



**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM**

**STATE ONLY NATURAL MINOR OPERATING PERMIT**

Issue Date:	May 23, 2022	Effective Date:	September 14, 2022
Revision Date:	September 14, 2022	Expiration Date:	May 31, 2027
Revision Type:	Amendment		

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 unless otherwise designated.

**State Only Permit No: 67-03052**

Natural Minor

Federal Tax Id - Plant Code: 23-2499368-3

**Owner Information**

Name: GELEST INC  
Mailing Address: 158 INDUSTRIAL RD  
GLEN ROCK, PA 17327-8626

**Plant Information**

Plant: GELEST INC/SPRINGFIELD  
Location: 67 York County 67958 Springfield Township  
SIC Code: 2869 Manufacturing - Industrial Organic Chemicals, Nec

**Responsible Official**

Name: CARL SHERVIN  
Title: VP OF OPERATIONS  
Phone: (717) 227 - 1774 Email: CShervin@gelest.com

**Permit Contact Person**

Name: AARON SLATTERY  
Title: ENVIRONMENTAL SPECIALIST  
Phone: (717) 227 - 1774 Email: aslattery@gelest.com

[Signature] \_\_\_\_\_  
WILLIAM R. WEAVER, SOUTH CENTRAL REGION AIR PROGRAM MANAGER

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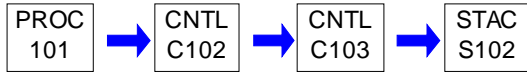
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Source ID	Source Name	Capacity/Throughput	Fuel/Material
101	CHEMICAL MFG PROCESSES		
C102	RTO, (MPEAS OR EQUIVALENT), 4000 SCFM		
C103	WET SCRUBBER, PACKED BED (MPEAS OR EQUIVALENT), 4,300 SCFM		
S102	STACK, RTO & WET SCRUBBER		

**PERMIT MAPS**

**SECTION B. General State Only 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 in 25 Pa. Code § 121.1.

**#002 [25 Pa. Code § 127.446]****Operating Permit Duration.**

(a) 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.

(b) The terms and conditions of the expired permit shall automatically continue pending issuance of a new operating 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.

**#003 [25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446 & 127.703(b)]****Permit Renewal.**

(a) The permittee shall submit a timely and complete application for renewal of the operating permit to the appropriate Regional Air Program Manager. The application for renewal of the operating permit shall be submitted at least six (6) months and not more than 18 months before the expiration date of this permit.

(b) The application for permit renewal shall include the current permit number, a description of any permit revisions that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. 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.

(c) The permittee shall submit with the renewal application a fee for the processing of the application as specified in 25 Pa. Code § 127.703(b). 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.

(d) 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.

(e) The application for renewal of the operating permit shall also include submission of supplemental compliance review forms in accordance with the requirements of 25 Pa. Code § 127.412(b) and § 127.412(j).

(f) 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 as necessary to address any requirements that become applicable to the source after the permittee submits a complete application, but prior to the date the Department takes action on the permit application.

**#004 [25 Pa. Code § 127.703]****Operating Permit Fees under Subchapter I.**

(a) The permittee shall pay the annual operating permit maintenance fee according to the following fee schedule in either paragraph (1) or (2) in accordance with 25 Pa. Code § 127.703(d) on or before December 31 of each year for the next calendar year.

(1) For a synthetic minor facility, a fee equal to:

(i) Four thousand dollars (\$4,000) for calendar years 2021—2025.

(ii) Five thousand dollars (\$5,000) for calendar years 2026—2030.

(iii) Six thousand three hundred dollars (\$6,300) for the calendar years beginning with 2031.

**SECTION B. General State Only Requirements**

(2) For a facility that is not a synthetic minor, a fee equal to:

- (i) Two thousand dollars (\$2,000) for calendar years 2021—2025.
- (ii) Two thousand five hundred dollars (\$2,500) for calendar years 2026—2030.
- (iii) Three thousand one hundred dollars (\$3,100) for the calendar years beginning with 2031.

(b) 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.

**#005 [25 Pa. Code §§ 127.450 (a)(4) and 127.464]****Transfer of Operating Permits.**

(a) This operating permit may not be transferred to another person, except in cases of transfer-of-ownership that are documented and approved by the Department.

