDITIONAL REQUIREMENTS.****# 024 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) The LDAR requirements specified under this Source ID shall apply to all process units, piping, and fugitive emissions components in VOC service<sup>5</sup> and related to the NGLs processing, storage, and distribution operations at the facility, including, but not limited to, the following:

(1) The following process units and associated piping and fugitive emissions components indicated in Title V Operating Permit No. 23-00119:

- (i) Three auxiliary boilers (1 and 3–4; Source IDs 031 and 033–034, respectively).
- (ii) Two refrigerated ethane storage tanks (Source IDs 101 and 117).
- (iii) Three refrigerated propane storage tanks (Source IDs 102 and 119–120).
- (iv) Refrigerated marine vessel loading (Source ID 104).

<sup>5</sup> As the term is defined in 40 CFR § 60.481a (i.e., "contains or contacts a process fluid that is at least 10[%] VOC, by weight").

**SECTION D. Source Level Plan Approval Requirements**

- (v) Refrigerated NGLs-related fugitive emissions components of the caverns (part of Source ID 105).
  - (vi) Two demethanizers (Source ID 106A).
  - (vii) A natural gasoline loading rack (Source ID 111).
  - (viii) A refrigerated butane storage tank (Source ID 118).
  - (ix) Eight internal floating roof storage tanks (246, 250, 527, 607, 609, 611, 253, and 610; Source IDs 133, 136, 178, 188, 190, 192, 204, and 212, respectively).
  - (x) A rail loading and unloading rack for propane, butane, and natural gasoline (15-2B).
  - (xi) Two cold flares (East and West; Source IDs C01–C02, respectively).
  - (xii) A propane storage sphere (S20).
  - (xiii) A butane storage sphere (S21).
  - (xiv) Three pentane storage spheres (3, 4, and HS-16).
  - (xv) Process gas vessel V282 of the 15-2B gas plant unit indicated in Condition # 032, Section D (under Source ID 801), of Title V Operating Permit No. 23-00119, and all associated piping and fugitive emissions components, including the GC shelter, leading to auxiliary boilers 1 and 3–4.
- (2) The following new process units and associated piping and fugitive emissions components authorized under Plan Approval No. 23-0119J:
- (i) Two refrigerated ethane storage tanks (Source IDs 124–125).
  - (ii) A cold flare (Project Phoenix; Source ID C04).
- (3) The following new fugitive emissions components authorized under Plan Approval No. 23-0119J:
- (i) Refrigeration system components.
  - (ii) Amine treatment system components.
- (4) The following new fugitive emissions components authorized under this plan approval:
- (i) Refrigeration system components.
  - (ii) BOG system components.
  - (iii) Feed metering system components.
  - (iv) Feed heating system components.
  - (v) Amine treatment system components.
- (b) The permittee shall provide the Department with a listing of all new process units, piping, and fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, within 60 days after commencing operation. The listing shall be categorized by process area, specify the fugitive emissions component count in each process area, include an explanation of why each fugitive emissions component designated as difficult-to-monitor or unsafe-to-monitor is designated as such, and include a written plan that requires monitoring of each unsafe-to-monitor component as frequently as practicable during safe-to-monitor times.

**SECTION D. Source Level Plan Approval Requirements**

(c) Before this plan approval may be incorporated into Title V Operating Permit No. 23-00119, the permittee shall provide the Department with the following:

(1) The applicable LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, for the process units, piping, and fugitive emissions components indicated in (a)(1)–(4), above, in VOC service.

(2) The methods of complying with these requirements.

**# 025 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

(a) The LDAR requirements specified in Condition #s 001, 004–006, 008, 011, and 019–020, Section D (under Source ID 400), of this plan approval, shall not apply where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch absolute (psia) at 68 °F or has an operating pressure at least 5 kilopascals (kPa) (0.725 psi) below ambient pressure. The permittee shall identify fugitive emissions components excluded from these requirements in a list, or by one of the methods described in (b), below, and made readily available to the Department upon request.

(b) The exempted components may be identified by one or more of the following methods:

- (1) Piping and instrumentation diagram (PID).
- (2) A written or electronic database or electronic file.
- (3) Color coding.
- (4) A form of weatherproof identification.
- (5) Designation of exempted process unit boundaries.

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Source ID: 401

Source Name: ADD'L NGLS FUGITIVE EMISSIONS COMPONENTS LDAR REQS (VOCs)

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) In addition to the requirements for the gas analyzer specified in Condition # 001, Section D (under Source ID 400), of this plan approval, the permittee shall ensure that the gas analyzer meets the following requirements:

(1) The permittee shall calibrate the gas analyzer before use each day.

(2) The permittee shall perform a calibration drift assessment for the gas analyzer, at a minimum, at the end of each monitoring day in accordance with the following requirements:

(i) The permittee shall use the same calibration gas(es) that were used to calibrate the gas analyzer before use.

(ii) The permittee shall follow the procedures specified in Section 10.1 of EPA Method 21, except for adjusting the meter readout to correspond to the calibration gas value.

(iii) The permittee shall record the instrument reading for each scale used, as specified in 40 CFR § 60.486a(e)(7).

(iv) The permittee shall calculate the calibration drift, as follows:

(A) The permittee shall determine the average algebraic difference between the three meter readings and the most recent calibration value.

(B) The permittee shall divide the algebraic difference in (a)(2)(iv)(A), above, by the initial calibration value and multiply by 100 to express as a percentage.

(b) If any calibration drift assessment shows a negative drift of more than 10% from the initial calibration value, then the permittee shall re-monitor all fugitive emissions components monitored since the last calibration for which the initial instrument reading was less than the applicable ppm threshold specified in Section D (under Source IDs 400–401), of this plan approval, but the reading after being multiplied by (100 minus the percent of negative drift/divided by 100) is equal to or greater than the applicable ppm threshold. If any calibration drift assessment shows a positive drift of more than 10% from the initial calibration value, then, at its discretion, the permittee may re-monitor all fugitive emissions components monitored since the last calibration for which the initial instrument reading was equal to or greater than the applicable ppm threshold, but the reading after being multiplied by (100 plus the percent of positive drift/divided by 100) is less than the applicable ppm threshold.

