



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: January 11, 2016 Effective Date: September 25, 2026
Revision Date: September 25, 2026 Expiration Date: April 17, 2027
Revision Type: Extension

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. 23-0003Z](#)

Federal Tax Id - Plant Code: 45-5201144-1

Owner Information

Name: MONROE ENERGY LLC
Mailing Address: 4101 POST RD
TRAINER, PA 19061-5052

Plant Information

Plant: MONROE ENERGY LLC/TRAINER
Location: 23 Delaware County 23949 Trainer Borough
SIC Code: 2911 Manufacturing - Petroleum Refining

Responsible Official

Name: MARK SCHUCK
Title: SVP, TRAINER COMPLEX
Phone: (610) 364 - 8082 Email: Mark.Schuck@monroe-energy.com

Plan Approval Contact Person

Name: ELIZABETH CLAPP
Title: ENV LEADER
Phone: (610) 364 - 8395 Email: Elizabeth.Clapp@monroe-energy.com

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



[Plan Approval Description](#)

Plan approval modification for design changes to CT 01 - Alky Cooling Tower #2



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**SECTION A. Plan Approval Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
700	HEAT EXCHANGE SYSTEMS		
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C700	COOLING TOWER DRIFT ELIMINATOR		
C701	COOLING TOWER DRIFT ELIMINATORS		
Z700	HEAT EXCHANGE SYSTEM FUGITIVES		
Z701	COOLING TOWER EXHAUST		

PERMIT MAPS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**SECTION B. General Plan Approval Requirements**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**SECTION B. General Plan Approval Requirements**

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

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

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

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

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

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

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

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

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

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

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

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

Regional Air Program Manager

PA Department of Environmental Protection

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

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

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

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

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

**SECTION B. General Plan Approval Requirements**

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

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

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

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

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

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

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

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



SECTION C. Site Level Plan Approval Requirements

I. RESTRICTIONS.

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

II. TESTING REQUIREMENTS.

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

III. MONITORING REQUIREMENTS.

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

IV. RECORDKEEPING REQUIREMENTS.

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

V. REPORTING REQUIREMENTS.

001 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

(a) The permittee shall report malfunctions, emergencies or incidents of excess emissions to DEP's 24-hour Emergency Hotline at 800.541.2050. A malfunction is any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. An emergency is any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator of a facility which requires immediate corrective action to restore normal operation and which causes the emission source to exceed emissions, due to unavoidable increases in emissions attributable to the situation. An emergency shall not include situations caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

(b) When the malfunction, emergency or incident of excess emissions poses an imminent danger to the public health, safety, welfare, or environment, it shall be reported to the Department and the County Emergency Management Agency by telephone within one (1) hour after the discovery of the malfunction, emergency or incident of excess emissions. The owner or operator shall electronically submit any report of instances of such malfunctions, emergencies or incidents of excess emissions to the Department within three (3) business days of the telephone report.

(c) The report shall describe the following:

- (1) Name, permit or authorization number, and location of the facility;
- (2) Nature and cause of the malfunction, emergency or incident;
- (3) Date and time when the malfunction, emergency or incident was first observed;
- (4) Expected duration of excess emissions;
- (5) Estimated rate of emissions; and
- (6) Corrective actions or preventative measures taken.

(d) Any malfunction, emergency or incident of excess emissions that is not subject to the notice requirements of paragraph (b) of this condition shall be reported to the Department by telephone within 24 hours (or by 4:00 PM of the next business day, whichever is later) of discovery and in writing or electronically within five (5) business days of discovery. The report shall contain the same information required by paragraph (c), and any permit specific malfunction reporting requirements.

(e) During an emergency an owner or operator may continue to operate the source at their discretion provided they submit justification for continued operation of a source during the emergency and follow all the notification and reporting requirements in accordance with paragraphs (b)-(d), as applicable, including any permit specific malfunction reporting requirements.

(f) Reports regarding malfunctions, emergencies or incidents of excess emissions shall be submitted to the appropriate

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

DEP Regional Office Air Program Manager.

(g) Any emissions resulting from malfunction or emergency are to be reported in the annual emissions inventory report, if the annual emissions inventory report is required by permit or authorization.

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

The permittee shall comply with all of the requirements of Title V Operating Permit No. 23-00003.

