



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

STATE ONLY NATURAL MINOR OPERATING PERMIT

Issue Date: March 31, 2025

Effective Date: April 2, 2025

Expiration Date: April 1, 2030

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: 09-00126

Natural Minor

Federal Tax Id - Plant Code: 55-0884195-1

Owner Information

Name: AIR LIQUIDE ELECTRONICS US LP

Mailing Address: 19 STEEL RD W
MORRISVILLE, PA 19067-3615

Plant Information

Plant: AIR LIQUIDE ELECTRONICS US LP/MORRISVILLE MFG PLT

Location: 09 Bucks County 09002 Falls Township

SIC Code: 2813 Manufacturing - Industrial Gases

Responsible Official

Name: MIKE LOPEZ

Title: ESG PLANT MANAGER

Phone: (215) 428 - 4607

Email: michael.lopez@airliquide.com

Permit Contact Person

Name: THOMAS GREENHILL

Title: PROJECT MANAGER

Phone: (713) 301 - 8310

Email: thomas.greenhill@airliquide.com

[Signature] _____

JILLIAN A. GALLAGHER, SOUTHEAST REGION AIR PROGRAM MANAGER



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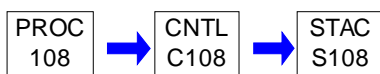
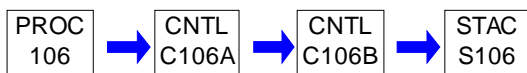
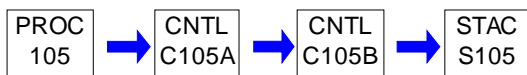
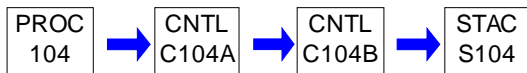
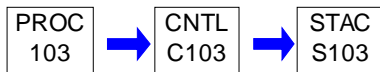
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Source ID	Source Name	Capacity/Throughput	Fuel/Material
102	PROCESS HOODS FOR CHLORIDE GASES	N/A	CHLORIDE GASES
103	AMMONIA PURIFICATION SYSTEM	74.300 Gal/HR	AMMONIA
104	PROCESS HOODS FOR HYDRIDE GASES	N/A	HYDRIDE GASES
105	PROCESS HOODS FOR PYROPHORIC GASES	N/A	PYROPHORIC GASES
106	PROCESS HOODS FOR HYDRIDES AND OTHER GASES	N/A	HYDRIDE & OTHER GASES
108	PROCESS HOODS FOR CORROSIVE GASES	N/A	CORROSIVE GASES
C102	SCRUBBER SYSTEM FOR CHLORIDE GASES (S-5)	0.168 Lbs/HR	CHLORIDE GASES
C103	SCRUBBER SYSTEM FOR AMMONIA GASES (S-4)	0.743 Gal/HR	AMMONIA
C104A	S-1 AFTERBURNER	0.313 Lbs/HR	HYDRIDE GASES
C104B	S-1 FABRIC FILTER	0.132 Lbs/HR	PARTICULATE MATTER
C105A	S-2 AFTERBURNER	2.700 Lbs/HR	PYROPHORIC GASES
C105B	S-2 FABRIC FILTER	5.120 Lbs/HR	PARTICULATE MATTER
C106A	S-3 AFTERBURNER	0.182 Lbs/HR	HYDRIDE & OTHER GASES
C106B	S-3 WET SCRUBBER	0.400 Lbs/HR	PARTICULATE MATTER
C108	SCRUBBER SYSTEM FOR CORROSIVE GASES (S-7)	1.986 Lbs/HR	CORROSIVE GASES
S102	CHLORIDE GASES SCRUBBER SYSTEM STACK (S-5)		
S103	AMMONIA GASES SCRUBBER SYSTEM STACK (S-4)		
S104	HYDRIDE GASES STACK (S-1)		
S105	PYROPHORIC GASES STACK (S-2)		
S106	HYDROCARBON GASES STACK (S-3)		
S108	CORROSIVE GASES SCRUBBER SYSTEM STACK (S-7)		

PERMIT MAPS

**PERMIT MAPS**

CNTL
C102 → STAC
S102

CNTL
C103 → STAC
S103

CNTL
C104A → CNTL
C104B → STAC
S104

CNTL
C104B → STAC
S104

CNTL
C105A → CNTL
C105B → STAC
S105

CNTL
C105B → STAC
S105

CNTL
C106A → CNTL
C106B → STAC
S106

CNTL
C106B → STAC
S106

CNTL
C108 → STAC
S108

**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_x from a single source during the term of the permit and 5 tons of NO_x 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 PM₁₀ from a single source during the term of the permit and 3.0 tons of PM₁₀ 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 § 127.11a]**Reactivation of Sources**

(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 §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. Section 4003).

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

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

- (1) Construction or demolition of buildings or structures.
- (2) Grading, paving and maintenance of roads and streets.
- (3) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets.
- (4) Clearing of land.
- (5) Stockpiling of materials.
- (6) Open burning operations, as specified in 25 Pa. Code § 129.14.
- (7) N/A
- (8) N/A
- (9) Sources and classes of sources other than those identified in (1)-(8) of this condition, for which the permittee has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:
 - (i) The emissions are of minor significance with respect to causing air pollution; and
 - (ii) The emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

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

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

004 [25 Pa. Code §123.31]**Limitations**

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

005 [25 Pa. Code §123.41]**Limitations**

A person may not 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.

006 [25 Pa. Code §123.42]**Exceptions**

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

- (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) (relating to prohibition of certain

**SECTION C. Site Level Requirements**

fugitive emissions).

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

- (a). The facility-wide emissions of particulate matter shall be limited to 55 pounds per year as a 12-month rolling sum.
- (b). The facility-wide emissions of volatile organic compounds (VOCs) shall be limited to 279 pounds per year as a 12-month rolling sum.

