



**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Southwest Regional Office

Air Quality Program



PLAN APPROVAL PERMIT # 63-01011

MARKWEST LIBERTY MIDSTREAM & RESOURCES LLC

Smith Township, Washington County

Issue Date: April 12, 2023

Expiration Date: September 28, 2023



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

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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. 63-01011

Federal Tax Id - Plant Code: 30-0528059-26

Owner Information

Name: MARKWEST LIBERTY MIDSTREAM & RESOURCES LLC

Mailing Address: 4600 JBARRY CT STE 500
CANONSBURG, PA 15317-5854

Plant Information

Plant: MARKWEST LIBERTY MIDSTREAM & RESOURCES/HARMON CREEK GAS PLT

Location: 63 Washington County 63953 Smith Township
SIC Code:

Responsible Official

Name: ROBERT W SHOUGH

Title: OPERATIONS DIRECTOR

Phone: (304) 840 - 5681

Email: rwsough@marathonpetroleum.com

Plan Approval Contact Person

Name: ALEXANDRA M JUAREZ

Title: ENV ENG

Phone: (412) 815 - 8886

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[Signature]

MARK R. GOROG, P.E., ENVIRONMENTAL PROGRAM MANAGER, SOUTHWEST REGION



Plan Approval Description

The purpose of this Plan Approval is to install and operate the following air contamination sources: One (1) 260 mmscfd natural gas processing plant; One (1) 17.84 MMBtu/hr natural-gas fired regenerative heater equipped with FGR; One (1) 500-gallon methanol storage tank; Three (3) 5,000 electric-driven compressors (rod-packing venting); Eight (8) Measurement Devices. This Plan Approval also intends on modifying the following air contamination sources: Fugitives; Truck Loadout; Plant Flare.



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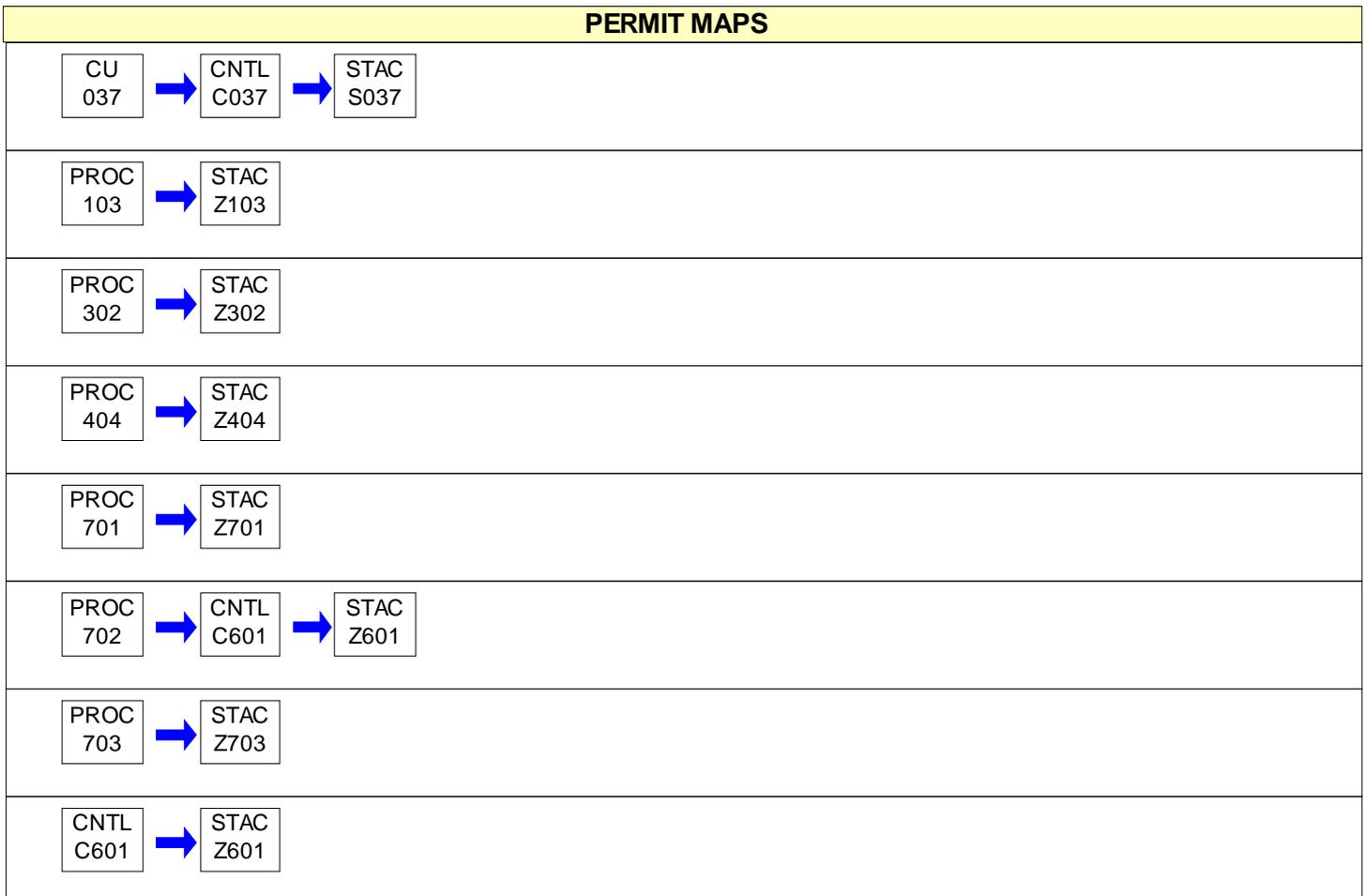
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**SECTION A. Plan Approval Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
037	17.84 MMBTU/HR CRYO PLANT 2 REGEN HEATER	N/A	Natural Gas
103	3 ELECTRIC DRIVEN COMPRESSORS WITH ROD-PACKING	N/A	Natural Gas
302	500 GALLON METHANOL TANK	N/A	
404	260 MMSCFD CRYO PLANT 2	N/A	Natural Gas
701	FUGITIVES	N/A	Natural Gas
702	TRUCK LOADOUT	N/A	Natural Gas
703	EIGHT (8) MEASUREMENT DEVICES	N/A	Natural Gas
C037	FGR		
C601	PLANT FLARE	N/A	Natural Gas
S037	17.84 MMBTU/HR CRYO PLANT 2 REGEN HEATER STACK		
Z103	3 ELECTRIC DRIVEN COMPRESSORS WITH ROD-PACKING STACK		
Z302	500 GALLON METHANOL STROAGE TANK FUGITIVES		
Z404	260 MMSCFD CRYO PLANT 2		
Z601	VENTING/BLOWDOWNS STACK		
Z701	FUGITIVES STACK		
Z703	EIGHT (8) MEASUREMENT DEVICES STACK		

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 15 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(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(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 § 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.****Emission Restriction(s).****# 001 [25 Pa. Code §121.7]****Prohibition of air pollution.**

No person may permit air pollution as that term is defined in the act.

002 [25 Pa. Code §123.1]**Prohibition of certain fugitive emissions**

(a) No person may permit the emission into the outdoor atmosphere of fugitive air contaminant from a source other than the following:

- (1) Construction or demolition of buildings or structures.
- (2) Grading, paving and maintenance of roads and streets.
- (3) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets.
- (4) Clearing of land.
- (5) Stockpiling of materials.
- (6) Open burning operations.
- (7) Blasting in open pit mines. Emissions from drilling are not considered as emissions from blasting.
- (8) n/a
- (9) Sources and classes of sources other than those identified in paragraphs (1)-(8), for which the operator has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:

(i) the emissions are of minor significance with respect to causing air pollution; and

(ii) the emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

(b) An application form for requesting a determination under either subsection (a)(9) or 129.15(c) is available from the Department. In reviewing these applications, the Department may require the applicant to supply information including, but not limited to, a description of proposed control measures, characteristics of emissions, quantity of emissions, and ambient air quality data and analysis showing the impact of the source on ambient air quality. The applicant shall be required to demonstrate that the requirements of subsections (a)(9) and (c) and 123.2 (relating to fugitive particulate matter) or of the requirements of 129.15(c) have been satisfied. Upon such demonstration, the Department will issue a determination, in writing, either as an operating permit condition, for those sources subject to permit requirements under the act, or as an order containing appropriate conditions and limitations.

(c) [See Work Practice Standards.]

(d) The requirements contained in subsection (a) and 123.2 do not apply to fugitive emissions arising from the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

003 [25 Pa. Code §123.2]**Fugitive particulate matter**

A person may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in §123.1(a)(1)—(9) (relating to prohibition of certain fugitive emissions) if the emissions are visible at the point the emissions pass outside the person's property.

004 [25 Pa. Code §123.21]**General**

(a) This section applies to sources except those subject to other provisions of this article, with respect to the control of sulfur compound emissions.

(b) No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

005 [25 Pa. Code §123.31]**Limitations**

A person may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source, in such a manner that the malodors are detectable outside the property of the person on whose land the source is being operated.

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

Facility-wide emissions from all sources shall not equal or exceed the following on a 12-month rolling basis:

29.0 TPY NO_x;
51.0 TPY CO;
39.0 TPY VOC;
1.0 TPY SO_x;
9.0 TPY PM₁₀;
9.0 TPY PM_{2.5};
4.0 TPY Total HAPs;
109,000 TPY CO_{2e}

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

The Owner/Operator shall not permit the emission into the outdoor atmosphere of any visible air contaminants that equal or exceed 10% at any time.