(b) In accordance with 25 Pa. Code § 127.450(a)(4), a change in ownership of the source shall be treated as an administrative amendment if the Department determines that no other change in the permit is required and a written agreement has been submitted to the Department identifying the specific date of the transfer of permit responsibility, coverage and liability between the current and the new permittee and a compliance review form has been submitted to, and the permit transfer has been approved by, the Department.

(c) This operating permit is valid only for those specific sources and the specific source locations described in this permit.

**#006 [25 Pa. Code § 127.441 and 35 P.S. § 4008]****Inspection and Entry.**

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

(1) Enter at reasonable times upon the permittee's premises where a 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, at reasonable times, any records that are kept under the conditions of this permit;

(3) Inspect at reasonable times, any 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, any 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 or regulations adopted thereunder including denying the Department access to a source at this facility. Refusal of entry or access may constitute grounds for permit revocation and assessment of criminal and/or civil penalties.

(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.

**#007 [25 Pa. Code §§ 127.441 & 127.444]****Compliance Requirements.**

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

**SECTION B. General State Only Requirements**

- (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 for the source is 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 State-Only permit. Nothing in this sub-condition shall be construed to create an independent affirmative duty upon the permittee to obtain a predetermination from the Department for physical configuration or engineering design detail changes made by the permittee.

**#008 [25 Pa. Code § 127.441]****Need to Halt or Reduce Activity Not a Defense.**

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

**#009 [25 Pa. Code §§ 127.442(a) & 127.461]****Duty to Provide Information.**

(a) The permittee shall submit reports to the Department containing information the Department may prescribe relative to the operation and maintenance of each source at the facility.

(b) The permittee shall furnish to the Department, in writing, information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to maintain in accordance with this permit.

**#010 [25 Pa. Code § 127.461]****Revising an Operating Permit for Cause.**

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

- (1) The permittee constructs or operates the source subject to the operating permit so that it is in violation of the Air Pollution Control Act, the Clean Air Act, the regulations thereunder, a plan approval, a permit or in a manner that causes air pollution.
- (2) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.
- (3) The permittee has failed to submit a report required by the operating permit or an applicable regulation.
- (4) The EPA determines that the permit is not in compliance with the Clean Air Act or the regulations thereunder.

**#011 [25 Pa. Code §§ 127.450, 127.462, 127.465 & 127.703]****Operating Permit Modifications**

(a) The permittee is authorized to make administrative amendments, minor operating permit modifications and significant operating permit modifications, under this permit, as outlined below:

**SECTION B. General State Only Requirements**

(b) Administrative Amendments. The permittee shall submit the application for administrative operating permit amendments (as defined in 25 Pa. Code § 127.450(a)), according to procedures specified in § 127.450 unless precluded by the Clean Air Act or its regulations.

(c) Minor Operating Permit Modifications. The permittee shall submit the application for minor operating permit modifications (as defined 25 Pa. Code § 121.1) in accordance with 25 Pa. Code § 127.462.

(d) Significant Operating Permit Modifications. The permittee shall submit the application for significant operating permit modifications in accordance with 25 Pa. Code § 127.465.

(e) 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.

**#012 [25 Pa. Code § 127.441]****Severability Clause.**

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

**#013 [25 Pa. Code § 127.449]****De Minimis Emission Increases.**

(a) This permit authorizes de minimis emission increases in accordance with 25 Pa. Code § 127.449 so long as the permittee provides the Department with seven (7) days prior written notice before commencing any de minimis emissions increase. 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.

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

(c) Except as provided below in (d), the permittee is authorized 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 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, the regulations thereunder 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, the regulations thereunder or 25 Pa. Code Article III.

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

(d) In accordance with § 127.14, the permittee is authorized to install the following minor sources without the need for a plan approval or permit modification:



**SECTION B. General State Only Requirements**

(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 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.

(e) 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 (c)(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 this permit, the Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under either of the acts.

(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, installation of minor sources made pursuant to this permit condition and Plan Approval Exemptions under 25 Pa. Code § 127.14 (relating to exemptions), the permittee is prohibited from making 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.

