

23-00059

LYONDELL CHEM CO/NEWTOWN SQUARE



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AIR QUALITY PROGRAM

STATE ONLY OPERATING PERMIT

Issue Date: June 20, 2006 Effective Date: April 24, 2007
Revision Date: April 24, 2007 Expiration Date: July 31, 2011

Revision Type: Amendment

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

The regulatory or statutory authority for each permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated.

State Only Permit No: 23-00059

Synthetic Minor

Federal Tax Id - Plant Code: 95-4160558-4

Owner Information

Name: LYONDELL CHEM CO Mailing Address: 3801 W CHESTER PIKE

NEWTOWN SQUARE, PA 19073-2320

Plant Information

Plant: LYONDELL CHEM CO/NEWTOWN SQUARE

Location: 23 Delaware County 23943 Newtown Township

SIC Code: 2869 Manufacturing - Industrial Organic Chemicals, Nec

Responsible Official

Name: MICHAEL J MCGOVERN

Title: MGR, PROD TECH & SUP SVCS

Phone: (610) 359 - 2344

Permit Contact Person

Name: TOM BAKER

Title: PRINCIPAL ENV ENGR

Phone: (610) 359 - 2432

[Signature]		

FRANCINE B CARLINI, SOUTHEAST REGION AIR PROGRAM MANAGER





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

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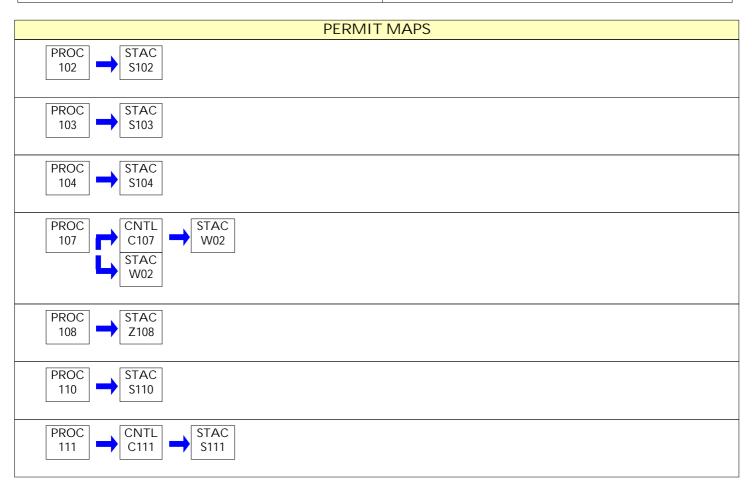
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SECTION A. Site Inventory List

Source I	D Source Name	Capacity/Throughput	Fuel/Material
102	HIGH PRESSURE CELLS (P001)	N/A	ORGANIC COMPOUND
103	RESEARCH LABORATORY HOODS (P002)	N/A	ORGANIC COMPOUND
104	E AND B BAY R&D UNIT HOODS (P004)	N/A	ORGANIC COMPOUND
107	POLYOLS PILOT PLANT (P003)	N/A	ORGANIC COMPOUND
108	COLD CLEANING MACHINE	N/A	SAFETY KLEEN SOLVEN
110	SURFACE COATING PROCESSES	N/A	COATING
111	INTEGRATED PROPYLENE OXIDE PILOT UNIT	N/A	ORGANIC COMPOUND
C107	POLYOLS PILOT PLANT SCRUBBER (CD01)		
C111	INTEG PROP OXIDE PILOT UNIT FTO		
S102	HIGH PRESSURE CELL STACKS (MULTIPLE)		
S103	R&D LABORATORY STACKS (MULTIPLE)		
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#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)&(c)]

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 and an additional annual administrative fee as specified in 25 Pa. Code § 127.703(b) and (c). The fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" and shall be for the amount specified in the following schedule specified in 25 Pa. Code § 127.703(b) and (c).
 - (1) Three hundred dollars for applications filed during the 2000-2004 calendar years.
 - (2) Three hundred seventy-five dollars for applications filed for the calendar years beginning in 2005.
- (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 fees according to the following schedule specified in 25 Pa. Code § 127.703(b):
 - (1) Three hundred dollars for applications filed during the 2000-2004 calendar years.
 - (2) Three hundred seventy-five dollars for applications filed for the calendar years beginning in 2005.