This condition shall not apply in any of the following instances:

- (1) When the presence of uncombined water is the only reason for failure of the emission to meet the limitations.
- (2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.
- (3) When the emission results from sources specified in §123.1 (a)(1)—(9) (relating to prohibition of certain fugitive emissions).

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

If performance testing is required, such testing shall be conducted as follows [25 Pa. Code §127.12b and §139.11]:

- (a) The permittee shall submit a pre-test protocol electronically to the Department for review at least 90 days prior to the performance of any EPA reference method stack test or portable analyzer test. The permittee may repeat portable analyzer testing without additional protocol approvals provided that the same method and equipment are used. All proposed performance test methods shall be identified in the pre-test protocol and approved by the Department prior to testing.
- (b) The permittee shall notify the Regional Air Quality Manager at least 15 days prior to any performance test so that an observer may be present at the time of the test. Notification shall also be sent to the Division of Source Testing and Monitoring. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.
- (c) A complete test report shall be submitted to the Department no later than 60 calendar days after completion of the on-site testing portion of an emission test program.
- (d) Pursuant to 25 Pa. Code §139.53(b) a complete test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or non-compliance with all applicable permit conditions. The summary results will include, at a minimum, the following information:
 - (1) A statement that the owner or operator has reviewed the report from the emissions testing body and agrees with the findings.
 - (2) Permit number(s) and condition(s) which are the basis for the evaluation.
 - (3) Summary of results with respect to each applicable permit condition.
 - (4) Statement of compliance or non-compliance with each applicable permit condition.
- (e) Pursuant to 25 Pa. Code §139.3, all submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

**SECTION C. Site Level Plan Approval Requirements**

(f) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.

(g) All submittals shall be sent electronically to ra-epstacktesting@pa.gov, with CC: to ra-epsstacktesting@pa.gov.

(h) The permittee shall ensure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

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

If, at any time, the Department has cause to believe that air contaminant emissions from the sources listed in this plan approval may be in excess of the limitations specified in, or established pursuant to this plan approval or the permittee's operating permit, the permittee may be required to conduct test methods and procedures deemed necessary by the Department to determine the actual emissions rate. Such testing shall be conducted in accordance with 25 Pa. Code Chapter 139, where applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the company that testing is required.

III. MONITORING REQUIREMENTS.**# 010 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

- (1) A device approved by the Department and maintained to provide accurate opacity measurements.
- (2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of devices approved by the Department.

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

Inspection of the authorized sources shall be conducted at a minimum of once per operating day. The inspection shall be conducted for the presence of the following:

- (a) Visible stack emissions;
- (b) Fugitive emissions; and
- (c) Potentially objectionable odors at the property line.

These observations are to ensure continued compliance with source-specific visible emission limitations, fugitive emissions prohibited under 25 Pa. Code §123.1 or §123.2, and malodors prohibited under 25 Pa. Code §123.31.

Observations for visible stack emissions shall be conducted during daylight hours, and all observations shall be conducted while sources are in operation.

If visible stack emissions, fugitive emissions, or potentially objectionable odors are apparent, the permittee shall take corrective action. If any visible emissions are apparent after the correction action, sources of emissions shall not start until the permittee can verify compliance with the opacity standards specified in the permit through methods prescribed in §123.43, such as EPA Method 9 readings taken by a certified visible emissions reader.

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

The Owner/Operator shall conduct a fractional gas analysis performed on the inlet gas to the facility at a minimum of once per quarter of each calendar year. Each sample shall be collected no sooner than 30 days from the previous sample.

**SECTION C. Site Level Plan Approval Requirements****IV. RECORDKEEPING REQUIREMENTS.****# 013 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall maintain the following comprehensive and accurate records:

- (1) Facility-wide emissions for NO_x, CO, SO₂, VOC, PM, PM₁₀, PM_{2.5}, any single HAP, total HAPs, and CO_{2e} per consecutive 12-month rolling period.
- (2) Results of facility-wide inspections including the date, time, name, and title of the observer, along with any corrective action taken as a result.
- (3) Results of any visible emissions observations to demonstrate compliance with the 10% opacity limit.
- (4) Copies of the manufacturers' specifications and recommended maintenance schedule (or site-specific developed maintenance schedule) for each air contamination source and air cleaning device.
- (5) All maintenance performed on each air contamination source and air cleaning device.
- (6) Records of a fractional gas analysis performed on the inlet gas to the facility at a minimum of once per quarter of each calendar year.
- (7) Hours of operation, kept on both a monthly and previous 12-month basis, for each air contamination source and air cleaning device;
- (8) Records of the date, time, duration, volume of natural gas released to atmosphere, and emissions from each blowdown and emergency shutdown at the facility.
- (9) Records of daily volumes routed to the flare, via the header meter, shall be maintained.

[Material throughput and emission records shall be updated each month, using monthly records.]

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

All logs and required records shall be maintained either on site, electronically, or at an alternative location acceptable to the Department, for a minimum of five (5) years and shall be made available to the Department upon request.

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

The Owner/Operator shall maintain records of the date, time, duration, volume of natural gas released, and emissions from each unplanned and uncontrolled blowdown and emergency shutdown at the facility.

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

In accordance with 25 Pa. Code § 135.3, the owner or operator of a facility shall submit to the Department via AES*Online or AES*XML at www.depgreenport.state.pa.us/ by March 1st of each year, a facility inventory report for the preceding calendar year for all sources regulated under this plan approval. The inventory report shall include all emissions information for all sources operated during the preceding calendar year. Emissions data including, but not limited to, the following shall be reported:

- (i) NO_x; (ii) CO; (iii) SO_x; (iv) PM₁₀; (v) PM_{2.5}; (vi) VOC;
- (vii) Speciated HAP including, but not limited to, benzene, ethyl benzene, formaldehyde, n-hexane, toluene, isomers and mixtures of xylenes, and 2,2,4-trimethylpentane;
- (viii) Total HAP; (ix) CO_{2e}; (x) CH₄; and (xi) N₂O.

(c) A source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

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

(a) The owner or operator shall report each malfunction that occurs at this facility that poses an imminent and substantial danger to the public health and safety or the environment or which it should reasonably believe may result in citizen complaints to the Department. For purpose of this condition, a malfunction is defined as any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment or source to operate in a normal or usual manner that may

**SECTION C. Site Level Plan Approval Requirements**

result in an increase in the emission of air contaminants. Examples of malfunctions that may result in citizen complaints include, but are not limited to, large dust plumes, heavy smoke, or a spill or release that may result in an odor detectable outside the property of the person on whose land the source is being operated.

(b) When the malfunction poses an imminent and substantial danger to the public health and safety or the environment, the notification shall be submitted to the Department no later than one hour after the incident. All other malfunctions that must be reported under subsection (a) shall be reported to the Department no later than the next business day.

(c) The report shall describe the:

- (i) Name and location of the facility;
- (ii) Nature and cause of the malfunction or breakdown;
- (iii) Time when the malfunction or breakdown was first observed;
- (iv) Expected duration of excess emissions;
- (v) Estimated rate of emissions;
- (vi) corrective actions or preventative measures taken,
- (vii) the 12-month rolling sum of emissions at the time of the malfunction event (including but not limited to: criteria pollutants, VOCs, benzene, methanol, formaldehyde, n-hexane, greenhouse gases, and total HAPs), including any emission increases that occurred as a result of the reportable malfunction event.

(d) The owner or operator shall notify the Department immediately when corrective measures have been accomplished.

(e) Subsequent to the malfunction, the owner/operator shall submit a full written report to the Department including the items identified in (c) and corrective measures taken on the malfunction within 15 days, if requested.

(f) The owner/operator shall submit reports on the operation and maintenance of the source to the Regional Air Program Manager at such intervals and in such form and detail as may be required by the Department. Information required in the reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and maintenance schedules.

(g) Malfunctions shall be reported to the Department at the following address:

Pennsylvania Department of Environmental Protection
Southwest Regional Office
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745
412-442-4000

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

MarkWest shall report each emergency shutdown (ESD) event that occurs at this facility in accordance with the malfunction reporting requirements of Section C of this operating permit.

019 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]**Subpart A - General Provisions****Address.**

The Facility is subject to New Source Performance Standards from 40 CFR Part 60 Subpart OOOOa. In accordance with 40 CFR

§60.4, copies of all requests, reports, applications, submittals and other communications regarding affected sources shall be forwarded to both EPA and the Department at the addresses listed below unless otherwise noted.

Associate Director
United States Environmental Protection Agency
Region III, Air and Radiation Division
Permits Branch (3AD10)

**SECTION C. Site Level Plan Approval Requirements**

Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852

PADEP
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745

020 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.7]**Subpart A - General Provisions****Notification and record keeping.**

The Owner/operator shall provide EPA with the notifications required by 40 CFR §60.7. Required notifications may include but are not necessarily limited to: date of commencement of construction (within 30 days after starting construction), actual start-up date (within 15 days after equipment start-up), physical or operational changes which may increase the emission rate of any air pollutant to which a standard applies (60 days or as soon as practicable before equipment start-up), and opacity observations (within 30 days).

VI. WORK PRACTICE REQUIREMENTS.**# 021 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

(c) A person responsible for any source specified in subsections (a)(1) -- (7) or (9) shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

- (1) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.
- (3) Paving and maintenance of roadways.
- (4) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

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

The permittee shall construct, operate, and maintain all air contamination sources and air cleaning devices authorized under this Plan Approval in accordance with the manufacturer's specifications and recommended maintenance schedules, or site-specific specifications developed in accordance with good engineering practice and prior operating experience. Additionally, the owner/operator may not cause or permit the operation of an air contamination source in a manner inconsistent with good operating practices.