008 [25 Pa. Code §129.14]**Open burning operations**

No person may permit the open burning of material in the Southeast Air Basin exempt where the open burning operations result from:

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

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

- (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, the most current version of the DEP Source Testing Manual, and the EPA Clean Air Act National Stack Testing Guidance, 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.**# 010 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

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

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]

**SECTION C. Site Level Requirements**

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

The permittee shall maintain a record of all reports of fugitive emissions, visible emissions and odors that the Department may consider to be malodors. The report 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.

013 [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). De minimis increases 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.

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

The permittee shall compile and record the total particulate matter and volatile organic compound emissions from the sources listed in Sections D and G of this permit on a monthly and a 12-month rolling sum basis to demonstrate compliance with the facility-wide emission limits of this permit.

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

All records required by the conditions of this permit shall be kept on file for a period of five (5) years, and the records shall be made available to the Department upon request.

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

(a) The permittee shall report malfunctions, emergencies or incidents of excess emissions to the Department at 484-250-5920. 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 submit a written or emailed 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 by e-mail 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.

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

[Additional authority for this permit condition is also derived from 40 C.F.R. Part 68.]

(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 C.F.R. 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 C.F.R. Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 C.F.R. § 68.130 is present in a process in more than the threshold quantity at a 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 C. Site Level Requirements**

- (i). Three years after the date on which a regulated substance is first listed under 40 C.F.R. § 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 C.F.R. § 68.190.

(3). The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 C.F.R. 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 C.F.R. § 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 this 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 C.F.R. Part 68 by the date specified in 40 C.F.R. § 68.10(a); or,

(2). Certify that this facility is in compliance with all requirements of 40 C.F.R. Part 68 including the registration and submission of the RMP.

(e). If this facility is subject to 40 C.F.R. Part 68, the permittee shall maintain records supporting the implementation of an accidental release program for five (5) years in accordance with 40 C.F.R. § 68.200.

(f). When this facility is subject to the accidental release program requirements of Section 112(r) of the Clean Air Act and 40 C.F.R. Part 68, appropriate enforcement action will be taken by the Department if the permittee fails to register and submit the RMP or a revised plan pursuant to 40 C.F.R. Part 68.

VI. WORK PRACTICE REQUIREMENTS.**# 018 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

A person responsible for any source specified 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; and

(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.

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

The permittee may not modify any air contaminant system identified in this permit, prior to obtaining Department approval, except those modifications authorized by Condition #013(g) of Section B, of this permit.

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

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.

**SECTION C. Site Level Requirements****# 021 [25 Pa. Code §127.441]
Operating permit terms and conditions.**

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.

VII. ADDITIONAL REQUIREMENTS.

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

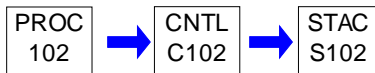
Source ID: 102

Source Name: PROCESS HOODS FOR CHLORIDE GASES

Source Capacity/Throughput:

N/A

CHLORIDE GASES

**I. RESTRICTIONS.**

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

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.**# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

For each type of gas processed through this source, the owner or operator shall monitor the following when this source is in operation:

- (a). The volume of each cylinder.
- (b). The number of cylinders processed on a monthly basis.

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

(a). For each type of gas processed through this source, the owner or operator shall keep records of the following when this source is in operation:

- (1). The volume of each cylinder processed.
- (2). The number of cylinders processed on a monthly basis.

(b). The data collected in paragraph (a) above shall be compiled with the data from other sources at this facility for comparison with the facility-wide limits on throughput and determination of compliance with emission limits on acid gases.

V. REPORTING REQUIREMENTS.

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

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

The S-5 Scrubber System (Source ID No. C102) associated with this source shall not be bypassed under any circumstances.

**SECTION D. Source Level Requirements****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The owner or operator shall operate this source in a manner that minimizes fugitive emissions of the gases being processed.

005 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The owner or operator shall operate and maintain this source in accordance with manufacturer's specifications.

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

The owner or operator shall only operate this source when the S-5 Scrubber System (Source ID No. C102) is in operation.

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

Source ID No. 102 includes, but is not limited to, the following process hoods:

- (a). F7 Process Hood - Hydrogen Chloride Blend/Fill/Detoxification
- (b). F9 Process Hood - Chlorine Blend/Fill/Detoxification
- (c). F11 Process Hood - Chlorides Blend/Fill/Detoxification

**SECTION D. Source Level Requirements**

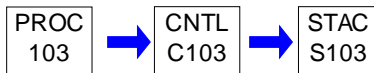
Source ID: 103

Source Name: AMMONIA PURIFICATION SYSTEM

Source Capacity/Throughput:

74.300 Gal/HR

AMMONIA

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

The owner or operator shall limit the throughput of ammonia in this source to 100,000 pounds in any consecutive 12-month rolling period.

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

The owner or operator shall monitor the following when this source is in operation:

- The amount of crude ammonia gas processed per batch.
- The amount of purified ammonia produced per batch.
- The date and time of start up for each batch.
- The date and time of shut down for each batch.

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

(a). The owner or operator shall keep records of the following when this source is in operation:

- The amount of crude ammonia gas processed per batch.
- The amount of purified ammonia produced per batch.
- The date and time of start up for each batch.
- The date and time of shut down for each batch.

(b). The owner or operator shall keep records of the total amount of ammonia that is processed by this source on a monthly and a 12-month rolling basis.

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

The owner or operator shall record each instance that the sensors in the leak detection system are inspected and/or maintained as required in Condition #012 for this source.

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

The owner or operator of this source shall keep the manufacturer's specifications for the sensors used in the leak detection system on file, and these specifications shall be made available to the Department upon request.

V. REPORTING REQUIREMENTS.

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

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

The owner or operator shall only operate this source when the S-4 Scrubber System (Source ID No. C103) is in operation.

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

The owner or operator shall operate and maintain this source in accordance with manufacturer's specifications.

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

The S-4 Scrubber System (Source ID No. C103) associated with this source shall not be bypassed under any circumstances.

