



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date:

Effective Date:

Expiration Date:

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

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

Plan Approval No. 23-0119I

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

Owner Information

Name: SUNOCO PARTNERS MKT & TERMLP  
Mailing Address: 100 GREEN ST  
MARCUS HOOK, PA 19061-4800

Plant Information

Plant: SPMT / MARCUS HOOK IND COMPLEX  
Location: 23 Delaware County 23825 Marcus Hook Borough  
SIC Code: 4226 Trans. & Utilities - Special Warehousing And Storage, Nec

Responsible Official

Name: EDWARD G HUMAN  
Title: DIR. - MARCUS HOOK OPER.  
Phone: (610) 859 - 1912

Plan Approval Contact Person

Name: KEVIN SMITH  
Title: ENV COMPLIANCE SPECIALIST  
Phone: (610) 859 - 1279

[Signature] \_\_\_\_\_  
JAMES D. REBARCHAK, SOUTHEAST REGION AIR PROGRAM MANAGER



#### Plan Approval Description

Plan approval to construct the following: two (2) cryogenic storage tanks for ethane; one (1) air-assisted cold flare; necessary piping and components (LDAR); amine treatment/dehydration system; demethanizer/refrigeration system; and one (1) wet surface air cooling system.



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

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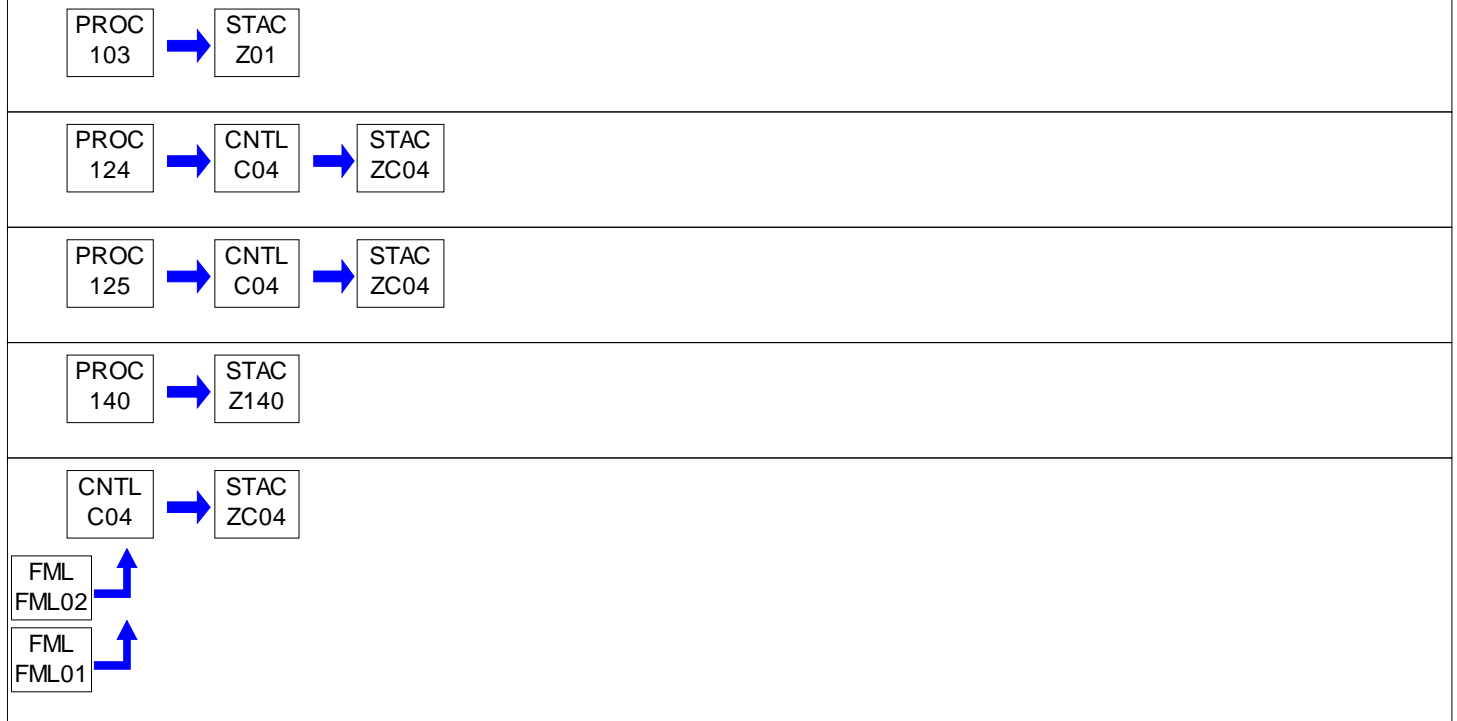