[Note: The provisions of 40 CFR § 60.485a(b)(1)–(2) serve as a basis for this plan approval condition.]

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall test each fugitive emissions component subject to the requirements specified in Section D (under Source IDs 400–401), of this plan approval, unless it is demonstrated that the process unit is not in VOC service (i.e., the VOC content of the process fluid that is contained in or contacts the components would never be reasonably expected to exceed 10%, by weight). For purposes of this demonstration, the permittee shall use the following methods and procedures to determine the VOC content in the process fluid:

**SECTION D. Source Level Plan Approval Requirements**

(1) The permittee shall use procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93.

(2) The permittee may exclude from the total quantity of organic compounds those compounds that are considered by the EPA Administrator to have negligible photochemical reactivity.

(3) The permittee may use engineering judgment to estimate the VOC content if a fugitive emissions component had not been shown previously to be in VOC service. If the Department disagrees with the judgment, the methods and procedures in (a)(1)–(2), above, shall be used to resolve the disagreement.

(b) The permittee shall demonstrate that a fugitive emissions component is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components in the process fluid is greater than 0.3 kPa at 20 °C (1.2 inches of water at 68 °F). (The permittee shall use standard reference texts or ASTM D2879-83, 96, or 97 to determine the vapor pressures.)

(2) The total concentration of the pure organic components in (b)(1), above, is equal to or greater than 20%, by weight.

(3) The process fluid is a liquid at operating conditions.

(c) The permittee shall determine compliance with the standards for flares as follows:

(1) The permittee shall use EPA Method 22 to determine visible emissions.

(2) The permittee shall use a thermocouple or any other equivalent device to monitor the presence of a pilot flame in the flare.

(3) The permittee shall calculate the maximum permitted velocity for air-assisted flares using the following equation:

$$V_{\max} = K1 + (K2 \times HT)$$

Where:

$V_{\max}$  = The maximum permitted velocity, in units of m/sec (ft/sec).

$K1$  = 8.706 m/sec (28.56 ft/sec).

$K2$  = 0.7084 m<sup>4</sup>/MJ-sec (0.087 ft<sup>4</sup>/Btu-sec).

$HT$  = The net heating value of the gas being combusted, in units of MJ/scm (Btu/scf), as calculated in accordance with 40 CFR § 60.485a(g)(4)–(6).

(4) The permittee shall use EPA Method 2, 2A, 2C, or 2D, as appropriate, to determine the actual exit velocity of a flare. (If needed, the permittee shall use the unobstructed (free) cross-sectional area of the flare tip.)

(d) The permittee shall ensure that samples used in conjunction with (a)–(c), above, are representative of the process fluid that is contained in or contacts the fugitive emissions component or the gas being combusted in the flare.

[Note: The provisions of 40 CFR § 60.485a(d)–(g) serve as a basis for this plan approval condition.]

**III. MONITORING REQUIREMENTS.**

**# 003 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

In addition to the requirement to perform AVO inspections for connectors indicated in Condition # 002, Section D (under Source ID 400), of this plan approval, and, except as specified in Condition # 024, Section D (under Source ID 401), of this plan approval, the permittee shall perform AVO inspections for all process units, piping, and other fugitive emissions

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components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, on at least a weekly basis by operating personnel walk-through.

**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition # 005(b), Section D (under Source ID 400), of this plan approval, the permittee shall monitor existing relief valves that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, as follows:

(1) The permittee shall monitor existing relief valves that are equipped with a rupture disc, but not equipped with a pressure-sensing device between the relief valve and rupture disc, by leak-checking for fugitive emissions in accordance with Condition # 009, Section D (under Source ID 401), of this plan approval, until such time that it complies with the requirements to install and maintain a pressure-sensing device specified in Condition # 020(a), Section D (under Source ID 400), of this plan approval, and Condition # 014(a), Section D (under Source ID 401), of this plan approval.

(2) The permittee shall monitor existing relief valves that are not equipped with a rupture disc by leak-checking for fugitive emissions in accordance with Condition # 009(a)–(c), Section D (under Source ID 401), of this plan approval. (Alternatively, the permittee may install a rupture disc and a pressure-sensing device between the valve and rupture disc and monitor in accordance with Condition # 005(b), Section D (under Source ID 400), of this plan approval.)

(3) The permittee shall ensure that, following the installation of a new rupture disc in accordance with Condition # 021(b), Section D (under Source ID 401), of this plan approval, and within the same timeframe, it monitors the relief valve by leak-checking for fugitive emissions using an approved gas analyzer with a directed maintenance program to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppmv.

(b) The permittee shall monitor new and replacement relief valves that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, as follows:

(1) The permittee is not required to monitor new and replacement relief valves that are routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the relief valve to a control device that complies with the requirements of 40 CFR § 60.482-10a.

(2) The permittee shall monitor the new and replacement relief valves indicated in Condition # 014(c)(1), Section D (under Source ID 401), of this plan approval, in accordance with Condition # 005(b), Section D (under Source ID 400), of this plan approval.

(3) The permittee shall monitor the new and replacement relief valves indicated in Condition # 014(c)(2), Section D (under Source ID 401), of this plan approval, in accordance with Condition # 009(a)–(c), Section D (under Source ID 401), of this plan approval, regardless of accessibility (i.e., the requirements specified in Condition # 007(a)–(b), Section D (under Source ID 400), of this plan approval, are not applicable).

[Note: The provisions of 40 CFR § 60.482-4a(b) serve as a basis for this plan approval condition.]

**# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

Except as specified in Condition #s 006 and 008, Section D (under Source ID 400), of this plan approval, and Condition # 009(d), Section D (under Source ID 401), of this plan approval, within 60 days after commencing operation, the permittee shall monitor all new fugitive emissions components subject to the requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions using an approved gas analyzer with a directed maintenance program.

**SECTION D. Source Level Plan Approval Requirements****# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall use dataloggers and/or other electronic data collection devices for all data collection during all LDAR monitoring. The permittee shall ensure that the responsible personnel transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database. For each monitoring event in which an electronic data collection device is used, the monitoring data collected by the permittee shall include the information required to be maintained in Condition # 010(a)(1)–(3), Section D (under Source ID 400), of this plan approval, and Condition # 011(a)(1)–(3), Section D (under Source ID 401), of this plan approval.

(b) The permittee may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring, or when dataloggers are not available or broken), and shall maintain records of, at a minimum, the information required to be maintained in Condition # 010(a)(1)–(3), Section D (under Source ID 400), of this plan approval, and Condition # 012(a)(1)–(3), Section D (under Source ID 401), of this plan approval. The permittee shall transfer any manually-recorded monitoring data to the electronic database within 7 days of the monitoring.

**# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee is not required to monitor the following types of connectors by leak-checking for fugitive emissions using a gas analyzer:

(a) Connectors that satisfy any of the following criteria, such that they are considered to be inaccessible:

- (1) The connectors are buried.
- (2) The connectors are insulated in a manner that prevents access to them by the sample probe of the gas analyzer.
- (3) The connectors are obstructed by equipment or piping that prevents access to them by the sample probe of the gas analyzer.
- (4) The connectors are unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to them up to 7.6 meters (25 feet) above the ground.
- (5) Access to the connectors would require the erection of a scaffold.
- (6) The connectors are unsafe to monitor at all times (e.g., access would require the use of a wheeled scissor-lift on unstable or uneven terrain, require the use of a motorized man-lift basket in areas where an ignition potential exists, require proximity to hazards such as electrical lines, or risk damage to sources or equipment).

(b) Ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined) connectors.

[Note: The provisions of 40 CFR § 60.482-11a(f)(1)(i)–(vi) serve as a basis for this plan approval condition.]

**# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition # 006, Section D (under Source ID 400), of this plan approval, the permittee shall monitor all existing pumps that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and do not satisfy the applicable criteria specified in Condition # 019(a), Section D (under Source ID 401), of this plan approval, by leak-checking for fugitive emissions on at least a monthly basis using an approved gas analyzer with a directed maintenance program.

**SECTION D. Source Level Plan Approval Requirements**

(b) The permittee shall ensure that all existing compressors satisfy the applicable criteria specified in Condition # 019(a), Section D (under Source ID 401), of this plan approval.

(c) The permittee is not required to monitor any pump or compressor that is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals of the pump or from the compressor drive shaft to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR § 60.482-10a.

[Note: The provisions of 40 CFR §§ 60.482-2a(a)(1) and (f) and 60.482-3a(a)(1) and (h) serve as a basis for this plan approval condition.]

**# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except as specified in Condition # 007(a)–(b), Section D (under Source ID 400), of this plan approval, the permittee shall monitor all valves in gas and light liquid service that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions on at least a monthly basis using an approved gas analyzer with a directed maintenance program.

(b) In lieu of the monitoring frequency specified in (a), above, the permittee may monitor any valve for which a leak is not detected for 2 successive months during the first month of every quarter, beginning with the next quarter. (Alternatively, the permittee may elect to subdivide a process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The permittee shall keep records of the valves assigned to each subgroup.)

(c) If a leak is detected for any valve with quarterly monitoring, the valve shall revert to the monthly monitoring frequency indicated in (a), above, until the valve again qualifies for the alternative monitoring schedule indicated in (b), above.

(d) Within 30 days after commencing operation, the permittee shall monitor all new valves subject to the requirements specified in Section D (under Source IDs 400–401), of this plan approval, by leak-checking for fugitive emissions using an approved gas analyzer with a directed maintenance program.

[Note: The provisions of 40 CFR § 60.482-7a(a) and (c) serve as a basis for this plan approval condition.]

**# 010 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall re-monitor any repaired fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, to verify repair within 15 calendar days after the affected process unit is returned to service following a delay in repair.

**IV. RECORDKEEPING REQUIREMENTS.****# 011 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall maintain records of the following information for each AVO inspection performed in Condition # 002, Section D (under Source ID 400), of this plan approval, and Condition # 003, Section D (under Source ID 401), of this plan approval, for process units, piping, and fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, in the operator's log or equivalent:

(a) The date and time of the inspection.

(b) The results of the inspection.

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- (c) The identification number of each fugitive emissions component for which a leak is detected.

[Compliance with this streamlined plan approval condition assures compliance with Condition # 002, Section D (under Source ID 400), of this plan approval.]

**# 012 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) In addition to the recordkeeping requirements for instrument monitoring specified in Condition # 010, Section D (under Source ID 400), of this plan approval, the permittee shall maintain records of the following information for the instrument monitoring of fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval:

- (1) The identification number of each fugitive emissions component.
- (2) The identification number of the gas analyzer used.
- (3) The identification number of the operator.

(b) In addition to the recordkeeping requirements for repairs specified in Condition # 012–013, Section D (under Source ID 400), of this plan approval, when a fugitive emissions component is found to be leaking VOCs at a concentration of equal to or greater than the applicable ppm threshold specified in Section D (under Source IDs 400–401), of this plan approval, the permittee shall maintain records of the following information in a readily-accessible log book for a minimum of 5 years:

- (1) The information indicated in (a)(1)–(3), above, except when indications of liquids dripping from a pump are designated as a leak.
- (2) The date that the leak was detected.
- (3) The repair methods applied in each attempt to repair the leak.
- (4) The maximum instrument reading measured by EPA Method 21 at the time the leak is successfully repaired or determined to be non-repairable, except when a pump is repaired by eliminating indications of liquids dripping.
- (5) The signature of the employee (or other designee of the permittee) whose decision it was that repair could not be effected without a process shutdown.
- (6) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- (7) The dates of process unit shutdowns that occur while the component is unrepaired.
- (8) The date of successful repair of the leak.