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

The owner or operator shall operate this source in a manner that minimizes fugitive emissions of the ammonia.

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

The owner or operator shall install, operate, and maintain sensors in the vicinity of this source to detect fugitive emissions of ammonia. These sensors shall be functioning at all times that anhydrous ammonia is being processed at this facility.

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

The owner or operator of this source shall inspect and/or maintain the sensors associated with the leak detection system in accordance with manufacturer's specifications.

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

The owner or operator of this source shall inspect and/or maintain the sensors in the leak detection system in accordance with manufacturer's specifications.

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.****# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Source ID No. 103 is an Ammonia Purification System manufactured by Air Liquide Electronics, U.S.L.P. (or equivalent). The Ammonia Purification System consists of, but is not limited to, the following equipment:

- (a). A Crude Ammonia Product Container.
- (b). A Condenser with operating temperature of -100 degrees Fahrenheit.
- (c). A Re-boiler.
- (d). A Vaporizer with operating range of 90 to 100 degrees Fahrenheit.
- (e). A Distillation Column.
- (f). A Gas Chromatograph.
- (g). A Moisture Analyzer.
- (h). One or Two Absorbent Beds to remove traces of oil and moisture from the crude ammonia gas.
- (i). Nitrogen Containers.
- (j). Helium Containers.
- (k). Piping, Tubing, Valves, and Instrumentation.
- (l). Vacuum Pumps.

**SECTION D. Source Level Requirements**

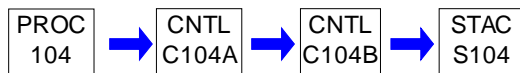
Source ID: 104

Source Name: PROCESS HOODS FOR HYDRIDE GASES

Source Capacity/Throughput:

N/A

HYDRIDE GASES

**I. RESTRICTIONS.**

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

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.**# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

For each type of gas processed through Process Hoods F3 and F13 and Process Manifold E7, the owner or operator shall monitor the following when this source is in operation:

- (a). The volume of each cylinder processed.
- (b). The number of cylinders processed on a monthly basis.

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

The permittee shall calculate and record the total particulate matter and volatile organic compound (VOC) emissions from this source and its associated control device(s) on a monthly basis and a 12-month rolling sum basis.

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

For each type of gas processed through Process Hoods F3 and F13 and Process Manifold E7, the owner or operator shall keep records of the following when this source is in operation:

- (a). The volume of each cylinder processed.
- (b). The number of cylinders processed on a monthly basis.

V. REPORTING REQUIREMENTS.

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

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

The permittee shall operate and maintain this source in accordance with manufacturer's specifications.

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

Source ID No. 104 includes, but is not limited to, the following process hoods for hydride gases:

- (a). F3 Process Hood
- (b). F13 Process Hood - Hydride Gas Fill/Detoxification
- (c). E7 Process Manifold - Hydrocarbons (Methane) and Flammables (Carbon Monoxide).

**SECTION D. Source Level Requirements**

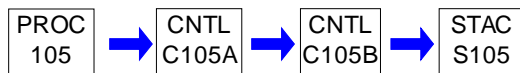
Source ID: 105

Source Name: PROCESS HOODS FOR PYROPHORIC GASES

Source Capacity/Throughput:

N/A

PYROPHORIC GASES

**I. RESTRICTIONS.**

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

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.**# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

For each type of gas processed through Process Hoods F1, E1, F5, and F15 and the D1 Emergency Process Hood, the owner or operator shall monitor the following when this source is in operation:

- (a). The volume of each cylinder processed.
- (b). The number of cylinders processed on a monthly basis.

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

The permittee shall calculate and record the total particulate matter emissions from this source and its associated control device(s) on a monthly basis and a 12-month rolling sum basis.

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

For each type of gas processed through Process Hoods F1, E1, F5, and F15 and the D1 Emergency Process Hood, the owner or operator shall keep records of the following when this source is in operation:

- (a). The volume of each cylinder processed.
- (b). The number of cylinders processed on a monthly basis.

V. REPORTING REQUIREMENTS.

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

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

The permittee shall operate and maintain this source in accordance with manufacturer's specifications.

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

Source ID No. 105 includes, but is not limited to, the following process hoods for pyrophoric gases:

- (a). F1 Process Hood - Silane Fill/Detoxification
- (b). E1 Process Hood - Silane Blend/Fill
- (c). F5 Process Hoods - Diborane Blend/Fill/Detoxification
- (d). F15 Process Hood - Silane Detoxification
- (e). D1 Emergency Process Hood - for emergency use for leaking cylinders.

**SECTION D. Source Level Requirements**

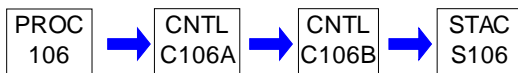
Source ID: 106

Source Name: PROCESS HOODS FOR HYDRIDES AND OTHER GASES

Source Capacity/Throughput:

N/A

HYDRIDE & OTHER GASES

**I. RESTRICTIONS.**

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

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.**# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

For each type of gas processed through Process Hoods F2, F-04, F6, F12, and F14, the owner or operator shall monitor the following when this source is in operation:

- (a). The volume of each cylinder processed.
- (b). The number of cylinders processed on a monthly basis.

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

The permittee shall calculate and record the total particulate matter and volatile organic compound (VOC) emissions from this source and its associated control device(s) on a monthly basis and a 12-month rolling sum basis.

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

For each type of gas processed through Process Hoods F2, F-04, F6, F12, and F14, the owner or operator shall keep records of the following when this source is in operation:

- (a). The volume of each cylinder processed.
- (b). The number of cylinders processed on a monthly basis.

V. REPORTING REQUIREMENTS.

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

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

The permittee shall operate and maintain this source and accordance with manufacturer's specifications.