003 [25 Pa. Code §127.208]**ERC use and transfer requirements.**

(a) The permittee shall use and transfer Emission Reduction Credits (ERCs) in accordance with the provisions specified in 25 Pa. Code §127.208.

(b) This Plan Approval authorizes the transfer and use of 25.0 tons of VOC ERC for offset purpose at Monroe's Trainer Refinery in accordance with 25 Pa. Code §127.208(2):

(1) The 25.0 tons of VOC ERC were generated from the shutdown sources at Element Markets, LLC, Baltimore, Maryland State, on January 17, 2007. These VOC ERCs were certified by Maryland State Department of the Environment on April 30, 2008. These VOC ERC were owned by Element Markets, LLC. prior to this transfer.

(2) Monroe Energy, LLC is a holder of the 25.0 tons VOC ERC. This Plan Approval is in accordance with the requirements of 25 Pa. Code Chapter 127, Subpart E - New Source Review, §127.205(3).

(3) Pursuant to 25 Pa. Code §127.208(2), upon the issuance of this amended Plan Approval, the 25.0 tons of VOC ERCs, not generated by the over-control of emissions, are no longer subject to the 10-year expiration date under 25 Pa. Code §127.206(f), except as specified in 25 Pa. Code §127.206(g). If the 25.0 tons VOC ERC identified in this Plan Approval are not used and are subsequently reentered into the ERC registry, these VOC ERC will expire on January 17, 2017.

(c) This Plan Approval authorizes the transfer and use of 25.73 tons of VOC ERC for offset purpose at Monroe's Trainer Refinery in accordance with 25 Pa. Code §127.208(2):

(1) The 25.73 tons of VOC ERCs were generated from the shutdown sources at Foamex L.P. facility in Eddystone, Delaware County, Pennsylvania State, on December 31, 2008. These VOC ERCs were certified by DEP on March 9, 2009. These VOC ERCs were owned by Element Markets, LLC. prior to this transfer.

(2) Monroe Energy, LLC is a holder of the 25.73 tons VOC ERCs. This Plan Approval is in accordance with the requirements of 25 Pa. Code Chapter 127, Subpart E - New Source Review, §127.205(3).

(3) Pursuant to 25 Pa. Code §127.208(2), upon the issuance of this amended Plan Approval, the 25.73 tons of VOC ERCs, not generated by the over-control of emissions, are no longer subject to the 10-year expiration date under 25 Pa. Code §127.206(f), except as specified in 25 Pa. Code §127.206(g). If the 25.73 tons VOC ERCs identified in this Plan Approval are not used and are subsequently reentered into the ERCs registry, these VOC ERCs will expire on December 31, 2018.

(d) This Plan Approval authorizes the transfer and use of 24.20 tons of VOC ERCs for offset purpose at Monroe's Trainer Refinery in accordance with 25 Pa. Code §127.208(2):

(1) The 24.20 tons of VOC ERC were generated from the shutdown sources at Philadelphia Baking Company in Philadelphia City, Pennsylvania State, on September 21, 2007. These VOC ERCs were certified by DEP on September 22, 2008. These VOC ERCs were owned by Element Markets, LLC. prior to this transfer.

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

(2) Monroe Energy, LLC is a holder of the 24.20 tons VOC ERCs. This Plan Approval is in accordance with the requirements of 25 Pa. Code Chapter 127, Subpart E - New Source Review, §127.205(3).

(3) Pursuant to 25 Pa. Code §127.208(2), upon the issuance of this amended Plan Approval, the 24.20 tons of VOC ERCs, not generated by the over-control of emissions, are no longer subject to the 10-year expiration date under 25 Pa. Code §127.206(f), except as specified in 25 Pa. Code §127.206(g). If the 24.20 tons VOC ERCs identified in this Plan Approval are not used and are subsequently reentered into the ERC registry, these VOC ERC will expire on September 21, 2017.

(e) This Plan Approval authorizes the transfer and use of 11.18 tons of VOC ERCs for offset purpose at Monroe's Trainer Refinery in accordance with 25 Pa. Code §127.208(2):

(1) The 11.18 tons of VOC ERC were generated from the shutdown sources at New York Organic Fertilizer Company (NYOFCO) in Bronx, New York State on July 2, 2010. These VOC ERCs were certified by NYSDEC. These VOC ERCs were owned by NYOFCO prior to this transfer.