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

The Owner/Operator shall minimize blowdown gas generated as a result of equipment maintenance and emergency shutdowns to the extent practical.

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

In instances of multiple applicable emission limitations, the most stringent emission limitation applies.

025 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Source owners or operators shall maintain and make available upon request by the Department records including computerized records that may be necessary to comply with §§ 135.3 and 135.21 (relating to reporting; and emission

**SECTION C. Site Level Plan Approval Requirements**

statements). These may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

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

Each quarterly fractional gas analysis performed on the inlet gas to the facility shall be evaluated for impacts on the actual emissions from this facility.

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

Air contamination sources and air cleaning devices authorized for construction and/or operation under this plan approval include the following:

- One (1) 260 mmscf natural gas processing plant (Source ID 404);
- Cryo Plant 2 regenerative heater (Source ID 037): Maximum heat input of 17.84 MMBtu/hr; Equipped with flue gas recirculation (Source ID C037).
- One (1) 500-gallon methanol storage tank (Source ID 302);
- Three (3) 5,000 hp electric-driven compressors (rod-packing venting) (Source ID 103);
- Fugitives (Source ID 701)
- Truck Loadout (Source ID 702)
- Measurement Devices (Source ID 703)
- Plant Flare (Source ID C601)

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

Upon determination by the permittee that the source(s) covered by this Plan Approval are constructed and in compliance with all operative conditions of the Plan Approval, the permittee shall contact the Department to schedule the Initial Operating Permit Inspection.

029 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Upon completion of the Initial Operating Permit Inspection and determination by the Department that the permittee is in compliance with all conditions of the plan approval, the permittee shall submit an application for a State Only Operating Permit (SOOP) for the Facility within 120 days to incorporate the conditions of this plan approval. The SOOP shall include air contamination sources and air cleaning devices operating within this Plan Approval as well as air contamination sources and air cleaning devices operating under GP5-63-01011B (AG5-63-00011A).

030 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall submit requests to extend the temporary operation periods under this Plan Approval at least 15 days prior to the expiration date of any authorized period of temporary operation.

031 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Compliance with mass emission limits established in this authorization may be demonstrated using engineering calculations based on fuel and raw material purchase records, laboratory analyses, manufacturers specifications, source test results, production and operating records, material balance methods, and/or other applicable methods, with written Department approval.

032 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

This Plan Approval is based on site-specific and Federal requirements. In the event of an inconsistency or any conflicting requirements, the most stringent provision, term, condition, method or rule shall be used by default.

**SECTION C. Site Level Plan Approval Requirements****# 033 [25 Pa. Code §129.14]****Open burning operations**

(a) Air basins. No person may permit the open burning of material in an air basin.

(b) Outside of air basins. No person may permit the open burning of material in an area outside of air basins in a manner that:

(1) The emissions are visible, at any time, at the point such emissions pass outside the property of the person on whose land the open burning is being conducted.

(2) Malodorous air contaminants from the open burning are detectable outside the property of the person on whose land the open burning is being conducted.

(3) The emissions interfere with the reasonable enjoyment of life or property.

(4) The emissions cause damage to vegetation or property.

(5) The emissions are or may be deleterious to human or animal health.

(c) Exceptions. The requirements of subsections (a) and (b) do not apply where the open burning operations result from:

(1) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.

(2) Any fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.

(3) A fire set for the prevention and control of disease or pests, when approved by the Department.

(4) A fire set in conjunction with the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

(5) A fire set for the purpose of burning domestic refuse, when the fire is on the premises of a structure occupied solely as a dwelling by two families or less and when the refuse results from the normal occupancy of the structure.

(6) A fire set solely for recreational or ceremonial purposes.

(7) A fire set solely for cooking food.

(d) Clearing and grubbing wastes. The following is applicable to clearing and grubbing wastes:

(1) As used in this subsection the following terms shall have the following meanings:

Air curtain destructor—A mechanical device which forcefully projects a curtain of air across a pit in which open burning is being conducted so that combustion efficiency is increased and smoke and other particulate matter are contained.

Clearing and grubbing wastes—Trees, shrubs and other native vegetation which are cleared from land during or prior to the process of construction. The term does not include demolition wastes and dirt laden roots.

(2) Subsection (a) notwithstanding, clearing and grubbing wastes may be burned in a basin subject to the following requirements:

(i) Air curtain destructors shall be used when burning clearing and grubbing wastes.

(ii) Each proposed use of air curtain destructors shall be reviewed and approved by the Department in writing with respect to equipment arrangement, design and existing environmental conditions prior to commencement of burning. Proposals approved under this subparagraph need not obtain plan approval or operating permits under Chapter 127 (relating to construction, modification, reactivation and operation of sources).

(iii) Approval for use of an air curtain destructor at one site may be granted for a specified period not to exceed 3 months, but may be extended for additional limited periods upon further approval by the Department.

(iv) The Department reserves the right to rescind approval granted if a determination by the Department indicates that an air pollution problem exists.

(3) N/A

(4) During an air pollution episode, open burning is limited by Chapter 137 (relating to air pollution episodes) and shall cease as specified in that chapter.

034 [25 Pa. Code §135.4]**Report format**

Source reports shall contain sufficient information to enable the Department to complete its emission inventory. Source reports shall be made by the source owner or operator in a format specified by the Department.

VIII. COMPLIANCE CERTIFICATION.



SECTION C. Site Level Plan Approval Requirements

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: 037

Source Name: 17.84 MMBTU/HR CRYO PLANT 2 REGEN HEATER

Source Capacity/Throughput:

N/A

Natural Gas

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.11]****Combustion units**

(a) A person may not permit the emission into the outdoor atmosphere of particulate matter from a combustion unit in excess of the following:

(1) The rate of 0.4 pound per million Btu of heat input, when the heat input to the combustion unit in millions of Btus per hour is greater than 2.5 but less than 50.

(2) The rate determined by the following formula:

$$A = 3.6E^{-0.56}$$

where:

A = Allowable emissions in pounds per million Btus of heat input, and

E = Heat input to the combustion unit in millions of Btus per hour,

when E is equal to or greater than 50 but less than 600.

(3) N/A

(b) N/A

[Source ID 037 has a guarantee of 0.13 pound per million Btu which satisfies this condition.]

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

Source ID 037 shall not exceed the following:

(1) 9 ppm_{dv} NO_x at 3% O₂

(2) 49 ppm_{dv} CO at 3% O₂

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

The Owner/Operator shall maintain records of the work practice standards, for a minimum of five (5) years, which shall, at a minimum, include the following:

(2) Records of annual tune-ups/inspections;

(3) Fuel consumption records on a monthly basis;

(4) The concentrations of NO_x and CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of Source ID 037;

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

- (5) A description of any corrective actions taken as part of the tune-up;
- (6) The date(s) the annual tune-up/inspection was conducted;
- (7) The factory calibration certification sheets for the portable analyzer;
- (8) The type and amount of fuel used over the 12 months prior to the tune-up;
- (9) Daily fuel consumption (in units of mass and heat input), kept on both a monthly and previous 12-month basis.
- (10) Records including a description of testing methods, results, regenerative heater operating data collected during tests, and a copy of the calculations performed to determine compliance with emission standards for the regenerative heater.

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 §123.22]****Combustion units**

(a) Nonair basin areas. Combustion units in nonair basin areas must conform with the following:

- (1) General provision. A person may not permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO₂, from a combustion unit in excess of the rate of 4 pounds per million Btu of heat input over a 1-hour period, except as provided in paragraph (4).
- (2) N/A.
- (b) - (h) N/A.

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

(a) The Owner/Operator shall conduct an annual tune-up/inspection on Source ID 037. At a minimum the tune-up/inspection shall consist of the following:

- (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary;
- (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
- (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly;
- (4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with the NO_x requirement to which Source ID 037 is subject;

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

(a) The Owner/Operator shall, every three years, or within an extended timeframe approved by the Department, measure the concentrations in the effluent stream of NO_x and CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable analyzer as long as it is calibrated and operated according to the manufacturer's recommendations, the procedures specified in ASTM D 6522, and the following requirements:

- (1) The portable analyzer shall undergo factory laboratory calibration and cleaning every three years.
- (2) The portable analyzer shall have on-site calibration checks using certified calibration gases demonstrating the analyzer accuracy requirements specified in ASTM D 6522.
- (3) In order to verify emissions, the Owner/Operator shall conduct three, twenty-minute test runs recording emissions data at least once each minute.
- (4) Depending on concentrations observed, fresh air purges should be performed according to manufacturer's recommendations.
- (5) Re-zeroing of the portable analyzer should be performed according to manufacturer's recommendations or at least

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

before every test run.

VII. ADDITIONAL REQUIREMENTS.

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

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Source ID: 103

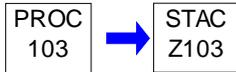
Source Name: 3 ELECTRIC DRIVEN COMPRESSORS WITH ROD-PACKING

Source Capacity/Throughput:

N/A

Natural Gas

Conditions for this source occur in the following groups: G01
G02

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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

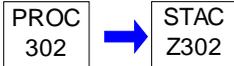
Source ID: 302

Source Name: 500 GALLON METHANOL TANK

Source Capacity/Throughput:

N/A

Conditions for this source occur in the following groups: G01

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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

The permittee shall maintain records of the total throughput through the methanol storage tanks on a 12-month rolling basis.