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

Source ID No. 106 includes, but is not limited to, the following process hoods for hydrides and other gases:

- (a). F2 Process Hood - Phosphine Blend/Fill/Detoxification
- (b). F6 Process Hood - Diborane Blend/Fill/Detoxification
- (c). F12 Process Hood - NO_x Blend/Fill/Detoxification
- (d). F14 Process Hood - Phosphine Detoxification
- (e). F-04 Process Hood - Ammonia
- (f). D-14 Process Hood - NO Purification System

**SECTION D. Source Level Requirements**

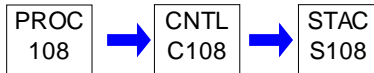
Source ID: 108

Source Name: PROCESS HOODS FOR CORROSIVE GASES

Source Capacity/Throughput:

N/A

CORROSIVE GASES

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

The emissions to the atmosphere from this source shall be limited to the following:

Boron Trichloride: 0.009 lbs/hr; 15.0 lbs/yr

Chlorine: 0.012 lbs/hr; 20.0 lbs/yr

Hydrogen Chloride: 0.016 lbs/hr; 25.0 lbs/yr

Hydrogen Bromide: 0.012 lbs/hr, 20.0 lbs/yr

Note: Compliance with the hourly and annual throughput limits assures compliance with the hourly and annual emission limits.

Throughput Restriction(s).**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The average hourly production/purification rate for each of the gases processed through this source shall be limited to the following:

Gases Processed	Maximum Rate (per gas processing operation)
Boron Trichloride	60 lbs/hr
Chlorine	60 lbs/hr
Hydrogen Chloride	160 lbs/hr
Hydrogen Bromide	60 lbs/hr

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

The amount of gases processed annually shall be limited to the following:

Gases Processed	Annual Rate
Boron Trichloride	100,000 lbs/yr (as a 12-month rolling sum)
Chlorine	100,000 lbs/yr (as a 12-month rolling sum)
Hydrogen Chloride	250,000 lbs/yr (as a 12-month rolling sum)
Hydrogen Bromide	100,000 lbs/yr (as a 12-month rolling sum)

II. TESTING REQUIREMENTS.

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

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall monitor the following for this source:

- (a). The names of each gas that is processed through this source with date and time.
- (b). The starting and ending time of processing each of the gases.
- (c). The amount of gases processed in pounds per operation for each of the gases processed.
- (d). The date, time, and duration if any gases bypass the scrubber system associated with this source.

IV. RECORDKEEPING REQUIREMENTS.**# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall keep records of the following for this source:

- (a). The names of each gas that is processed through this source with date and time.
- (b). The starting and ending time of processing each of the gases.
- (c). The amount of gases processed in pounds per operation for each of the gases processed.
- (d). The date, time, and duration if any gases bypass the scrubber system associated with this source.
- (e). The annual throughput, for each gas, on a monthly and 12-month rolling sum basis.
- (f). The hourly throughput, for each gas, based upon a block monthly average which is to be calculated as the total monthly throughput for a given gas divided by the monthly operating time for that gas.

V. REPORTING REQUIREMENTS.

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

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

The permittee shall operate and maintain this source in accordance with manufacturer's specifications and good air pollution control practices.

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

The permittee shall operate this source in such a manner to minimize fugitive emissions of the gases being processed.

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

The scrubber system associated with this source shall not be bypassed under any circumstances.

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

Source ID No. 108 includes, but is not limited to, the following process systems:

- (a). Boron Trichloride (BCl₃) Purification - Purification/Fill/Detoxification
- (b). Chlorine (Cl₂) Purification - Purification/Fill/Detoxification



SECTION D. Source Level Requirements

(c). Hydrogen Bromide (HBr) Purification - Purification/Fill/Detoxification

**SECTION D. Source Level Requirements**

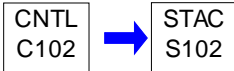
Source ID: C102

Source Name: SCRUBBER SYSTEM FOR CHLORIDE GASES (S-5)

Source Capacity/Throughput:

0.168 Lbs/HR

CHLORIDE GASES

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

The owner or operator shall maintain the following operational parameters for the packed bed stage of the S-5 Scrubber System when this system is in operation:

- (a). A minimum flow rate of the scrubber solution of 7 gallons per minute.
- (b). A pressure drop between 0.01 inches water gauge and 4 inches water gauge.

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

The owner or operator shall use a solution of sodium hydroxide to neutralize the chlorine and hydrochloric acid gases processed through this scrubber. The owner or operator shall maintain a minimum pH of 9.0 for the scrubber solution for all times when this source is in operation.

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

The owner or operator shall maintain a minimum flow rate of the scrubber solution flowing through the eductor venturi stage of the S-5 Scrubber System at 60 gallons per minute when this source is in operation.

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

The owner or operator shall monitor the following for this source on a daily basis when this source is in operation:

- (a). The pH of the scrubber solution.
- (b). The flow rate of scrubber solution through the eductor venturi stage of the S-5 Scrubber System.
- (c). The flow rate of scrubber solution through the packed bed stage of the S-5 Scrubber System.
- (d). The pressure differential across the packed bed stage of the S-5 Scrubber System.

005 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

- (a). The owner or operator shall monitor the date in which the pH of the scrubber solution falls to 9.0 or below.
- (b). The owner or operator shall monitor the date when the neutralizing solution is replaced by a new solution in the scrubber.

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

The owner or operator shall monitor the date, time, and duration for any circumstance where a gas bypass occurs.

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

The owner or operator shall record the following for this source on a daily basis when this source is in operation:

- (a). The pH of the scrubber solution.
- (b). The flow rate of scrubber solution through the eductor venturi stage of the S-5 Scrubber System.
- (c). The flow rate of scrubber solution through the packed bed stage of the S-5 Scrubber System.
- (d). The pressure differential across the packed bed stage of the S-5 Scrubber System.

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

The owner or operator shall record the date, time, and duration for any circumstance where a gas bypass occurs.

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

- (a). The owner or operator shall record the date in which the pH of the scrubber solution falls to 9.0 or below.
- (b). The owner or operator shall record the date when the neutralizing solution is replaced by a new solution in the scrubber.

