



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM

**TITLE V/STATE OPERATING PERMIT**

Issue Date: March 11, 2022      Effective Date: December 31, 2025  
Revision Date: December 31, 2025      Expiration Date: March 10, 2027  
Revision Type: Modification, Significant

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 operate the air emission source(s) more fully described in this permit. This Facility is subject to all terms and conditions specified in this permit. Nothing in this permit 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 permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable applicable requirements unless otherwise designated as "State-Only" or "non-applicable" requirements.

**TITLE V Permit No: 23-00016**

Federal Tax Id - Plant Code: 23-0972750-1

**Owner Information**

Name: PQ LLC  
Mailing Address: 1201 W FRONT ST  
CHESTER, PA 19013-3436

**Plant Information**

Plant: PQ LLC/CHESTER  
Location: 23      Delaware County      23001      Chester City  
SIC Code: 2819 Manufacturing - Industrial Inorganic Chemicals, Nec

**Responsible Official**

Name: HASSAN AKHTAR  
Title: PLANT MGR  
Phone: (610) 447 - 3906      Email: Hassan.Akhtar@pqcorp.com

**Permit Contact Person**

Name: THOMAS FERRALL  
Title: EHS PARTNER  
Phone: (706) 667 - 1604      Email: Thomas.Ferrall@pqcorp.com

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



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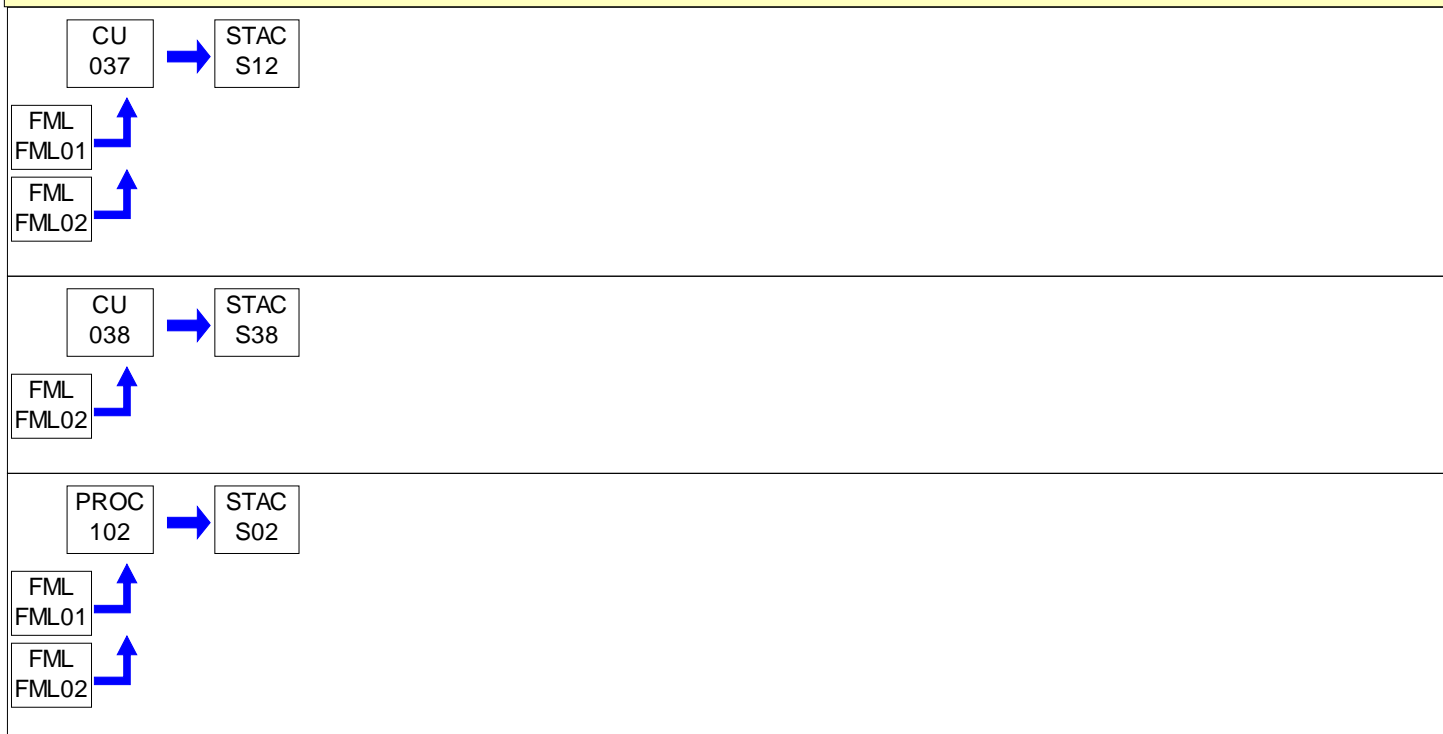
F-I: Restrictions  
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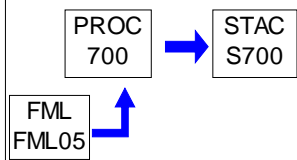
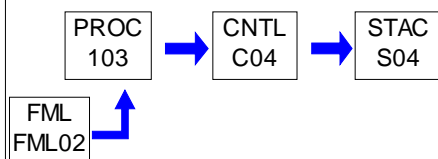
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Source ID	Source Name	Capacity/Throughput	Fuel/Material
037	CLEAVER-BROOKS (CBLE200-350) BOILER	14.210 MMBTU/HR	
		N/A	Natural Gas
		N/A	#2 Oil
038	DONLEE TECH BOILER	10.043 MMBTU/HR	
		9,709.000 CF/HR	Natural Gas
102	#4 SODIUM SILICATE FURNACE	11.600 Tons/HR	SODIUM SILICATE
		317.000 Gal/HR	#2 Oil
		50.000 MCF/HR	Natural Gas
103	SPRAY DRYER G & GD	13.000 MCF/HR	Natural Gas
		2.000 Tons/HR	POWDERED NA-SIL
700	400KW EMERGENCY GENERATOR	31.860 Gal/HR	Diesel Fuel
C04	SCHNEIBLE SCRUBBER		
FML01	T-132 #2 FUEL OIL TANK		
FML02	NATURAL GAS LINE-PECO		
FML05	DIESEL FUEL		
S02	#4 FURNACE STACK		
S04	SPRAY DRYER STACK		
S12	C-B BOILER STACK		
S38	DONLEE TECH STACK		
S700	400KW EMERGENCY GEN STACK		

**PERMIT MAPS**

**PERMIT MAPS**

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

Words and terms that are not otherwise defined in this permit 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 § 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).

**#003 [25 Pa. Code § 127.512(c)(4)]****Property Rights**

This permit does not convey property rights of any sort, or any exclusive privileges.

**#004 [25 Pa. Code § 127.446(a) and (c)]****Permit Expiration**

This operating permit is issued for a fixed term of five (5) years and shall expire on the date specified on Page 1 of this permit. The terms and conditions of the expired permit shall automatically continue pending issuance of a new Title V permit, provided the permittee has submitted a timely and complete application and paid applicable fees required under 25 Pa. Code Chapter 127, Subchapter I and the Department is unable, through no fault of the permittee, to issue or deny a new permit before the expiration of the previous permit. An application is complete if it contains sufficient information to begin processing the application, has the applicable sections completed and has been signed by a responsible official.

**#005 [25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446(e), 127.503 & 127.704(b)]****Permit Renewal**

(a) An application for the renewal of the Title V permit shall be submitted to the Department at least six (6) months, and not more than 18 months, before the expiration date of this permit. The renewal application is timely if a complete application is submitted to the Department's Regional Air Manager within the timeframe specified in this permit condition.

(b) The application for permit renewal shall include the current permit number, the appropriate permit renewal fee, a description of any permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. The fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" and submitted with the fee form to the respective regional office.

(c) The renewal application shall also include submission of proof that the local municipality and county, in which the facility is located, have been notified in accordance with 25 Pa. Code § 127.413. The application for renewal of the Title V permit shall also include submission of compliance review forms which have been used by the permittee to update information submitted in accordance with either 25 Pa. Code § 127.412(b) or § 127.412(j).

(d) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information during the permit renewal process. The permittee shall also promptly provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

**#006 [25 Pa. Code §§ 127.450(a)(4) & 127.464(a)]****Transfer of Ownership or Operational Control**

(a) In accordance with 25 Pa. Code § 127.450(a)(4), a change in ownership or operational control of the source shall be treated as an administrative amendment if:

(1) The Department determines that no other change in the permit is necessary;

(2) A written agreement has been submitted to the Department identifying the specific date of the transfer of permit

**SECTION B. General Title V Requirements**

responsibility, coverage and liability between the current and the new permittee; and,

(3) A compliance review form has been submitted to the Department and the permit transfer has been approved by the Department.

(b) In accordance with 25 Pa. Code § 127.464(a), this permit may not be transferred to another person except in cases of transfer-of-ownership which are documented and approved to the satisfaction of the Department.

**#007 [25 Pa. Code § 127.513, 35 P.S. § 4008 and § 114 of the CAA]****Inspection and Entry**

(a) Upon presentation of credentials and other documents as may be required by law for inspection and entry purposes, the permittee shall allow the Department of Environmental Protection or authorized representatives of the Department to perform the following:

(1) Enter at reasonable times upon the permittee's premises where a Title V source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit;

(2) Have access to and copy or remove, at reasonable times, records that are kept under the conditions of this permit;

(3) Inspect at reasonable times, facilities, equipment including monitoring and air pollution control equipment, practices, or operations regulated or required under this permit;

(4) Sample or monitor, at reasonable times, substances or parameters, for the purpose of assuring compliance with the permit or applicable requirements as authorized by the Clean Air Act, the Air Pollution Control Act, or the regulations promulgated under the Acts.

(b) 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.

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

**#008 [25 Pa. Code §§ 127.25, 127.444, & 127.512(c)(1)]****Compliance Requirements**

(a) The permittee shall comply with the conditions of this permit. Noncompliance with this permit constitutes a violation of the Clean Air Act and the Air Pollution Control Act and is grounds for one (1) or more of the following:

(1) Enforcement action

(2) Permit termination, revocation and reissuance or modification

(3) Denial of a permit renewal application

(b) A person may not cause or permit the operation of a source, which is subject to 25 Pa. Code Article III, unless the source(s) and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the applications and the conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to 25 Pa. Code Chapter 127 in a manner inconsistent with good operating practices.

(c) For purposes of Sub-condition (b) of this permit condition, the specifications in applications for plan approvals and operating permits are the physical configurations and engineering design details which the Department determines are essential for the permittee's compliance with the applicable requirements in this Title V permit.

**SECTION B. General Title V Requirements****#009 [25 Pa. Code § 127.512(c)(2)]****Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**#010 [25 Pa. Code §§ 127.411(d) & 127.512(c)(5)]****Duty to Provide Information**

(a) The permittee shall furnish to the Department, within a reasonable time, information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit.

(b) Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such records directly to the Administrator of EPA along with a claim of confidentiality.

**#011 [25 Pa. Code §§ 127.463, 127.512(c)(3) & 127.542]****Reopening and Revising the Title V Permit for Cause**

(a) This Title V permit may be modified, revoked, reopened and reissued or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay a permit condition.

(b) This permit may be reopened, revised and reissued prior to expiration of the permit under one or more of the following circumstances:

(1) Additional applicable requirements under the Clean Air Act or the Air Pollution Control Act become applicable to a Title V facility with a remaining permit term of three (3) or more years prior to the expiration date of this permit. The Department will revise the permit as expeditiously as practicable but not later than 18 months after promulgation of the applicable standards or regulations. No such revision is required if the effective date of the requirement is later than the expiration date of this permit, unless the original permit or its terms and conditions has been extended.

(2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator of EPA, excess emissions offset plans for an affected source shall be incorporated into the permit.

(3) The Department or the EPA determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

(4) The Department or the Administrator of EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(c) Proceedings to revise this permit shall follow the same procedures which apply to initial permit issuance and shall affect only those parts of this permit for which cause to revise exists. The revision shall be made as expeditiously as practicable.

(d) Regardless of whether a revision is made in accordance with (b)(1) above, the permittee shall meet the applicable standards or regulations promulgated under the Clean Air Act within the time frame required by standards or regulations.

**#012 [25 Pa. Code § 127.543]****Reopening a Title V Permit for Cause by EPA**

As required by the Clean Air Act and regulations adopted thereunder, this permit may be modified, reopened and reissued, revoked or terminated for cause by EPA in accordance with procedures specified in 25 Pa. Code § 127.543.