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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Source ID: 404

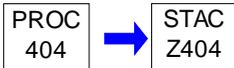
Source Name: 260 MMSCFD CRYO PLANT 2

Source Capacity/Throughput:

N/A

Natural Gas

Conditions for this source occur in the following groups: G01

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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Source ID: 701

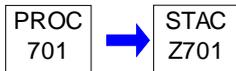
Source Name: FUGITIVES

Source Capacity/Throughput:

N/A

Natural Gas

Conditions for this source occur in the following groups: G01
G02

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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

For each fugitive emissions component constructed and authorized to operate at this facility, the following applies:

(i) No later than thirty (30) days after an emission source commences operation, and at least monthly thereafter, the owner or operator of a facility shall conduct an AVO inspection. The owner/operator shall conduct daily AVO inspections on all component types. Additionally, the owner/operator shall conduct weekly AVO inspections on pump components. Please see Section H. "Miscellaneous" regarding this frequency.

(ii) For compressor and connector component types, no later than sixty (60) days after initial startup, and at least quarterly thereafter, the owner or operator shall conduct an LDAR program using an (optical gas imaging) OGI camera. Additionally, a gas leak detector that meets the requirements of 40 CFR Part 60, Appendix A-7, Method 21, shall be conducted at least annually.

(iii) For pressure relief and valve components types, no later than sixty (60) days after initial startup, and at least quarterly thereafter, the owner or operator shall conduct an LDAR program using a gas leak detector that meets the requirements of 40 CFR Part 60, Appendix A-7, Method 21.

(iv) For pump component types, no later than 60 days after initial startup, and at least monthly thereafter, the owner or operator shall conduct an LDAR program using a gas leak detector that meets the requirements of 40 CFR Part 60, Appendix A-7, Method 21.

(A) The owner or operator may request, in writing, an extension of the LDAR inspection interval from the Air Program Manager of the Southwest Regional Office.

(B) Any fugitive emissions components that are difficult-to-monitor or unsafe-to-monitor must be identified in the monitoring plan described in 40 CFR § 60.5397a(b) through (d).

(iii) The detection devices must be operated and maintained in accordance with manufacturer-recommended procedures, as required by the test method, or a Department-approved method.

(iv) A leak is defined as:

(A) Any positive indication, whether audible, visual, or odorous, determined during an AVO inspection;

(B) Any visible emissions detected by an OGI camera calibrated according to 40 CFR §60.18 and a detection sensitivity level of 60 grams/hour; or

(C) A concentration of 500 ppm calibrated as methane detected by an instrument reading. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than ten (10) using methane. If a response factor less than ten (10) cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than ten (10) for each of the VOC to be measured.

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

- (v) For inspections using a gas leak detector in accordance with 40 CFR Part 60, Appendix A-7, Method 21, the owner or operator may choose to adjust the detection instrument readings to account for the background organic concentration level as determined according to the procedures in Section 8.3.2.
- (vi) Any leak detected from a fugitive emission component shall be repaired by the owner or operator of the facility as expeditiously as practicable. A first attempt at repair must be attempted within five (5) calendar days of detection, and repair must be completed no later than fifteen (15) calendar days after the leak is detected unless:
- (A) The owner or operator must purchase parts, in which case the repair must be completed no later than ten (10) calendar days after the receipt of the purchased parts; or
- (B) The repair or replacement is technically infeasible, would require a vent blowdown, a compressor station, processing plant or transmission station shutdown, or would be unsafe to repair during operation of the unit, in which case the repair or replacement must be completed during the next scheduled compressor station, processing plant or transmission station shutdown, after a planned vent blowdown or within two (2) years, whichever is earlier.
- (C) If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within fifteen (15) days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list.
- (vii) Once a fugitive emission component has been repaired or replaced, the owner or operator must resurvey the component as soon as practicable, but no later than fifteen (15) calendar days after the leak is repaired.
- (A) For repairs that cannot be made during the monitoring survey when the leak is initially found, either a digital photograph must be taken of the component or the component must be tagged for identification purposes.
- (B) A leak is considered repaired if:
- (1) There are no detectable emissions consistent with Section 8.3.2 of 40 CFR Part 60, Appendix A-7, Method 21;
 - (2) A leak concentration of less than 500 ppm as methane is detected when the gas leak detector probe inlet is placed at the surface of the component;
 - (3) There is no visible leak image when using an OGI camera calibrated at a detection sensitivity level of 60 grams/hour; or
 - (4) There is no bubbling at the leak interface using a soap solution bubble test specified in Section 8.3.3 of 40 CFR Part 60, Appendix A-7, Method 21.

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

If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

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

The permittee shall maintain the following comprehensive and accurate records:
Records of any leak detected and associated repair activity through the leak detection and repair or maintenance program.

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

For fugitive emissions components, the owner or operator shall maintain the following records, including information on:

- (a) The fugitive emissions monitoring plan in accordance with 40 CFR §60.5397a(b) through (d).
- (b) Records of each monitoring survey which must include:
 - (i) The facility name and location;
 - (ii) The state-only operating permit number;
 - (iii) The date, start time, and end time of the survey;
 - (iv) The name of the operator(s) performing the survey;
 - (v) The monitoring instrument used;
 - (vi) The ambient temperature, sky conditions, and maximum wind speed at the time of the survey;
 - (vii) Any deviations from the monitoring plan or a statement that there were none; and

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

(vii) Documentation of each fugitive emission including:

(A) The identification of each component from which fugitive emissions leaks were detected;

(B) The instrument reading of each fugitive emissions component that meets the leak definition:

(1) A concentration of 500 ppm calibrated as methane detected by an instrument reading

(C) The status of repair of each component including:

(1) The repair methods applied in each attempt to repair the component;

(2) The tagging or digital photographing of each component not repaired during the monitoring survey in which the fugitive emissions were discovered;

(3) The reasons a component was placed on delay of repair;

(4) The date of successful repair of the component; and

(5) The information on the instrumentation or method used to resurvey the component after repair, if it was not completed during the monitoring survey in which the fugitive emissions were discovered.

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

Records of each monitoring survey conducted during the reporting period shall be included for any annual report required by an applicable New Source Performance Standard (NSPS) or National Emissions Standard for Hazardous Air Pollutants (NESHAP).

The emissions from fugitive emissions components during the reporting period shall be included in the annual AES emissions inventory reports.

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

The Owner/Operator shall maintain the following records:

(1) Record of construction documentation that indicate new and reworked valves, piping, compressor systems, and pump systems conform to American Petroleum Institute (API), American National Standards institute (ANSI), American Society of Mechanical Engineers (ASME), or equivalent code

(2) Record of construction indicating that new underground drain piping shall be welded.

(3) Record of construction showing that piping connections are welded, flanged, or screwed (if two-inch diameter or smaller).

(4) A list of all difficult-to-monitor or unsafe-to-monitor components at the facility.

(5) A record of hydraulic testing, gas testing, or gas analyzer results on new or reworked piping connections.

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

Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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

New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least daily by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a 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 permit holder must complete either of the following actions within that time period;

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve;

or
(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

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

Hydraulic testing or gas testing of new and reworked piping connections, at no lower than operating pressure, shall be completed before components are returned to service. Alternatively, the components may be monitored for leaks by utilizing an approved gas analyzer within fifteen (15) days of return to services. To obtain leak-free operation, necessary adjustments shall be made.

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

Each open-ended line and open-ended valve shall be equipped with an appropriately sized blind flange, cap, plug, or a second valve to seal the line. Both valves shall be closed except during sampling procedures. This condition does not apply if when open-ended line or open-ended valve is out of service and properly follows lockout and tagout procedures.

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

For annual emissions reporting purposes, cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the EPA correlation approach.

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

Within ten (10) days of when the most recent leaking component is added to the delay of repair list, the cumulative daily emission calculations, which include every component listed on the delay of repair list shall be updated. If the equation, below, occurs, the Owner/Operator shall notify the department within fifteen (15) days of this determination. Depending on the severity or number of tagged leaks, early shutdown, or other appropriate responses may result:

$(\text{Cumulative daily emission rate of all components on the delay of repair list}) \times (\text{days until the next scheduled unit shutdown}) \geq (\text{total emissions from a unit shutdown})$

**SECTION D. Source Level Plan Approval Requirements****# 013 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak checking during plant operation.

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

Source ID: 702

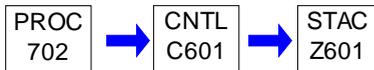
Source Name: TRUCK LOADOUT

Source Capacity/Throughput:

N/A

Natural Gas

Conditions for this source occur in the following groups: G01

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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

The Owner/Operator shall monitor volume of liquids loaded from Source ID 702 on a 12-month rolling basis.

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

The Owner/Operator shall maintain records of volume of liquids loaded from Source ID 702 on a 12-month rolling basis.

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) and/or Section E (Source Group Restrictions).

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

The Owner/Operator shall maintain records of truck condensate load-out throughput on a 12-month rolling basis.

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

Throughputs for the truck load-out shall not exceed 220,000 gallons of condensate during any consecutive 12-month period.

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

Truck loadout operations shall be dedicated normal service, filled by submerged loading.

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

The flare shall be operated, at all times, during condensate truck loadout operations.