(2) Monroe Energy, LLC will be a holder of the 11.18 tons VOC ERCs pending on the final transfer approved by both New York State DEC and the Department. Monroe Energy, LLC will be the holder of the 11.18 tons VOC ERCs effective on the date when the transfer is approved by the Department. This Plan Approval is in accordance with the requirements of 25 Pa. Code Chapter 127, Subpart E - New Source Review, §127.205(3).

(3) Pursuant to 25 Pa. Code §127.208(2), upon the issuance of this amended Plan Approval, the 11.18 tons of VOC ERCs, not generated by the over-control of emissions, are no longer subject to the 10-year expiration date under 25 Pa. Code §127.206(f), except as specified in 25 Pa. Code §127.206(g). If the 11.18 tons VOC ERCs identified in this Plan Approval are not used and are subsequently reentered into the ERC registry, these VOC ERC will expire on July 2, 2020.

(f) This Plan Approval authorizes the transfer and use of 4.07 tons of VOC ERCs for offset purpose at Monroe's Trainer Refinery in accordance with 25 Pa. Code §127.208(2):

(1) The 4.07 tons of VOC ERC were generated from the shutdown sources at PE Bayshore LLC, in Bay Shore, New York State on September 19, 2014. These VOC ERCs were certified by NYSDEC. These VOC ERCs were owned by Element Markets, LLC prior to this transfer.

(2) Monroe Energy, LLC will be a holder of the 4.07 tons VOC ERCs pending on the final transfer approved by both New York State DEC and the Department. Monroe Energy, LLC will be the holder of the 4.07 tons VOC ERCs effective on the date when the transfer is approved by the Department. This Plan Approval is in accordance with the requirements of 25 Pa. Code Chapter 127, Subpart E - New Source Review, §127.205(3).

(3) Pursuant to 25 Pa. Code §127.208(2), upon the issuance of this amended Plan Approval, the 4.07 tons of VOC ERCs, not generated by the over-control of emissions, are no longer subject to the 10-year expiration date under 25 Pa. Code §127.206(f), except as specified in 25 Pa. Code §127.206(g). If the 4.07 tons VOC ERCs identified in this Plan Approval are not used and are subsequently reentered into the ERC registry, these VOC ERC will expire on September 19, 2024.

004 [25 Pa. Code §127.210]**Offset ratios.**

(a) The 5-year aggregated VOC emission increases including this project are 69.37 tons.

(b) The permittee shall provide VOC ERCs at a 1.3:1.0 ratio to offset the net emission increase of 69.37 tons as per 25 Pa. Code §§127.205(3) and 127.210. The required VOC ERCs are 90.18 tons.

(c) The permittee has provided a total of 90.18 tons VOC ERCs through ERC purchasing and transferring approved by the DEP.

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).

**SECTION C. Site Level Plan Approval Requirements****IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

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

Source ID: 700

Source Name: HEAT EXCHANGE SYSTEMS

Source Capacity/Throughput:

**I. RESTRICTIONS.**

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

II. TESTING REQUIREMENTS.

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.**

The permittee shall:

- (a) Shutdown and decommission the Alky Unit Cooling Tower by the end of the fourth quarter of 2028.
- (b) Operate either the existing Alky Unit Cooling Tower or CT 01 (Alky Cooling Tower #2), but not both at the same time.
- (c) Include in the written notice of completion activities (Section B, Condition #003) the dates of the shutdown and decommissioning of the Alky Unit Cooling Tower.

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

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

The permittee shall comply with all of the existing requirements of Title V Operating Permit No. 23-00003 for Source ID: 700.

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

Source ID: 701

Source Name: COOLING TOWERS (CLOSED LOOP RECIRCULATING HEAT EXCHANGERS)

Source Capacity/Throughput:

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

001 [25 Pa. Code §123.13]

Processes

The concentration of particulate matter (PM) in the effluent of each cooling tower shall not exceed 0.02 gr/dscf.

002 [25 Pa. Code §127.203a.]

Applicability determination.