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

**#014 [25 Pa. Code § 127.3]****Operational Flexibility.**

The permittee is authorized to make changes within the facility in accordance with the regulatory provisions outlined in 25 Pa. Code § 127.3 (relating to operational flexibility) to implement the operational flexibility requirements provisions authorized under Section 6.1(i) of the Air Pollution Control Act and the operational flexibility terms and conditions of this permit. The provisions in 25 Pa. Code Chapter 127 which implement the operational flexibility requirements include the following:

(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)

**SECTION B. General State Only Requirements**

(6) Section 127.462 (relating to minor operating permit modifications)

(7) Subchapter H (relating to general plan approvals and general operating permits)

**#015 [25 Pa. Code § 127.11]****Reactivation**

(a) The permittee may not reactivate a source that has been out of operation or production for at least one year unless the reactivation is conducted in accordance with a plan approval granted by the Department or in accordance with reactivation and maintenance plans developed and approved by the Department in accordance with 25 Pa. Code § 127.11a(a).

(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).

**#016 [25 Pa. Code § 127.36]****Health Risk-based Emission Standards and Operating Practice Requirements.**

(a) When needed to protect public health, welfare and the environment from emissions of hazardous air pollutants from new and existing sources, the permittee shall comply with the health risk-based emission standards or operating practice requirements imposed by the Department, except as precluded by §§ 6.6(d)(2) and (3) of the Air Pollution Control Act [35 P.S. § 4006.6(d)(2) and (3)].

(b) A person challenging a performance or emission standard established by the Department has the burden to demonstrate that performance or emission standard does not meet the requirements of Section 112 of the Clean Air Act.

**#017 [25 Pa. Code § 121.9]****Circumvention.**

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 25 Pa. Code Article III, except that with prior approval of the Department, the device or technique may be used for control of malodors.

**#018 [25 Pa. Code §§ 127.402(d) & 127.442]****Reporting Requirements.**

(a) The permittee shall comply with the applicable reporting requirements of the Clean Air Act, the regulations thereunder, the Air Pollution Control Act and 25 Pa. Code Article III including Chapters 127, 135 and 139.

(b) The permittee shall submit reports to the Department containing information the Department may prescribe relative to the operation and maintenance of any air contamination source.

(c) 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 in the permit transmittal letter, or otherwise notified)

(d) Any records or information including applications, forms, or reports submitted pursuant to this permit condition shall contain a certification by a responsible official as to truth, accuracy and completeness. The certifications submitted under this permit shall require a responsible official of the facility to certify that based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate and complete.

(e) Any records, reports or information submitted to the Department shall be available to the public except for such

**SECTION B. General State Only Requirements**

records, reports or information which meet the confidentiality requirements of § 4013.2 of the Air Pollution Control Act and §§ 112(d) and 114(c) of the Clean Air Act. The permittee may not request a claim of confidentiality for any emissions data generated for the facility.

**#019 [25 Pa. Code §§ 127.441(c) & 135.5]****Sampling, Testing and Monitoring Procedures.**

(a) The permittee shall comply with the monitoring, recordkeeping or reporting requirements of 25 Pa. Code Chapter 139 and the other applicable requirements of 25 Pa. Code Article III and additional requirements related to monitoring, reporting and recordkeeping required by the Clean Air Act and the regulations thereunder including the Compliance Assurance Monitoring requirements of 40 CFR Part 64, where applicable.

(b) Unless alternative methodology is required by the Clean Air Act and regulations adopted thereunder, sampling, testing and monitoring required by or used by the permittee to demonstrate compliance with any applicable regulation or permit condition shall be conducted in accordance with the requirements of 25 Pa. Code Chapter 139.

**#020 [25 Pa. Code §§ 127.441(c) and 135.5]****Recordkeeping.**

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

- (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 any 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.

**#021 [25 Pa. Code § 127.441(a)]****Property Rights.**

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

**#022 [25 Pa. Code § 127.447]****Alternative Operating Scenarios.**

The permittee is authorized to make changes at the facility to implement alternative operating scenarios identified in this permit in accordance with 25 Pa. Code § 127.447.

**SECTION B. General State Only Requirements****#023 [25 Pa. Code §135.3]****Reporting**

(a) If the facility is a Synthetic Minor Facility, 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 of a Synthetic Minor Facility 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.