This fee schedule shall apply to the processing of an application for an operating permit as well as the extension, modification, revision, renewal, and re-issuance of each operating permit or part thereof.







- (b) The permittee shall pay an annual operating permit administrative fee according to the fee schedule established in 25 Pa. Code § 127.703(c).
 - (1) Two hundred fifty dollars for applications filed during the 1995-1999 calendar years.
 - (2) Three hundred dollars for applications filed during the 2000-2004 calendar years.
 - (3) Three hundred seventy-five dollars for applications filed during the years beginning in 2005.
- (c) The applicable fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund".

#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.

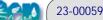
- (a) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department or authorized representatives of the Department to perform the following:
- (1) Enter at reasonable times upon the permittee's premises where a source is located or emissions 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:
 - (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 subcondition 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.

[25 Pa. Code §§ 127.450 & 127.462] #011

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:
- (b) Administrative Amendments. The permittee shall make 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 make minor operating permit modifications (as defined





25 Pa. Code § 121.1) in accordance with 25 Pa. Code § 127.462.

(d) Permit modifications which do not qualify as minor permit modifications under 25 Pa. Code § 127.541 will be treated as a significant operating permit revision subject to the public notification procedures in §§ 127.424 and 127.425.

#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 NOx from a single source during the term of the permit and 5 tons of NOx 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:
- (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.



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SECTION B. General State Only Requirements

- (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)
- (6) Section 127.462 (relating to minor operating permit modifications)
- (7) Subchapter H (relating to general plan approvals and general operating permits)

#015 [25 Pa. Code § 127.11]

Reactivation

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





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

[25 Pa. Code § 127.36] #016

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 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.



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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).

Air pollution is defined as follows:

The presence in the outdoor atmosphere of any form of contaminant, including, but not limited to, the discharging from stacks, chimneys, openings, buildings, structures, open fires, vehicles, processes or any other source of any smoke, soot, fly ash, dust, cinders, dirt, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, toxic, hazardous or radioactive substances, waste or other matter in a place, manner or concentration inimical or which may be inimical to public health, safety or welfare or which is or may be injurious of human, plant or animal life or to property or which unreasonably interferes with the comfortable enjoyment of life or property.

002 [25 Pa. Code §123.1]

Prohibition of certain fugitive emissions

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

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

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 Condition #002, of this Section, 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.



SECTION C. Site Level Requirements

006 [25 Pa. Code §123.42]

Exceptions

The limitations of Condition #005, of this Section, shall not apply to a visible emission in either of the following instances:

- (a) When the presence of uncombined water is the only reason for failure to meet the limitations.
- (b) When the emission results from the sources specified in Condition #002, of this Section.

007 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a) The permittee shall limit the emissions of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) from all the sources at the facility to the following amounts:
- (1). The amount of VOC emissions from the facility shall be less than or equal to 24.9 tons averaged over a 12-month rolling period. HAP emissions that are also VOC emissions shall be counted towards the Total VOC Emissions for the facility.
- (2). The amount of emissions of any single HAP from the facility shall be less than or equal to 9.9 tons averaged over a 12month rolling period.
- (3). The combination of all HAP emissions from the facility shall be less than or equal to 24.9 tons averaged over a 12month rolling period.
- (b) The Methods of Compliance for the emission limitations above are included under the appropriate source level conditions in Section D of this permit.

[25 Pa. Code §129.14] # 008

Open burning operations

The permittee may not permit the open burning of material in the Southeast Air Basin, except when the open burning results from:

- (a) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.
- (b) Any fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.
- (c) A fire set solely for cooking food.
- (d) A fire set solely for recreational or ceremonial purposes.
- (e) A fire set for the prevention and control of disease or pests, when approved by the Department.

П. TESTING REQUIREMENTS.