(c) The permittee shall maintain records of the following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR § 60.482-10a in a readily-accessible location:

- (1) Detailed schematics, design specifications, and PIDs.
- (2) The dates and descriptions of any changes in the design specifications.
- (3) A description of the parameter or parameters monitored, as required in 40 CFR § 60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring;
- (4) Periods when the closed vent systems and control devices required in 40 CFR §§ 60.482-2a, 60.482-3a, 60.482-4a,

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and 60.482-5a are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR §§ 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a.

(d) The permittee shall maintain records of the following information pertaining to all process units and/or fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, in a readily-accessible log book:

(1) A list of identification numbers for the components.

(2) The following information for each compliance test required in 40 CFR §§ 60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f):

(i) The date performed.

(ii) The background level measured during the test.

(iii) The maximum instrument reading measured at the component during the test.

(3) The following information for each gas analyzer calibration performed in Condition # 001, Section D (under Source IDs 400–401), of this plan approval:

(i) The date of the calibration.

(ii) The calibration gas cylinder identification, certification date, and certified concentration (and a description of the procedure used if the permittee makes its own calibration gas).

(iii) The instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value, in accordance with Section 10.1 of EPA Method 21.

(v) The results of each calibration drift assessment required in Condition # 001(a)(2), Section D (under Source ID 401), of this plan approval (i.e., the instrument reading for calibration at the end of the monitoring day and the calculated percent difference from the initial calibration value).

(vi) The initials of the operator that performed the calibration.

(4) The schedule of monitoring, including the start and end dates of each monitoring period, for each process unit and component type.

(5) Each pressure release from a relief valve.

(6) If applicable, a list of identification numbers for components in vacuum service.

(e) The permittee shall maintain a listing of identification numbers for fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and designated as difficult-to-monitor or unsafe-to-monitor, in a readily-accessible log book. The listing shall also include an explanation of why each component is designated as such and the plan or schedule for monitoring each component.

(f) The permittee shall maintain records of the following information in a readily-accessible log book:

(1) The design criterion required in 40 CFR §§ 60.482-2a(d)(5) and 60.482-3a(e)(2) and explanation of the design criterion.

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(2) Any changes to this criterion and the reasons for the changes.

(g) The permittee shall maintain records of the following information in a readily-accessible log book:

(1) An analysis demonstrating the design capacity of the process units at the facility.

(2) A statement listing the feed or raw materials and products from the process units and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol.

(3) An analysis demonstrating the fugitive emissions components that are not in VOC service.

[Note: The provisions of 40 CFR § 60.486a(a), (c)–(f), and (h)–(j) serve as a basis for this plan approval condition.]

**V. REPORTING REQUIREMENTS.**

**# 013 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

(a) The permittee shall submit semiannual reports to the Department beginning 6 months after the initial startup date.

(b) The initial semiannual report shall include the following information:

(1) The process unit identification.

(2) The number of valves subject to the requirements of 40 CFR § 60.482-7a, excluding those valves designated for no detectable emissions under the provisions of 40 CFR § 60.482-7a(f).

(3) If applicable, the number of pumps subject to the requirements of 40 CFR § 60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR § 60.482-2a(e) and those pumps complying with 40 CFR § 60.482-2a(f).

(4) If applicable, the number of compressors subject to the requirements of 40 CFR § 60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of 40 CFR § 60.482-3a(i) and those compressors complying with 40 CFR § 60.482-3a(h).

(5) The number of connectors subject to the requirements of 40 CFR § 60.482-11a.

(c) All semiannual reports shall include the following information, summarized from the information in 40 CFR § 60.486a:

(1) The process unit identification;

(2) The following information for each month during the semiannual reporting period:

(i) The number of valves for which leaks were detected as described in 40 CFR § 60.482-7a(b) or §60.483-2a.

(ii) The number of valves for which leaks were not repaired as required in 40 CFR § 60.482-7a(d)(1).

(iii) The number of pumps for which leaks were detected as described in 40 CFR § 60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii).

(iv) The number of pumps for which leaks were not repaired as required in 40 CFR § 60.482-2a(c)(1) and (d)(6).

(v) The number of compressors for which leaks were detected as described in 40 CFR § 60.482-3a(f).

(vi) The number of compressors for which leaks were not repaired as required in 40 CFR § 60.482-3a(g)(1).

(vii) The number of connectors for which leaks were detected as described in 40 CFR § 60.482-11a(b).

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(viii) The number of connectors for which leaks were not repaired as required in 40 CFR § 60.482-11a(d).

(ix) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) The dates of process unit shutdowns that occurred within the semiannual reporting period.

(4) Revisions to items reported in (b), above, if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) The permittee shall report the results of all performance tests in accordance with 40 CFR § 60.8. The provisions of 40 CFR § 60.8(d) do not apply, except that the permittee must notify the Department of the schedule for the initial performance tests at least 30 days before the initial performance tests.

[Note: The provisions of 40 CFR § 60.487a(a)–(c) and (e)–(f) serve as a basis for this plan approval condition.]

**VI. WORK PRACTICE REQUIREMENTS.****# 014 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Within 180 days after the date of issuance of this plan approval, the permittee shall install a pressure-sensing device between the relief valve and rupture disc for the existing relief valves indicated in Condition # 004(a)(1), Section D (under Source ID 401), of this plan approval.

(b) Except as specified in (c), below, the permittee shall ensure that all new and replacement relief valves that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, are routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device that complies with the requirements of 40 CFR § 60.482-10a.