**#024 [25 Pa. Code §135.4]****Report Format**

If applicable, the 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 shall permit the emission into the outdoor atmosphere of any fugitive air contaminant from a source other than the following:

- (a) Construction or demolition of a building or structure.
- (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 material.
- (f) Open burning operations.
- (g) Sources and classes of sources other than those identified above, for which the operator has obtained a determination from the Department, in accordance with 25 Pa. Code Section 123.1(b) that fugitive emissions from the source, after appropriate control, meet the following requirements:
  - (1) The emissions are of minor significance with respect to causing air pollution.
  - (2) The emissions are not preventing or interfering with the attainment or maintenance of any ambient air standard.

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

No person shall emit particulate matter into the outdoor atmosphere from a source specified in Condition #001 if the emissions are visible at the point the emissions pass outside the person's property.

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

No person shall 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**

No person shall permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

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

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

The emission limitation of 25 Pa. Code Section 123.41 shall not apply when:

- (a) The presence of uncombined water is the only reason for failure of the emission to meet the limitation.
- (b) The emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.
- (c) The emission results from sources specified in Section C, Condition #001.

**SECTION C. Site Level Requirements****# 006 [25 Pa. Code §129.14]****Open burning operations**

(a) No person shall conduct open burning of materials in such a manner that:

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

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

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

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

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

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

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

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

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

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

(5) A fire set solely for cooking food.

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

The Department reserves the right to require exhaust stack testing of the sources referenced in this permit as necessary during the permit term to verify emissions for purposes including emission fees, malfunctions or permit condition violations.

**III. MONITORING REQUIREMENTS.****# 008 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

(1) A device approved by the Department and maintained to provide accurate opacity measurements.

(2) Observers, trained and certified, to measure plume opacity with the naked eye or with the aid of devices approved by the Department.

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

The permittee shall conduct a weekly inspection around the plant periphery during daylight hours when the plant is in production to detect visible emission, fugitive emissions and malodors as follows:

(a) Visible emissions in excess of the limits stated in Section C, Condition #004. Visible emissions may be measured according to the methods specified in Section C, Condition #008, or alternately, plant personnel who observe such emissions may report the incidence of visible emissions to the Department within two hours of each incident and make arrangements for a certified observer to verify the visible emission.

**SECTION C. Site Level Requirements**

- (b) The presence of fugitive emissions beyond the plant property boundaries, as stated in Section C, Condition #002.
- (c) The presence of odorous air contaminants beyond the plant property boundaries as stated in Section C, Condition #003.

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

All records required by this operating permit and subsequent issuances shall be maintained for the most recent five-year period and made available to Department representatives upon request.

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

The permittee shall maintain a logbook of inspections around the plant periphery. The logbook shall include, at minimum:

- 1.) Name of the company representative doing the observation.
- 2.) Date and time of the monitoring.
- 3.) Wind direction.
- 4.) Description of any emissions and/or malodors observed and actions to mitigate them. If none are present, record "NONE."

**# 012 [25 Pa. Code §135.3]****Reporting**

The permittee shall maintain and make available upon request by the Department, records including computerized records that may be necessary to comply with 25 Pa. Code Sections 135.3 and 135.21 (relating to reporting, 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.

**V. REPORTING REQUIREMENTS.****# 013 [25 Pa. Code §127.442]****Reporting requirements.**

The permittee shall report malfunctions which occur at this facility to the Department. A malfunction is defined as 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 that may result in an increase in air emissions. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. Malfunctions shall be reported to the Department at the following address:

PADEP  
Air Quality Program  
909 Elmerton Avenue  
Harrisburg, PA 17110

The report shall describe the:

- (i) name and location of the facility;
- (ii) nature and cause of the malfunction or breakdown;
- (iii) time when the malfunction or breakdown was first observed;
- (iv) expected duration of excess emissions; and
- (v) estimated rate of emissions.