V. REPORTING REQUIREMENTS.

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

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

The owner or operator shall operate and maintain this source in accordance with manufacturer's specifications and good air pollution control practices.

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

Whenever the pH value of the original solution in the tank falls below 9.0, the owner or operator may add sodium hydroxide to bring the solution pH value above nine to continue operation. Within one week of an occurrence where the pH falls below 9.0, the entire neutralizing solution shall be replaced by fresh solution.

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

The owner or operator shall operate this source in a manner that minimizes fugitive emissions of the gases being processed.

**SECTION D. Source Level Requirements****# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) Equipment shall be installed and maintained to display the following:

- (1). The flow rate of scrubber solution through the eductor venturi stage of the S-5 Scrubber System.
- (2). The flow rate of the scrubber solution through the packed bed stage of the S-5 Scrubber System.
- (3). The pressure differential across the packed bed stage of the S-5 Scrubber System.
- (4). The pH of the scrubber solution.

(b). The monitoring equipment in paragraph (a) above shall be calibrated in accordance with manufacturer's specifications and shall accurately determine compliance with the limits in Condition #001, #002, and #003.

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

Source ID No. C102 is a Croll Reynolds Wet Scrubber with a Eductor Venturi stage and a Packed Bed stage (Model No. 44-8T 9H/30V).

**SECTION D. Source Level Requirements**

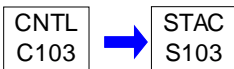
Source ID: C103

Source Name: SCRUBBER SYSTEM FOR AMMONIA GASES (S-4)

Source Capacity/Throughput:

0.743 Gal/HR

AMMONIA

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

The owner or operator shall use a solution of Sulfuric Acid to neutralize the ammonia gases processed through the S-4 Scrubber System. The owner or operator shall maintain a maximum pH of 5.0 for the Sulfuric Acid Solution used in the S-4 Scrubber System at all times.

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

The owner or operator shall maintain a minimum flow rate of 29 gallons per minute for the Sulfuric Acid scrubber solution flowing through the eductor venturi scrubber stage of the S-4 Scrubber System when the source is in operation.

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

The owner or operator shall maintain the following operational parameters for the packed bed stage of the S-4 Scrubber System when this system is in operation:

- A minimum flow rate of 6 gallons per minute for the Sulfuric Acid Scrubber Solution flowing through the packed bed.
- The pressure drop range shall be between 0.01 inches water gauge and 5 inches water gauge across the packed bed stage of this scrubber.

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

The owner or operator shall monitor the following for this source on a daily basis when this source is in operation:

- The pH of the scrubber solution.
- The flow rate of scrubber solution through the eductor venturi stage of the S-4 Scrubber System.
- The flow rate of scrubber solution through the packed bed stage of the S-4 Scrubber System.
- The pressure differential across the packed bed stage of the S-4 Scrubber System.

005 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

- The owner or operator shall monitor the date and time when the scrubber solution rises above a pH of 5.0.

**SECTION D. Source Level Requirements**

(b). The owner or operator shall monitor the date when the scrubber solution is replaced by a new solution in the scrubber system.

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

The owner or operator shall keep records of the following for this source on a daily basis when this source is in operation:

- (a). The pH of the scrubber solution.
- (b). The flow rate of scrubber solution through the eductor venturi stage of the S-4 Scrubber System.
- (c). The flow rate of scrubber solution through the packed bed stage of the S-4 Scrubber System.
- (d). The pressure differential across the packed bed stage of the S-4 Scrubber System.

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

- (a). The owner or operator shall keep records of the date and time when the scrubber solution rises above a pH of 5.0.
- (b). The owner or operator shall keep records of the date when the scrubber solution is replaced by a new solution in the scrubber system.
- (c). The owner or operator shall keep records of any inspections and/or maintenance performed on this scrubber, any deficiencies, and any corrective actions taken.

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

The owner or operator shall operate this source in a manner that minimizes fugitive emissions of the ammonia gases.

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

- (a). The owner or operator shall record the date, time, and duration for any circumstance when the S-4 Scrubber System is bypassed.
- (b). For any circumstance that the S-4 Scrubber System is bypassed, the owner or operator shall investigate the incident to determine the cause of the bypass, keep a record of the results of the investigation, and keep a record of the corrective action taken.

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

- (a). The owner or operator of this source shall keep records of the manufacturer's specifications on equipment used to monitor the pH of the scrubber solution, the flow rate of scrubber fluid through the eductor venturi stage of the S-4 Scrubber System, the flow rate of scrubber fluid through the packed bed stage of the S-4 Scrubber System, and the pressure differential across the packed bed stage of the S-4 Scrubber System.
- (b). The owner or operator shall make the manufacturer's specifications for the equipment in paragraph (a) above available to the Department upon request.

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.**

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

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

The owner or operator shall operate and maintain this source in accordance with manufacturer's specifications and good air pollution control practices.

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

Whenever the pH of the scrubber solution rises above a pH of 5.0, the owner or operator may add sulfuric acid to bring the solution pH value below 5.0 to continue operation. Within one week of an occurrence where the pH rises above 5.0, the entire neutralizing solution shall be replaced by fresh solution.

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

(a). Equipment shall be installed and maintained to display the following:

- (1). The pH of the scrubber solution.
- (2). The flow rate of scrubber solution through the eductor venturi scrubber stage of the S-4 Scrubber System.
- (3). The flow rate of scrubber solution through the packed bed stage of the S-4 Scrubber System.
- (4). The pressure differential across the packed bed stage of the S-4 Scrubber System.

(b). The monitoring equipment in paragraph (a) above shall be calibrated in accordance with manufacturer's specifications and shall accurately determine compliance with the limits in Condition #001, #002, and #003.

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

The Ammonia Purification System (Source ID No. 103) shall only be operated when the S-4 Scrubber System is in operation.