(a) As per 25 Pa. Code §127.203a(a)(5)(iii)(A), VOC emissions from the following new cooling towers shall not exceed the limits, specified below, calculated monthly and 12-month rolling sum:

CT 01 - Alky Cooling Tower #2 10.49 TPY

CT 02 - FCC Cooling Tower 24.81 TPY

CT 03 - Crude Cooling Tower 32.08 TPY

(b) The VOC concentration determined in accordance with the monitoring requirements under Condition #006 of this Section shall not exceed 31 ppmv on a rolling 12-month average basis for CT 02 - FCC Cooling Tower or CT 03 - Crude Cooling Tower. The VOC concentration determined in accordance with the monitoring requirements under Condition #006 of this Section shall not exceed 11.32 ppmv on a rolling 12-month average basis for CT 01 - Alky Cooling Tower #2.

[The VOC concentration determined in accordance with the monitoring requirements under Condition #006 of this section shall not exceed 31 ppmv on a rolling 12-month average basis, which is a LAER determination, and can't be changed without a new LAER determination.]

Control Device Efficiency Restriction(s).

003 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Each cooling tower shall be equipped with drift eliminators designed to achieve a drift rate of 0.0005%, by weight.

II. TESTING REQUIREMENTS.

004 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall measure the total dissolved solids (TDS) content of the cooling water in each cooling tower once per month. The method(s) for TDS content measurement shall be approved by DEP prior to the operation of the cooling towers.

III. MONITORING REQUIREMENTS.

005 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall monitor and record the operating minutes for each cooling tower on a monthly basis.

006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.654]

Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Heat exchange systems.

As per 40 C.F.R. §63.654(a) and (c), the permittee must perform monitoring to identify leaks of total strippable volatile

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organic compounds (VOC) from each heat exchange system according to the procedures below.

(1) Monitoring location: For each closed loop recirculating heat exchange system, collect and analyze a sample from each cooling tower return line prior to exposure to air for each heat exchange system.

(2) As per 40 C.F.R. §63.654(c)(3) - Monitoring method, the permittee must determine the total strippable hydrocarbon concentration (in parts per million by volume (ppmv) as methane) at each monitoring location using the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see §63.14) using a flame ionization detector (FID) analyzer for on-site determination as described in Section 6.1 of the Modified El Paso Method.

(3) As per 40 C.F.R. §63.654(c)(4)(i) - Monitoring frequency and leak action level, the permittee must monitor monthly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv.

[The monthly monitoring frequency is a LAER determination, and can't be changed without a new LAER determination.]

(4) As per 40 C.F.R. §63.654(c)(6) - Leak definition, a leak is detected if a measurement value of the sample taken from the return line equals or exceeds the leak action level of 6.2 ppmv.

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

The permittee shall keep the following records for each cooling tower:

- (a) The maintenance and replacement conducted on the drift eliminators;
- (b) The monthly operating minutes;
- (c) The TDS content of the circulated water measured monthly;
- (d) The monthly PM emissions calculated using the monthly operating minutes, the TDS contents measured monthly, and the water recirculation rates as specified below:

CT 01 - Alky Cooling Tower #2 – 33,000 gallons per minute (gpm)

CT 02 - FCC Cooling Tower – 28,500 gpm

CT 03 - Crude Cooling Tower – 36,850 gpm

- (e) PM emissions on a 12 month rolling sum.

008 [25 Pa. Code §127.203a.]**Applicability determination.**

The permittee shall keep records of VOC emissions from each cooling tower on a monthly basis, and 12-month rolling sum.

009 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries
Reporting and recordkeeping requirements.**

(a) As per 40 C.F.R. §63.655(i)(4), the permittee shall comply with the recordkeeping requirements in paragraph (a)(i) through (v) below and retain these records for 5 years.

(i) Identification of all petroleum refinery process unit heat exchangers at the facility and the average annual HAP concentration of process fluid or intervening cooling fluid estimated when developing the Notification of Compliance Status report.

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(ii) Identification of all heat exchange systems subject to the monitoring requirements in 40 C.F.R. §63.654 and identification of all heat exchange systems that are exempt from the monitoring requirements according to the provisions in 40 C.F.R. §63.654(b). For each heat exchange system that is subject to the monitoring requirements in 40 C.F.R. §63.654, this must include identification of all heat exchangers within each heat exchange system, and, for closed-loop recirculation systems, the cooling tower included in each heat exchange system.

(iii) Results of the following monitoring data for each required monitoring event:

(A) Date/time of event.

(B) Barometric pressure.