(c) If the routing of any new or replacement relief valve(s) to a control device, in the manner described in (b), above, poses a safety concern, the permittee shall provide justification to the Department for approval to install a relief valve(s) that vent to atmosphere and are equipped in one of the following manners:

(1) With a rupture disc and a pressure-sensing device between the valve and rupture disc.

(2) Without a rupture disc.

**# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall ensure that, if any of the inaccessible, ceramic, or ceramic-lined connectors indicated in Condition # 007, Section D (under Source ID 401), of this plan approval, are found to be leaking during an AVO inspection, the permittee shall eliminate the AVO or other indications of the leak as soon as practical.

(b) Except for instrumentation systems and the inaccessible, ceramic, or ceramic-lined connectors indicated in Condition # 007, Section D (under Source ID 401), of this plan approval, the permittee shall identify the connectors subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval. The permittee is not required to individually identify all connectors in a designated area or length of pipe, so long as they are identified as a group and the number of connectors is indicated.

[Note: The provisions of 40 CFR § 60.482-11a(f)(2) and (g) serve as a basis for this plan approval condition.]

**SECTION D. Source Level Plan Approval Requirements****# 016 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) If any valves in heavy liquid service are found to be leaking during an AVO inspection, the permittee shall follow either of the following procedures:

(1) The LDAR requirements specified in Conditions # 022–023, Section D (under Source ID 400), of this plan approval, except that the permittee shall monitor the valve using a gas analyzer within 5 calendar days.

(2) The permittee shall eliminate the AVO or other indications of the leak within 5 calendar days.

(b) The first attempts at repair of valves in heavy liquid service include, but are not limited to, the following best practices, where practicable:

(1) The tightening or replacement of bonnet bolts.

(2) The tightening of packing gland nuts.

(3) The injection of lubricant into lubricated packing.

(4) Ensuring that the seal flush is operating at design pressure and temperature.

[Note: The provisions of 40 CFR § 60.482-8a(a)(1)–(2) and (d) serve as a basis for this plan approval condition.]

**# 017 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

In addition to the LDAR requirements specified in Conditions # 022–023, Section D (under Source ID 400), of this plan approval, when a fugitive emissions component is found to be leaking VOCs at a concentration of equal to or greater than the applicable ppm threshold specified in Section D (under Source IDs 400–401), of this plan approval, the permittee shall comply with the following requirements:

(a) The tags referenced in Condition # 023(a)–(b), Section D (under Source ID 400), of this plan approval, shall be weatherproof and marked with the following readily-visible information:

(1) The identification number of the component.

(2) The date on which the permittee found the leak.

(b) Except as specified in (c), below, the permittee may remove the tag on a fugitive emissions component after it has been repaired.

(c) The permittee may remove the tag on a valve after it has been monitored for 2 successive months and the instrument readings are less than the applicable ppm threshold specified in Section D (under Source IDs 400–401), of this plan approval. (At this point, the valve may be considered to be repaired and no longer subject to delay of repair requirements.)

[Note: The provisions of 40 CFR §§ 60.482-9(f) and 60.486a(b) serve as a basis for this plan approval condition.]

**# 018 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall comply with the requirements for piping connections specified in Condition # 017, Section D (under Source ID 400), of this plan approval, except that the timeframe within which to monitor the piping connections shall be

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8 hours instead of 15 calendar days.

(b) The permittee shall comply with the requirements for open-ended valves or lines specified in Condition # 021, Section D (under Source ID 400), of this plan approval, except that the timeframes within which to monitor the open-ended valve or line or install a cap, blind flange, plug, or second valve if a repair or replacement shall be 24 hours instead of 72 hours.

**# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) In addition to the requirements for shaft sealing systems for pumps and compressors specified in Condition # 019(a), Section D (under Source ID 400), of this plan approval, the permittee shall ensure that the shaft sealing systems satisfy the following criteria:

(1) The dual mechanical seal system for pumps or compressor seal system satisfies one of the following criteria:

(i) It is operated with the barrier fluid at a pressure that is at all times greater than the pump or compressor stuffing box pressure.

(ii) It is equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR § 60.482-10a.

(iii) It is equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each sensor in (a)(3), above, is equipped with an audible alarm. The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(b) If any existing pumps are found to be leaking during an AVO inspection, the permittee shall follow the following procedures:

(1) The LDAR requirements specified in Condition # 022, Section D (under Source ID 400), of this plan approval, except that the permittee shall either monitor the pump using a gas analyzer within 5 calendar days to determine whether there is a leak of VOCs in the barrier fluid or designate the indications of liquids dripping as a leak.

(2) The LDAR requirements specified in Condition # 023, Section D (under Source ID 400), of this plan approval, with the following constituting the first attempts at repair and successful repair:

(i) The first attempts at repair of pumps include, but are not limited to, the following best practices, where practicable, and eliminating indications of liquids dripping.

(A) The tightening of packing gland nuts.

(B) Ensuring that the seal flush is operating at design pressure and temperature.

(ii) Successful repair is based on eliminating the visual indications of liquids dripping.

(c) If the sensor in (a)(3), above, indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in accordance with (a)(4), above, a leak is detected and the permittee shall follow the LDAR requirements specified in Condition # 023, Section D (under Source ID 400), of this plan approval. Successful repair is based on

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eliminating the conditions that activated the sensor.

[Note: The provisions of 40 CFR §§ 60.482-2a(a)(1) and (d) and 60.482-3a(a)–(f) serve as a basis for this plan approval condition.]

**# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The first attempts at repair of valves in gas and light liquid service include, but are not limited to, the following best practices, where practicable:

- (a) The tightening or replacement of bonnet bolts.
- (b) The tightening of packing gland nuts.
- (c) The injection of lubricant into lubricated packing.

[Note: The provisions of 40 CFR § 60.482-7a(e)(1)–(4) serve as a basis for this plan approval condition.]

**# 021 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) Except during pressure releases, the permittee shall operate each relief valve in gas service that is subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv.