SECTION D. Source Level Plan Approval Requirements

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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

Source ID: 703

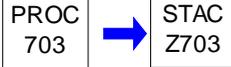
Source Name: EIGHT (8) MEASUREMENT DEVICES

Source Capacity/Throughput:

N/A

Natural Gas

Conditions for this source occur in the following groups: G01

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

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) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

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

Source ID: C601

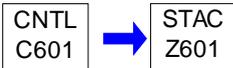
Source Name: PLANT FLARE

Source Capacity/Throughput:

N/A

Natural Gas

Conditions for this source occur in the following groups: G01

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Emissions of VOC from the flare stack shall not exceed 14.0 tons during any consecutive 12-month period, updated monthly.

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) and/or Section E (Source Group Restrictions).

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

The Owner/Operator shall monitor:

- (1) Daily gas throughput and heat content.

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

The permittee shall maintain the following comprehensive and accurate records:

- (1) Daily gas throughput and heat content, kept on both a monthly and previous 12-month basis.

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) and/or Section E (Source Group Restrictions).

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

The Owner/Operator shall operate the flare in accordance with manufacturer specifications and the manufacturer's recommended operating parameters to minimize emission of air pollutants.

VII. ADDITIONAL REQUIREMENTS.**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

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

(a) Introduction.

(1) This section contains requirements for control devices used to comply with applicable subparts of 40 CFR parts 60 and 61. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(2) N/A

(b) Flares. Paragraphs (c) through (f) apply to flares.

(c) (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} , as determined by the following equation:

$$V_{max} = (XH_2 - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, $3.9(\text{m/sec})/\text{volume-percent hydrogen}$.

XH_2 = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the

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

method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f) (1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$HT = K * \text{Sum (For } i=1 \text{ to } i=n) C_i * H_i$$

where:

HT = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$K = (1.740 * 10^{-7}) (1/\text{ppm}) (\text{g mole}/\text{scm}) (\text{MJ}/\text{kcal})$
where the standard temperature for (g mole/scm) is 20 Degrees C

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and

H_i = Net heat of combustion of sample component i , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, V_{max} , for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$$\text{Log}_{10} (V_{max}) = (HT + 28.8)/31.7$$

V_{max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

HT = The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation.

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

$$V_{\max} = 8.706 + 0.7084 (HT)$$

V_{\max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

HT = The net heating value as determined in paragraph (f)(3).

(g) - (i) N/A.

[51 FR 2701, Jan. 21, 1986, as amended at 63 FR 24444, May 4, 1998; 65 FR 61752, Oct. 17, 2000; 73 FR 78209, Dec. 22, 2008]

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

Group Name: G01

Group Description: Non-Combustion Emission Sources

Sources included in this group

ID	Name
103	3 ELECTRIC DRIVEN COMPRESSORS WITH ROD-PACKING
302	500 GALLON METHANOL TANK
404	260 MMSCFD CRYO PLANT 2
701	FUGITIVES
702	TRUCK LOADOUT
703	EIGHT (8) MEASUREMENT DEVICES
C601	PLANT FLARE

I. RESTRICTIONS.**Emission Restriction(s).**

001 [25 Pa. Code §123.13]

Processes

Particulate matter emissions into the outdoor atmosphere from any process shall not exceed 0.04 gr/dscf as specified in 25 Pa. Code § 123.13(c)(1)(i).

002 [25 Pa. Code §123.21]

General

(a) N/A.

(b) No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

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.

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

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

Group Name: G02

Group Description: Sources Subject o Subpart OOOOa

Sources included in this group

ID	Name
103	3 ELECTRIC DRIVEN COMPRESSORS WITH ROD-PACKING
701	FUGITIVES

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.**# 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5421a]****Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015****What are my additional recordkeeping requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?**

(a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of § 60.486a.

(b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of § 60.5401a(b)(1).

(1) When each leak is detected as specified in § 60.5401a(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.

(2) When each leak is detected as specified in § 60.5401a(b)(2), the information specified in paragraphs (b)(2)(i) through (x) of this section must be recorded in a log and shall be kept for 2 years in a readily accessible location:

(i) The instrument and operator identification numbers and the equipment identification number.

(ii) The date the leak was detected and the dates of each attempt to repair the leak.

(iii) Repair methods applied in each attempt to repair the leak.

(iv) "Above 500 ppm" if the maximum instrument reading measured by the methods specified in § 60.5400a(d) after each repair attempt is 500 ppm or greater.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.

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

(ix) The date of successful repair of the leak.

(x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of § 60.482-4a(a). The designation of equipment subject to the provisions of § 60.482-4a(a) must be signed by the owner or operator.

V. REPORTING REQUIREMENTS.

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5420a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction,
Modification or Reconstruction Commenced After September 18, 2015
What are my notification, reporting, and recordkeeping requirements?**

(a) Notifications. You must submit the notifications according to paragraphs (a)(1) and (2) of this section if you own or operate one or more of the affected facilities specified in § 60.5365a that was constructed, modified, or reconstructed during the reporting period.

(1) If you own or operate an affected facility that is the group of all equipment within a process unit at an onshore natural gas processing plant, or a sweetening unit, you must submit the notifications required in §§ 60.7(a)(1), (3), and (4) and 60.15(d). If you own or operate a well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, or collection of fugitive emissions components at a compressor station, you are not required to submit the notifications required in §§ 60.7(a)(1), (3), and (4) and 60.15(d).

(2) N/A

(b) Reporting requirements. You must submit annual reports containing the information specified in paragraphs (b)(1) through (8) and (12) of this section and performance test reports as specified in paragraph (b)(9) or (10) of this section, if applicable. You must submit annual reports following the procedure specified in paragraph (b)(11) of this section. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to § 60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) and (12) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

(1) The general information specified in paragraphs (b)(1)(i) through (iv) of this section is required for all reports.

(i) The company name, facility site name associated with the affected facility, U.S. Well ID or U.S. Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.

(ii) An identification of each affected facility being included in the annual report.

(iii) Beginning and ending dates of the reporting period.

(iv) A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(2) – (3) N/A

(4) For each reciprocating compressor affected facility, the information specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) The cumulative number of hours of operation or the number of months since initial startup, since August 2, 2016, or since the previous reciprocating compressor rod packing replacement, whichever is latest. Alternatively, a statement that

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

emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.

(ii) If applicable, for each deviation that occurred during the reporting period and recorded as specified in paragraph (c)(3)(iii) of this section, the date and time the deviation began, duration of the deviation and a description of the deviation.

(iii) If required to comply with § 60.5385a(a)(3), the information in paragraphs (b)(4)(iii)(A) through (C) of this section.

(A) Dates of each inspection required under § 60.5416a(a) and (b);

(B) Each defect or leak identified during each inspection, and date of repair or date of anticipated repair if repair is delayed; and

(C) Date and time of each bypass alarm or each instance the key is checked out if you are subject to the bypass requirements of § 60.5416a(a)(4).

(5) – (8) N/A

(9) Within 60 days after the date of completing each performance test (see § 60.8) required by this subpart, except testing conducted by the manufacturer as specified in § 60.5413a(d), you must submit the results of the performance test following the procedure specified in either paragraph (b)(9)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), except as outlined in this paragraph (b)(9)(i). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>).) The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as confidential business information (CBI). Anything submitted using CEDRI cannot later be claimed CBI. Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (b)(9)(i). All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 60.4.

(10) N/A

(11) You must submit reports to the EPA via CEDRI, except as outlined in this paragraph (b)(11). (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>).) The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Anything submitted using CEDRI cannot later be claimed CBI. You must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in § 60.4. Once the form has been available in CEDRI for at least 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file

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consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Fuels and Incineration Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via CEDRI. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(12) N/A

(13) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (b)(13)(i) through (vi) of this section.

(i) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(ii) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(iii) The outage may be planned or unplanned.

(iv) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.

(v) You must provide to the Administrator a written description identifying:

(A) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(B) A rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage;

(C) Measures taken or to be taken to minimize the delay in reporting; and

(D) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(vi) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(vii) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(14) If you are required to electronically submit a report through CEDRI in the EPA's CDX, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (b)(14)(i) through (v) of this section.

(i) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

(ii) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.

(iii) You must provide to the Administrator:

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- (A) A written description of the force majeure event;
- (B) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
- (C) Measures taken or to be taken to minimize the delay in reporting; and
- (D) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (iv) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- (v) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.
- (c) Recordkeeping requirements. You must maintain the records identified as specified in § 60.7(f) and in paragraphs (c)(1) through (18) of this section. All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by this subpart that are submitted electronically via the EPA's CDX may be maintained in electronic format.
- (1) – (2) N/A
- (3) For each reciprocating compressor affected facility, you must maintain the records in paragraphs (c)(3)(i) through (iii) of this section.
- (i) Records of the cumulative number of hours of operation or number of months since initial startup, since August 2, 2016, or since the previous replacement of the reciprocating compressor rod packing, whichever is latest. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
- (ii) Records of the date and time of each reciprocating compressor rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system as specified in § 60.5385a(a)(3).
- (iii) Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in § 60.5385a, including the date and time the deviation began, duration of the deviation, and a description of the deviation.
- (4) – (17) N/A
- (18) A copy of each performance test submitted under paragraph (b)(9) of this section.

[85 FR 57449, Sept. 15, 2020]

003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5422a]

Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015

What are my additional reporting requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?

(a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of § 60.487a(a), (b)(1) through (3) and (5), and (c)(2)(i) through (iv) and (vii) through (viii). You must submit semiannual reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI website (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in § 60.4. Once the form has been available in CEDRI for at least 90 days, you must begin submitting all subsequent reports via CEDRI. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

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(b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in § 60.487a(b)(1) through (3) and (5): Number of pressure relief devices subject to the requirements of § 60.5401a(b) except for those pressure relief devices designated for no detectable emissions under the provisions of § 60.482-4a(a) and those pressure relief devices complying with § 60.482-4a(c).