(C) El Paso air stripping apparatus water flow milliliter/minute (ml/min) and air flow, ml/min, and air temperature, °Celsius.

(D) FID reading (ppmv).

(E) Length of sampling period.

(F) Sample volume.

(G) Calibration information identified in Section 5.4.2 of the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see 40 C.F.R. §63.14).

(iv) The date when a leak was identified, the date the source of the leak was identified, and the date when the heat exchanger was repaired or taken out of service.

(v) If a repair is delayed, the reason for the delay, the schedule for completing the repair, the heat exchange exit line flow or cooling tower return line average flow rate at the monitoring location (in gallons/minute), and the estimate of potential strippable hydrocarbon emissions for each required monitoring interval during the delay of repair.

(b) As per 40 C.F.R. §63.655(i)(5), all other information required to be reported under 40 C.F.R. §63.655 shall be retained for 5 years.

V. REPORTING REQUIREMENTS.**# 010 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Applicability and designation of affected source.**

As per 40 C.F.R. §63.640(l)(3), the permittee shall comply with the reporting and recordkeeping requirements applicable to the cooling towers. The applicable reports include, but are not limited to:

(i) The Notification of Compliance Status report as required by 40 C.F.R. §63.655(f)(6);

(ii) Periodic Reports and other reports as required by 40 C.F.R. §63.655(g) and (h);

(iii) Reports and notifications required by sections of subpart A of 40 C.F.R. part 63 that are applicable, as identified in table 6 of 40 C.F.R. 63 subpart CC.

011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

(a) As per 40 C.F.R. §§63.640(l)(3)(i), 63.642(f), 63.655(e)(1) and (f)(6), Notification of Compliance Status report shall be submitted no later than 60 days after the end of the 6-month period during which the cooling tower(s) was brought into compliance. Six-month periods shall be the same 6-month periods specified in 40 C.F.R. §63.655(g).

(b) As per 40 C.F.R. §§63.640(l)(3)(ii), 63.642(f), 63.655(e)(2) and (g), Periodic Reports must include the following information:

(i) The number of heat exchange systems at the plant site subject to the monitoring requirements in 40 C.F.R. §63.654;

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(ii) The number of heat exchange systems at the plant site found to be leaking;

(iii) For each monitoring location where the total strippable hydrocarbon concentration was determined to be equal to or greater than the applicable leak definitions specified in §63.654(c)(6), identification of the monitoring location (e.g., unique monitoring location or heat exchange system ID number), the measured total strippable hydrocarbon concentration, the date the leak was first identified, and, if applicable, the date the source of the leak was identified;

(iv) For leaks that were repaired during the reporting period (including delayed repairs), identification of the monitoring location associated with the repaired leak, the total strippable hydrocarbon concentration measured during re-monitoring to verify repair, and the re-monitoring date (i.e., the effective date of repair); and

(v) For each delayed repair, identification of the monitoring location associated with the leak for which repair is delayed, the date when the delay of repair began, the date the repair is expected to be completed (if the leak is not repaired during the reporting period), the total strippable hydrocarbon concentration and date of each monitoring event conducted on the delayed repair during the reporting period, and an estimate of the potential strippable hydrocarbon emissions over the reporting period associated with the delayed repair.

(c) As per 40 C.F.R. §§63.640(l)(3)(ii), 63.642(f), 63.655(e)(3) and (h), Other Reports shall be submitted as specified in 40 C.F.R. 63 Subpart A and reports of startup, shutdown, and malfunction required by 40 C.F.R. §63.10(d)(5). For purposes of this paragraph, startup and shutdown shall have the meaning defined in 40 C.F.R. §63.641, and malfunction shall have the meaning defined in 40 C.F.R. §63.2.

VI. WORK PRACTICE REQUIREMENTS.

012 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The drift eliminators shall be installed, operated, and maintained in accordance with manufacturer's specifications.

013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.654]

Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries
Heat exchange systems.