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

Source ID No. C103 is an Air Liquide Wet Scrubber System (or equivalent) that is composed of an eductor venturi scrubber and a packed bed scrubber in series.

**SECTION D. Source Level Requirements**

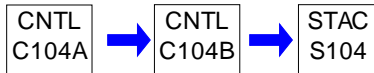
Source ID: C104A

Source Name: S-1 AFTERBURNER

Source Capacity/Throughput:

0.313 Lbs/HR

HYDRIDE GASES

**I. RESTRICTIONS.****Control Device Efficiency Restriction(s).**

001 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall maintain a minimum temperature of 1,400 degrees F in the afterburner combustion chamber exit 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.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously monitor the combustion chamber exit gas temperature for this afterburner.

Note: continuous temperature monitoring/recordkeeping shall be interpreted to mean monitoring at least every 15 minutes.

IV. RECORDKEEPING REQUIREMENTS.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of all inspections and/or maintenance that is performed on this source, any deficiencies, and any corrective action taken.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously record the combustion chamber exit gas temperature for this afterburner.

V. REPORTING REQUIREMENTS.

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

VI. WORK PRACTICE REQUIREMENTS.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall perform inspections and/or maintenance on this afterburner on at least a monthly basis.

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

The permittee shall equip this afterburner with temperature monitoring instrumentation which continuously indicates and records the burner combustion chamber exit gas temperature.

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

The permittee shall not operate the S-1 Process Hoods associated with the S-1 afterburner unless this afterburner is in operation.

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

This source is composed of one direct flame Afterburner. Manufactured by John Zink Co. and installed in 1990.

**SECTION D. Source Level Requirements**

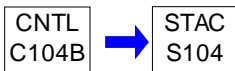
Source ID: C104B

Source Name: S-1 FABRIC FILTER

Source Capacity/Throughput:

0.132 Lbs/HR

PARTICULATE MATTER

**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 in excess of 0.04 gr/dscf, pursuant to 25 Pa. Code § 123.13 (c)(1)(i).

Control Device Efficiency Restriction(s).

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The pressure drop across the S-1 Fabric Filter shall not exceed 9 inches water gauge (w.g.).

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 monitor the pressure differential across this fabric filter on a daily basis when this source is in operation.

IV. RECORDKEEPING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of all inspections and/or maintenance that is performed on this fabric filter, any deficiencies, and any corrective action taken.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of the pressure differential across this fabric filter on a daily basis when this source is in operation.

V. REPORTING REQUIREMENTS.

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

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

The permittee shall inspect and/or maintain this fabric filter on at least a monthly basis.

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

The permittee shall keep on hand a sufficient quantity of spare fabric collector cartridges for this fabric collector in order to be able to immediately replace any cartridges or bags requiring replacement.

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

This fabric collector must be equipped with a functional device for monitoring the pressure differential across this fabric collector.

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

The permittee shall not operate the S-1 Process Hoods unless the afterburner and this fabric filter is in operation.

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

This source is composed of one fabric filter manufactured by Infra Micron, Model Number MKR 2/20/3, installed in 1990.

**SECTION D. Source Level Requirements**

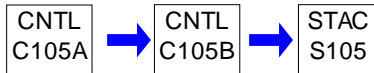
Source ID: C105A

Source Name: S-2 AFTERBURNER

Source Capacity/Throughput:

2.700 Lbs/HR

PYROPHORIC GASES

**I. RESTRICTIONS.****Control Device Efficiency Restriction(s).**

001 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall maintain a minimum temperature of 1,400 degrees F in the afterburner combustion chamber exit 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.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously monitor the combustion chamber exit gas temperature for this afterburner.

Note: continuous temperature monitoring/recordkeeping shall be interpreted to mean monitoring at least every 15 minutes.

IV. RECORDKEEPING REQUIREMENTS.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of all inspections and/or maintenance that is performed on this source, any deficiencies, and any corrective action taken.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously record the combustion chamber exit gas temperature for this afterburner.

V. REPORTING REQUIREMENTS.

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

VI. WORK PRACTICE REQUIREMENTS.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall perform inspections and/or maintenance on this afterburner on at least a monthly basis.

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

The permittee shall equip this afterburner with temperature monitoring instrumentation which continuously indicates and records the burner combustion chamber exit gas temperature.

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

The permittee shall not operate the S-2 Process Hoods associated with the S-2 afterburner unless this afterburner is in operation.

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

This source is composed of one direct flame Afterburner. manufactured by John Zink Co. and installed in 1990.

**SECTION D. Source Level Requirements**

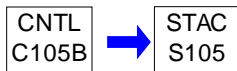
Source ID: C105B

Source Name: S-2 FABRIC FILTER

Source Capacity/Throughput:

5.120 Lbs/HR

PARTICULATE MATTER

**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 in excess of 0.04 gr/dscf, pursuant to 25 Pa. Code § 123.13 (c)(1)(i).

Control Device Efficiency Restriction(s).

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The pressure drop across the S-2 Fabric Filter shall not exceed 12 inches water gauge (w.g.).

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 monitor the pressure differential across this fabric filter on a daily basis when this source is in operation.

IV. RECORDKEEPING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of all inspections and/or maintenance that is performed on this fabric filter, any deficiencies, and any corrective action taken.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of the pressure differential across this fabric filter on a daily basis when this source is in operation.

V. REPORTING REQUIREMENTS.

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

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

The permittee shall perform inspections and/or maintenance on this fabric filter on at least a monthly basis.

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

The permittee shall keep on hand a sufficient quantity of spare fabric collector cartridges for this fabric collector in order to be able to immediately replace any cartridges or bags requiring replacement.

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

This fabric collector must be equipped with a functional device for monitoring the pressure differential across this fabric collector.

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

The permittee shall not operate the S-2 Process Hoods unless the afterburner and this fabric filter is in operation.

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

This source is composed of one fabric filter manufactured by Mikro Pul, model number CF-4, installed in 1990.