[25 Pa. Code §127.441] # 009

Operating permit terms and conditions.

- (a) If at any time the Department has cause to believe that air contaminant emissions from any source(s) listed in Section A. of this Permit, 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, 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.

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LYONDELL CHEM CO/NEWTOWN SQUARE



SECTION C. Site Level Requirements

HII 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.
- [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall monitor the facility, once per operating day, for the following:
 - (1). Odors, which the Department may determine to be objectionable.
 - (2). Visible Emissions.
 - (3). Fugitive Particulate Matter.
- (b). All detectable fugitive particulate emissions, and/or objectionable odors, that originated on-site and cross the property line as well as visible emissions that originate on site shall:
 - (1). Be investigated.
 - (2). Be reported to the facility management, or individual(s) designated by the permittee.
 - (3). Be recorded in a permanent written log.
- (c). At the end of six months, 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). At the end of the second six month period, 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 and the semi-annual report of monitoring and record keeping, complaints, monitoring results, and/or Department findings.

RECORDKEEPING REQUIREMENTS.

[25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall maintain a record of all reports of fugitive particulate 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.

REPORTING REQUIREMENTS.

013 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a) The permittee shall, within two (2) hours, of becoming knowledgeable, of any occurrence, notify the Department, at (484) 250-5920, of any malfunction of the source(s) or associated air pollution control devices listed in Section A, of this permit, which results in, or may possibly result in, the emission of air contaminants in excess of the limitations specified in this permit, or regulation contained in 25 Pa. Code Article III.
- (b) Malfunction(s) which occur at this facility, and pose(s) an imminent danger to public health, safety, welfare and the environment, and would violate permit conditions if the source were to continue to operate after the malfunction, shall



SECTION C. Site Level Requirements

immediately be reported to the Department by telephone at the above number.

- (c) A written report shall be submitted to the Department within two (2) working days following the notification of the incident, and shall describe, at a minimum, the following:
- (1) The malfunction(s).
- (2) The emission(s).
- (3) The duration.
- (4) Any corrective action taken.

014 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Within thirty (30) days after permit issuance, the permittee shall submit, to the Department for approval, the proposed recordkeeping formats required in this Operating Permit.

015 [25 Pa. Code §127.441]

Operating permit terms and conditions.

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

- (a). If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release [25 Pa. Code § 127.441(d) and 40 CFR Part 68] program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).
- (b). The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the 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:
 - (i). Three years after the date on which a regulated substance is first listed under 40 CFR § 68.130; or,
 - (ii). The date on which a regulated substance is first present above a threshold quantity in a process.
- (2). The permittee shall submit any additional relevant information requested by the Department or EPA concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.
- (3). The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.
- (c). As used in this permit condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.
- (d). If 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 CFR Part 68 by the date specified in 40 CFR § 68.10(a); or,
- (2). Certify that this facility is in compliance with all requirements of 40 CFR Part 68 including the registration and submission of the RMP.
- (e). If this facility is subject to 40 CFR Part 68, the permittee shall maintain records supporting the implementation of an accidental release program for five (5) years in accordance with 40 CFR § 68.200.
- (f). When this facility is subject to the accidental release program requirements of Section 112(r) of the Clean Air Act and 40 CFR Part 68, appropriate enforcement action will be taken by the Department if:
 - (1). The permittee fails to register and submit the RMP or a revised plan pursuant to 40 CFR Part 68.
- (2). The permittee fails to submit a compliance schedule or include a statement in an annual Compliance Certification submittal for the previous year indicating compliance with the requirements of the terms and conditions of this permit, and the requirements of Section 112(r) of the Clean Air Act and 40 CFR Part 68. The certification shall include:



SECTION C. Site Level Requirements

- (i). The identification of each term or condition of the permit that is the basis of the certification.
- (ii). The compliance status.
- (iii). The methods used for determining the compliance status of the source, currently and over the reporting period.
- (iv). Whether compliance was continuous or intermittent.
- (g). The compliance certification should be postmarked or hand-delivered within thirty days of each anniversary date of the date of issuance of this permit.