**SECTION B. General Title V Requirements****#013 [25 Pa. Code § 127.522(a)]****Operating Permit Application Review by the EPA**

The applicant may be required by the Department to provide a copy of the permit application, including the compliance plan, directly to the Administrator of the EPA. Copies of title V permit applications to EPA, pursuant to 25 PA Code §127.522(a), shall be submitted, if required, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#014 [25 Pa. Code § 127.541]****Significant Operating Permit Modifications**

When permit modifications during the term of this permit do not qualify as minor permit modifications or administrative amendments, the permittee shall submit an application for significant Title V permit modifications in accordance with 25 Pa. Code § 127.541. Notifications to EPA, pursuant to 25 PA Code §127.522(a), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#015 [25 Pa. Code §§ 121.1 & 127.462]****Minor Operating Permit Modifications**

The permittee may make minor operating permit modifications (as defined in 25 Pa. Code §121.1), on an expedited basis, in accordance with 25 Pa. Code §127.462 (relating to minor operating permit modifications). Notifications to EPA, pursuant to 25 PA Code §127.462(c), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#016 [25 Pa. Code § 127.450]****Administrative Operating Permit Amendments**

(a) The permittee may request administrative operating permit amendments, as defined in 25 Pa. Code §127.450(a). Copies of request for administrative permit amendment to EPA, pursuant to 25 PA Code §127.450(c)(1), if required, shall be submitted to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

(b) Upon final action by the Department granting a request for an administrative operating permit amendment covered under §127.450(a)(5), the permit shield provisions in 25 Pa. Code § 127.516 (relating to permit shield) shall apply to administrative permit amendments incorporated in this Title V Permit in accordance with §127.450(c), unless precluded by the Clean Air Act or the regulations thereunder.

**#017 [25 Pa. Code § 127.512(b)]****Severability Clause**

The provisions of this permit are severable, and if any provision of this permit is determined by the Environmental Hearing Board or a court of competent jurisdiction, or US EPA to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

**SECTION B. General Title V Requirements****#018 [25 Pa. Code §§ 127.704, 127.705 & 127.707]****Fee Payment**

- (a) The permittee shall pay fees to the Department in accordance with the applicable fee schedules in 25 Pa. Code Chapter 127, Subchapter I (relating to plan approval and operating permit fees). The applicable fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" with the permit number clearly indicated and submitted to the respective regional office.
- (b) Emission Fees. The permittee shall, on or before September 1st of each year, pay applicable annual Title V emission fees for emissions occurring in the previous calendar year as specified in 25 Pa. Code § 127.705. The permittee is not required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant emitted from the facility.
- (c) As used in this permit condition, the term "regulated pollutant" is defined as a VOC, each pollutant regulated under Sections 111 and 112 of the Clean Air Act and each pollutant for which a National Ambient Air Quality Standard has been promulgated, except that carbon monoxide is excluded.
- (d) Late Payment. Late payment of emission fees will subject the permittee to the penalties prescribed in 25 Pa. Code § 127.707 and may result in the suspension or termination of the Title V permit. The permittee shall pay a penalty of fifty percent (50%) of the fee amount, plus interest on the fee amount computed in accordance with 26 U.S.C.A. § 6621(a)(2) from the date the emission fee should have been paid in accordance with the time frame specified in 25 Pa. Code § 127.705(c).
- (e) The permittee shall pay an annual operating permit maintenance fee according to the following fee schedule established in 25 Pa. Code § 127.704(d) on or before December 31 of each year for the next calendar year.
- (1) Eight thousand dollars (\$8,000) for calendar years 2021—2025.
  - (2) Ten thousand dollars (\$10,000) for calendar years 2026—2030.
  - (3) Twelve thousand five hundred dollars (\$12,500) for the calendar years beginning with 2031.

**#019 [25 Pa. Code §§ 127.14(b) & 127.449]****Authorization for De Minimis Emission Increases**

- (a) This permit authorizes de minimis emission increases from a new or existing source in accordance with 25 Pa. Code §§ 127.14 and 127.449 without the need for a plan approval or prior issuance of a permit modification. The permittee shall provide the Department with seven (7) days prior written notice before commencing any de minimis emissions increase that would result from either: (1) a physical change of minor significance under § 127.14(c)(1); or (2) the construction, installation, modification or reactivation of an air contamination source. The written notice shall:

- (1) Identify and describe the pollutants that will be emitted as a result of the de minimis emissions increase.
- (2) Provide emission rates expressed in tons per year and in terms necessary to establish compliance consistent with any applicable requirement.

The Department may disapprove or condition de minimis emission increases at any time.

- (b) Except as provided below in (c) and (d) of this permit condition, the permittee is authorized during the term of this permit to make de minimis emission increases (expressed in tons per year) up to the following amounts without the need for a plan approval or prior issuance of a permit modification:

- (1) Four tons of carbon monoxide from a single source during the term of the permit and 20 tons of carbon monoxide at the facility during the term of the permit.
- (2) One ton of NO<sub>x</sub> from a single source during the term of the permit and 5 tons of NO<sub>x</sub> at the facility during the term of the permit.
- (3) One and six-tenths tons of the oxides of sulfur from a single source during the term of the permit and 8.0 tons of

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oxides of sulfur at the facility during the term of the permit.

(4) Six-tenths of a ton of PM<sub>10</sub> from a single source during the term of the permit and 3.0 tons of PM<sub>10</sub> at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(5) One ton of VOCs from a single source during the term of the permit and 5.0 tons of VOCs at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(c) In accordance with § 127.14, the permittee may install the following minor sources without the need for a plan approval:

(1) Air conditioning or ventilation systems not designed to remove pollutants generated or released from other sources.

(2) Combustion units rated at 2,500,000 or less Btu per hour of heat input.

(3) Combustion units with a rated capacity of less than 10,000,000 Btu per hour heat input fueled by natural gas supplied by a public utility, liquefied petroleum gas or by commercial fuel oils which are No. 2 or lighter, viscosity less than or equal to 5.82 c St, and which meet the sulfur content requirements of 25 Pa. Code § 123.22 (relating to combustion units). For purposes of this permit, commercial fuel oil shall be virgin oil which has no reprocessed, recycled or waste material added.

(4) Space heaters which heat by direct heat transfer.

(5) Laboratory equipment used exclusively for chemical or physical analysis.

(6) Other sources and classes of sources determined to be of minor significance by the Department.

(d) This permit does not authorize de minimis emission increases if the emissions increase would cause one or more of the following:

(1) Increase the emissions of a pollutant regulated under Section 112 of the Clean Air Act except as authorized in Subparagraphs (b)(4) and (5) of this permit condition.

(2) Subject the facility to the prevention of significant deterioration requirements in 25 Pa. Code Chapter 127, Subchapter D and/or the new source review requirements in Subchapter E.

(3) Violate any applicable requirement of the Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under either of the acts.

(4) Changes which are modifications under any provision of Title I of the Clean Air Act and emission increases which would exceed the allowable emissions level (expressed as a rate of emissions or in terms of total emissions) under the Title V permit.

(e) Unless precluded by the Clean Air Act or the regulations thereunder, the permit shield described in 25 Pa. Code § 127.516 (relating to permit shield) shall extend to the changes made under 25 Pa. Code § 127.449 (relating to de minimis emission increases).

(f) Emissions authorized under this permit condition shall be included in the monitoring, recordkeeping and reporting requirements of this permit.

(g) Except for de minimis emission increases allowed under this permit, 25 Pa. Code § 127.449, or sources and physical changes meeting the requirements of 25 Pa. Code § 127.14, the permittee is prohibited from making physical changes or engaging in activities that are not specifically authorized under this permit without first applying for a plan approval. In accordance with § 127.14(b), a plan approval is not required for the construction, modification, reactivation, or installation of the sources creating the de minimis emissions increase.

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(h) The permittee may not meet de minimis emission threshold levels by offsetting emission increases or decreases at the same source.

**#020 [25 Pa. Code §§ 127.11a & 127.215]****Reactivation of Sources**

(a) The permittee may reactivate a source at the facility that has been out of operation or production for at least one year, but less than or equal to five (5) years, if the source is reactivated in accordance with the requirements of 25 Pa. Code §§ 127.11a and 127.215. The reactivated source will not be considered a new source.

(b) A source which has been out of operation or production for more than five (5) years but less than 10 years may be reactivated and will not be considered a new source if the permittee satisfies the conditions specified in 25 Pa. Code § 127.11a(b).

**#021 [25 Pa. Code §§ 121.9 & 127.216]****Circumvention**

(a) The owner of this Title V facility, 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 permit, 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.

**#022 [25 Pa. Code §§ 127.402(d) & 127.513(1)]****Submissions**

(a) Reports, test data, monitoring data, notifications and requests for renewal of the permit shall be submitted to the:

Regional Air Program Manager  
PA Department of Environmental Protection  
(At the address given on the permit transmittal letter, or otherwise notified)

(b) Any report or notification for the EPA Administrator or EPA Region III should be addressed to:

Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

The Title V compliance certification shall be emailed to EPA at [R3\\_APD\\_Permits@epa.gov](mailto:R3_APD_Permits@epa.gov).

(c) An application, form, report or compliance certification submitted pursuant to this permit condition shall contain certification by a responsible official as to truth, accuracy, and completeness as required under 25 Pa. Code § 127.402(d). Unless otherwise required by the Clean Air Act or regulations adopted thereunder, this certification and any other certification required pursuant to this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**#023 [25 Pa. Code §§ 127.441(c) & 127.463(e); Chapter 139; & 114(a)(3), 504(b) of the CAA]****Sampling, Testing and Monitoring Procedures**

(a) The permittee shall perform the emissions monitoring and analysis procedures or test methods for applicable requirements of this Title V permit. In addition to the sampling, testing and monitoring procedures specified in this

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permit, the Permittee shall comply with any additional applicable requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) The sampling, testing and monitoring required under the applicable requirements of this permit, shall be conducted in accordance with the requirements of 25 Pa. Code Chapter 139 unless alternative methodology is required by the Clean Air Act (including §§ 114(a)(3) and 504(b)) and regulations adopted thereunder.

**#024 [25 Pa. Code § 127.513]****Compliance Certification**

(a) One year after the date of issuance of the Title V permit, and each year thereafter, unless specified elsewhere in the permit, the permittee shall submit to the Department and EPA Region III a certificate of compliance with the terms and conditions in this permit, for the previous year, including the emission limitations, standards or work practices. This certification shall include:

- (1) The identification of each term or condition of the permit that is the basis of the certification.
- (2) The compliance status.
- (3) The methods used for determining the compliance status of the source, currently and over the reporting period.
- (4) Whether compliance was continuous or intermittent.

(b) The compliance certification shall be postmarked or hand-delivered no later than thirty days after each anniversary of the date of issuance of this Title V Operating Permit, or on the submittal date specified elsewhere in the permit, to the Department in accordance with the submission requirements specified in Section B, Condition #022 of this permit. The Title V compliance certification shall be emailed to EPA at R3\_APD\_Permits@epa.gov.

**#025 [25 Pa. Code §§ 127.511 & Chapter 135]****Recordkeeping Requirements**

(a) The permittee shall maintain and make available, upon request by the Department, records of required monitoring information that include the following:

- (1) The date, place (as defined in the permit) and time of sampling or measurements.
- (2) The dates the analyses were performed.
- (3) The company or entity that performed the analyses.
- (4) The analytical techniques or methods used.
- (5) The results of the analyses.
- (6) The operating conditions as existing at the time of sampling or measurement.

(b) The permittee shall retain records of the required monitoring data and supporting information for at least five (5) years from the date of the monitoring sample, measurement, report or application. Supporting information includes the calibration data and maintenance records and original strip-chart recordings for continuous monitoring instrumentation, and copies of reports required by the permit.

(c) The permittee shall maintain and make available to the Department upon request, records including computerized records that may be necessary to comply with the reporting, recordkeeping and emission statement requirements in 25 Pa. Code Chapter 135 (relating to reporting of sources). In accordance with 25 Pa. Code Chapter 135, § 135.5, such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

**SECTION B. General Title V Requirements****#026 [25 Pa. Code §§ 127.411(d), 127.442, 127.463(e) & 127.511(c)]****Reporting Requirements**

(a) The permittee shall comply with the reporting requirements for the applicable requirements specified in this Title V permit. In addition to the reporting requirements specified herein, the permittee shall comply with any additional applicable reporting requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) Pursuant to 25 Pa. Code § 127.511(c), the permittee shall submit reports of required monitoring at least every six (6) months unless otherwise specified in this permit. Instances of deviations (as defined in 25 Pa. Code § 121.1) from permit requirements shall be clearly identified in the reports. The reporting of deviations shall include the probable cause of the deviations and corrective actions or preventative measures taken, except that sources with continuous emission monitoring systems shall report according to the protocol established and approved by the Department for the source. The required reports shall be certified by a responsible official.

(c) Every report submitted to the Department under this permit condition shall comply with the submission procedures specified in Section B, Condition #022(c) of this permit.

(d) Any records, reports or information obtained by the Department or referred to in a public hearing shall be made available to the public by the Department except for such records, reports or information for which the permittee has shown cause that the documents should be considered confidential and protected from disclosure to the public under Section 4013.2 of the Air Pollution Control Act and consistent with Sections 112(d) and 114(c) of the Clean Air Act and 25 Pa. Code § 127.411(d). The permittee may not request a claim of confidentiality for any emissions data generated for the Title V facility.