**SECTION A. Table of Contents**

**Section G. Miscellaneous**

**SECTION A. Plan Approval Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
103	NSPS SUBPART VVA FUGITIVE EQUIPMENT LEAKS	N/A	METHANE, ETHANE, PROP.
124	CRYOGENIC ETHANE TANK (600,000 BBL)	N/A	ETHANE
125	CRYOGENIC ETHANE TANK (600,000 BBL)	N/A	ETHANE
140	WET SURFACE AIR COOLER	N/A	WATER
C04	COLD FLARE (ME-2X)	1,285.000 CF/HR	NAT GAS (PILOT AND PURC
FML01	NATURAL GAS		
FML02	PROCESS GAS		
Z01	NSPS SUBPART VVA FUGITIVE EQUIPMENT		
Z140	WSAC FUGITIVES		
ZC04	COLD FLARE (ME-2X)		

**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.**

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

### **II. TESTING REQUIREMENTS.**

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

### **III. MONITORING REQUIREMENTS.**

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

### **IV. RECORDKEEPING REQUIREMENTS.**

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

### **V. REPORTING REQUIREMENTS.**

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

### **VI. WORK PRACTICE REQUIREMENTS.**

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

### **VII. ADDITIONAL REQUIREMENTS.**

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

### **VIII. COMPLIANCE CERTIFICATION.**

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

### **IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

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

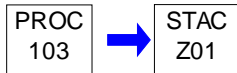
Source ID: 103

Source Name: NSPS SUBPART VVA FUGITIVE EQUIPMENT LEAKS

Source Capacity/Throughput:

N/A

METHANE, ETHANE, PROPANE

**I. RESTRICTIONS.**

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

**II. TESTING REQUIREMENTS.**

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

**III. MONITORING REQUIREMENTS.**

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

**IV. RECORDKEEPING REQUIREMENTS.**

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

**V. REPORTING REQUIREMENTS.**

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

**VI. WORK PRACTICE REQUIREMENTS.**

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

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

- (a) The applicable requirements for this source can be found in Source 103 (NSPS, Subpart VVA, Fugitive Equipment Leaks), of the Title V Operating Permit.
- (b) The permittee shall install, operate, and maintain the affected components in accordance with the requirements in its current TVOP No. 23-00119 for Source ID 103 (NSPS, Subpart VVA, Fugitive Equipment Leaks).
- (c) Prior to amending this plan approval into the TVOP, the permittee shall provide the Department with a list of the components that are affected by this project (ME-2X) and are subject to 40 CFR Part 60, Subpart VVa, the applicable requirements for the components, and the methods of complying with the requirements.
- (d) New fugitive components from this project include:
  - (1) refrigeration system components; and
  - (2) amine treatment system components.

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

Source ID: 124

Source Name: CRYOGENIC ETHANE TANK (600,000 BBL)

Source Capacity/Throughput:

N/A

ETHANE

**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 60.115b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Reporting and recordkeeping requirements.**

After installing a closed vent system and flare to comply with 40 CFR § 60.112b, the permittee shall keep a record of all periods of operation during which the flare pilot flame is absent.

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.116b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Monitoring of operations.**

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.116b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Monitoring of operations.**

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

The permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. These records shall be kept for a minimum of five (5) years.

**V. REPORTING REQUIREMENTS.**

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.115b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Reporting and recordkeeping requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

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

The permittee shall submit the following:

- (a) a report containing the measurements required by 40 CFR § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator and the Department as required by 40 CFR § 60.8. This report shall be submitted within six (6) months of the initial start-up date; and
- (b) semiannual reports of all periods in which the pilot flame was absent shall be furnished to the Administrator and the Department.

**VI. WORK PRACTICE REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.112b]  
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Standard for volatile organic compounds (VOC).**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

Emissions from this tank shall be controlled by a closed vent system designed to collect all vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR § 60.485a(b).