(b) Except as specified in Condition # 023(b), Section D (under Source ID 400), of this plan approval, and Condition # 023, Section D (under Source ID 401), of this plan approval, the permittee shall ensure that, after a pressure release or if a rupture disc is found to be leaking VOCs at a concentration of equal to or greater than 500 ppmv, it installs a new rupture disc upstream of the relief valve as soon as practicable, but no later than 5 calendar days after the pressure release or the leak is found.

[Note: The provisions of 40 CFR § 60.482-4a(a) and (d) serve as a basis for this plan approval condition.]

**# 022 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) In addition to the requirements for open-ended valves or lines specified in Condition # 021, Section D (under Source ID 400), of this plan approval, the permittee shall operate the open-ended valves or lines in compliance with the following requirements:

- (1) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
  - (2) For an open-ended valve or line that is equipped with a second valve, the valve on the process fluid end shall be closed before the second valve is closed.
  - (3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall comply with the requirements of (a)(1), above, and Condition # 021, Section D (under Source ID 400), of this plan approval, at all other times.
- (b) The following open-ended valves or lines are exempt from the requirements of (a)(1)–(3), above, and Condition # 021, Section D (under Source ID 400), of this plan approval:

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(1) Open-ended valves or lines in an emergency shutdown system that are designed to open automatically in the event of a process upset.

(2) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system.

[Note: The provisions of 40 CFR § 60.482-6a(a)–(e) serve as a basis for this plan approval condition.]

**# 023 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

In addition to the reason for delays of repair of fugitive emissions components specified in Condition # 023(b), Section D (under Source ID 400), of this plan approval, the permittee may delay the repair of components for the following reasons:

(a) If the repair of a component within 15 days is technically infeasible without a process unit shutdown.

(b) If the component is isolated from the process and does not remain in VOC service.

(c) If the permittee demonstrates that the expected emissions of purged material resulting from immediate repair of a valve or connector are greater than the fugitive emissions likely to result from delay of repair and, during the repair of the valve or connector, collects and destroys or recovers the purged material in a control device that complies with the requirements of 40 CFR § 60.482-10a.

[Note: The provisions of 40 CFR § 60.482-9a(a)–(c) serve as a basis for this plan approval condition.]

**# 024 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

As applicable.

**WORK PRACTICE STANDARD**

(a) The vapor recovery system shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95% or greater.

**MONITOR**

(b) The permittee shall monitor the control devices to ensure that they are operated and maintained in conformance with their designs.

(c) Except as provided in (f)–(h), below, the permittee shall inspect the vapor collection system or closed vent system as follows:

- (1) conduct an initial inspection according to the procedures in 40 CFR § 60.485a(b); and
- (2) conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
- (3) if the vapor collection system or closed vent system is constructed of ductwork, the permittee shall:
  - (i) conduct an initial inspection according to the procedures in 40 CFR § 60.485a(b); and
  - (ii) conduct annual inspections according to the procedures in 40 CFR § 60.485a(b).

**WORK PRACTICE STANDARD**

(d) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in (e), below.

- (1) a first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
- (2) repairs shall be completed no later than 15 calendar days after the leak is detected.

(e) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(f) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection

**SECTION D. Source Level Plan Approval Requirements**

requirements of (c)(1)–(2), above.

(g) Any parts of the closed vent system that are designated, as described in (g)(1), below, as unsafe to inspect are exempt from the inspection requirements of (c)(1)–(2), above, if they comply with the requirements in (g)(1)–(2), below:

- (1) the permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with (c)(1)–(2), above; and
- (2) the permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(h) Any parts of the vapor recovery system that are designated, as described in (h)(2), below, as difficult to inspect are exempt from the inspection requirements of (c)(1)–(2), above, if they comply with the requirements specified in (h)(1)–(3), below:

- (1) the permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and
- (2) the process unit within which the vapor recovery system is located becomes an affected facility through 40 CFR §§ 60.14 or 60.15, or the permittee designates less than 3.0% of the total number of vapor recovery system equipment as difficult to inspect; and
- (3) the permittee has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

**RECORDS**

(i) The permittee shall record the following:

- (1) identification of all parts of the vapor recovery system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment;
- (2) identification of all parts of the vapor recovery system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment;
- (3) for each inspection during which a leak is detected, a record of the information specified in 40 CFR § 60.486a(c);
- (4) for each inspection conducted in accordance with 40 CFR § 60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected; and
- (5) for each visual inspection conducted in accordance with (c)(2), above, during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(j) The vapor recovery system used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

[Note: The provisions of 40 CFR § 60.482-10a serve as a basis for this plan approval condition.]

**# 025 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

As applicable.

Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR § 60.482-1a(c) and the following requirements:

- (a) gases displaced during filling of the sample container are not required to be collected or captured;
- (b) containers that are part of a closed-purge system must be covered or closed when not being filled or emptied;
- (c) gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured; and
- (d) each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either (d)(1), (2), (3), or (4), below:
  - (1) return the purged process fluid directly to the process line;
  - (2) collect and recycle the purged process fluid to a process;
  - (3) capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR § 60.482-10a; or
  - (4) collect, store, and transport the purged process fluid to any of the following systems or facilities:
    - (i) a waste management unit as defined in 40 CFR § 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR Part 63, Subpart G, applicable to Group 1 wastewater streams;
    - (ii) a treatment, storage, or disposal facility subject to regulation under 40 CFR Parts 262, 264, 265, or 266;

**SECTION D. Source Level Plan Approval Requirements**

- (iii) a facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR Part 261;
- (iv) a waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR § 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR §§ 61.343–347; or
- (v) a device used to burn off-specification used oil for energy recovery in accordance with 40 CFR Part 279, Subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR Part 261.

(c) in-situ sampling systems and sampling systems without purges are exempt from the requirements above.

[Note: The provisions of 40 CFR § 60.482-5a serve as a basis for this plan approval condition.]