**SECTION D. Source Level Requirements**

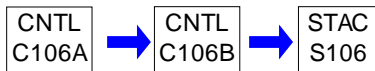
Source ID: C106A

Source Name: S-3 AFTERBURNER

Source Capacity/Throughput:

0.182 Lbs/HR

HYDRIDE & OTHER GASES

**I. RESTRICTIONS.****Control Device Efficiency Restriction(s).**

001 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall maintain a minimum temperature of 1,400 degrees F in the afterburner combustion chamber exit 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.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously monitor the combustion chamber exit gas temperature for this afterburner.

Note: continuous temperature monitoring/recordkeeping shall be interpreted to mean monitoring at least every 15 minutes.

IV. RECORDKEEPING REQUIREMENTS.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of all inspections and/or maintenance that is performed on this source, any deficiencies, and any corrective action taken.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously record the combustion chamber exit gas temperature for this afterburner.

V. REPORTING REQUIREMENTS.

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

VI. WORK PRACTICE REQUIREMENTS.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall perform inspections and/or maintenance on this afterburner on at least a monthly basis.

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

The permittee shall equip this afterburner with temperature monitoring instrumentation which continuously indicates and records the burner combustion chamber exit gas temperature.

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

The permittee shall not operate the S-3 Process Hoods associated with the S-3 afterburner unless this afterburner is in operation.

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

This source is composed of one direct flame Afterburner, manufactured by John Zink Co., installed in 1990.

**SECTION D. Source Level Requirements**

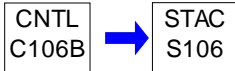
Source ID: C106B

Source Name: S-3 WET SCRUBBER

Source Capacity/Throughput:

0.400 Lbs/HR

PARTICULATE MATTER

**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 in excess of 0.04 gr/dscf, pursuant to 25 Pa. Code § 123.13 (c)(1)(i).

Control Device Efficiency Restriction(s).

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The pH of the scrubber solution shall be greater than or equal to a value of 9.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The solution recirculation flow rate shall be at a minimum of 25 gallons per minute for the packed tower scrubber.
- (b). The pressure differential across the packed tower scrubber shall be kept between 1 and 4 inches water gauge (w.g.).

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.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall monitor the following information for this wet scrubber system when this source is in operation:

- (a). The recirculation flow rate of the scrubber solution for the packed tower scrubber on a daily basis.
- (b). The pressure differential across the packed tower scrubber on a daily basis.
- (c). The pH of the scrubber solution on a daily basis.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall monitor the date and time when the neutralizing caustic solution is added to the recirculating scrubber solution to increase the pH of the solution or when the neutralizing caustic solution in this wet scrubber system is replaced by fresh caustic solution.

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

The permittee shall keep records of the following information for this wet scrubber system when this source is in operation:

- (a). The recirculation flow rate of the scrubber solution for the packed tower scrubber on a daily basis.
- (b). The pressure differential across the packed tower scrubber on a daily basis.
- (c). The pH of the scrubber solution on a daily basis.

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

The permittee shall keep records of all inspections and/or maintenance that is performed on this source, any deficiencies, and any corrective action taken.

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

The permittee shall record the date and time when the neutralizing caustic solution is added to the recirculating scrubber solution to increase the pH of the solution or when the neutralizing caustic solution in this wet scrubber system is replaced by fresh caustic solution.

V. REPORTING REQUIREMENTS.

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

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

Equipment shall be installed and maintained to continuously display the following:

- (a). Pressure drop across the packed tower scrubber utilizing a differential manometer, or equivalent.
- (b). Scrubber Solution Flow Rate to the packed tower scrubber utilizing a rotameter, or equivalent.

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

The permittee shall not operate the S-3 Process Hoods unless this wet scrubber system is in operation.

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

The permittee shall perform inspections and/or maintenance on this wet scrubber on at least a monthly basis.

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.****# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This source is composed of one Packed Tower Scrubber System manufactured by Croll-Reynolds, model number 24T-15H Packed Tower, installed in 1990.

**SECTION D. Source Level Requirements**

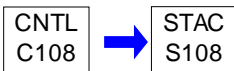
Source ID: C108

Source Name: SCRUBBER SYSTEM FOR CORROSIVE GASES (S-7)

Source Capacity/Throughput:

1.986 Lbs/HR

CORROSIVE GASES

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

- (a). The recirculation flow rate to the eductor venturi scrubber shall be equal to or greater than 280 gallons per minute.
- (b). The recirculation flow rate to the packed bed tower scrubber shall be equal to or greater than 20 gallons per minute.
- (c). The pressure differential across the packed bed tower scrubber on the tank shall be maintained between 0.01 and 4.0 inches water gauge.
- (d). This scrubber system shall use a neutralizing solution of sodium hydroxide (NaOH). The pH value of the solution shall be kept at a minimum of 9.0.

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

The permittee shall monitor the following information for this wet scrubber system when this source is in operation:

- (a). The recirculation flow rate of the neutralizing scrubber solution for the eductor venturi scrubber on a daily basis.
- (b). The recirculation flow rate of the neutralizing scrubber solution for the packed bed tower scrubber on a daily basis.
- (c). The pressure differential across the packed bed tower scrubber on a daily basis.
- (d). The pH of the scrubber solution on a daily basis.

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

The permittee shall monitor the date and time when the neutralizing caustic solution is added to the recirculating scrubber solution to increase the pH of the solution or when the neutralizing caustic solution in this wet scrubber system is replaced by fresh caustic solution.

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

The permittee shall keep records of the following information in a bound logbook for this wet scrubber system when this source is in operation:

**SECTION D. Source Level Requirements**

- (a). The recirculation flow rate of the neutralizing scrubber solution for the eductor venturi scrubber on a daily basis.
- (b). The recirculation flow rate of the neutralizing scrubber solution for the packed bed tower scrubber on a daily basis.
- (c). The pressure differential across the packed bed tower scrubber on a daily basis.
- (d). The pH of the scrubber solution on a daily basis.