016 [25 Pa. Code §135.3]

Reporting

The owner or operator shall submit by March 1 of each year, a source report for the preceding calendar year. The report shall include information for all previously reported sources, new sources which were first operated during the preceding calendar year and sources modified during the same period which were not previously reported.

The source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

VI. WORK PRACTICE REQUIREMENTS.

017 [25 Pa. Code §123.1]

Prohibition of certain fugitive emissions

A person responsible for any source specified in Condition #002, of this Section, 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, as approved by the Department, 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, as approved by the Department, on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.
- (c) Paving and maintenance of roadways.
- (d) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or by other means.

018 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a) The permittee shall ensure that the source(s) and air pollution control device(s), listed in Section A and Section G, where applicable, of this permit, are operated and maintained in a manner consistent with good operating and maintenance practices, and in accordance with manufacturers specifications.
- (b) The permittee may not modify any air contaminant system identified in Sections A or G, of this permit, prior to obtaining Department approval, except those modifications authorized by Condition #013(g), of Section B, of this permit.
- (c) If an unauthorized modification of any source(s) occurs at this facility, the permittee shall immediately notify the Department. If so directed by the Department, then this permit, as it pertains to the modified source(s), shall be suspended and the source(s) shall not be operated until the modification is authorized by the Department.

VII. ADDITIONAL REQUIREMENTS.

019 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The SIC Code listing in the computer database only allows for four digit listings in the permit cover page, so the SIC Code used on the cover page does not fully represent the actitivities that are performed at this facility. The SIC Code that best represents this facility's activities is 2869-2 (this code represents research and development auxiliary facilities associated with the Industrial Organic Chemicals, NEC manufacturing classification).





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SECTION C. Site Level Requirements

VIII. COMPLIANCE CERTIFICATION.

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

IX. COMPLIANCE SCHEDULE.

No compliance milestones exist.



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LYONDELL CHEM CO/NEWTOWN SQUARE



SECTION D. Source Level Requirements

Source ID: 102 Source Name: HIGH PRESSURE CELLS (P001)

> Source Capacity/Throughput: N/A ORGANIC COMPOUNDS

PROC STAC S102 102

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.

The permittee shall monitor the operation of each High Pressure Cell in use at this facility on a daily basis.

IV. RECORDKEEPING REQUIREMENTS.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall keep records of the operation of each High Pressure Cell in use at this facility on a daily basis.
- (b). The permittee shall compile the records of the operation of each High Pressure Cell on a monthly basis and a 12-month rolling basis for use in estimating VOC and HAP emissions.
- (c). The permittee shall estimate and record the VOC and HAP emissions from the High Pressure Cells on a monthly and 12month rolling basis.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep a record of all material balances and other calculations that are used to derive the emission factors for calculating the VOC and HAP emissions from the High Pressure Cells.

V. REPORTING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall, on an annual basis, submit to the Department, an AIMS report documenting the emissions of VOCs and HAPs from this source.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall submit a report to the Department on the emission factors that are used for the High Pressure Cells included under this source on a semi-annual basis (March 1 and September 1 of each year). The reports shall indicate any changes that have been made to the emisson factors being used for each project that is being performed in these High Pressure Cells.



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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 and the equipment associated with 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 develop emission factors (in pounds of pollutant per unit per month) for the estimation of VOC and HAP emissions for each of the High Pressure Cells included under this source. The emission factors shall be developed from material balances on each project that is performed in the High Pressure Cells, and the emission factors shall account for any emission reductions that may occur through a control device, such as a condenser, scrubber, or carbon adsorption device, that is considered part of the apparatus contained in each High Pressure Cell. The emission factor shall be adjusted for each new project that takes place in the High Pressure Cells.

VII. ADDITIONAL REQUIREMENTS.

008 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Lyondell Chemical Company owns and operates 24 separate High Pressure Cells (small rooms with thick reinforced concrete walls designed to withstand an explosion) that are used to carry on bench-scale experiments for research and development. Lyondell shall maintain a list of all High Pressure Cells at the facility and the location of each of these cells.