(a) Malfunctions which occur at this facility and which pose an imminent danger to the public health, safety, welfare and environment, shall be immediately reported to the Department by telephone. The telephone report of such malfunctions shall occur no later than two hours after the incident. Telephone reports can be made to the Department's Air Quality

**SECTION C. Site Level Requirements**

Program at (717) 705-4702 during normal business hours or to the Department's Emergency Hotline at any time. The Emergency Hotline phone number is changed/updated periodically. The current Emergency Hotline phone number can be found at <https://www.dep.pa.gov/About/Regional/SouthcentralRegion/Pages/default.aspx>.

- (1) The permittee shall notify the Department immediately when corrective measures have been accomplished.
- (2) The permittee shall submit a written report of instances of such malfunctions to the Department within three (3) days of the telephone report.
- (b) Unless otherwise required by this permit, any other malfunction that is not subject to the reporting requirements of (a) above, shall be reported to the Department, in writing, within five (5) days of discovery of the malfunction.
- (c) Subsequent to the malfunction, the owner or operator shall submit a full report of the malfunction and corrective actions to the Department within 15 days, if requested.
- (d) The permittee shall submit reports on the operation and maintenance of the source to the Harrisburg District Supervisor at such intervals and in such form and detail as may be required by the Department. Information required in the reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and maintenance schedules.

**# 014 [25 Pa. Code §135.3]****Reporting**

- a) The permittee shall submit by March 1 of each year a source report for the preceding calendar year. The report shall include information for all 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.
- b) The permittee may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

**VI. WORK PRACTICE REQUIREMENTS.****# 015 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

The permittee shall take all reasonable actions to prevent particulate matter from the sources identified in Section C, Condition #001(a) through (g) from becoming airborne. These actions shall include, but are not limited to, the following:

- (a) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (b) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which create 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 other means.

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

All air pollution sources and air pollution control devices referenced in this permit shall be operated and maintained in accordance with the manufacturer's general recommendations and good air pollution control practices.

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

Operation of any air emissions source is contingent upon proper operation of its associated emissions control system, unless otherwise approved by the Department.



**SECTION C. Site Level Requirements****VIII. COMPLIANCE CERTIFICATION.**

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

**IX. COMPLIANCE SCHEDULE.**

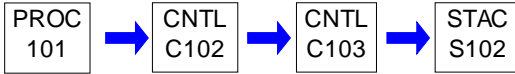
No compliance milestones exist.

**SECTION D. Source Level Requirements**

Source ID: 101

Source Name: CHEMICAL MFG PROCESSES

Source Capacity/Throughput:

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

# 001 [25 Pa. Code §123.13]

**Processes**

No person shall permit the emission into the outdoor atmosphere of particulate matter from a process in excess of 0.04 grains per dry standard cubic foot of effluent gas.

# 002 [25 Pa. Code §123.21]

**General**

Sulfur oxides emissions, expressed as sulfur dioxide, from the C102 oxidizer or C103 wet scrubber, associated with the Source ID 101, shall not exceed 500 ppm, by volume, in the effluent gas.

**II. TESTING REQUIREMENTS.**

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

**III. MONITORING REQUIREMENTS.**

# 003 [25 Pa. Code §127.441]

**Operating permit terms and conditions.**

The permittee shall calculate monthly emissions for each calendar month and total emissions for each consecutive 12-month period for VOCs, total HAPs, and each individual HAP.

**IV. RECORDKEEPING REQUIREMENTS.**

# 004 [25 Pa. Code §127.441]

**Operating permit terms and conditions.**

All records required by this operating permit shall be maintained for the most recent five-year period and shall be made available to Department's representatives upon request.

**V. REPORTING REQUIREMENTS.**

# 005 [25 Pa. Code §127.441]

**Operating permit terms and conditions.**

Quarterly reports containing, but not limited to, the following data shall be prepared and maintained on site within a month of the end of each quarter:

- a. A listing of the specialty chemical products produced.
- b. The number of batches and pounds of product produced for each specialty chemical product.
- c. The type of emissions (by chemical name) and total calculated emissions (after control) from each specialty chemical product (both per batch and per quarter).
- d. Identification by chemical name of the volatile organic compounds (VOCs) emitted from the facility, the weight of each, and the sum of all.
- e. Identification by chemical name and CAS number of the hazardous air pollutants (HAPs) emitted from the facility, the

**SECTION D. Source Level Requirements**

weight of each, and the sum of all.