005 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The permittee shall keep records of all inspections and/or maintenance that is performed on this source, any deficiencies, and any corrective action taken.

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

The permittee shall record the date and time when the neutralizing caustic solution is added to the recirculating scrubber solution to increase the pH of the solution or when the neutralizing caustic solution in this wet scrubber system is replaced by fresh caustic solution.

V. REPORTING REQUIREMENTS.

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

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

(a). Pumps shall recirculate the neutralizing caustic solution in the eductor venturi and the packed bed tower scrubber. Venting to the scrubbing system shall be discontinued if the flow of the neutralizing solution stops for any reason.

(b). The permittee shall not operate the purification processes for BCl₃, Cl₂, and HBr gases unless the eductor venturi/packed bed tower scrubber is in operation.

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

The permittee shall operate and maintain this source in accordance with the manufacturer's specifications and good air pollution control practices.

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

The permittee shall perform inspections and/or maintenance on this wet scrubber on at least a monthly basis.

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

Whenever the pH of the original solution in the tank falls below 9.0, sodium hydroxide shall be added to bring the pH value above 9.0 for production. Within one week of such an instance, the entire neutralizing scrubber solution shall be replaced by a fresh neutralizing caustic solution.

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

This scrubber system shall not be bypassed under any circumstances.

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

Source ID No. C108 includes, but is not limited to, the following equipment:

- (a). Tank - Capacity is 1,000 gallons; contains Sodium Hydroxide Solution.
- (b). Eductor Venturi Scrubber.
- (c). Packed bed tower scrubber
- (d). Installed in 1990.

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

The lines from the purification processes for boron trichloride gases (BCl₃), chlorine gases (Cl₂), and hydrogen bromide (HBr) gases shall exhaust into the 1,000-gallon tank. Exhausts from the tank shall be controlled by the eductor venturi and packed bed tower scrubber.



SECTION E. Source Group Restrictions.



SECTION F. Alternative Operation Requirements.

No Alternative Operations exist for this State Only facility.

**SECTION G. Emission Restriction Summary.**

Source Id	Source Description
108	PROCESS HOODS FOR CORROSIVE GASES
Emission Limit	
0.009 Lbs/Hr	Boron Trichloride
15.000 Lbs/Yr	Boron Trichloride
0.012 Lbs/Hr	Chlorine
20.000 Lbs/Yr	Chlorine
0.016 Lbs/Hr	Hydrochloric Acid
25.000 Lbs/Yr	Hydrochloric Acid
0.012 Lbs/Hr	Hydrogen Bromide
20.000 Lbs/Yr	Hydrogen Bromide
C104B	S-1 FABRIC FILTER
Emission Limit	
0.040 gr/DRY FT3	PM_FILT
C105B	S-2 FABRIC FILTER
Emission Limit	
0.040 gr/DRY FT3	PM_FILT
C106B	S-3 WET SCRUBBER
Emission Limit	
0.040 gr/DRY FT3	PM_FILT

Site Emission Restriction Summary

Emission Limit		Pollutant
279.000 Lbs/Yr	12-month rolling sum basis	VOC
55.000 Lbs/Yr	12-month rolling sum basis	PM_FILT

**SECTION H. Miscellaneous.**

#001. This permit includes certain terms, conditions, and information derived from the following permits and plan approvals:

- (a). OP-09-0126.
- (b). 09-399-025.
- (c). PA-09-0126.
- (d). PA-09-0126A.
- (e). 09-0126B

#002. The capacities and/or throughputs for fuel and materials that are listed in Sections A and D of this State Only Operating Permit are used for descriptive purposes. These capacities and/or throughputs are not considered limitations or enforceable conditions by the Department.

#003. For clarification:

The Department requests daily monitoring for visible emissions to be performed by completing of a daily walk through of the facility or standing a point where the entire facility may be viewed to inspect for visible emissions. Daily monitoring for visible emissions does not need to be performed by an individual certified to perform opacity measurements. However, if there is an incident only a certified observer can determine a violation of the regulation.

#004. APS No. 315194; Authorization No. 840962: This State Only Operating Permit has been amended to incorporate plan approval 09-0126C for the operation of an ammonia purification system and its associated scrubber system (Source ID Nos. 103 and C103). This administrative amendment was performed in accordance with 25 Pa. Code § 127.450(a)(5).

#005. APS No. 315194; Authorization No. 985671 Renewal of operating permit. In section C - conditions #002, #003, #008, #011 and #019 were updated to reflect standard Department language.

#006. APS No. 315194; Authorization No. 1268741 Renewal of operating permit. RfDs 7661 and 7743 to repair S-5 and S-7 scrubbers have been completed.

***** March 2025 *****

#007 Permit Renewal, APS No. 315194; Authorization No. 1499597.

- 1) Source ID 107 removed from the permit.
- 2) Source ID 108: Added requirement to calculate the annual throughput on a monthly and 12-month rolling sum basis
- 3) Source ID 108: Added requirement to calculate the hourly throughput limits based upon a block monthly average
- 4) Source ID C102: Added calibration requirements for monitoring equipment.
- 5) Source ID C108: Consistent language used to refer to packed bed tower scrubber.
- 6) Note added to clarify the meaning of continuous temperature monitoring/recordkeeping for Source IDs C104A, C105A and C106A.
- 7) The following RfDs were determined to be exempt:
 - RfD #10418 for the installation of rupture disks and vent lines on emergency relief devices.
 - RfD #10768 for the installation of new CHF3 (Trifluoromethane) system in Building 1.
 - RfD #10907 for the installation of new fluorine cylinder filling process.
- 8) Arsine, Propylene and Ethylene are no longer processed at this facility and have been removed from Source ID 104.
- 9) SOx and HCN are no longer processed at this facility and have been removed from Source ID 106.
- 10) Hydrogen Chloride (HCl) is no longer processed at this facility and have been removed from Source ID 108 and C108.



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