The cold flare shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements in 40 CFR § 60.18.

**VII. ADDITIONAL REQUIREMENTS.**

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

This source consists one 600,000 bbl cryogenic ethane storage tank with a vapor recovery system. Ethane vapors will be condensed to a liquid state by the vapor recovery system before being hard-piped back to the storage tank.

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

[Additional authority for this permit condition is also derived from 40 CFR § 60.480a(d)(5).]

Additional applicable requirements for this source can be found in Source 103 (Fugitive Equipment Leaks), except that this tank storing non-VOCs is exempt from the requirements of 40 CFR §§ 60.482-1a through 60.482-11a.

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

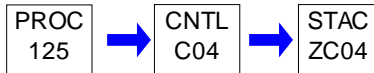
Source ID: 125

Source Name: CRYOGENIC ETHANE TANK (600,000 BBL)

Source Capacity/Throughput:

N/A

ETHANE

**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 60.115b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Reporting and recordkeeping requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

After installing a closed vent system and flare to comply with 40 CFR § 60.112b, the permittee shall keep a record of all periods of operation during which the flare pilot flame is absent.

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.116b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Monitoring of operations.**

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.116b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Monitoring of operations.**

Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

The permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. These records shall be kept for a minimum of five (5) years.

**V. REPORTING REQUIREMENTS.**

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.115b] Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 Reporting and recordkeeping requirements.**

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

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

The permittee shall submit the following:

- (a) a report containing the measurements required by 40 CFR § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator and the Department as required by 40 CFR § 60.8. This report shall be submitted within six (6) months of the initial start-up date; and
- (b) semiannual reports of all periods in which the pilot flame was absent shall be furnished to the Administrator and the Department.

**VI. WORK PRACTICE REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.112b]  
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Standard for volatile organic compounds (VOC).**

[Additional authority for this condition is also derived from 25 Pa. Code 127.12b.]

Emissions from this tank shall be controlled by a closed vent system designed to collect all vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR § 60.485a(b).

The cold flare shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements in 40 CFR § 60.18.

**VII. ADDITIONAL REQUIREMENTS.**

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

This source consists one 600,000 bbl cryogenic ethane storage tank with a vapor recovery system. Ethane vapors will be condensed to a liquid state by the vapor recovery system before being hard-piped back to the storage tank.

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

[Additional authority for this permit condition is also derived from 40 CFR § 60.480a(d)(5).]

Additional applicable requirements for this source can be found in Source 103 (Fugitive Equipment Leaks), except that this tank storing non-VOCs is exempt from the requirements of 40 CFR §§ 60.482-1a through 60.482-11a.

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

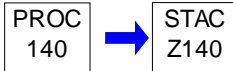
Source ID: 140

Source Name: WET SURFACE AIR COOLER

Source Capacity/Throughput:

N/A

WATER

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

Particulate matter (total PM) emissions from this Wet Surface Air Cooling System (WSACS) shall not exceed either of the following:

- (a) 0.02 gr/dscf, pursuant to 25 Pa. Code § 127.13(c)(1)(iii); and
- (b) 0.28 tons in any 12 consecutive month period.

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

The permittee shall inspect the high-efficiency drift eliminators on this WSACS cooling unit on a 3-year (preventative maintenance cycle) basis.

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

The permittee shall demonstrate compliance with the particulate matter emission limit by performing a monthly analysis for specific conductivity in umhos (micro mhos), or other Department approved method, on this WSACS cooling unit.

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

The permittee shall monitor the average cooling water circulation flow rate through this WSACS cooling unit on a monthly basis when it is in operation.

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

The permittee shall monitor the average cooling water circulation flow rate through this WSACS cooling unit on a monthly basis when it is in operation.