**#027 [25 Pa. Code § 127.3]****Operational Flexibility**

The permittee is authorized to make changes within the Title V facility in accordance with the following provisions in 25 Pa. Code Chapter 127 which implement the operational flexibility requirements of Section 502(b)(10) of the Clean Air Act and Section 6.1(i) of the Air Pollution Control Act:

- (1) Section 127.14 (relating to exemptions)
- (2) Section 127.447 (relating to alternative operating scenarios)
- (3) Section 127.448 (relating to emissions trading at facilities with federally enforceable emissions caps)
- (4) Section 127.449 (relating to de minimis emission increases)
- (5) Section 127.450 (relating to administrative operating permit amendments)
- (6) Section 127.462 (relating to minor operating permit amendments)
- (7) Subchapter H (relating to general plan approvals and operating permits)

**#028 [25 Pa. Code §§ 127.441(d), 127.512(i) and 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 Title V facility. The permittee shall submit the RMP to the federal Environmental Protection Agency according to the following schedule and requirements:

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

**SECTION B. General Title V 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 EPA 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 permit 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.
- (d) If the Title V facility is subject to 40 CFR Part 68, as part of the certification required under this permit, the permittee shall:
- (1) Submit a compliance schedule for satisfying the requirements of 40 CFR Part 68 by the date specified in 40 CFR § 68.10(a); or,
  - (2) Certify that the Title V facility is in compliance with all requirements of 40 CFR Part 68 including the registration and submission of the RMP.
- (e) If the Title V facility is subject to 40 CFR Part 68, the permittee shall maintain records supporting the implementation of an accidental release program for five (5) years in accordance with 40 CFR § 68.200.
- (f) When the Title V facility is subject to the accidental release program requirements of Section 112(r) of the Clean Air Act and 40 CFR Part 68, appropriate enforcement action will be taken by the Department if:
- (1) The permittee fails to register and submit the RMP or a revised plan pursuant to 40 CFR Part 68.
  - (2) The permittee fails to submit a compliance schedule or include a statement in the compliance certification required under Section B, Condition #026 of this permit that the Title V facility is in compliance with the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68, and 25 Pa. Code § 127.512(i).

**#029 [25 Pa. Code § 127.512(e)]****Approved Economic Incentives and Emission Trading Programs**

No permit revision shall be required under approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this Title V permit.

**#030 [25 Pa. Code §§ 127.516, 127.450(d), 127.449(f) & 127.462(g)]****Permit Shield**

(a) The permittee's compliance with the conditions of this permit shall be deemed in compliance with applicable requirements (as defined in 25 Pa. Code § 121.1) as of the date of permit issuance if either of the following applies:

- (1) The applicable requirements are included and are specifically identified in this permit.
- (2) The Department specifically identifies in the permit other requirements that are not applicable to the permitted facility or source.

(b) Nothing in 25 Pa. Code § 127.516 or the Title V permit shall alter or affect the following:

- (1) The provisions of Section 303 of the Clean Air Act, including the authority of the Administrator of the EPA provided thereunder.
- (2) The liability of the permittee for a violation of an applicable requirement prior to the time of permit issuance.

**SECTION B. General Title V Requirements**

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act.

(4) The ability of the EPA to obtain information from the permittee under Section 114 of the Clean Air Act.

(c) Unless precluded by the Clean Air Act or regulations thereunder, final action by the Department incorporating a significant permit modification in this Title V Permit shall be covered by the permit shield at the time that the permit containing the significant modification is issued.

**#031 [25 Pa. Code §135.3]****Reporting**

(a) The permittee shall submit by March 1 of each year an annual emissions report for the preceding calendar year. The report shall include information for all active previously reported sources, new sources which were first operated during the preceding calendar year, and sources modified during the same period which were not previously reported. All air emissions from the facility should be estimated and reported.

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

**#032 [25 Pa. Code §135.4]****Report Format**

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



**SECTION C. Site Level Requirements****I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

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

- (a) Construction or demolition of buildings or structures.
- (b) Grading, paving and maintenance of roads and streets.
- (c) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets.
- (d) Clearing of land.
- (e) Stockpiling of materials.
- (f) Open burning operations, as specified in 25 Pa. Code § 129.14;
- (g) Sources, and classes of sources, other than those identified in (a) - (f) above, for which the operator has obtained a determination from the Department, in accordance with 25 Pa. Code § 123.1(b), that fugitive emissions from the source, after appropriate controls, meet the following requirements:
  - (1) The emissions are of minor significance with respect to causing air pollution; and
  - (2) The emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

**# 002 [25 Pa. Code §123.2]****Fugitive particulate matter**

A person may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in 25 Pa. Code § 123.1(a)(1)-(9) (relating to prohibition of certain fugitive emissions) if such emissions are visible at the point the emissions pass outside the person's property.

**# 003 [25 Pa. Code §123.31]****Limitations****[ODOR EMISSIONS]**

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

**# 004 [25 Pa. Code §123.41]****Limitations****[VISIBLE EMISSIONS]**

A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emissions is either of the following:

- (a) Equal to or greater than 20% for a period or periods aggregating more than three (3) minutes in any one (1) hour.
- (b) Equal to or greater than 60% at any time.

**# 005 [25 Pa. Code §123.42]****Exceptions****[VISIBLE EMISSIONS EXCEPTIONS]**

The opacity limitations as per 25 Pa. Code § 123.41 shall not apply to a visible emission in any of the following instances:

**SECTION C. Site Level Requirements**

- (a) When the presence of uncombined water is the only reason for failure of the emission to meet the limitations.
- (b) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.
- (c) When the emission results from the sources specified in 25 Pa. Code § 123.1(a)(1)-(9) (relating to prohibition of certain fugitive emissions).

**# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.91, 129.96(a), and 129.114(b) and (d)]

The permittee shall ensure that the total nitrogen oxides (NO<sub>x</sub>) emissions from the facility shall not exceed 368.0 tons per year as a twelve (12) month rolling sum.

**# 007 [25 Pa. Code §129.14]****Open burning operations**

No person may permit the open burning of material in the Southeast Air Basin, except when the open burning results from:

- (a) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer;
- (b) Any fire set for the purpose of instructing personnel in fire fighting, when approved by the Department;
- (c) A fire set for the prevention and control of disease or pests, when approved by the Department;
- (d) A fire set in conjunction with the production of agricultural commodities in their unmanufactured state on the premises of the farm operation;
- (e) A fire set for the purpose of burning domestic refuse, when the fire is on the premises of a structure occupied solely as a dwelling by two families or less and when the refuse results from the normal occupancy of the structure;
- (f) A fire set solely for recreational or ceremonial purposes; or,
- (g) A fire set solely for cooking food.

**II. TESTING REQUIREMENTS.****# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.512]

- (a) If at any time the Department has cause to believe that air contaminant emissions from any source may be in excess of the limitations specified in this Permit, or established pursuant to, any applicable rule or regulation contained in 25 Pa. Code Article III, the permittee shall be required to conduct whatever tests are deemed necessary by the Department to determine the actual emission rate(s).
- (b) Such testing shall be conducted in accordance with the provisions of 25 Pa. Code Chapter 139 and the most current version of the DEP Source Testing Manual, when applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the permittee that testing is required.

**III. MONITORING REQUIREMENTS.****# 009 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

**SECTION C. Site Level Requirements**

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

**# 010 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.511]

- (a) The permittee shall monitor the facility, once per operating day, for the following:
  - (1) Odors which may be objectionable (as per 25 Pa. Code § 123.31);
  - (2) Visible emissions (as per 25 Pa. Code §§ 123.41 and 123.42); and,
  - (3) Fugitive particulate matter (as per 25 Pa. Code §§ 123.1 and 123.2).
- (b) Objectionable odors, fugitive particulate emissions, and visible emissions that are caused or may be caused by operations at the site shall:
  - (1) Be investigated;
  - (2) Be reported to the facility management, or individual(s) designated by the permittee;
  - (3) Have appropriate corrective action taken (for emissions that originate on-site); and,
  - (4) Be recorded in a permanent written log.
- (c) After six (6) months of daily monitoring, and upon the permittee's request, the Department will determine the feasibility of decreasing the monitoring frequency to weekly for the next six month period.
- (d) After six (6) months of weekly monitoring, and upon the permittee's request, the Department will determine the feasibility of decreasing the frequency of monitoring to monthly.
- (e) The Department reserves the right to change the above monitoring requirements at any time, based on but not limited to: the review of the compliance certification, complaints, monitoring results, and/or Department findings.

**IV. RECORDKEEPING REQUIREMENTS.****# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.511]

The permittee shall maintain a record of all monitoring of fugitive emissions, visible emissions and odors, including those that deviate from the conditions found in this permit. The record of deviations shall contain, at a minimum, the following items:

- (a) Date, time, and location of the incident(s).
- (b) The cause of the event.
- (c) The corrective action taken, if necessary, to abate the situation and prevent future occurrences.

**# 012 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall maintain the necessary records to demonstrate compliance with the site-wide emission limits contained herein this permit.

**# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Records of the monitoring and supporting data required by this Operating Permit shall be retained for a minimum of five (5) years.

**SECTION C. Site Level Requirements****# 014 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall maintain records of all the facility's increases of emissions from the following categories:

- (a) Increases of minor significance without notification to the Department.
- (b) De minimis increases with notification to the Department, via letter.
- (c) Increases resulting from a Request for Determination (RFD) to the Department.
- (d) Increases resulting from the issuance of a plan approval and subsequent operating permit.

**V. REPORTING REQUIREMENTS.****# 015 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.511]

(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 DEP Regional Office Air Program Manager.

(g) Any emissions resulted 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.

**SECTION C. Site Level Requirements****# 016 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.511(c)]

The permittee shall submit the following:

(a) An annual certificate of compliance, due by April 1st of each year, for the period covering January 1 through December 31 of the previous year. This certificate of compliance shall document compliance with all permit terms and conditions set forth in this Title V permit as required under condition #26 of section B of this permit. The annual certificate of compliance shall be submitted to DEP electronically, and to EPA Region III in electronic form at the following email address: R3\_APD\_Permits@epa.gov. The subject line shall read: "TVOP No. 23-00016, PQ LLC."

(b) A semi-annual deviation report to DEP, due by October 1 of each year, for the period covering January 1 through June 30 of the same year. Note: The annual certification of compliance fulfills the obligation for the second deviation reporting period (July 1 through December 31 of the previous year).

**VI. WORK PRACTICE REQUIREMENTS.****# 017 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

A person responsible for any source specified in 25 Pa. Code § 123.1 shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

(a) Use, where possible, of water or suitable chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.

(b) Application of asphalt, water, or other suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.

(c) Paving and maintenance of roadways.

(d) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or by other means.

**# 018 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.512(h)]

The permittee shall immediately, upon discovery, implement measures which may include the application for the installation of an air cleaning device(s), if necessary, to reduce the air contaminant emissions to within applicable limitations, if at any time the operation of the source(s) identified in this permit, is causing the emission of air contaminants in excess of the limitations specified in, or established pursuant to 25 Pa. Code Article III or any other applicable rule promulgated under the Clean Air Act. However, should the permittee decide to implement any measures or install additional control devices, then the permittee must obtain written approval from the Department prior to any measures being taken.

**# 019 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.512(h)]

The permittee shall ensure that the source(s) and air pollution control device(s), listed in this permit, are operated and maintained in a manner consistent with good operating and maintenance practices, and in accordance with manufacturer's specifications.

**# 020 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.512(h)]

**SECTION C. Site Level Requirements**

The permittee may not modify any air contaminant system identified in this permit, prior to obtaining Department approval, except those modifications authorized by Condition #019(g), of Section B, of this permit.

**VII. ADDITIONAL REQUIREMENTS.****# 021 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

All Reasonably Available Control Technology (RACT)-related permit conditions under 25 Pa. Code § 129.114 are to be approved by the United States Environmental Protection Agency (EPA) as part of the Commonwealth's State Implementation Plan (SIP), and any future revisions to any such permit conditions will require a co-incident SIP revision.

**# 022 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]****Subpart A - General Provisions****Address.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.441]

The permittee shall submit all requests, reports, applications, submittals, and other communications to both the Administrator and to the Regional Office of the Department. The copies shall be forwarded to:

United States Environmental Protection Agency  
Region III, Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
R3\_APD\_Permits@epa.gov

Regional Air Quality Program Manager  
Department of Environmental Protection  
<https://greenport.pa.gov/ePermitPublicAccess/PublicSubmission/Home>

**VIII. COMPLIANCE CERTIFICATION.**

No additional compliance certifications exist except as provided in other sections of this permit including Section B (relating to Title V General Requirements).