009 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The vents that are associated with each of the High Pressure Cells include, but may not be limited to, the following:
 - (1). High Pressure Cell No. 1 Vent E-PC-3, Vent V-PC-1A, Vent V-PC-1B.
 - (2). High Pressure Cell No. 2 Vent E-PC-4, Vent V-PC-1A, Vent V-PC-1B.
 - (3). High Pressure Cell No. 3 Vent E-PC-5, Vent V-PC-3A, Vent V-PC-3B.
 - (4). High Pressure Cell No. 4 Vent E-PC-6, Vent V-PC-4A, Vent V-PC-4B.
 - (5). High Pressure Cell No. 5 Vent E-PC-7, Vent V-PC-5A, Vent V-PC-5B.
 - (6). High Pressure Cell No. 6 Vent E-PC-8, Vent V-PC-6A, Vent V-PC-6B.
 - (7). High Pressure Cell No. 7 Vent E-PC-9, Vent V-PC-7A, Vent V-PC-7B. (8). High Pressure Cell No. 8 Vent E-PC-10, Vent V-PC-8A, Vent V-PC-8B.
 - (9). High Pressure Cell No. 9 Vent E-PC-11, Vent V-PC-9A, Vent V-PC-9B.
 - (10). High Pressure Cell No. 10 Vent E-PC-12, Vent V-PC-10A, Vent V-PC-10B.
 - (11). High Pressure Cell No. 11 Vent E-PC-13, Vent V-PC-11A, Vent V-PC-11B.
 - (12). High Pressure Cell No. 12 Vent E-PC-14, Vent V-PC-12A, Vent V-PC-12B.
 - (13). High Pressure Cell No. 13 Vent E-PC-15, Vent V-PC-13A, Vent V-PC-13B.
 - (14). High Pressure Cell No. 14 Vent E-PC-16, Vent V-PC-14A, Vent V-PC-14B.
 - (15). High Pressure Cell No. 15 Vent E-PC-17, Vent V-PC-15A, Vent V-PC-15B.
 - (16). High Pressure Cell No. 16 Vent E-PC-18, Vent V-PC-16A, Vent V-PC-16B.
 - (17). High Pressure Cell No. 17 Vent E-PC-19, Vent V-PC-17A, Vent V-PC-17B.
 - (18). High Pressure Cell No. 18 Vent E-PC-20, Vent V-PC-18A, Vent V-PC-18B.
 - (19). High Pressure Cell No. 19 Vent E-PC-21, Vent V-PC-19A, Vent V-PC-19B.
 - (20). High Pressure Cell No. 20 Vent E-PC-22, Vent V-PC-20A, Vent V-PC-20B.
 - (21). High Pressure Cell No. 21 Vent E-PC-23, Vent V-PC-21A, Vent V-PC-21B.
 - (22). High Pressure Cell No. 22 Vent E-PC-24, Vent V-PC-22A, Vent V-PC-22B.
 - (23). High Pressure Cell No. 23 Vent E-PC-29.
 - (24). High Pressure Cell No. 24 Vent E-PC-30.
- (b). In addition to the exhaust vents listed above, there are three emergency exhaust vents, which are normally off, located in the building that houses the High Pressure Cells.

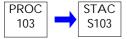




SECTION D. Source Level Requirements

Source ID: 103 Source Name: RESEARCH LABORATORY HOODS (P002)

> Source Capacity/Throughput: N/A ORGANIC COMPOUNDS



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.

The permittee shall monitor the operation of each laboratory hood in use at this facility on a daily basis.

IV. RECORDKEEPING REQUIREMENTS.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall keep records of the operation of each laboratory hood in use at this facility on a daily basis.
- (b). The permittee shall compile the records of the operation of each laboratory hood on a monthly basis and a 12-month rolling basis for use in estimating VOC and HAP emissions.
- (c). The permittee shall estimate and record the VOC and HAP emissions from the laboratory hood on a monthly and 12month rolling basis.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep a record of all material balances and other calculations that are used to derive the emission factors for calculating the VOC and HAP emissions from the laboratory hoods.