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

To delay the repair of leaks, the permittee shall record the following information:

- (a) the reason(s) for delaying repair;
- (b) a schedule for completing the repair as soon as practical, but no later than the next unit shutdown;
- (c) the date and concentration of the leak as first identified and the results of all subsequent testing/monitoring events during the delay of repair period; and
- (d) an estimate of the potential VOC emissions from the leaking cooling tower for each required delay of repair monitoring



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

interval following the procedures below:

- (1) determine the leak concentration and convert the stripping gas leak concentration (in ppm) to an equivalent liquid concentration, in ppmw.
- (2) determine the mass flow rate of the cooling water at the monitoring location where the leak was detected. If the monitoring location is an individual cooling tower riser, determine the total cooling water mass flow rate. Cooling water mass flow rates may be determined using direct measurement, pump curves, heat balance calculations, or other engineering methods. Volumetric flow measurements may be used and converted to mass flow rates using the density of water at the specific monitoring location temperature or using the default density of water at 8.32 pounds per gallon;
- (3) for delay of repair monitoring intervals prior to repair of the leak, calculate the potential VOC emissions for the leaking cooling tower for the monitoring interval by multiplying the leak concentration in the cooling water (in ppmw), determined in (d)(1), above, by the mass flow rate of the cooling water determined in (d)(2), above, and by the duration of the delay of repair monitoring interval. The duration of the delay of repair monitoring interval is the time period starting at midnight on the day of the previous monitoring event or at midnight on the day the repair would have had to be completed if the repair had not been delayed, whichever is later, and ending at midnight of the day of the current monitoring event; and
- (4) for delay of repair monitoring intervals ending with a repaired leak, calculate the potential VOC emissions by multiplying the duration of the final delay of repair monitoring interval by the leak concentration and cooling water flow rates determined for the last monitoring event prior to the re-monitoring event used to verify the leak was repaired. The duration of the final delay of repair monitoring interval is the time period starting at midnight of the day of the last monitoring event prior to re-monitoring to verify the leak was repaired and ending at the time of the re-monitoring event that verified that the leak was repaired.

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

- (a) When a VOC leak is detected, the permittee shall troubleshoot and investigate for the source of the leak.
- (b) Once a leak is detected, the permittee shall monitor the leak monthly until the leak has been repaired. Upon completion of the repair, the permittee shall monitor in accordance with subcondition (e) of the testing condition, above.
- (c) The first attempt to isolate the leak and perform the necessary repairs shall be made no later than fourteen (14) days after the second sample results indicating a leak is returned.

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

The leak shall be repaired within forty-five (45) days after identifying the leak, except as outlined in the "Delay of Repair" condition for this source. Actions that can be taken to achieve repair include, but are not limited to:

- (a) physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;
- (b) blocking the leaking tube within the heat exchanger;
- (c) changing the pressure so that water flows into the process fluid;
- (d) replacing the heat exchanger or heat exchanger bundle; or
- (e) isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

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

The permittee may delay the repair of a leaking heat exchanger if (a) or (b) below is met. The permittee must determine if a delay of repair is necessary as soon as practicable, but no later than forty-five (45) days after first identifying the leak.

- (a) If the repair is technically infeasible without a shutdown and the total VOC emissions would be less than 25% of the permitted emission limits if a repair would take place, the permittee may delay repair until the next scheduled shutdown of the heat exchanger. If, during subsequent monthly monitoring, the VOC leak rate has increased, the permittee shall repair the leak within thirty (30) days of the monitoring event indicating the increase.
- (b) If the necessary equipment, parts, or personnel are not available and the total VOC concentration does not increase for all monthly monitoring periods during the delay of repair, the permittee may delay the repair for a maximum of 120 calendar

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

days. The permittee must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monthly monitoring, the VOC concentration increases, the permittee must repair the leak within thirty (30) days of the monitoring event in which the leak was shown to increase.

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

- (a) The permittee shall not use chromium-based water treatment chemicals in this cooling unit.
- (b) The cooling unit and equipment shall be installed, maintained, and operated in accordance with manufacturer's specifications.

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

This source consists of one (1) 21,000 gpm WSACS having high-efficiency drift eliminators for use with the ethane and propane refrigeration systems of the ME-2X project.