**IX. COMPLIANCE SCHEDULE.**

#023 01-JAN-26

(a) Within 180 days of the issuance of Authorization No. 1536486, PQ, LLC shall perform a stack test on the No. 4 Sodium Silicate Furnace (Source ID 102) for volatile organic compounds (VOC), using EPA Method 25/25A. VOC shall be reported in ppmv (as propane), in lbs of VOC per ton of production, and lbs of VOC per MMcf of natural gas burned.

(b) Stack testing shall be performed while the furnace is producing sodium silicate at the normal production rate. Refer to PADEP Source Testing Program website online for further information related to source testing including Source Testing FAQ and the PADEP Source Testing Manual.

(c) Performance testing shall be performed in accordance with the provisions of Chapter 139 and with all applicable EPA reference method test procedures.

(d) The following process data shall be recorded at 15-minute intervals during each test run to document the operation of the source. The Department may require additional parameters to be recorded, which will be addressed prior to stack testing.

- (1) Crown temperature
- (2) Air/Fuel Ratio
- (3) Percent O<sub>2</sub> in the regenerative chambers
- (4) The staged air portion of the combustion air
- (5) The burner tip cooling air pressure settings for each side of the #4 Sodium Silicate Furnace

**SECTION C. Site Level Requirements**

- (6) Amount of fuel combusted
- (7) Feed rate of material into the furnace, in pounds or tons
- (8) Production from the furnace, in pounds or tons
- (9) Water used In the Batch Wetting System, In pounds orton

(e) At least ninety (90) days prior to the performance test, the permittee shall submit to the PSIMS Administrator in Central Office for approval the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.

(f) At least thirty (30) days prior to the test, the Regional Air Quality Manager and the PSIMS Administrator in Central Office shall be informed of the date and time of the test.

(g) Within sixty (60) days after completion of the performance test, copies of each performance test report, which includes all operating conditions, shall be submitted to the Regional Air Quality Manager and the PSIMS Administrator in Central Office for approval.

(h) The permittee shall submit an electronic copy of all source test submissions (notifications, protocols, reports, supplemental information, etc.) to the AQ Program Manager for the Southeast Regional Office, and the PSIMS Administrator in Central Office. Email addresses are provided below for the PSIMS Administrator and the Southeast Regional Office:

Central Office  
RA-EPstacktesting@pa.gov

Southeast Regional Office  
RA-EPSEstacktesting@pa.gov

**\*\*\* Permit Shield In Effect \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 037

Source Name: CLEAVER-BROOKS (CBLE200-350) BOILER

Source Capacity/Throughput:

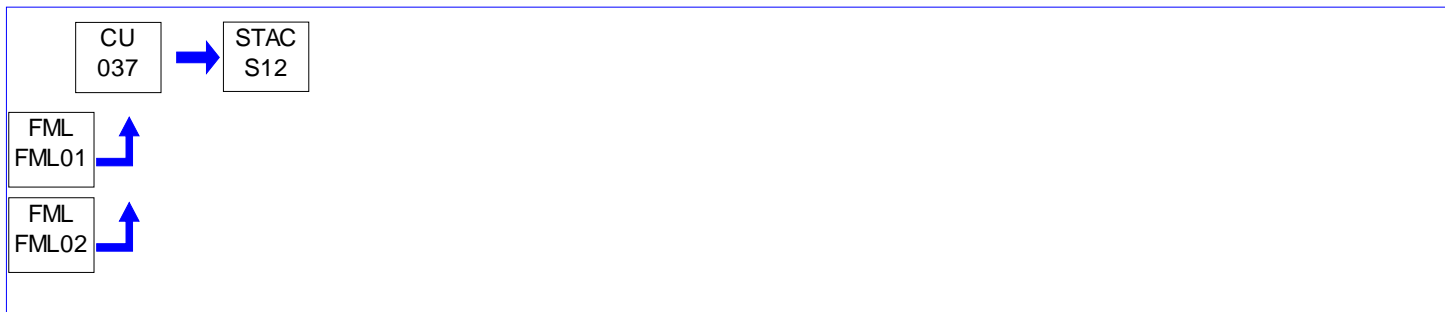
14.210 MMBTU/HR

N/A

Natural Gas

N/A

#2 Oil

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

Emissions of particulate matter (PM-total) from this combustion source shall not exceed 0.4 pounds per million BTU of heat input, pursuant to 25 Pa. Code § 123.11(a)(1).

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This combustion unit shall not exceed the following emission limits:

- (a) 30 ppm<sub>dv</sub> NO<sub>x</sub> at 3% oxygen when firing natural gas
- (b) 90 ppm<sub>dv</sub> NO<sub>x</sub> at 3% oxygen when firing No. 2 fuel oil
- (c) 300 ppm<sub>dv</sub> CO at 3% oxygen, regardless of fuel type

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Cleaver-Brooks (CBLE200-350) Boiler shall comply with the following emission limits:

- |  |   |
|--|---|
| (a) Nitrogen Oxides (NO <sub>x</sub> ) -           | 7.22 tons per twelve (12) month rolling period  |
| (b) Carbon Monoxide (CO) -                         | 13.93 tons per twelve (12) month rolling period |
| (c) Sulfur Oxides (SO <sub>x</sub> ) -             | 12.80 tons per twelve (12) month rolling period |
| (d) Volatile Organic Compounds (VOC) -             | 0.33 tons per twelve (12) month rolling period  |
| (e) Particulate Matter (PM-total, PM-10, PM-2.5) - | 1.50 tons per twelve (12) month rolling period  |

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.42c]****Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units  
Standard for sulfur dioxide.**

This combustion source shall not result in emissions of SO<sub>x</sub>, expressed as SO<sub>2</sub>, in excess of 215 ng/J (0.50 lb/million Btu) heat input, pursuant to 40 C.F.R. § 60.42c(d).

[Compliance with this streamlined permit condition assures compliance with 25 Pa. Code § 123.22(e)(1)]

**Fuel Restriction(s).****# 005 [25 Pa. Code §123.22]****Combustion units**

The sulfur content of the fuel shall not exceed 0.0015% by weight.

[Compliance with this streamlined permit condition assures compliance with 40 C.F.R. § 60.42c(d)]



**SECTION D. Source Level Requirements****# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall only burn in this combustion unit natural gas or commercial No. 2 fuel oil, which does not contain reclaimed waste oil or other waste materials.

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.11195]****Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources****Are any boilers not subject to this subpart?**

The Cleaver-Brooks (CBLE200-350) Boiler shall only use natural gas as the primary fuel. No. 2 fuel oil shall only be used during periods of gas curtailment, gas supply emergencies, or for periodic testing (not to exceed 48 hours during any calendar year).

**II. TESTING REQUIREMENTS.****# 008 [25 Pa. Code §123.22]****Combustion units**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 139.16]

(a) For the purpose of determining compliance with the requirements of this section, the actual sulfur content of commercial fuel oil shall be determined by one of the following:

- (1) In accordance with the sample collection, test methods and procedures specified under 25 Pa. Code § 139.16 (relating to sulfur in fuel oil).
- (2) Other methods developed or approved by the Department or the Administrator of the EPA, or both.

(b) A refinery owner or operator who produces commercial fuel oil intended for use or used in this Commonwealth is required to sample, test and calculate the actual sulfur content of each batch of the commercial fuel oil as specified in paragraph (a), above.

(c) Prior to offering for sale, delivering for use, exchanging in trade or permitting the use of commercial fuel oil in this Commonwealth, a person other than the ultimate consumer that accepts a shipment of commercial fuel oil from a refinery or other transferor, shall sample, test and calculate the actual sulfur content of the commercial fuel oil in accordance with subparagraph (a), above, if the shipment lacks the record required under 25 Pa. Code § 123.22(g)(1) that enables the transferee to determine if the sulfur content of the shipment of commercial fuel oil meets the applicable maximum allowable sulfur content.

**III. MONITORING REQUIREMENTS.****# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Cleaver-Brooks (CBLE200-350) Boiler shall be equipped with the necessary meter(s) to determine and to record amount of fuel usage.

**IV. RECORDKEEPING REQUIREMENTS.****# 010 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall record emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, VOC, PM-total, PM-10, and PM-2.5 on a monthly basis and as a 12-month rolling sum for this source.

**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 40 C.F.R. §§ 60.48c(g) and 63.11195]

**SECTION D. Source Level Requirements**

(a) The permittee shall record fuel usage of natural gas on a monthly basis.

(b) The permittee shall record daily use of No. 2 fuel oil, when it is used, and the reason for using No. 2 fuel oil.

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.48c]**

**Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units Reporting and recordkeeping requirements.**

When firing No. 2 fuel oil, records shall be kept for the fuel firing rates of the combustion unit on a monthly basis in order to determine sulfur dioxide (SO<sub>2</sub>) emissions in accordance with 40 C.F.R. § 60.48c(d).

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.48c]**

**Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units Reporting and recordkeeping requirements.**

[Additional authority for this permit condition is also derived from 40 C.F.R. §§ 60.42c(h) and 60.46c(e)]

(a) The permittee shall keep records of fuel supplier certification that shall include the following information for each delivery of distillate oil:

(1) The name of the oil supplier.

(2) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 C.F.R. § 60.41c.

(3) The sulfur content or maximum sulfur content of the oil.

(b) In the event that a delivery is made, and no receipt is obtained, the permittee shall perform testing in accordance with 40 C.F.R. §§ 60.44c(g) and 60.46c(d)(2) and 25 Pa. Code § 139.16 (refer to Testing Requirements). The necessary samples shall be taken within one (1) business day of the delivery and sent off to a lab for analysis, within that same time-frame. If the oil does not comply with the conditions of this permit, the permittee shall notify the Department of the results within 1 business day of receiving the results.

**V. REPORTING REQUIREMENTS.**

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.48c]**

**Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units Reporting and recordkeeping requirements.**

(a) For records required to be maintained for this source, reports shall be submitted on a semi-annual basis unless no excess emissions occurred. If there are no excess emissions, the permittee shall semi-annually report that no excess emissions occurred during the semi-annual reporting period.

(b) Condition (a) above does not apply to natural gas usage.

**# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.48c]**

**Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units Reporting and recordkeeping requirements.**

In accordance with 40 C.F.R. §§ 60.48c(d), 60.48c(e)(11) and 60.48c(j), the owner/operator shall submit reports to the Administrator of fuel oil usage and certification.

(a) The reporting period is each six-month period.

(b) The report shall contain:

(1) The calendar dates covered.

(2) The reasons for any non-compliance with sulfur dioxide emissions standards and the corrective actions taken.

**SECTION D. Source Level Requirements**

(3) A certified statement signed by the owner/operator of the affected facility that the records of fuel supplier certifications submitted represent all the fuel combusted during the reporting period.

(c) The initial semi-annual report shall be postmarked by the 30th day of the sixth month following completion of the initial performance test.

(d) Each subsequent report shall be postmarked by the 30th day following the end of the reporting period.

**VI. WORK PRACTICE REQUIREMENTS.****# 016 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 127.512(h), 129.97(c)(3), and 129.112(c)(4)]

The Cleaver-Brooks (CBLE200-350) Boiler shall be:

- (a) Operated in such a manner as not to cause air pollution.
- (b) Operated and maintained in a manner consistent with good operating and maintenance practices.
- (c) Operated and maintained in accordance with the manufacturer's specifications.

**VII. ADDITIONAL REQUIREMENTS.****# 017 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Pursuant to 40 C.F.R. § 60.4, the permittee shall submit copies of all requests, reports, applications, submittals, and other communications to both EPA and the appropriate Regional Office of the Department. The EPA copies shall be forwarded to:

Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

**# 018 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall, upon the request of the Department, provide fuel analyses, or fuel samples of the fuel used in the Cleaver-Brooks (CBLE200-350) Boiler.

**# 019 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This combustion source shall be equipped with flue gas recirculation (FGR) and low-NOx burner technology.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

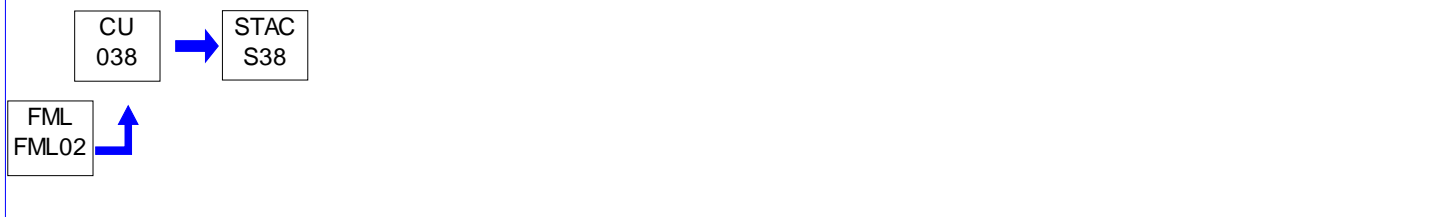
Source ID: 038

Source Name: DONLEE TECH BOILER

Source Capacity/Throughput: 10.043 MMBTU/HR

9,709.000 CF/HR

Natural Gas

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

Emissions of particulate matter (PM-total) from this combustion source shall not exceed 0.4 pounds per million BTU of heat input, pursuant to 25 Pa. Code § 123.11(a)(1).