(c) An owner or operator must include the information specified in paragraphs (c)(1) and (2) of this section in all semiannual reports in addition to the information required in § 60.487a(c)(2)(i) through (iv) and (vii) through (viii):

(1) Number of pressure relief devices for which leaks were detected as required in § 60.5401a(b)(2); and

(2) Number of pressure relief devices for which leaks were not repaired as required in § 60.5401a(b)(3).

[81 FR 35898, June 3, 2016, as amended at 85 FR 57457, Sept. 15, 2020]

VI. WORK PRACTICE REQUIREMENTS.**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5400a]****Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015****What equipment leak GHG and VOC standards apply to affected facilities at an onshore natural gas processing plant?**

This section applies to the group of all equipment, except compressors, within a process unit located at an onshore natural gas processing plant.

(a) You must comply with the requirements of §§ 60.482-1a(a), (b), (d), and (e), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in § 60.5401a, as soon as practicable but no later than 180 days after the initial startup of the process unit.

(b) You may elect to comply with the requirements of §§ 60.483-1a and 60.483-2a, as an alternative.

(c) You may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of § 60.5402a.

(d) You must comply with the provisions of § 60.485a except as provided in paragraph (f) of this section.

(e) You must comply with the provisions of §§ 60.486a and 60.487a except as provided in §§ 60.5401a, 60.5421a, and 60.5422a.

(f) You must use the following provision instead of § 60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in § 60.17) must be used.

[81 FR 35898, June 3, 2016, as amended at 85 FR 57071, Sept. 14, 2020; 85 FR 57445, Sept. 15, 2020]

005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5401a]**Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015****What are the exceptions to the equipment leak GHG and VOC standards for affected facilities at onshore natural gas processing plants?**

(a) You may comply with the following exceptions to the provisions of § 60.5400a(a) and (b).

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- (b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in § 60.485a(b) except as provided in §§ 60.5400a(c) and in paragraph (b)(4) of this section, and 60.482-4a(a) through (c) of subpart VVa of this part.
- (2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- (3) (i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in § 60.482-9a.
- (ii) A first attempt at repair must be made no later than 5 calendar days after each leak is detected.
- (4) (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are onsite, instead of within 5 days as specified in paragraph (b)(1) of this section and § 60.482-4a(b)(1).
- (ii) No pressure relief device described in paragraph (b)(4)(i) of this section may be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of § 60.482-5a.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, pressure relief devices in gas/vapor service, and connectors in gas/vapor service and in light liquid service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§ 60.482-2a(a)(1), 60.482-7a(a), 60.482-11a(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, pressure relief devices in gas/vapor service, and connectors in gas/vapor service and in light liquid service within a process unit that is located in the Alaskan North Slope are exempt from the monitoring requirements of §§ 60.482-2a(a)(1), 60.482-7a(a), and 60.482-11a(a) and paragraph (b)(1) of this section.
- (f) An owner or operator may use the following provisions instead of § 60.485a(e):
- (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °Celsius (302 °Fahrenheit) as determined by ASTM Method D86-96 (incorporated by reference as specified in § 60.17).
- (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °Celsius (302 °Fahrenheit) as determined by ASTM Method D86-96 (incorporated by reference as specified in § 60.17).
- (g) An owner or operator may use the following provisions instead of § 60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in § 60.486a(e)(8). For each scale, divide the arithmetic difference of the most recent calibration and the post-test calibration response by the corresponding calibration gas value, and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the most recent calibration response, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the most recent calibration response, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

[77 FR 49542, Aug. 16, 2012, as amended at 85 FR 57445, Sept. 15, 2020]

VII. ADDITIONAL REQUIREMENTS.

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5360a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015
What is the purpose of this subpart?**

(a) This subpart establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO₂) emissions from affected facilities in the crude oil and natural gas production source category that commence construction, modification, or reconstruction after September 18, 2015.

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5365a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015
Am I subject to this subpart?**

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The following is from 40 CFR § 60.5365 - "Am I subject to this subpart?":

You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (j) of this section, that is located within the Crude Oil and Natural Gas Production source category, as defined in § 60.5430a, for which you commence construction, modification, or reconstruction after September 18, 2015.

(a) – (b) N/A

(c) Each reciprocating compressor affected facility, which is a single reciprocating compressor. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

(d) – (e) N/A

(f) The group of all equipment within a process unit at an onshore natural gas processing plant is an affected facility.

(1) Addition or replacement of equipment for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(2) Equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system, or liquefied natural gas unit is covered by §§ 60.5400a, 60.5401a, 60.5402a, 60.5421a, and 60.5422a if it is located at an onshore natural gas processing plant. Equipment not located at the onshore natural gas processing plant site is exempt from the provisions of §§ 60.5400a, 60.5401a, 60.5402a, 60.5421a, and 60.5422a.

(3) The equipment within a process unit of an affected facility located at onshore natural gas processing plants and described in paragraph (f) of this section are exempt from this subpart if they are subject to and controlled according to subparts VVa, GGG, or GGGa of this part.

(g) – (j) N/A

[81 FR 35898, June 3, 2016, as amended at 85 FR 57070, Sept. 14, 2020; 85 FR 57438, Sept. 15, 2020]

008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5370a]

Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015

When must I comply with this subpart?

(a) You must be in compliance with the standards of this subpart no later than August 2, 2016 or upon startup, whichever is later.

(b) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to this subpart.

(c) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5385a]

Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015

What GHG and VOC standards apply to reciprocating compressor affected facilities?

You must reduce VOC emissions by complying with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

(a) You must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this section, or you must comply with paragraph (a)(3) of this section.

(1) On or before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, August 2, 2016, or the date of the most recent reciprocating compressor rod packing replacement, whichever is latest.

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(2) Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.

(3) Collect the VOC emissions from the rod packing using a rod packing emissions collection system that operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of § 60.5411a(a) and (d).

(b) You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5410a(c).

(c) You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5415a(c).

(d) You must perform the reporting as required by § 60.5420a(b)(1) and (4) and the recordkeeping as required by § 60.5420a(c)(3), (6) through (9), and (17), as applicable.

[81 FR 35898, June 3, 2016, as amended at 85 FR 57070, Sept. 14, 2020; 85 FR 57439, Sept. 15, 2020]

010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5402a]

Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015

What are the alternative means of emission limitations for GHG and VOC equipment leaks from onshore natural gas processing plants?

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

(b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.

(c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.

(d) An application submitted under paragraph (c) of this section must meet the following criteria:

(1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.

(2) The application must include operation, maintenance, and other provisions necessary to assure reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard in paragraph (a) of this section by including the information specified in paragraphs (d)(2)(i) through (x) of this section.

(i) A description of the technology or process.

(ii) The monitoring instrument and measurement technology or process.

(iii) A description of performance based procedures (i.e. method) and data quality indicators for precision and bias; the method detection limit of the technology or process.

(iv) The action criteria and level at which a fugitive emission exists.

(v) Any initial and ongoing quality assurance/quality control measures.

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- (vi) Timeframes for conducting ongoing quality assurance/quality control.
 - (vii) Field data verifying viability and detection capabilities of the technology or process.
 - (viii) Frequency of measurements.
 - (ix) Minimum data availability.
 - (x) Any restrictions for using the technology or process.
- (3) The application must include initial and continuous compliance procedures including recordkeeping and reporting.

[81 FR 35898, June 3, 2016, as amended at 85 FR 57071, Sept. 14, 2020]

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5410a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015
How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump,...unit affected facilities at onshore natural gas processing plants?**

You must determine initial compliance with the standards for each affected facility using the requirements in paragraphs (a) through (k) of this section. Except as otherwise provided in this section, the initial compliance period begins on August 2, 2016, or upon initial startup, whichever is later, and ends no later than 1 year after the initial startup date for your affected facility or no later than 1 year after August 2, 2016. The initial compliance period may be less than 1 full year.

(a) – (b) N/A

(c) To achieve initial compliance with the standards for each reciprocating compressor affected facility you must comply with paragraphs (c)(1) through (4) of this section.

(1) If complying with § 60.5385a(a)(1) or (2), during the initial compliance period, you must continuously monitor the number of hours of operation or track the number of months since initial startup, since August 2, 2016, or since the last rod packing replacement, whichever is latest.

(2) If complying with § 60.5385a(a)(3), you must operate the rod packing emissions collection system under negative pressure and route emissions to a process through a closed vent system that meets the requirements of § 60.5411a(a) and (d).

(3) You must submit the initial annual report for your reciprocating compressor as required in § 60.5420a(b)(1) and (4).

(4) You must maintain the records as specified in § 60.5420a(c)(3) for each reciprocating compressor affected facility.

(d) – (e) N/A

(f) For affected facilities at onshore natural gas processing plants, initial compliance with the VOC standards is demonstrated if you are in compliance with the requirements of § 60.5400a.

(g) – (k) N/A

[81 FR 35898, June 3, 2016, as amended at 82 FR 25733, June 5, 2017; 85 FR 57071, Sept. 14, 2020; 85 FR 57445, Sept. 15, 2020]

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5415a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015
How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump,...and affected facilities at onshore natural gas processing plants?**

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(a) – (b) N/A

(c) For each reciprocating compressor affected facility complying with § 60.5385a(a)(1) or (2), you must demonstrate continuous compliance according to paragraphs (c)(1) through (3) of this section. For each reciprocating compressor affected facility complying with § 60.5385a(a)(3), you must demonstrate continuous compliance according to paragraph (c)(4) of this section.