REPORTING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall, on an annual basis, submit to the Department, an AIMS report documenting the emissions of VOCs and HAPs from this source.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall submit a report to the Department on the emission factors that are used for the laboratories included under this source on a semi-annual basis (March 1 and September 1 of each year). The reports shall indicate any changes that have been made to the emisson factors being used for each project that is being performed in these laboratories.



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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 and the equipment associated with 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 develop emission factors (in pounds of pollutant per unit per month) for the estimation of VOC and HAP emissions for each of the laboratory hoods included under this source. The emission factors shall be developed from material balances on each project that is performed in the laboratory hoods, and the emission factors shall account for any emission reductions that may occur through a control device, such as a condenser, scrubber, or carbon adsorption device, that is considered part of the apparatus contained in each laboratory hood. The emission factor shall be adjusted for each new project that takes place in the laboratory hoods.

VII. ADDITIONAL REQUIREMENTS.

008 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Source ID No. 103 includes all the laboratory hoods, including those in the High Pressure Cell Area and the B Bay and E Bay Pilot Plant Area, that operate at this facility for research and development or sample analysis purposes. The permittee shall keep a record of the location of each laboratory hood that is used at the facility.

009 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Vents to the atmosphere for the laboratory hoods include, but are not limited to, the following:

- (a). High Pressure Cell Area Lab Hoods 1, 2, 3, and 4 vent to E-PC-2B.
- (b). High Pressure Cell Area Lab Hoods 5, 6, 7, and 8 vent to E-PC-2A.
- (c). High Pressure Cell Area Lab Hood 9 vents to E-PC-2C.
- (d). High Pressure Cell Area Lab F1208 Hood A vents to E-PC-2D.
- (e). High Pressure Cell Area Lab F1208 Hood B vents to E-PC-31 and V-PC-5.
- (f). Analytical Labs F1110 (2 hoods), F1109 (1 hood), and F1108(3 hoods) vent to E-F-1.
- (g). Analytical Labs F1102 and F1104 vent to E-S-4 and E-S-1 respectively.
- (h). E Bay 1 Lab E1402 (3 hoods) vents to EF-PP-6.
- (i). Small Laboratory Hoods (E Bay) E1100, E1109, and E1110 vent to EF-PP-7.
- (j). Large Laboratory Hoods (E Bay) E 1100 vent to EF-PP-21.
- (k). Laboratory Walk-in Hood (E Bay) E1104 vents to EF-PP-22.
- (I). Laboratory Hoods B1145, B1135, B1144, B1134, B1143, and B1133 vent to E-C-1A and E-C-1B.
- (m). Laboratory Hoods B1142, B1132, B1141, B1131, B1140, and B1130 vent to E-C-2A and E-C-2B.
- (n). Laboratory Hoods B1105, B1095, B1104, B1094, B1103, and B1093 vent to E-C-3A and E-C-3B.
- (o). Laboratory Hoods B1102, B1092, B1101, B1091, B1100, and B1090 vent to E-C-4A and E-C-4B.
- (p). Laboratory Hoods B1065, B1055, B1064, B1054, B1063, and B1053 vent to E-C-5A and E-C-5B.
- (q). Laboratory Hoods B1062, B1052, B1061, B1051, B1060, and B1050 vent to E-C-6A and E-C-6B.
- (r). Laboratory Hoods B1025, B1015, B1024, B1014, B1023, and B1013 vent to E-C-7A and E-C-7B.
- (s). Laboratory Hoods B1022, B1012, B1021, B1021, B1020, and B1010 vent to E-C-8A and E-C-8B.
- (t). Laboratory Hoods B2208.



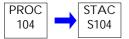




SECTION D. Source Level Requirements

Source ID: 104 Source Name: E AND B BAY R&D UNIT HOODS (P004)

> Source Capacity/Throughput: N/A ORGANIC COMPOUNDS



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.

The permittee shall monitor the operation of each R & D Unit in the B and E Bays that is in use at this facility on a daily basis.