**VI. WORK PRACTICE REQUIREMENTS.**

**# 006 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

[Additional authority for the following permit conditions are derived from PA 67-03052B, for the Control IDs C102 and C103]

1. The permittee shall maintain the Regenerative Thermal Oxidizer (RTO, Control ID C102) bed/chamber temperature at a minimum of 1,400 F during its operation.
2. For the RTO, the permittee shall monitor the inlet and outlet temperatures once every day, during the operation of the unit. The permittee shall record the results and make them available to the Department's representative upon request.
3. For the wet scrubber (Control ID 103), the permittee shall test the pH of the liquid and verify the flow once per day. The permittee shall record the results and make them available to the Department representative upon request.
4. For the oxidizer (C102) and wet scrubber (C103), the permittee shall maintain records of all maintenance, testing, repairs, and malfunctions for the most recent five-year period. The records must be made available to the Department's representative upon request.
5. (a) The Control ID 102 shall be operated at all times that Source ID 101 is operating in a manner, which is assessed to generate any hazardous air pollutants as defined in the Clean Air Act, except for the periods up to five (5) consecutive days, due to preventive maintenance, malfunction, or unit failure. This period may be extended with prior approval from the Department.  
 (b) The Control ID 103 shall be operated at all times that Source ID 101 is operating.

**VII. ADDITIONAL REQUIREMENTS.**

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



**SECTION E. Source Group Restrictions.**



**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this State Only facility.



**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.

**SECTION H. Miscellaneous.**

#001. Source 101 includes the following reactors /systems:

System # Equipment ID # Description

21, R21, 2000 Gallon System  
 22, R22, 150 Gallon System  
 23, R23, 1000 Gallon System  
 24, R24, 270-1 System  
 25, R25, 270-2 System  
 26, R26, 270-3 System  
 27, R27, 270-4 System  
 28, R28, 350 Gallon System  
 29, R29, 300 Glass System  
 30, R30, 40 Gallon System  
 31, R31, 350 Gallon #2 System  
 32, R32, 2000 Gallon SS Reactor  
 40, R40, 50 Gallon System  
 50, R50, 100 Gallon System  
 70, R70, 200 Gallon System  
 71, R71, 200 Gallon Glass System  
 81, R81, 1100 Gallon System  
 90, R90, 500 Gallon System  
 101, R101, 3000 Gallon System

Pilot Plant

RGL72, RGL72, Glass Recator 72L  
 R20, RGL100, Glass Reactor 100L  
 Glass Reactor 20 gal  
 Glass Reactor 50 gal

#002. Insignificant Source List: The following sources and activities are not subject to any specific work practice standards, testing, monitoring, recordkeeping or reporting requirements:

Utilities /Miscellaneous Equipment:

7000 Gallon Waste Tank  
 Waste Water Treatment (Permit-by-Rule)  
 Oven tray drier  
 6" Glass thin/wiped film evaporator  
 3" SS thin/wiped film evaporator  
 Water jet aspirators for slight vacuum in reactors: ASP1001, ASP1002, WJA1, WJA2, WJA System 1, WJA System 2, and WJA System 3.  
 Twenty (20) Vacuum pumps for deep vacuum distillation  
 One (1) Million BTU Boiler (Max input 1.26 mmBTU/hr, Natural Gas)  
 Two (2) Million BTU Boiler (Max input 1.26 mmBTU/hr, Natural Gas)  
 R&D Buch1 Rotavap  
 R&D CVC Molecular Still  
 Two (2) Cooling towers 1mmBtu/hr  
 Backup engerator, Cummings, rated 60Kw  
 Five (5) Natural Gas office heaters, > 1mmBtu/hr  
 Four (4) Chillers (4, 6, 6, 8 tons) all set at < 10C  
 Various R&D Glassware  
 2.4 MMBtu/hr Natural Gas Boiler  
 12" thin/wiped film evaporator  
 Two (2) 100 gallon blend tanks

[NOTE: Backup generator (Cummins), rated at 60 kw (89 hp) is exempt as per Section 60.4230(a)(4)(iii) and (iv).

#003. This permit is renewal of the natural minor operating permit amendment issued on February 3, 2017



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

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