(1) You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, since August 2, 2016, or since the date of the most recent reciprocating compressor rod packing replacement, whichever is latest.

(2) You must submit the annual reports as required in § 60.5420a(b)(1) and (4) and maintain records as required in § 60.5420a(c)(3).

(3) You must replace the reciprocating compressor rod packing on or before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.

(4) You must operate the rod packing emissions collection system under negative pressure and continuously comply with the cover and closed vent requirements in § 60.5416a(a) and (b).

(d) – (e) N/A

(f) For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400a.

(g) - (j) N/A

[81 FR 35898, June 3, 2016, as amended at 82 FR 25733, June 5, 2017; 85 FR 57071, Sept. 14, 2020; 85 FR 57447, Sept. 15, 2020]

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5425a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction,
Modification or Reconstruction Commenced After September 18, 2015
What parts of the General Provisions apply to me?**

Table 3 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply.

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5430a]
Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction,
Modification or Reconstruction Commenced After September 18, 2015
What definitions apply to this subpart?**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, in subpart A or subpart VVa of part 60; and the following terms shall have the specific meanings given them.

Acid gas means a gas stream of hydrogen sulfide (H₂S) and carbon dioxide (CO₂) that has been separated from sour natural gas by a sweetening unit.

Alaskan North Slope means the approximately 69,000 square-mile area extending from the Brooks Range to the Arctic Ocean.

API Gravity means the weight per unit volume of hydrocarbon liquids as measured by a system recommended by the American Petroleum Institute (API) and is expressed in degrees.

Artificial lift equipment means mechanical pumps including, but not limited to, rod pumps and electric submersible pumps used to flowback fluids from a well.

Bleed rate means the rate in standard cubic feet per hour at which natural gas is continuously vented (bleeds) from a pneumatic controller.

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Capital expenditure means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(1) Exceeds P, the product of the facility's replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: $P = R \times A$, where:

(i) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation: $A = Y \times (B \div 100)$;

(ii) The percent Y is determined from the following equation: $Y = (\text{CPI of date of construction}/\text{most recently available CPI of date of project})$, where the "CPI-U, U.S. city average, all items" must be used for each CPI value; and

(iii) The applicable basic annual asset guideline repair allowance, B, is 4.5.

(2) [Reserved]

Centrifugal compressor means any machine for raising the pressure of a natural gas by drawing in low pressure natural gas and discharging significantly higher pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors for the purposes of this subpart.

Certifying official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities with an affected facility subject to this subpart and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(ii) The Administrator is notified of such delegation of authority prior to the exercise of that authority. The Administrator reserves the right to evaluate such delegation;

(2) For a partnership (including but not limited to general partnerships, limited partnerships, and limited liability partnerships) or sole proprietorship: A general partner or the proprietor, respectively. If a general partner is a corporation, the provisions of paragraph (1) of this definition apply;

(3) For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or

(4) For affected facilities:

(i) The designated representative in so far as actions, standards, requirements, or prohibitions under title IV of the CAA or the regulations promulgated thereunder are concerned; or

(ii) The designated representative for any other purposes under this part.

Coil tubing cleanout means the process where an operator runs a string of coil tubing to the packed proppant within a well and jets the well to dislodge the proppant and provide sufficient lift energy to flow it to the surface. Coil tubing cleanout includes mechanical methods to remove solids and/or debris from a wellbore.

Collection system means any infrastructure that conveys gas or liquids from the well site to another location for treatment, storage, processing, recycling, disposal or other handling.

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

Completion combustion device means any ignition device, installed horizontally or vertically, used in exploration and production operations to combust otherwise vented emissions from completions. Completion combustion devices include pit flares.

Compressor station means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering pipelines. This includes, but is not limited to, gathering and boosting stations. The combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station for purposes of § 60.5397a.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at standard conditions.

Continuous bleed means a continuous flow of pneumatic supply natural gas to a pneumatic controller.

Crude Oil and Natural Gas Production source category means:

- (1) Crude oil production, which includes the well and extends to the point of custody transfer to the crude oil transmission pipeline or any other forms of transportation; and
- (2) Natural gas production and processing, which includes the well and extends to, but does not include, the point of custody transfer to the natural gas transmission and storage segment.

Custody meter means the meter where natural gas or hydrocarbon liquids are measured for sales, transfers, and/or royalty determination.

Custody meter assembly means an assembly of fugitive emissions components, including the custody meter, valves, flanges, and connectors necessary for the proper operation of the custody meter.

Custody transfer means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.

Dehydrator means a device in which an absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber).

Delineation well means a well drilled in order to determine the boundary of a field or producing reservoir.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Equipment, as used in the standards and requirements in this subpart relative to the equipment leaks of VOC from onshore natural gas processing plants, means each pump, pressure relief device, open-ended valve or line, valve, and flange or other connector that is in VOC service or in wet gas service, and any device or system required by those same standards and requirements in this subpart.

Field gas means feedstock gas entering the natural gas processing plant.

Field gas gathering means the system used transport field gas from a field to the main pipeline in the area.

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

First attempt at repair means, for the purposes of fugitive emissions components, an action taken for the purpose of stopping or reducing fugitive emissions to the atmosphere. First attempts at repair include, but are not limited to, the following practices where practicable and appropriate: Tightening bonnet bolts; replacing bonnet bolts; tightening packing gland nuts; or injecting lubricant into lubricated packing.

Flare means a thermal oxidation system using an open (without enclosure) flame. Completion combustion devices as defined in this section are not considered flares.

Flow line means a pipeline used to transport oil and/or gas to a processing facility or a mainline pipeline.

Flowback means the process of allowing fluids and entrained solids to flow from a well following a treatment, either in preparation for a subsequent phase of treatment or in preparation for cleanup and returning the well to production. The term flowback also means the fluids and entrained solids that emerge from a well during the flowback process. The flowback period begins when material introduced into the well during the treatment returns to the surface following hydraulic fracturing or refracturing. The flowback period ends when either the well is shut in and permanently disconnected from the flowback equipment or at the startup of production. The flowback period includes the initial flowback stage and the separation flowback stage. Screenouts, coil tubing cleanouts, and plug drill-outs are not considered part of the flowback process.

Fugitive emissions component means any component that has the potential to emit fugitive emissions of VOC at a well site or compressor station, including valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to § 60.5411 or § 60.5411a, thief hatches or other openings on a controlled storage vessel not subject to § 60.5395 or § 60.5395a, compressors, instruments, and meters. Devices that vent as part of normal operations, such as natural gas-driven pneumatic controllers or natural gas-driven pumps, are not fugitive emissions components, insofar as the natural gas discharged from the device's vent is not considered a fugitive emission. Emissions originating from other than the device's vent, such as the thief hatch on a controlled storage vessel, would be considered fugitive emissions.

Gas to oil ratio (GOR) means the ratio of the volume of gas at standard temperature and pressure that is produced from a volume of oil when depressurized to standard temperature and pressure.

Hydraulic fracturing means the process of directing pressurized fluids containing any combination of water, proppant, and any added chemicals to penetrate tight formations, such as shale or coal formations, that subsequently require high rate, extended flowback to expel fracture fluids and solids during completions.

Hydraulic refracturing means conducting a subsequent hydraulic fracturing operation at a well that has previously undergone a hydraulic fracturing operation.

In light liquid service means that the piece of equipment contains a liquid that meets the conditions specified in § 60.485a(e) or § 60.5401a(f)(2).

In wet gas service means that a compressor or piece of equipment contains or contacts the field gas before the extraction step at a gas processing plant process unit.

Initial flowback stage means the period during a well completion operation which begins at the onset of flowback and ends at the separation flowback stage.

Intermediate hydrocarbon liquid means any naturally occurring, unrefined petroleum liquid.

Intermittent/snap-action pneumatic controller means a pneumatic controller that is designed to vent non-continuously.

Liquefied natural gas unit means a unit used to cool natural gas to the point at which it is condensed into a liquid which is colorless, odorless, non-corrosive and non-toxic.

Liquid collection system means tankage and/or lines at a well site to contain liquids from one or more wells or to convey liquids to another site.

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

Local distribution company (LDC) custody transfer station means a metering station where the LDC receives a natural gas supply from an upstream supplier, which may be an interstate transmission pipeline or a local natural gas producer, for delivery to customers through the LDC's intrastate transmission or distribution lines.

Low pressure well means a well that satisfies at least one of the following conditions:

- (1) The static pressure at the wellhead following fracturing but prior to the onset of flowback is less than the flow line pressure;
- (2) The pressure of flowback fluid immediately before it enters the flow line, as determined under § 60.5432a, is less than the flow line pressure; or
- (3) Flowback of the fracture fluids will not occur without the use of artificial lift equipment.

Major production and processing equipment means reciprocating or centrifugal compressors, glycol dehydrators, heater/treaters, separators, and storage vessels collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water, for the purpose of determining whether a well site is a wellhead only well site.