**# 002 [25 Pa. Code §123.22]****Combustion units**

No person may permit the emission into the outdoor atmosphere of sulfur oxides (SO<sub>x</sub>), expressed as SO<sub>2</sub>, from any combustion unit, in the Southeast Air Basin, in excess of 1.2 pounds per million BTU of heat input, pursuant to 25 Pa. Code § 123.22(e)(1).

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This combustion unit shall not exceed the following emission limits:

- (a) 30 ppm<sub>dv</sub> NO<sub>x</sub> at 3% oxygen
- (b) 300 ppm<sub>dv</sub> CO at 3% oxygen

**# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Donlee Tech Boiler shall comply with the following emission limits:

- |  |  |
|--|--|
| (a) Nitrogen Oxides (NO <sub>x</sub> ) -           | 6.40 tons per twelve (12) month rolling period |
| (b) Carbon Monoxide (CO) -                         | 3.57 tons per twelve (12) month rolling period |
| (c) Sulfur Oxides (SO <sub>x</sub> ) -             | 6.81 tons per twelve (12) month rolling period |
| (d) Volatile Organic Compounds (VOC) -             | 0.23 tons per twelve (12) month rolling period |
| (e) Particulate Matter (PM-total, PM-10, PM-2.5) - | 1.06 tons per twelve (12) month rolling period |

**Fuel Restriction(s).****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall only burn natural gas in this combustion unit.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Donlee Tech Boiler shall be equipped with the necessary meter(s) to determine and to record amount of fuel usage.

**IV. RECORDKEEPING REQUIREMENTS.****# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall record emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, VOC, PM-total, PM-10, and PM-2.5 on a monthly basis and as a 12-month rolling sum for this source.

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.48c]****Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units Reporting and recordkeeping requirements.**

As allowed per 40 C.F.R. § 60.48(g)(2), the permittee shall record natural gas usage on a monthly basis.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 127.512(h), 129.97(c)(3), and 129.112(c)(4)]

The Donlee Tech Boiler shall be:

- (a) Operated in such a manner as not to cause air pollution.
- (b) Operated and maintained in a manner consistent with good operating and maintenance practices.
- (c) Operated and maintained in accordance with the manufacturer's specifications.

**VII. ADDITIONAL REQUIREMENTS.****# 010 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This combustion source shall be equipped with flue gas recirculation (FGR) and low-NO<sub>x</sub> burner technology.

**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Pursuant to 40 C.F.R. § 60.4, the permittee shall submit copies of all requests, reports, applications, submittals, and other communications to both EPA and the appropriate Regional Office of the Department. The EPA copies shall be forwarded to:

Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

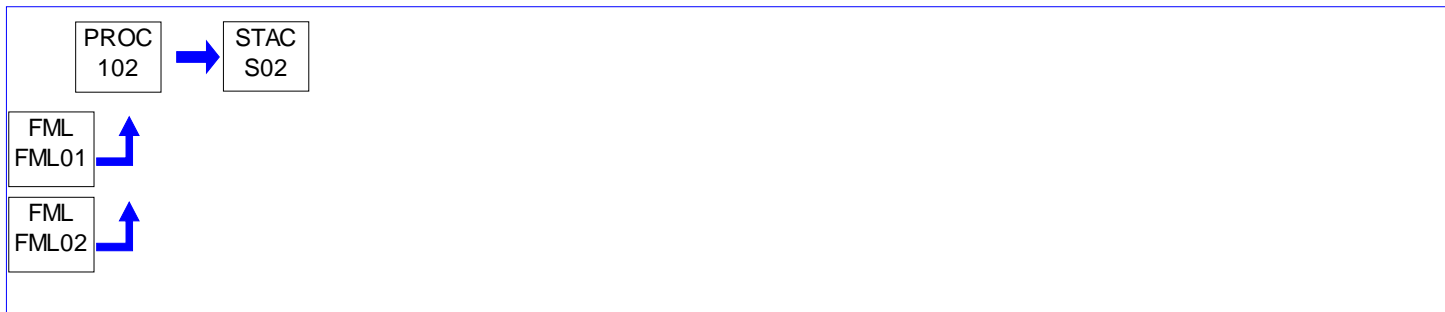
\*\*\* Permit Shield in Effect. \*\*\*

**SECTION D. Source Level Requirements**

Source ID: 102

Source Name: #4 SODIUM SILICATE FURNACE

Source Capacity/Throughput:	11.600 Tons/HR	SODIUM SILICATE
	317.000 Gal/HR	#2 Oil
	50.000 MCF/HR	Natural Gas

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.91, 129.96(a), 129.112(i)(5) and 129.115(b)(1)]

(a) The #4 Sodium Silicate Furnace shall not exceed the following nitrogen oxide (NO<sub>x</sub>) emission rates:

- (1) 6.0 lbs/ton of sodium silicate produced from this furnace
- (2) 69.6 lbs/hr (based on a 4-hour average, rolling by 1 hour)
- (3) 275.00 tons/year, determined on a 12-month rolling basis

(b) Compliance with the above lb/ton limit for NO<sub>x</sub> shall be demonstrated on a 30-operating day rolling average. An operating day is a 24-hour period beginning at 12:00 midnight during which the source produces sodium silicate.

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) The #4 Sodium Silicate Furnace shall not exceed the following carbon monoxide (CO) emission rates:

- (1) 20.0 lbs/hr (based on a 24-hour average, rolling by 1 hour)
- (2) 87.6 tons/year, determined on a 12-month rolling basis

(b) Compliance with the lb/hr CO emission limit shall be based on the CO Continuous Emission Monitoring System (CEMS).

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Emissions of particulate matter (PM-total) from the #4 Sodium Silicate Furnace shall not exceed 11.00 pounds per hour (lbs/hr), pursuant to 25 Pa. Code § 123.13(b).

**# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The #4 Sodium Silicate Furnace shall comply with the following emission limits:

- |  |  |
|--|--|
| (a) Sulfur Oxides (SO <sub>x</sub> ) -             | 162.53 tons per twelve (12) month rolling period |
| (b) Volatile Organic Compounds (VOC) -             | 9.56 tons per twelve (12) month rolling period   |
| (c) Particulate Matter (PM-total, PM-10, PM-2.5) - | 48.18 tons per twelve (12) month rolling period  |

**SECTION D. Source Level Requirements****# 005 [25 Pa. Code §123.21]****General**

No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO<sub>2</sub>, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

**# 006 [25 Pa. Code §129.114]****Alternative RACT proposal and petition for alternative compliance schedule**

NO<sub>x</sub> emissions occurring during non-operating days shall not exceed 1,304.4 pounds per non-operating day. A non-operating day is defined as any 24-hour period beginning at 12:00 midnight during which the source does not produce sodium silicate. Non-operating days may occur during periods of idling (e.g., hot holds), startup, and shutdown.

[Compliance with this requirement ensures compliance with 129.96(a).]

**Fuel Restriction(s).****# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

- (a) The fuel usage rate of No. 2 fuel oil shall be restricted to a monthly average of 317 gallons/hour.
- (b) When using No. 2 fuel oil for combustion, the permittee shall restrict the sulfur content of No. 2 fuel oil to 0.2 percent, by weight.

**Throughput Restriction(s).****# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Production from the #4 Sodium Silicate Furnace shall be limited to 11.6 tons per hour, demonstrated per shift.

**II. TESTING REQUIREMENTS.****# 009 [25 Pa. Code §139.3]****General requirements.**

(a) If the permittee should ever use fuel oil for 30 or more cumulative days within a 12-month rolling period, the permittee shall perform stack testing to measure emissions of VOC, SO<sub>x</sub>, PM-total, PM-10, and PM-2.5. Stack testing shall be performed no later than 90 days following the 30th day of cumulative fuel oil usage. This required stack testing is a one-time requirement, unless the Department deems it necessary to require this testing each 5-year term of the permit.

(b) The permittee shall follow the following procedures:

- (1) All such testing shall be conducted in accordance with the provisions of Chapter 139 of Article III of the Rules and Regulations of the Department of Environmental Protection and any other requirements which may be established by the Department.
- (2) At least sixty (60) days prior to the test, the permittee shall submit to the Department for approval one paper copy plus one electronic copy to both the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.
- (3) At least thirty (30) days prior to the test, the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office shall be informed of the date and time of the test.
- (4) Within thirty (30) days after the source test, the permittee shall submit one paper copy plus one electronic copy of the source test report to both the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office.

**SECTION D. Source Level Requirements**

(c) Emissions shall be reported as follows:

- (1) VOC - ppm<sub>dv</sub> (as propane), lbs/hr, and lb/ton of production.
- (1) SO<sub>x</sub> -- ppm<sub>dv</sub>, lbs/hr, and lbs/ton of production.
- (2) PM-total, PM-10, and PM-2.5 -- lbs/hr and lbs/ton of production.

(d) In the event that any of the above deadlines cannot be met, the permittee may request an extension for the due date(s) in writing and include a justification for the extension. The Department may grant an extension for a reasonable cause.

(e) Any questions or concerns about source testing submissions can be sent to [RA-EPstacktesting@pa.gov](mailto:RA-EPstacktesting@pa.gov) and the PSIMS Administrator will address them. The following are the mail and email addresses for the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office:

Central Office  
Pennsylvania Department of Environmental Protection  
Attn: PSIMS Administrator  
P.O. Box 8468  
Harrisburg, PA 17105-8468  
[RA-EPstacktesting@pa.gov](mailto:RA-EPstacktesting@pa.gov)

Southeast Region  
Pennsylvania Department of Environmental Protection  
Attn: Air Quality Program Manager  
2 East Main Street  
Norristown, PA 19401  
[RA-EPSEstacktesting@pa.gov](mailto:RA-EPSEstacktesting@pa.gov)

**# 010 [25 Pa. Code §139.3]**

**General requirements.**

(a) Stack testing for PM-total, PM-10, and PM-2.5 shall be performed on the #4 Sodium Silicate Furnace while operating at the maximum routine production rate and firing on the primary fuel. Stack testing for these pollutants shall be performed at a minimum of once every five (5) years, or when requested by the Department for just cause. If the primary fuel is No. 2 fuel oil, then the permittee shall also test for emissions of SO<sub>x</sub>.

(1) All such testing shall be conducted in accordance with the provisions of Chapter 139 of Article III of the Rules and Regulations of the Department of Environmental Protection and any other requirements which may be established by the Department.

(2) The permittee shall provide to the Department the feed rate of material into the furnace, in pounds or tons, and production from the furnace, in pounds or tons, for the shift(s) during which stack testing occurred. The following additional process data shall be recorded at 15-minute intervals during each test run to document the operation of the source. The Department may require additional parameters to be recorded, which will be addressed prior to stack testing.

- (i) Crown temperature
- (ii) Air/Fuel Ratio
- (iii) Percent O<sub>2</sub> in the regenerative chambers
- (iv) The staged air portion of the combustion air
- (v) The burner tip cooling air pressure settings for each side of the #4 Sodium Silicate Furnace
- (vi) Amount of fuel combusted
- (vii) Water used in the Batch Wetting System, in pounds or ton

(3) Testing of all pollutants shall be conducted simultaneously.

(4) Emissions shall be reported as follows:



**SECTION D. Source Level Requirements**

- (i) SO<sub>x</sub> -- ppm<sub>d</sub>v, lbs/hr, and lbs/ton of production.
- (ii) PM-total, PM-10, and PM-2.5 -- lbs/hr and lbs/ton of production.

(5) At least sixty (60) days prior to the test, the permittee shall submit to the Department for approval one paper copy plus one electronic copy to both the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.

(6) At least thirty (30) days prior to the test, the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office shall be informed of the date and time of the test.

(7) Within thirty (30) days after the source test, the permittee shall submit one paper copy plus one electronic copy of the source test report to both the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office.

(b) If the permittee seeks a change to the allowable air/fuel ratio range identified herein this operating permit, the permittee shall perform stack testing for all pollutants identified in part (a) above, at both the lowest and highest air/fuel ratios that the furnace is expected to be operated at.

(c) In the event that any of the above deadlines cannot be met, the permittee may request an extension for the due date(s) in writing and include a justification for the extension. The Department may grant an extension for a reasonable cause.