**# 026 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall ensure that any valve in gas and light liquid service, excluding a relief valve, that is authorized or approved on or after May 16, 2024, subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, and found to be leaking during an AVO inspection, is repaired or monitored using an approved gas analyzer within 15 calendar days<sup>6</sup> to determine whether it is leaking VOCs at a concentration of equal to or greater than 100 ppmv. If the valve is found to be leaking VOCs at a concentration of equal to or greater than 100 ppmv, it shall be subject to the repair and replacement requirements specified in Condition #s 008, 012–014, 021, and 023, Section D (under Source ID 400), of this plan approval, and Condition #s 012, 016–017, 019–021, and 023, Section D (under Source ID 401), of this plan approval.

[Note: The provisions of 40 CFR § 60.482-7b(b) serve as a basis for this plan approval condition.]

<sup>6</sup> In accordance with Condition # 023(a), Section D (under Source ID 400), of this plan approval, the permittee is still required to make a first attempt at repair within 5 calendar days.

**VII. ADDITIONAL REQUIREMENTS.****# 027 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) The LDAR requirements specified under this Source ID shall apply to the same process units, piping, and fugitive emissions components indicated in Condition # 024(a), Section D (under Source ID 400), of this plan approval, in VOC service.

(b) The permittee shall provide the Department with a listing of all new process units, piping, and fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source IDs 400–401), of this plan approval, within 60 days after commencing their operation. The listing shall be categorized by process area, specify the fugitive emissions component count in each process area, include an explanation of why each fugitive emissions component designated as difficult-to-monitor or unsafe-to-monitor is designated as such, and include a written plan that requires monitoring of each unsafe-to-monitor component as frequently as practicable during safe-to-monitor times.

**# 028 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) The permittee shall demonstrate compliance with the requirements of 40 CFR §§ 60.482-1a through 60.482-10a, as applicable, for all equipment within 180 days of initial startup.

(b) Compliance with 40 CFR §§ 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR § 60.485a.

(c) The permittee may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined, as follows:

- (1) Monthly monitoring: monitoring events shall be separated by at least 10 calendar days.

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(2) Quarterly monitoring: monitoring events shall be separated by at least 30 calendar days.

(3) Semiannual monitoring: monitoring events shall be separated by at least 60 calendar days.

(4) Annual monitoring: monitoring events must be separated by at least 120 calendar days.

(d) If applicable, equipment that is in vacuum service is excluded from the requirements of 40 CFR §§ 60.482-2a through 60.482-10a if it is identified as required in 40 CFR § 60.486a(e)(5).

[Note: The provisions of 40 CFR § 60.482-1a(a)–(b), (d), (f)(3), and (g) serve as a basis for this plan approval condition.]

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 501

Source Name: ADD'L FUGITIVE EMISSIONS COMPONENTS LDAR REQUIREMENTS (GHGS)

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall use an approved gas analyzer with a directed maintenance program for instrument monitoring of fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source ID 501), of this plan approval.

(b) The permittee shall ensure that the gas analyzer conforms to the following requirements specified in EPA Method 21:

(1) The equipment specifications and performance criteria contained in Section 6.0 of EPA Method 21.

(2) The requirements and procedures specified in Sections 7.0–10.0 of EPA Method 21, except that the permittee shall calibrate the gas analyzer with methane.

(c) If using a gas analyzer other than a flame ionization detector (FID), the permittee shall develop a site-specific leak definition that, except as specified in Condition # 006, Section D (under Source ID 501), of this plan approval, would provide an equivalent response to 500 ppm as methane using an FID (e.g., 10.6 eV for a photo ionization detector (PID) with a specified isobutylene concentration).

**III. MONITORING REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall perform AVO inspections for all process units, piping, and fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source ID 501), of this plan approval, on a daily basis by operating personnel walk-through, as follows:

(a) For existing process units, piping, and fugitive emissions components: Upon issuance of this plan approval.

(b) For new process units, piping, and fugitive emissions components: Upon commencing operation.

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall maintain records of the following information for each AVO inspection performed in Condition # 002, Section D (under Source ID 501), of this plan approval, for the process units, piping, and fugitive emissions components subject to the LDAR requirements specified in Section D (under Source ID 501), of this plan approval, in the operator's log or equivalent:

(a) The date and time of the inspection.

**SECTION D. Source Level Plan Approval Requirements**

(b) The following information for each fugitive emissions component in GHG service<sup>7</sup> for which a GHG leak is detected:

(1) The identification and location.

(2) The instrument reading(s) of each fugitive emissions component, along with an indication of whether the reading(s) was made prior to or subsequent to repair activities.

(3) The following information regarding the status of repair of each fugitive emissions component:

(i) The following for each attempt to repair the fugitive emissions component:

(A) The date.

(B) The repair method(s) applied.

(ii) The digital photographing and/or tagging of each fugitive emissions component not repaired during the inspection in which the GHG leak was detected.

(iii) The reason(s) that a fugitive emissions component was placed on delay of repair (i.e., one or more of the reasons specified in Condition # 004(a)(2), Section D (under Source ID 501), of this plan approval), if applicable.

(iv) The date of successful repair of the fugitive emissions component.

(v) The following for the re-monitoring of a repaired fugitive emissions component that could not be repaired during the initial GHG leak finding:

(A) The date.

(B) The instrumentation or method used.

<sup>7</sup> Analogous to the term "in VOC service," the term "in GHG service" means that the GHG content of the material that is contained in or contacts the component during the course of normal operations is, or may reasonably be expected to be, equal to or greater than 10%, by weight.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

**# 004 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

(a) The permittee shall repair any GHG leak detected from any fugitive emissions components subject to the requirements specified in Section D (under Source ID 501), of this plan approval, as expeditiously as practicable. A first attempt at repair must be attempted within 5 calendar days of detection, and repair must be completed no later than 15 calendar days after the GHG leak is detected, except in either of the following situations:

(1) The owner or operator must purchase parts to complete the repair, in which case the repair must be completed no later than 10 calendar days after the receipt of the purchased parts.