Maximum average daily throughput means the following:

- (1) For storage vessels that commenced construction, reconstruction, or modification after September 18, 2015, and on and before November 16, 2020, maximum average daily throughput means the earliest calculation of daily average throughput during the 30-day PTE evaluation period employing generally accepted methods.
- (2) For storage vessels that commenced construction, reconstruction, or modification after November 16, 2020, maximum average daily throughput means the earliest calculation of daily average throughput, determined as described in paragraph (3) or (4) of this definition, to an individual storage vessel over the days that production is routed to that storage vessel during the 30-day PTE evaluation period employing generally accepted methods specified in § 60.5365a(e)(1).
- (3) If throughput to the individual storage vessel is measured on a daily basis (e.g., via level gauge automation or daily manual gauging), the maximum average daily throughput is the average of all daily throughputs for days on which throughput was routed to that storage vessel during the 30-day evaluation period; or
- (4) If throughput to the individual storage vessel is not measured on a daily basis (e.g., via manual gauging at the start and end of loadouts), the maximum average daily throughput is the highest, of the average daily throughputs, determined for any production period to that storage vessel during the 30-day evaluation period, as determined by averaging total throughput to that storage vessel over each production period. A production period begins when production begins to be routed to a storage vessel and ends either when throughput is routed away from that storage vessel or when a loadout occurs from that storage vessel, whichever happens first. Regardless of the determination methodology, operators must not include days during which throughput is not routed to an individual storage vessel when calculating maximum average daily throughput for that storage vessel.

Natural gas-driven diaphragm pump means a positive displacement pump powered by pressurized natural gas that uses the reciprocating action of flexible diaphragms in conjunction with check valves to pump a fluid. A pump in which a fluid is displaced by a piston driven by a diaphragm is not considered a diaphragm pump for purposes of this subpart. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a diaphragm pump.

Natural gas-driven pneumatic controller means a pneumatic controller powered by pressurized natural gas.

Natural gas liquids means the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

Natural gas processing plant (gas plant) means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not a natural gas processing plant.

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

Natural gas transmission means the pipelines used for the long distance transport of natural gas (excluding processing). Specific equipment used in natural gas transmission includes the land, mains, valves, meters, boosters, regulators, storage vessels, dehydrators, compressors, and their driving units and appurtenances, and equipment used for transporting gas from a production plant, delivery point of purchased gas, gathering system, storage area, or other wholesale source of gas to one or more distribution area(s).

Natural gas transmission and storage segment means the transport or storage of natural gas prior to delivery to a "local distribution company custody transfer station" (as defined in this section) or to a final end user (if there is no local distribution company custody transfer station). For the purposes of this subpart, natural gas enters the natural gas transmission and storage segment after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage segment after the point of "custody transfer" (as defined in this section). A compressor station that transports natural gas prior to the point of "custody transfer" or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage segment.

Nonfractionating plant means any gas plant that does not fractionate mixed natural gas liquids into natural gas products.

Non-natural gas-driven pneumatic controller means an instrument that is actuated using other sources of power than pressurized natural gas; examples include solar, electric, and instrument air.

Onshore means all facilities except those that are located in the territorial seas or on the outer continental shelf.

Plug drill-out means the removal of a plug (or plugs) that was used to isolate different sections of the well.

Pneumatic controller means an automated instrument used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature.

Pressure vessel means a storage vessel that is used to store liquids or gases and is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the pressure vessel during filling of the pressure vessel to its design capacity.

Process unit means components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the products.

Produced water means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.

Qualified Professional Engineer means an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in at least one state in which the certifying official is located.

Reciprocating compressor means a piece of equipment that increases the pressure of a process gas by positive displacement, employing linear movement of the driveshaft.

Reciprocating compressor rod packing means a series of flexible rings in machined metal cups that fit around the reciprocating compressor piston rod to create a seal limiting the amount of compressed natural gas that escapes to the atmosphere, or other mechanism that provides the same function.

Recovered gas means gas recovered through the separation process during flowback.

Recovered liquids means any crude oil, condensate or produced water recovered through the separation process during flowback.

Reduced emissions completion means a well completion following fracturing or refracturing where gas flowback that is otherwise vented is captured, cleaned, and routed to the gas flow line or collection system, re-injected into the well or another well, used as an onsite fuel source, or used for other useful purpose that a purchased fuel or raw material would

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

serve, with no direct release to the atmosphere.

Reduced sulfur compounds means H₂S, carbonyl sulfide (COS), and carbon disulfide (CS₂).

Removed from service means that a storage vessel affected facility has been physically isolated and disconnected from the process for a purpose other than maintenance in accordance with § 60.5395a(c)(1).

Repaired means, for the purposes of fugitive emissions components, that fugitive emissions components are adjusted, replaced, or otherwise altered, in order to eliminate fugitive emissions as defined in § 60.5397a and resurveyed as specified in § 60.5397a(h)(4) and it is verified that emissions from the fugitive emissions components are below the applicable fugitive emissions definition.

Returned to service means that a storage vessel affected facility that was removed from service has been:

(1) Reconnected to the original source of liquids or has been used to replace any storage vessel affected facility; or

(2) Installed in any location covered by this subpart and introduced with crude oil, condensate, intermediate hydrocarbon liquids or produced water.

Routed to a process or route to a process means the emissions are conveyed via a closed vent system to any enclosed portion of a process that is operational where the emissions are predominantly recycled and/or consumed in the same manner as a material that fulfills the same function in the process and/or transformed by chemical reaction into materials that are not regulated materials and/or incorporated into a product; and/or recovered.

Salable quality gas means natural gas that meets the flow line or collection system operator specifications, regardless of whether such gas is sold.

Screenout means an attempt to clear proppant from the wellbore to dislodge the proppant out of the well.

Separation flowback stage means the period during a well completion operation when it is technically feasible for a separator to function. The separation flowback stage ends either at the startup of production, or when the well is shut in and permanently disconnected from the flowback equipment.

Startup of production means the beginning of initial flow following the end of flowback when there is continuous recovery of salable quality gas and separation and recovery of any crude oil, condensate, or produced water, except as otherwise provided in this definition. For the purposes of the fugitive monitoring requirements of § 60.5397a, startup of production means the beginning of the continuous recovery of salable quality gas and separation and recovery of any crude oil, condensate, or produced water.

Storage vessel means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after startup of production following flowback for a period which exceeds 60 days is considered a storage vessel under this subpart. A tank or other vessel shall not be considered a storage vessel if it has been removed from service in accordance with the requirements of § 60.5395a(c)(1) until such time as such tank or other vessel has been returned to service. For the purposes of this subpart, the following are not considered storage vessels:

(1) Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. If you do not keep or are not able to produce records, as required by § 60.5420a(c)(5)(iv), showing that the vessel has been located at a site for less than 180 consecutive days, the vessel described herein is considered to be a storage vessel from the date the original vessel was first located at the site. This exclusion does not apply to a well completion vessel as described above.

(2) Process vessels such as surge control vessels, bottoms receivers or knockout vessels.

(3) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

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

Sulfur production rate means the rate of liquid sulfur accumulation from the sulfur recovery unit.

Sulfur recovery unit means a process device that recovers element sulfur from acid gas.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Sweetening unit means a process device that removes hydrogen sulfide and/or carbon dioxide from the sour natural gas stream.

Total Reduced Sulfur (TRS) means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide as measured by Method 16 of appendix A-6 of this part.

Total SO₂equivalents means the sum of volumetric or mass concentrations of the sulfur compounds obtained by adding the quantity existing as SO₂ to the quantity of SO₂ that would be obtained if all reduced sulfur compounds were converted to SO₂ (ppmv or kg/dscm (lb/dscf)).

UIC Class I oilfield disposal well means a well with a UIC Class I permit that meets the definition in 40 CFR 144.6(a)(2) and receives eligible fluids from oil and natural gas exploration and production operations.

UIC Class II oilfield disposal well means a well with a UIC Class II permit where wastewater resulting from oil and natural gas production operations is injected into underground porous rock formations not productive of oil or gas, and sealed above and below by unbroken, impermeable strata.

Underground storage vessel means a storage vessel stored below ground.

Well means a hole drilled for the purpose of producing oil or natural gas, or a well into which fluids are injected.

Well completion means the process that allows for the flowback of petroleum or natural gas from newly drilled wells to expel drilling and reservoir fluids and tests the reservoir flow characteristics, which may vent produced hydrocarbons to the atmosphere via an open pit or tank.

Well completion operation means any well completion with hydraulic fracturing or refracturing occurring at a well affected facility.

Well completion vessel means a vessel that contains flowback during a well completion operation following hydraulic fracturing or refracturing. A well completion vessel may be a lined earthen pit, a tank or other vessel that is skid-mounted or portable. A well completion vessel that receives recovered liquids from a well after startup of production following flowback for a period which exceeds 60 days is considered a storage vessel under this subpart.

Well site means one or more surface sites that are constructed for the drilling and subsequent operation of any oil well, natural gas well, or injection well. For purposes of the fugitive emissions standards at § 60.5397a, well site also means a separate tank battery surface site collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water from wells not located at the well site (e.g., centralized tank batteries). Also, for the purposes of the fugitive emissions standards at § 60.5397a, a well site does not include:

- (1) UIC Class II oilfield disposal wells and disposal facilities;
- (2) UIC Class I oilfield disposal wells; and
- (3) The flange immediately upstream of the custody meter assembly and equipment, including fugitive emissions components, located downstream of this flange.

Wellhead means the piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead valve. The wellhead does not include other equipment at the well site except for any conveyance through which gas is vented to the atmosphere.

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Wellhead only well site means, for the purposes of the fugitive emissions standards at § 60.5397a, a well site that contains one or more wellheads and no major production and processing equipment.

Wildcat well means a well outside known fields or the first well drilled in an oil or gas field where no other oil and gas production exists.

[81 FR 35898, June 3, 2016, as amended at 85 FR 57072, Sept. 14, 2020; 85 FR 57458, Sept. 15, 2020]



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.**

The MPLX Operations team will conduct daily AVO inspections of all component types, including pump components. Additionally, the MPLX LDAR team will conduct weekly AVO inspections on pump components.



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