(d) Any questions or concerns about source testing submissions can be sent to [RA-EPstacktesting@pa.gov](mailto:RA-EPstacktesting@pa.gov) and the PSIMS Administrator will address them. The following are the mail and email addresses for the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office:

Central Office  
Pennsylvania Department of Environmental Protection  
Attn: PSIMS Administrator  
P.O. Box 8468  
Harrisburg, PA 17105-8468  
[RA-EPstacktesting@pa.gov](mailto:RA-EPstacktesting@pa.gov)

Southeast Region  
Pennsylvania Department of Environmental Protection  
Attn: Air Quality Program Manager  
2 East Main Street  
Norristown, PA 19401  
[RA-EPSEstacktesting@pa.gov](mailto:RA-EPSEstacktesting@pa.gov)

**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 139.16]

(a) The following are applicable to the analysis of commercial fuel oil:

- (1) The fuel oil sample for chemical analysis shall be collected in a manner that provides a representative sample.
- (2) Tests methods and procedures for the determination of sulfur shall be those approved by the Department.
- (3) Results shall be reported in accordance with the units specified in 25 Pa. Code § 123.22 (relating to combustion units).

(b) The testing requirements in subpart (a), above, shall be waived in the event that a delivery receipt from the supplier, showing the maximum percent sulfur in the fuel, is obtained each time a fuel oil delivery is made.

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 012 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.114(b) and (d), and 129.115(b)(1)]

(a) The following CEMS shall be installed, approved by the Department, operated, and maintained in accordance with the requirements of 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the "Submittal and Approval", "Record Keeping and Reporting", and "Quality Assurance" requirements of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

(1) NO<sub>x</sub> CEMS -

- (i) Emissions are to be monitored in ppm<sub>dv</sub>, converted to lbs/hr.
- (ii) Emissions are to be monitored on a per minute basis.

(2) CO CEMS -

- (i) Emissions are to be monitored in ppm<sub>dv</sub>, converted to lbs/hr.
- (ii) Emissions are to be monitored on a per minute basis.

(b) The permittee shall install all other such monitoring equipment necessary for the required CEMS to demonstrate compliance to the emission rates for which they are being installed.

(c) A Continuous Opacity Monitor (COM) shall be installed to monitor opacity from the furnace.

(d) Monitoring of NO<sub>x</sub>, CO, and Opacity shall be performed in the furnace stack.

(e) Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with the regulations.

**# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.91, 129.96(a), 129.114(b) and (d), and 129.115(f)]

(a) The permittee shall continuously monitor the following:

- (1) Air/fuel ratio
- (2) Flame pattern
- (3) Crown temperature

(b) Under the condition that the permittee is not producing material from the #4 Sodium Silicate Furnace, the permittee may perform necessary maintenance, repairs, or quality assurance activities on monitoring equipment associated with paragraph (a), above.

**# 014 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.114(b) and (d)]

The following shall be monitored on a daily basis:

- (a) Production from the furnace, in pounds or tons;
- (b) Hours of operation, excluding non-production time;
- (c) Total hours that the furnace is operating (when the burners are burning fuel);

**SECTION D. Source Level Requirements**

- (d) Feed rate of material into the furnace, in pounds or tons; and,  
(e) Water used in Batch Wetting System, in pounds or ton.

**# 015 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

- (a) The furnace shall be equipped with fuel gauges to track fuel usage of natural gas and No. 2 fuel oil.  
(b) Fuel usage of natural gas and No. 2 fuel oil shall be monitored on a daily basis.  
(c) The permittee shall track the hours operated on No. 2 fuel oil on a daily basis, when operating with No. 2 fuel oil.

**# 016 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In addition to CEMS data, emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, VOC, PM-total, PM-10, and PM-2.5, in tons, shall be monitored on a monthly basis.

**# 017 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) In accordance with 25 Pa. Code § 139.101(12), required monitoring for NO<sub>x</sub> and CO shall meet at least one of the following minimum data availability requirements unless other data availability requirements are stipulated elsewhere under Title 25 of the Pennsylvania Code, in a plan approval or permit condition under Chapter 127 (relating to construction, modification, reactivation and operation of sources), or in an order issued under section 4 of the Act:

- (1) In each calendar month, at least 90% of the time periods for which an emission standard applies shall be valid as set forth in the "Quality Assurance" section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.
- (2) In each calendar quarter, at least 95% of the hours shall be valid as set forth in the "Quality Assurance" section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

(b) In accordance with 25 Pa. Code § 139.103, the COM for PM shall comply with the following data availability requirements:

- (1) Opacity measurements shall be converted to represent plume opacity as described in the Department's Continuous Source Monitoring Manual, 274-0300-001. The conversion method shall be approved by the Department.
- (2) Opacity monitoring systems shall meet at least one of the following minimum data availability requirements unless other data availability requirements are stipulated elsewhere under Title 25 of the Pennsylvania Code for this particular process:
  - (i) At least 90% of the hours in each calendar month shall be valid hours as set forth in the "Quality Assurance" section of the Department's Continuous Source Monitoring Manual, 274-0300-001.
  - (ii) At least 95% of the hours in each calendar quarter shall be valid hours as set forth in the "Quality Assurance" section of the Department's Continuous Source Monitoring Manual, 274-0300-001.

(c) Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with the regulations.

**# 018 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall monitor the burner tip cooling air pressure settings for each side of the #4 Sodium Silicate Furnace. The pressure settings shall be monitored daily, including whenever there are changes in the pressure setting.

**SECTION D. Source Level Requirements****# 019 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The staged air portion of the combustion air shall be continuously monitored.

**IV. RECORDKEEPING REQUIREMENTS.****# 020 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is derived from 25 Pa. Code §§ 139.101(5) and 139.101(12)]

(a) The permittee shall comply with the recordkeeping requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), (and) the "Record Keeping and Reporting" requirements in the Department's Continuous Source Monitoring Manual, Revision No. 8, 274-0300-001.

(b) The following shall be recorded from CEMS on a continuous basis:

(1) NO<sub>x</sub> emissions -

- (i) Emissions are to be recorded in ppm<sub>dv</sub>, converted to lbs/hr.
- (ii) Emissions are to be recorded on a per minute basis.

(2) CO emissions -

- (i) Emissions are to be recorded in ppm<sub>dv</sub>, converted to lbs/hr.
- (ii) Emissions are to be recorded on a per minute basis.

(c) Opacity shall be continuously recorded by means of a COM.

(d) Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

**# 021 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall maintain records of all corrective actions taken in response to exceedances of emission standards, operational criteria or data availability standards.

**# 022 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.91, 129.96(a), 129.114(b) and (d), and 129.115(f)]

The permittee shall record the following at least once per shift:

- (a) Air/fuel ratio
- (b) Flame pattern
- (c) Crown temperature

**# 023 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.114(b) and (d)]

(a) The following shall be recorded on a daily basis:

- (1) Production from the furnace, in pounds or tons;
- (2) Hours of operation, excluding non-production time;
- (3) Total hours that the furnace is operating (when the burners are burning fuel);

**SECTION D. Source Level Requirements**

- (4) Tons/hr production rate per each shift;
- (5) Feed rate of material into the furnace, in pounds or tons;
- (6) Water used in Batch Wetting System, in pounds or ton; and,
- (7) Average weight percent of water used in Batch Wetting System versus the furnace feed rate.

(b) Production from the furnace, in tons, and hours of operation (excluding non-production time) shall be totaled on a monthly basis. An average hourly production rate shall be calculated monthly using the monthly total production and monthly total hours of operation.

**# 024 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

- (a) The permittee shall record fuel usage of natural gas and No. 2 fuel oil on a daily basis.
- (b) The permittee shall record the hours operated on No. 2 fuel oil on a daily basis, when operating on No. 2 fuel oil.
- (c) To demonstrate compliance with the monthly average limit of 317 gallons per hour, the permittee shall calculate and record the hourly average fuel oil combustion rate on a monthly basis, for those months when the furnace has operated on No. 2 fuel oil.

**# 025 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

- (a) The permittee shall obtain from the fuel oil supplier, each time a delivery is made, a delivery receipt that certifies the percentage of sulfur, by weight, is less than or equal to 0.2 percent for No.2 fuel oil.
- (b) If the permittee cannot obtain a delivery receipt that certifies the percentage of sulfur, then the permittee shall perform the necessary testing described under "Testing Requirements."

**# 026 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.95, 129.96(a), 129.112(i)(5), and 129.115(b)(1)]

- (a) Using CEMS data and hourly production rates, the permittee shall record the lbs/ton emission rate of NO<sub>x</sub> on a daily basis, and as a 30-operating day rolling average.
- (b) In addition to CEMS data, emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, VOC, PM-total, PM-10, and PM-2.5, in tons, shall be recorded on a monthly basis and as a 12-month rolling sum for this source.
- (c) In lieu of emission factors developed by the EPA, the permittee may use Department approved emission factors developed from the latest Department approved stack test performed on Source ID 102 to calculate emissions from Source ID 102.

**# 027 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall record the burner tip cooling air pressure settings for each side of the #4 Sodium Silicate Furnace. The pressure settings shall be recorded daily, including whenever there are changes in the pressure setting.

**# 028 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The staged air portion of the combustion air shall be recorded at a minimum of once per shift, and whenever the staged air portion of the combustion air is adjusted.

**# 029 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

- (a) The permittee shall maintain records of:
  - (1) Source tests and operating parameters established during the initial source test with the Blower Air Staging

**SECTION D. Source Level Requirements**

(BAS) System.

(2) Maintenance, repairs, malfunctions, idling, start-up and shutdown of the furnace.

(3) Materials used in the maintenance of the furnace and for making sodium silicate, and demonstration that none of the materials contain polychlorinated biphenyls (PCBs).

(b) The records required for this source shall be maintained onsite for 5 years. The records shall be made available or submitted to the Department upon request.

**# 030 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.96(a), 129.114(b) and 129.115(f)]

Emissions of NO<sub>x</sub> occurring from the furnace on non-operating days (days where there is no production from the furnace) shall be tracked daily, as pounds per day.

**V. REPORTING REQUIREMENTS.****# 031 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is derived from 25 Pa. Code §§ 139.101(1)(iv), 139.101(10) and 139.101(12)]

(a) The permittee shall submit quarterly reports of continuous emission monitoring and opacity monitoring data to the Department in accordance with the requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the "Record Keeping and Reporting" requirements as established in Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

(b) The permittee shall report emissions for all periods of unit operation, including startup, shutdown and malfunction.

(c) Initial quarterly reports following system certification shall be submitted to the Department within 35 days following the date upon which the Department notifies the owner or operator, in writing, of the approval of the CEMS and COM for use in determining compliance with applicable emission and opacity standards.

(d) Subsequent quarterly reports shall be submitted to the Department within 30 days after the end of each calendar quarter.

(e) Failure to submit required reports of continuous emission monitoring and/or opacity monitoring data within the time periods specified in this condition, shall constitute violations of this Permit, unless approved in advance by the Department in writing.

(f) Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

(g) Reporting required per this condition shall be submitted to the Pennsylvania Department of Environmental Protection, Central Office.

**# 032 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Whenever the furnace is shut down and restarted, the permittee shall submit to the Department the following information, no later than 30 days prior to the anticipated date of start-up of the furnace:

(a) A detailed list of activities to be performed during start-up and an explanation for the length of time needed to complete each activity; and,

(b) A description of the material process flow rates and system operating parameters and other information that the

**SECTION D. Source Level Requirements**

permittee plans to evaluate during the process optimization.

**# 033 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The following pertains to the CEMS for NO<sub>x</sub>:

(a) Data invalidated under Chapter 139, Subchapter C, shall be substituted with the following if approved in writing by the Department:

(1) The highest valid 1-hour emission value that occurred under similar source operating conditions during the reporting quarter.

(2) If no valid data were collected during the reporting quarter, one of the following shall be reported to the Department or appropriate approved local air pollution control agency:

(i) The highest valid 1-hour emission value that occurred under similar source operating conditions during the most recent quarter for which valid data were collected.

(ii) The highest valid 1-hour emission value that occurred under similar source operating conditions during an alternative reporting period.

(3) An alternative method of data substitution.

(b) Instead of data substitution, the Department may approve an alternative procedure to quantify NO<sub>x</sub> emissions and glass production.

(c) The permittee shall submit to the Department quarterly reports of CEMS monitoring data in pounds of NO<sub>x</sub> emitted per hour, in a format approved by the Department and in compliance with Chapter 139, Subchapter C.

(d) The CEMS for NO<sub>x</sub> must meet the minimum data availability requirements in Chapter 139, Subchapter C, as incorporated herein this Operating Permit.

**# 034 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) The owner or operator of a glass melting furnace shall calculate and report to the Department or appropriate approved local air pollution control agency on a quarterly basis, no later than 30 days after the end of the quarter, the CEMS data and glass production data used to show compliance with the allowable lb/ton NO<sub>x</sub> emission limitation. The glass production data must consist of the quantity of glass, in tons, pulled per day for each furnace.

(b) Production data referenced in subparagraph (a) of this condition shall be submitted to the Southeast Regional Office of the Department of Environmental Protection (DEP) until such time that the Central Office of DEP can merge the production data with the CEMS data.

(c) The CEMS data referenced in subparagraph (a) of this condition shall be submitted to the Central Office of DEP.