IV. RECORDKEEPING REQUIREMENTS.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall keep records of the operation of each B and E Bay R & D Unit in use at this facility on a daily basis.
- (b). The permittee shall compile the records of the operation of each E and B Bay R & D Unit on a monthly basis and a 12month rolling basis for use in estimating VOC and HAP emissions.
- (c). The permittee shall estimate and record the VOC and HAP emissions from the E and B Bay R & D Units on a monthly and 12-month rolling basis.

003 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep a record of all material balances and other calculations that are used to derive the emission factors for calculating the VOC and HAP emissions from the B and E Bay R & D Units.

V. REPORTING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall, on an annual basis, submit to the Department, an AIMS report documenting the emissions of VOCs and HAPs from this source.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall submit a report to the Department on the emission factors that are used for the R & D Units included under this source on a semi-annual basis (March 1 and September 1 of each year). The reports shall indicate any changes that have been made to the emisson factors being used for each project that is being performed in these R & D Units.



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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 and the equipment associated with 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.

- (a). The permittee shall develop emission factors (in pounds of pollutant per unit per hour, pounds of pollutant per day, or pounds of pollutant per batch) for the estimation of VOC and HAP emissions for each of the B and E Bay R & D Units included under this source.
- (b). The permittee shall provide evidence in the derivation of the emission factors to indicate why a particular frequency (hour, day, or batch) for the emission factor was chosen.
- (c). The emission factors shall be developed from material balances on each project that is performed in the B and E Bay R & D Units, and the emission factors shall account for any emission reductions that may occur through a control device, such as a condenser, scrubber, or carbon adsorption device, that is considered part of the apparatus contained in each B and E Bay R & D Unit, and the permittee shall record the type(s) of control device(s) that are used in each project. The emission factor shall be adjusted for each new project that takes place in the B and E Bay R & D Units.

VII. ADDITIONAL REQUIREMENTS.

008 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The stacks associated with the B Bay R & D Unit Area include, but are not limited to, the following:
 - (1). B Bay 1 (4 hoods) 4 process stacks, 4 process relief stacks, general exhaust (E-C-9).
 - (2). B Bay 2 (9 hoods) 6 process stacks, 6 process relief stacks, general exhaust (E-C-10).
 - (3). B Bay 3 (10 hoods) 7 process stacks, 7 process relief stacks, general exhaust (E-C-11).
 - (4). B Bay 4 (2 hoods) 5 process stacks, 5 process relief stacks, general exhaust (E-C-12).
 - (5). B Bay 5 (2 hoods) 6 process stacks, 4 process relief stacks, general exhaust (E-C-13).
 - (6). B Bay 6 (4 hoods) 3 process stacks, 2 process relief stacks, general exhaust (E-C-14).
 - (7). B Bay 7 (4 hoods) 4 process stacks, 4 process relief stacks, general exhaust (E-C-15).
 - (8). B Bay 8 (4 hoods) general exhaust (E-C-16).
 - (9). B Bay 9 (4 hoods) 4 process stacks, 5 process relief stacks, general exhaust (E-C-17).
 - (10). B Bay 10 (6 hoods) 4 process stacks, 4 process relief stacks, general exhaust (E-C-18).
- (b). The stacks associated with the E Bay R & D Units include, but are not limited to the following:
 - (1). E Bay 1
 - (A). General Exhaust or Process Exhaust Fans: EF-PP1, EF-PP1A, EF-PP-1B, and EF-PP-20
- (B). Process Vents: E1-1-5"; E1-2A-1"; E1-2B-1"; E1-3-2"; E1-4-2"; E1-5A-1"; E1-5B-2"; E1-6-2"; E1-8A-1"; E1-8B-1/2"; E1-9-2"; E1-10-2"; E1-10-2"; E1-11-2"; E1-12-4"; E1-13-1"; E1-15-1"; E1-16-1"; E1-17-1-1/2"; E1-18-1"; E1-19-1"; E1-20-4"; E1-21-1"; E1-22-1"; E1-23-1", E1-24-2"; E1-25A-1"; E1-25B-1" E1-26-1"; E1-27-3"; E1-28-2"; E1-29-1-1/2"; E1-30-1"; E1-31-1-1/2"; E1-32-1"; E1-33-1"; E1-34-1"; E1-35-1"; E1-37-1/2"; E1-38-1/2"; E1-39-1/2"; E1-40-1/2"; E1-41-1"; E1-42-2"; E1-43-1"; E1-44-2"; E1-45-3"; and E1-X-6"
 - (2). E Bay 2
 - (A). General Exhaust or Process Exhaust Fans: EF-PP-2, EF-PP-2A, and EF-PP2B
 - (B). Process Vents (not limited to): E2-2-1"; E2-4-1"; E2-6-1", E2-8-1"; E2-11-2"; E2-12-2"; and E2-13-6"
 - (3). E Bay 3