(a) As per 40 C.F.R. §63.654(d), if a leak is detected, the permittee must repair the leak to reduce the measured concentration to below the applicable action level as soon as practicable, but no later than 45 days after identifying the leak. Repair includes re-monitoring at the monitoring location where the leak was identified according to the method specified in 40 C.F.R. §63.654(c)(3) to verify that the measured concentration is below the leak action level of 6.2ppmv. Actions that can be taken to achieve repair include but are not limited to:

- (1) Physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;
- (2) Blocking the leaking tube within the heat exchanger;
- (3) Changing the pressure so that water flows into the process fluid;
- (4) Replacing the heat exchanger or heat exchanger bundle; or
- (5) Isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

(b) As per 40 C.F.R. §63.654(f), the permittee may delay the repair of a leaking heat exchanger when one of the conditions specified below is met and the leak is less than the delay of repair action level specified in paragraph (b)(3) below. The permittee must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.

(1) If the repair is technically infeasible without a shutdown and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monthly monitoring periods during the delay of repair, the permittee may delay repair until the next scheduled shutdown of the heat exchange system. If, during subsequent monthly monitoring, the delay of repair action level is exceeded, the permittee must repair the leak within 30 days of the monitoring event in

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which the leak was equal to or exceeded the delay of repair action level.

(2) If the necessary equipment, parts, or personnel are not available and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monthly monitoring periods during the delay of repair, the permittee may delay the repair for a maximum of 120 calendar days. The permittee must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monthly monitoring, the delay of repair action level is exceeded, the permittee must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

(3) The delay of repair action level is a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv. The delay of repair action level is exceeded if a measurement value of the sample taken from each return line equals or exceeds the delay of repair action level.

(c) As per 40 C.F.R. §63.654(g), to delay the repair under 40 C.F.R. §63.654(f), the permittee must record the following information.

(1) The reason(s) for delaying repair.

(2) A schedule for completing the repair as soon as practical.

(3) The date and concentration of the leak as first identified and the results of all subsequent monthly monitoring events during the delay of repair.

(4) An estimate of the potential strippable hydrocarbon emissions from the leaking heat exchange system or heat exchanger for each required delay of repair monitoring interval following the procedures in paragraphs (c)(4)(i) through (iv) below.

(i) Determine the leak concentration as specified in 40 C.F.R. §63.654(c) and convert the stripping gas leak concentration (in ppmv as methane) to an equivalent liquid concentration, in parts per million by weight (ppmw), using equation 7-1 from "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see 40 C.F.R. §63.14) and the molecular weight of 16 grams per mole (g/mol) for methane.

(ii) 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 to the cooling tower. 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 25 degrees Celsius, which is 997 kilograms per cubic meter or 8.32 pounds per gallon.

(iii) For delay of repair monitoring intervals prior to repair of the leak, calculate the potential strippable hydrocarbon emissions for the leaking heat exchange system or heat exchanger for the monitoring interval by multiplying the leak concentration in the cooling water, ppmw, determined in paragraph (c)(4)(i) above, by the mass flow rate of the cooling water determined in paragraph (c)(4)(ii) 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.

(iv) For delay of repair monitoring intervals ending with a repaired leak, calculate the potential strippable hydrocarbon emissions for the leaking heat exchange system or heat exchanger for the final delay of repair monitoring interval 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.

**SECTION D. Source Level Plan Approval Requirements****VII. ADDITIONAL REQUIREMENTS.****# 014 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Applicability and designation of affected source.**

(a) As per 40 C.F.R. §63.640(l)(2)(i), the heat exchange systems shall be in compliance with the applicable requirements of 40 C.F.R. 63 subpart CC upon initial startup.

(b) The heat exchange systems subject to the requirements of 40 C.F.R. 63 Subpart CC at the Trainer Refinery (Facility ID 293037) are:

CT 01 - Alky Cooling Tower #2

CT 02 - FCC Cooling Tower

CT 03 - Crude Cooling Tower



SECTION E. Source Group Plan Approval Restrictions.

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Plan Approval facility.

**SECTION G. Emission Restriction Summary.**

Source Id	Source Description		
701	COOLING TOWERS (CLOSED LOOP RECIRCULATING HEAT EXCHANGERS)		
Emission Limit			Pollutant
0.020	gr/CF	Dry standard conditions	PM10
10.490	Tons/Yr	12-month rolling sum for Alky Cooling Tower #2	VOC
24.810	Tons/Yr	12-month rolling sum for FCC Cooling Tower	VOC
32.080	Tons/Yr	12-month rolling sum for Crude Cooling Tower	VOC

Site Emission Restriction Summary

Emission Limit	Pollutant
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SECTION H. Miscellaneous.



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