**VI. WORK PRACTICE REQUIREMENTS.****# 035 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.91, 129.96(a), and 129.114(b) and (d)]

The #4 Sodium Silicate Furnace shall be operated with low nitrogen oxide (low-NO<sub>x</sub>) burners.

**SECTION D. Source Level Requirements****# 036 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The average weight percent of water used in the Batch Wetting System versus the furnace feed rate shall be at a minimum of 1.0 percent.

**# 037 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 127.512(h), 129.96(a), and 129.112(d)]

The permittee shall operate and maintain this furnace in accordance with good operating and maintenance practices and good air pollution control practices.

**# 038 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) The BAS settings on the #4 Sodium Silicate Furnace shall be maintained such that the furnace complies with all applicable emission limits; or,

(b) If the CEMS and/or COM do not produce valid data for a period of 15 consecutive minutes or more, the permittee shall maintain the BAS settings such that the percent of combustion air supplied by the BAS system is between zero percent (0%) and fifteen percent (15%), or within a range requested by the permittee and approved by the Department. This restriction shall remain in effect until the CEMS/COM are taking valid readings consistently and that it has been determined that the CEMS/COM are working properly.

**# 039 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is derived from 25 Pa. Code §§ 139.101(1)(iv), 139.101(2), 139.101(3), 139.101(4), 139.101(6), 139.101(7), 139.101(8), 139.101(12), 139.101(14) and 139.101(15)]

(a) CEMS/COM and associated components shall be operated and maintained in accordance with the requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources) and the "Quality Assurance" requirements in Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

(b) Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

**# 040 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The burner tip cooling air pressure settings on the #4 Sodium Silicate Furnace shall be maintained in accordance with the manufacturer's specifications.

**# 041 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) The operating air/fuel ratio shall be maintained such that the furnace complies with all applicable emission limits; or,

(b) If the CEMS and/or COM do not produce valid data for a period of 15 consecutive minutes or more, the permittee shall maintain the air/fuel ratio between 9.0 and 12.0, or a range requested by the permittee and approved by the Department. This restriction shall remain in effect until the CEMS/COM are taking valid readings consistently and that it has been determined that the CEMS/COM are working properly.

**# 042 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) Whenever the furnace is shut down and restarted, the stoichiometric ratio of the furnace combustion system shall be maintained so as not to exceed 5% excess oxygen, as calculated from the actual fuel and oxidant flow measurements for combustion in the furnace.

(b) The permittee shall place the BAS system in operation as soon as technologically feasible during start-up to minimize



**SECTION D. Source Level Requirements**

emissions.

**# 043 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) The duration of a furnace shutdown (as defined under 25 Pa. Code § 121.1), as measured from the time the furnace operations drop below 25% of the permitted production capacity or fuel use capacity to when all emissions from the furnace cease, may not exceed 20 days.

(b) The permittee shall operate the BAS system whenever technologically feasible, as approved by the Department, during idling or shutdown to minimize emissions.

**VII. ADDITIONAL REQUIREMENTS.****# 044 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The #4 Sodium Silicate Furnace shall be equipped with the following burners:

(a) Sixteen (16) furnace burners, each with a rated capacity of 6.0 MMBtu/hr each, and manufactured by Combustion Tec, Model No. Britefire 0308;

(b) One (1) lip burner, with a rated capacity of 0.347 MMBtu/hr, and manufactured by Selas Heat Technology Company, Model No. 12 ET (Torch 2.5" NPT ignitor and FL-Rod).

(c) One (1) draw burner, with a rated capacity of 0.613 MMBtu/hr, and manufactured by Selas Heat Technology Company, Model 1001NM Burner Assembly.

**# 045 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Batch Wetting System shall have a rated capacity of 928 lbs of water per hour and manufactured by Martin Sprocket & Gear, Inc., model number 9/16P624-R.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 103

Source Name: SPRAY DRYER G &amp; GD

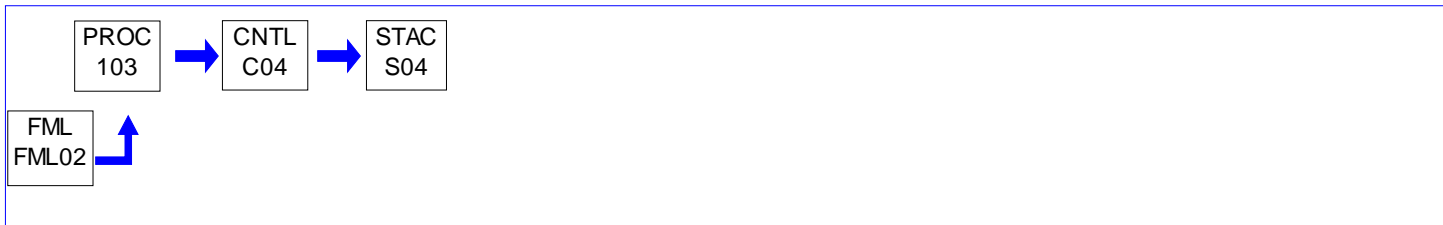
Source Capacity/Throughput:

13.000 MCF/HR

Natural Gas

2.000 Tons/HR

POWDERED NA-SIL

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter from this source at any time, in excess of 0.04 grains per dry standard cubic foot, pursuant to 25 Pa. Code § 123.13(c)(1).

**# 002 [25 Pa. Code §123.21]****General**

No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO<sub>2</sub>, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Spray Dryer G & GD shall comply with the following emission limits:

- |  |   |
|--|---|
| (a) Nitrogen Oxides (NO <sub>x</sub> ) -           | 11.23 tons per twelve (12) month rolling period |
| (b) Carbon Monoxide (CO) -                         | 4.78 tons per twelve (12) month rolling period  |
| (c) Sulfur Oxides (SO <sub>x</sub> ) -             | 0.89 tons per twelve (12) month rolling period  |
| (d) Volatile Organic Compounds (VOC) -             | 0.47 tons per twelve (12) month rolling period  |
| (e) Particulate Matter (PM-total, PM-10, PM-2.5) - |   |
| (1) Combustion -                                   | 0.43 tons per twelve (12) month rolling period  |
| (2) Process -                                      | 5.64 tons per twelve (12) month rolling period  |

**Fuel Restriction(s).****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall use only natural gas as fuel for the spray dryer.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.511]

The permittee shall monitor:

- (a) The amount of fuel consumed daily
- (b) The hours of operation

**IV. RECORDKEEPING REQUIREMENTS.****# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code § 127.511]

The permittee shall maintain records of:

- (a) The amount of fuel consumed daily
- (b) The hours of operation

**# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) The permittee shall record emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, VOC, PM-total, PM-10, and PM-2.5 on a monthly basis and as a 12-month rolling sum for this source.

(b) PM emission shall be calculated and reported separately for both combustion and process emissions.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for the following conditions are derived from 25 Pa. Code §§ 127.512(h), 129.93(c)(1), 129.97(c)(3), and 129.112(c)(4)]

The spray dryer shall be maintained, and operated in accordance with good operating and maintenance practices and good air pollution control practices.

**VII. ADDITIONAL REQUIREMENTS.****# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Source ID 103 consists of a Spray Dryer and a Ducon multi-Cyclone for capturing product material. Emissions are controlled by a Schneible Scrubber (Source ID C04).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

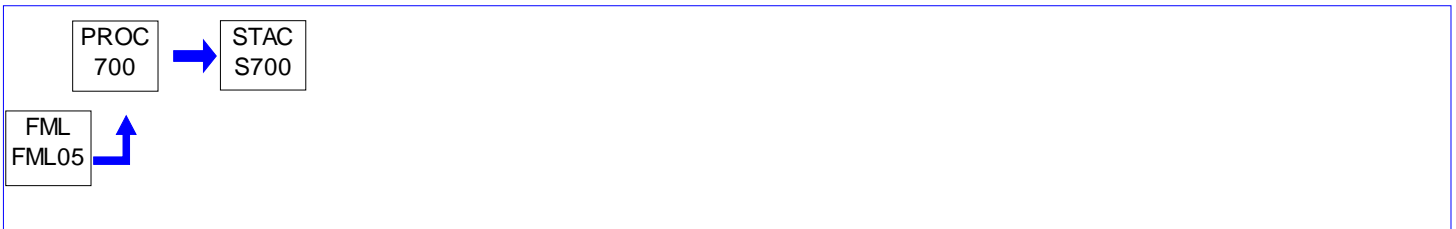
Source ID: 700

Source Name: 400KW EMERGENCY GENERATOR

Source Capacity/Throughput:

31.860 Gal/HR

Diesel Fuel

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

(a) No person may permit the emission into the outdoor atmosphere of particulate matter from this source in excess of 0.04 gr/dscf, pursuant to 25 Pa. Code § 123.13(c)(1)(i).

(b) The above requirement only applies to filterable PM.

**# 002 [25 Pa. Code §123.21]****General**

No person may permit the emission into the outdoor atmosphere of sulfur oxides from this source in a manner that the concentration of the sulfur oxides, expressed as SO<sub>2</sub>, in the effluent gas exceeds 500 ppmvd.

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

NO<sub>x</sub> emissions from this emergency generator shall not exceed any of the following:

- (a) 100 lbs/hr;
- (b) 1000 lbs/day;
- (c) 2.75 tons per ozone season; and
- (d) 6.6 tons in any 12 consecutive month period.

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4205]****Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines****What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal co**

[Additional authority for this permit condition is also derived from 40 CFR § 60.4202]

(a) The 400 kW emergency generator shall be certified to meet the following emission rates:

- |  |              |
|--|--------------|
| (1) Non-methane Hydrocarbons (NMHC) + Nitrogen Oxides (NO <sub>x</sub> ) - | 4.0 g/kW-hr  |
| (2) Carbon Monoxide (CO) -   | 3.5 g/kW-hr  |
| (3) Particulate Matter (PM) -  | 0.20 g/kW-hr |

(b) In lieu of the NMHC + NO<sub>x</sub> standards and PM standards specified in condition (a), above, the 400 KW emergency generator may comply with the following family emission limits (FEL), if approved by the EPA:

- |  |              |
|--|--------------|
| (1) Non-methane Hydrocarbons (NMHC) + Nitrogen Oxides (NO <sub>x</sub> ) - | 6.40 g/kW-hr |
| (2) Particulate Matter (PM) -  | 0.54 g/kW-hr |

(c) If the engine is naturally aspirated, the 400 kW emergency generator shall not discharge crankcase emissions into the ambient atmosphere, unless such crankcase emissions are permanently routed into the exhaust and included in all exhaust emission measurements. This provision does not apply if the 400 kW emergency generator is using turbochargers, pumps, blowers, or superchargers for air induction.

**SECTION D. Source Level Requirements****Fuel Restriction(s).**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4207]**  
**Subpart III - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**  
**What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to**

The permittee shall only use diesel fuel in the 400 kW emergency generator that meets the following parameters:

- (a) Sulfur content. 15 ppm maximum.
- (b) Cetane index or aromatic content, as follows:
  - (1) A minimum cetane index of 40; or
  - (2) A maximum aromatic content of 35 volume percent

**Operation Hours Restriction(s).**

**# 006 [25 Pa. Code §127.441]**  
**Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 25 Pa. Code §§ 129.97(c)(1) and 129.112(c)(1)]

This emergency generator shall not be operated more than 800 hours in any 12-month rolling period.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

**# 007 [25 Pa. Code §127.441]**  
**Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 40 CFR § 60.4214]

The 400 kW emergency generator shall be equipped with a non-resettable hour meter to monitor hours of operation.

**IV. RECORDKEEPING REQUIREMENTS.**

**# 008 [25 Pa. Code §127.441]**  
**Operating permit terms and conditions.**

(a) The permittee shall maintain all necessary documents and data to demonstrate compliance with all applicable emission limits identified herein this operating permit.

(b) The permittee shall maintain all necessary documents and data to demonstrate compliance with the requirements of 25 Pa. Code §129.203 (refer to Additional Requirements).

**# 009 [25 Pa. Code §127.441]**  
**Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 40 CFR § 60.4211]

The permittee shall maintain the necessary documents to demonstrate that the 400 kW emergency generator was purchased as a certified engine meeting Tier 3 emission standards.

**# 010 [25 Pa. Code §127.441]**  
**Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 40 CFR § 60.4214]

(a) The permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason

**SECTION D. Source Level Requirements**

the engine was in operation during that time.

(b) Hours of operation shall be summarized on a monthly basis and as a 12-month rolling sum.

**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from 40 CFR § 60.4211]

If the permittee does not install, configure, operate, and maintain the 400 kW emergency generator according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must:

(a) Keep a maintenance plan and records of conducted maintenance.

(b) Maintain records and reports of performance testing conducted on the 400 kW emergency generator, as would be required per 40 CFR § 60.4211.