(2) The repair or replacement is technically infeasible or would be unsafe to perform during operation of the affected process unit, in which case the repair or replacement must be completed during the next scheduled process unit shutdown,

**SECTION D. Source Level Plan Approval Requirements**

or within 12 months, whichever is earlier.

(b) If either of the situations specified in (a)(1)–(2), above, applies to a fugitive emissions component, the permittee shall take a digital photograph of the affected component and/or tag it for identification purposes until repaired.

(c) A GHG leak is considered repaired if any of the following apply:

(1) The affected fugitive emissions component is monitored by leak-checking for fugitive emissions using an approved gas analyzer and the reading is less than the applicable ppm threshold, or equivalent response, specified in Section D (under Source ID 501), of this plan approval.

(2) No detectable emissions exist, as determined using the procedures specified in Section 8.3.2 of EPA Method 21.

(3) There is no bubbling at the leak interface using the soap solution screening procedure specified in Section 8.3.3 of EPA Method 21.

(d) The permittee shall re-monitor any replaced fugitive emissions components subject to the requirements specified in Section D (under Source ID 501), of this plan approval, for leaks within 15 calendar days after being placed back into GHG service.

**# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Additional authority for this plan approval condition is derived from 25 Pa. Code § 127.1.]

The permittee shall ensure that all relief valves subject to the requirements specified in Section D (under Source ID 501), of this plan approval, are monitored and installed in accordance with Condition #s 005 and 020, Section D (under Source ID 400), of this plan approval, and Condition #s 004, 014, and 021, Section D (under Source ID 401), of this plan approval.

**# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

If using a gas analyzer other than an FID for instrument monitoring of any valve in gas and light liquid service, excluding a relief valve, that is authorized or approved on or after May 16, 2024, and subject to the LDAR requirements specified in Section D (under Source ID 501), of this plan approval, the permittee shall develop a site-specific leak definition that would provide an equivalent response to 100 ppm as methane using a FID (e.g., 2.1 eV for a PID with a specified isobutylene concentration).

[Note: The provisions of 40 CFR § 60.482-7b(b) serve as a basis for this plan approval condition.]

**VII. ADDITIONAL REQUIREMENTS.****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) The LDAR requirements specified under this Source ID shall apply to the following process units, piping, and fugitive emissions components in GHG service at the facility:

(1) The same process units, piping, and fugitive emissions components indicated in Condition # 024(a), Section D (under Source ID 400), of this plan approval.

(2) All aboveground natural gas piping and associated fugitive emissions components at the facility.

(b) The permittee shall provide the Department with a listing of all new process units, piping, and fugitive emissions components that are subject to the LDAR requirements specified in Section D (under Source ID 501), of this plan approval, within 60 days after commencing their operation. The listing shall be categorized by process area, specify the fugitive emissions component count in each process area, and include an explanation of why each fugitive emissions component designated as difficult-to-monitor or unsafe-to-monitor is designated as such.

**SECTION D. Source Level Plan Approval Requirements****# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Any positive indication, whether auditory, visual, olfactory, determined during an AVO inspection for the process units, piping, and/or fugitive emissions components subject to the requirements specified in Section D (under Source ID 501), of this plan approval, shall be considered a GHG leak, except as follows:

(a) If the positive indication is due to a release from any equipment or component designed by the manufacturer to protect the equipment, controller, or personnel, or to prevent groundwater contamination, gas migration, or an emergency situation.

(b) If the affected fugitive emissions component is subsequently monitored by leak-checking for fugitive emissions using an approved gas analyzer (prior to any repair activities) and the reading is less than the applicable ppm threshold, or equivalent response, specified in Section D (under Source ID 501), of this plan approval.



**SECTION E. Source Group Plan Approval Restrictions.**

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Plan Approval facility.

**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.

**SECTION H. Miscellaneous.**

(a) This plan approval (APS ID 1056774, Auth ID 1552571) is a minor modification of Plan Approval No. 23-0119K, which was originally issued on April 18, 2024 (APS ID 1056774, Auth ID 1385103).

(b) The following is a listing of the changes reflected in this plan approval:

(1) The title of the responsible official, as indicated on the cover page of the original plan approval (same location in this plan approval), has been changed to Vice President–Marcus Hook Operations.

(2) The permit contact person, as indicated on the cover page of the original plan approval (same location in this plan approval), has been changed to Keith Graver, Senior Specialist–Environmental Compliance, (610) 859-1276, keith.graver@energytransfer.com.

(3) Condition # 001(a)(1)–(2), Section C, of the original plan approval, has been replaced by a statement that "[t]he permittee shall comply with all existing requirements specified in Plan Approval No. 23-0119J, except that Condition # 002(a)(1)–(2), Section C, of Plan Approval No. 23-0119J, shall no longer apply."

(4) The following for Condition # 003, Section C, of the original plan approval (same condition number in this plan approval):

(i) The amount of VOC ERCs previously surrendered/retired, as indicated in Sub-condition (a)(2), has been increased by the amount surrendered/retired under the original plan approval.

(ii) The footnotes at the end of the condition have been removed.

(5) Condition # 004, Section C, of the original plan approval (same condition number in this plan approval), has been modified to reflect the NO<sub>x</sub> ERCs and VOC ERCs used to satisfy the offset requirements specified in Condition # 003(a)–(b), Section C, of this plan approval, and Condition # 002(a)–(b), Section C, of Plan Approval No. 23-0119J.

(6) The requirements specified in Section D (under Source IDs 400–401 and 501), of the original plan approval (same locations in this plan approval), have been updated to match those specified in Section D (under Source IDs 400–401 and 501), of Title V Operating Permit No. 23-00119.



\*\*\*\*\* End of Report \*\*\*\*\*

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