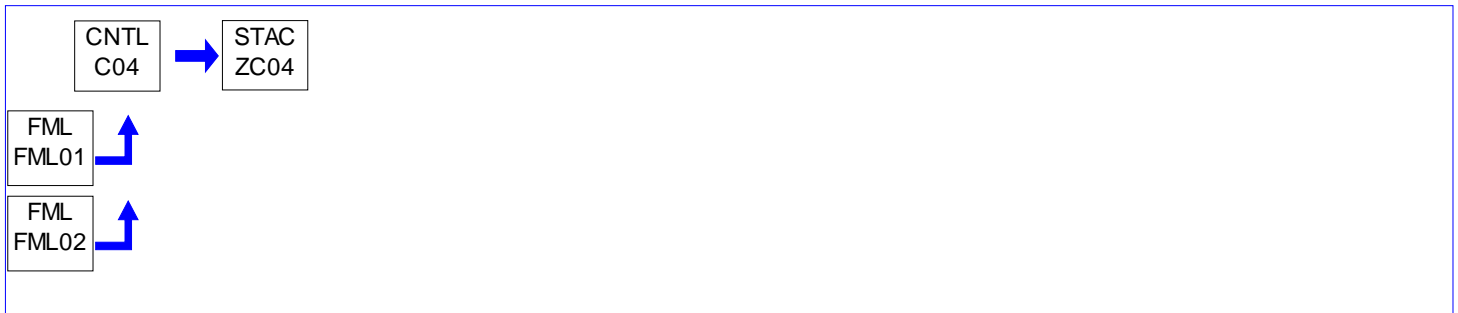
**SECTION D. Source Level Plan Approval Requirements**

Source ID: C04

Source Name: COLD FLARE (ME-2X)

Source Capacity/Throughput: 1,285.000 CF/HR

NAT GAS (PILOT AND PURGE)

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

**II. TESTING REQUIREMENTS.****# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

The permittee shall use Department approved testing methods to demonstrate compliance with the standards for flares. These include, but are not limited to, the following:

- (a) EPA Test Method 22, with an observation period of two (2) hours, as found in Appendix A of 40 CFR Part 60 shall be used to determine the compliance of this flare with the visible emission provisions;
- (b) EPA Method 2, 2A, 2C, or 2D for determination of flare velocity. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used;
- (c) EPA Method 3A for determining flue gas composition and molecular weight;
- (d) EPA Method 18 for determination of Hydrocarbon constituents;
- (e) the net heating value of the gas being combusted in the flare shall be combusted as stated in 40 CFR § 60.485a(g)(4);
- (f) EPA Method 18 and ASTM D 2504-67 (or most recent equivalent revised method) shall be used to determine the concentration of sample component "i" in the equation stated in 40 CFR § 60.485a(g)(4); and
- (g) ASTM D 2382-76, or most recent equivalent revised method shall, be used to determine the net heat of combustion of component "i" referenced in 40 CFR § 60.485(g)(4), if published values are not available or cannot be calculated.

**III. MONITORING REQUIREMENTS.****# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

- (a) The permittee shall continuously monitor the presence of a pilot flame for this flare by using an infrared sensor or other device approved by the Department.
- (b) The permittee shall monitor the type and amount of fuel combusted in the flare on a daily basis.

**SECTION D. Source Level Plan Approval Requirements****IV. RECORDKEEPING REQUIREMENTS.****# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

- (a) The permittee shall maintain records of the continuous presence of a pilot flame on this flare.
- (b) The permittee shall maintain daily records of the type and amount of fuel combusted in this flare.

**V. REPORTING 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.**

Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

The permittee shall submit to the Department semi-annual exception reports of the date and time the pilot flame was not working.

**VI. WORK PRACTICE REQUIREMENTS.****# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

The permittee shall ensure that the flare is operated and maintained in conformance with its design.

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

[Additional authority for this condition is also derived from 25 Pa. Code § 127.12b.]

- (a) The flare shall be operated with a flame present at all times.
- (b) The flare shall be used only with the net heating value of the gas being combusted is 300 Btu/scf or greater. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR § 60.18(f).
- (c) The air-assisted flare shall be designed and operated with an exit velocity less than the maximum velocity, (Vmax), as determined by the method specified in 40 CFR § 60.18(f)(6).

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

This air-assisted cold flare has two flare tips with pilot and purge flow rates as follows:

- (a) High pressure - 761 scf/hr; and
- (b) Low Pressure - 524 scf/hr



**SECTION E. Alternative Operation Requirements.**

No Alternative Operations exist for this Plan Approval facility.



**SECTION F. Emission Restriction Summary.**

Source Id	Source Description	Emission Limit	Pollutant
140	WET SURFACE AIR COOLER		
		0.020 gr/DRY FT3	TSP
		0.280 Tons/Yr	TSP

**Site Emission Restriction Summary**

Emission Limit	Pollutant
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**SECTION G. Miscellaneous.**



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

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