**V. REPORTING REQUIREMENTS.****# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4214]****Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines****What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?**

If the 400 kW emergency generator is used to supply power as part of a financial arrangement with another entity (as approved herein this operating permit), the permittee must submit an annual report according to the following conditions:

(a) The report must contain the following information:

(1) Company name and address where the engine is located.

(2) Date of the report and beginning and ending dates of the reporting period.

(3) Engine site rating and model year.

(4) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(5) Hours spent for operation where the 400 kW emergency generator is used to supply power as part of a financial arrangement with another, including the date, start time, and end time for engine operation for that purpose. The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the DEP and EPA at the appropriate address listed in 40 CFR § 60.4.

**VI. WORK PRACTICE REQUIREMENTS.****# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for the following conditions are derived from 25 Pa. Code §§ 127.512(h), 129.97(c)(1), and 129.112(c)(1)]

The emergency generator shall be maintained, and operated in accordance with good operating and maintenance practices

**SECTION D. Source Level Requirements**

and good air pollution control practices.

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4211]****Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines****What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?**

(a) The permittee shall operate the 400 kW emergency generator according to the requirements in the most recent version of 40 CFR § 60.4211(f).

(b) If the permittee does not operate the 400 kW emergency generator according to the requirements of 40 CFR § 60.4211(f), the engine will not be considered an emergency engine under 40 CFR Part 60, Subpart IIII, and must meet all requirements for nonemergency engines.

**VII. ADDITIONAL REQUIREMENTS.****# 015 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This source is a 400 kW diesel-fired emergency generator manufactured by Ransome, Model No. C15 DITA, with a rated engine capacity of 619 hp.

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**



**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Title V facility.

**SECTION G. Emission Restriction Summary.**

Source Id	Source Description		
037	CLEAVER-BROOKS (CBLE200-350) BOILER		
Emission Limit		Pollutant	
13.930	Tons/Yr	Determined on a 12-month rolling period	CO
300.000	PPMV	Dry volume, corrected to 3% O <sub>2</sub> , regardless of fuel type	CO
7.220	Tons/Yr	Determined on a 12-month rolling period	NOX
30.000	PPMV	Dry volume, corrected to 3% O <sub>2</sub> , when firing natural gas	NOX
90.000	PPMV	Dry volume, corrected to 3% O <sub>2</sub> , when firing No. 2 fuel oil	NOX
0.500	Lbs/MMBTU		SOX
12.800	Tons/Yr	Determined on a 12-month rolling period	SOX
0.400	Lbs/MMBTU		TSP
1.500	Tons/Yr	Limit applies to PM-total, PM-10, and PM-2.5; Determined on a 12-month rolling period	TSP
0.330	Tons/Yr	Determined on a 12-month rolling period	VOC
038	DONLEE TECH BOILER		
Emission Limit		Pollutant	
3.570	Tons/Yr	Determined on a 12-month rolling period	CO
300.000	PPMV	Dry volume, corrected to 3% O <sub>2</sub> , regardless of fuel type	CO
6.400	Tons/Yr	Determined on a 12-month rolling period	NOX
30.000	PPMV	Dry volume, corrected to 3% O <sub>2</sub> , when firing natural gas	NOX
90.000	PPMV	Dry volume, corrected to 3% O <sub>2</sub> , when firing No. 2 fuel oil	NOX
1.200	Lbs/MMBTU		SOX
6.810	Tons/Yr	Determined on a 12-month rolling period	SOX
0.400	Lbs/MMBTU		TSP
1.060	Tons/Yr	Determined on a 12-month rolling period	TSP
0.230	Tons/Yr	Determined on a 12-month rolling period	VOC
102	#4 SODIUM SILICATE FURNACE		
Emission Limit		Pollutant	
20.000	Lbs/Hr	Based on a 4-hour average, rolling by 1 hour	CO
87.600	Tons/Yr	Determined on a 12-month rolling period	CO
6.000	Lbs/Tons		NOX
69.600	Lbs/Hr	Based on a 4-hour average, rolling by 1 hour	NOX
275.000	Tons/Yr	Determined on a 12-month rolling period	NOX
1,304.400	Lbs/Day	Applies to non-operating days	NOX
1,304.400	Lbs/Day	Case-by-case RACT III	NOX
162.530	Tons/Yr	Determined on a 12-month rolling period	SOX
500.000	PPMV	Determined on a dry basis	SOX
11.000	Lbs/Hr	Limit applies to PM-total, PM-10, and PM-2.5	TSP
48.180	Tons/Yr	Limit applies to PM-total, PM-10, and PM-2.5; Determined on a 12-month rolling period	TSP
9.560	Tons/Yr	Determined on a 12-month rolling period	VOC

**SECTION G. Emission Restriction Summary.**

Source Id	Source Description		
103	SPRAY DRYER G & GD		
Emission Limit			Pollutant
4.780	Tons/Yr	Determined on a 12-month rolling period	CO
11.230	Tons/Yr	Determined on a 12-month rolling period	NOX
0.040	gr/DRY FT3	Applies to filterable PM only	PM_FILT
0.890	Tons/Yr	Determined on a 12-month rolling period	SOX
500.000	PPMV	Determined on a dry basis	SOX
0.430	Tons/Yr	Limit applies to PM-total, PM-10, and PM-2.5 from combustion; Determined on a 12-month rolling period	TSP
5.640	Tons/Yr	Limit applies to PM-total, PM-10, and PM-2.5 from process; Determined on a 12-month rolling period	TSP
0.470	Tons/Yr	Determined on a 12-month rolling period	VOC
700	400KW EMERGENCY GENERATOR		
Emission Limit			Pollutant
3.500	GRAMS/KW-Hr		CO
4.000	GRAMS/KW-Hr	Combined with NOx emissions	NMHC
6.400	GRAMS/KW-Hr	Family Emission Limit; combined with NOx emissions	NMHC
2.750	Tons/OZNESEAS		NOX
4.000	GRAMS/KW-Hr	Combined with NMHC emissions	NOX
6.400	GRAMS/KW-Hr	Family Emission Limit; combined with NMHC emissions	NOX
6.600	Tons/Yr	Determined on a 12-month rolling period	NOX
100.000	Lbs/Hr		NOX
1,000.000	Lbs/Day		NOX
500.000	PPMV		SOX
0.040	gr/DRY FT3	Applies to filterable PM only	TSP
0.200	GRAMS/KW-Hr		TSP
0.540	GRAMS/KW-Hr	Family Emission Limit	TSP

**Site Emission Restriction Summary**

Emission Limit		Pollutant
368.000	Tons/Yr	Determined on a 12-month rolling period
		NOX

**SECTION H. Miscellaneous.**

(a) The Department has determined that the emissions from the following activities, excluding those indicated as site level requirements, in Section C, of this permit, do not require additional limitations, monitoring, or recordkeeping:

- (1) Cooling Tower with no chemical Additives
- (2) DC Batteries
- (3) Steam Lines and Traps
- (4) Soft Water System
- (5) Electric Space heaters
- (6) Hot water heaters - electric
- (7) Electric Heating Coil in #6 oil tank
- (8) Forklifts, carts, and front-end loader
- (9) Silicate, NaOH and KOH tanks
- (10) Silicate handling systems (pumps, connections, hoses, loading, etc.)
- (11) Waste water treatment system and associated equipment
- (12) Tanks used to hold process water
- (13) HVAC - Office, Maintenance, and Labs
- (14) Office equipment
- (15) Maintenance equipment, torch, portable welding machine 16hp (propane)
- (16) Propane tanks - rental, maintenance shop, oil tank area
- (17) Spray Dryer bagger, associated with Source ID 103, with dust collector
- (18) Baghouse associated with Source ID 102, which exhausts indoors.
- (19) No. 2 fuel oil fired heater (196,000 Btu/hr) in main office
- (20) Glass Unloading Operations
- (21) Lithium Silicate Operations
- (22) T-133 #2 Fuel Oil Tank

(b) The previously issued Operating Permit, OP-23-0016, serves as the basis for certain terms and conditions set forth in this Title V Permit, Auth. ID: 354769.

(c) Under Auth. ID: 481482, a Minor Modification was made to Source 036 - Cleaver Brooks Boiler, CB400HP, whose heat input is 13 million Btu per hour, adding the usage of No. 2 fuel oil in the event of natural gas supply is limited or curtailed.

(d) Under Auth. ID: 624881, this Title V Operating Permit has been renewed for another 5-year term. Under the same authorization:

- (1) Source ID 036 and has been removed and been replaced by Source ID 037;
- (2) Source ID 104 has been removed;
- (3) This Title V Operating Permit has been amended to incorporate Plan Approval No. 23-0016A; and,
- (4) Request for Determination Nos. 23-A01-685 and 23-A01-738 have been incorporated into Section G of this Title V Operating Permit.

(e) Under Auth ID: 856491, this Title V Operating Permit has been amended as follows:

- (1) Emission limits for the Cleaver-Brooks Boiler (Source ID 037) have been revised;
- (2) Fuel oil stack test requirements have been revised for the #2 Potassium Silicate Furnace (Source ID 101);
- (3) Fuel oil stack test requirements have been revised for the #4 Sodium Silicate Furnace (Source ID 102);
- (4) Emission limits for the Spray Dryer G & GD (Source ID 103) have been revised; and,
- (5) Site-wide emission limits have been revised, consistent with the emission limit revisions to Source IDs 037 and 103.

(f) Under Auth. ID: 907979, this Title V Operating Permit has been amended as follows:

- (1) General Permit No. GP1-23-0148 has been incorporated (Source ID 038).
- (2) Request for Determination Nos. 2023 and 2617 have been incorporated.

(g) Under Auth. ID: 1044446, this Title V Operating Permit has been amended as follows:

- (1) Plan Approval No. 23-0016C has been incorporated (Source ID 104).
- (2) Request for Determination Nos. 3277, 3539, and 3957 have been incorporated.

(h) RFD No. 3277 incorporates a 400 kW emergency generator subject to 40 CFR Part 60, Subpart IIII. The permittee shall comply

**SECTION H. Miscellaneous.**

with all applicable requirements of Subpart IIII.

(i) Under Auth. ID: 1048683, this Title V Operating Permit has been renewed for another 5-year term. This Title V Operating Permit also incorporates RFD No. 5016 (ventilation fan on the Lithium Silicate process).

(j) As per January 23, 2015, the Department has approved PQ Corporation's request to reduce the monitoring for malodors, fugitive emissions, and visible emissions from daily monitoring to weekly monitoring. The Department reserves the right to change the above monitoring requirements at any time, based on but not limited to: the review of the compliance certification, complaints, monitoring results, and/or Department findings.

(k) Under Auth. ID: 1219604, this Title V Operating Permit has been amended to clarify the reporting requirement of 25 Pa. Code § 129.309, as noted under Section D, Source ID 102 (#4 Sodium Silicate Furnace).

(l) Under Auth. ID: 1262842, this Title V Operating Permit has been amended to incorporate the requirements of Plan Approval No. 23-0016E, to change the averaging period for the carbon monoxide (CO) pound per hour (lb/hr) emission limit applicable to the #4 Sodium Silicate Furnace (Source ID 102). This Title V Operating Permit also incorporates a minor modification (Auth. ID: 1253394), for the replacement of the fuel oil supply skid associated with the #4 Sodium Silicate Furnace and the incorporation of an hourly fuel usage limit.

(m) Under Auth. ID: 1365922, the company name changed from "PQ Corporation" to "PQ LLC".

(n) Under Auth. ID: 1324417, this Title V Operating Permit has been renewed for another 5-year term. Per this Title V Operating Permit, the Responsible Official has been changed from Mr. Deric Edwards to Mr. Hassan Akhtar. This Title V Operating Permit also incorporates the following Request for Determinations (RFDs):

(1) RFD No. 5935, for the installation of oxygen sensors (4 total) in crown areas of the regenerators of the No. 4 Furnace.

(2) RFD No. 7038, for the installation of a lip burner (0.347 MMBtu/hr) and a draw burner (0.613 MMBtu/hr) to aid the flow of silicate from the furnace onto the chain; additionally, this RFD granted approval for the installation of a valve or flange in the furnace stack to allow flexibility for potential future projects.

(o) Under Auth. ID: 1536486, this Title V Operating Permit has been modified to incorporate both presumptive RACT III and case-by-case RACT III. Sources subject to presumptive RACT III include the Cleaver-Brooks Boiler (Source ID 037), Donlee Tech Boiler (Source ID 038), #4 Sodium Silicate Furnace (Source ID 102; operating day emissions), Spray Dryer G & GD (Source ID 103), and 400kW Emergency Generator (Source ID 700). The #2 Sodium Silicate Furnace (Source ID 102) is subject to case-by-case RACT III for emissions resulting on non-operating days. This modification also reflects the following:

(1) Redaction of the Glass Melting Furnace regulations.

(2) Redaction of requirements pertaining to 40 C.F.R. §§ 60.4211(f)(2)(ii)-(iii) and 60.4214(d)(1)(v)-(vi). Refer to Section D, Source ID 700, Condition #012.



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

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