SECTION D. Source Level Requirements

- (A). General Exhaust or Process Exhaust Fans: EF-PP-3, EF-PP-3A, EF-PP-3B, and EF-PP-5, EF-PP-22.
- (B). Process Vents: E3-1-6"; E3-2-2"; E3-4-1"; E3-5-1/2"; E3-7-2"; E3-8-2"; E3-9-2"; E3-9-2"; E3-10-2"; E3-11-2"; E3-12-2"; and E3-13-2"
 - (4). E Bay 4
 - (A). General Exhaust Fans: EF-PP4, EF-PP-4A, and EF-PP-4B
- (B). Process Vents: E4-1-3"; E4-2-2"; E4-3-1"; E4-4-2"; E4-5-1/2"; E4-6-3"; E4-7-4"; E4-8-1"; E4-12-1"; E4-13-1"; E4-14-1"; E4-15-2"; E4-16-1"; E4-17-1"; E4-18-1/2"; E4-19-1"; E4-20-2"; E4-21-2"; E4-22-1"; E4-23-3/4"; E4-25-1"; E4-26-3/4"; E4-27-1"; and E4-28-1"
- (c). Some E Bay R & D Units have laboratory hoods that snorkels going into their general or process exhaust. In these cases, the laboratory hoods are considered part of that E Bay R & D Unit from which it is connected.



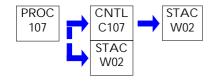




SECTION D. Source Level Requirements

Source ID: 107 Source Name: POLYOLS PILOT PLANT (P003)

> Source Capacity/Throughput: N/A ORGANIC COMPOUNDS



RESTRICTIONS.

Control Device Efficiencies Restriction(s).

001 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall maintain a pressure drop below 6.5 inches w.g. across the scrubber connected to this source and a liquid flow rate between 14.5 and 18 gallons per minute through the scrubber when the scrubber is in operation with this source.

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 the scrubber that is connected to this source:

- (a). The pressure drop across the scrubber on a daily basis when the scrubber is in operation.
- (b). The liquid flow rate through the scrubber on a daily basis when the scrubber is in operation.

[25 Pa. Code §127.441] # 003

Operating permit terms and conditions.

The permittee shall monitor the operation of this source on a daily basis.

IV. RECORDKEEPING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall keep records of the operation of this source on a daily basis.
- (b). The permittee shall compile the records of the operation of this source on a monthly basis and a 12-month rolling basis for use in estimating VOC and HAP emissions.
- (c). The permittee shall estimate and record the VOC and HAP emissions from this source on a monthly and 12-month rolling basis.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep a record of all material balances and other calculations that are used to derive the emission factors for calculating the VOC and HAP emissions from this source.



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SECTION D.

006

Source Level Requirements



Operating permit terms and conditions.

[25 Pa. Code §127.441]

The permittee shall keep records of the following information for the scrubber that is connected to this source:

- (a). The pressure drop across the scrubber on a daily basis when the scrubber is in operation.
- (b). The liquid flow rate through the scrubber on a daily basis when the scrubber is in operation.
- (c). All inspections and maintenance performed on the source and scrubber associated with the source.

V. REPORTING REQUIREMENTS.

007 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall, on an annual basis, submit to the Department, an AIMS report documenting the emissions of VOCs and HAPs from this source.

008 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall submit a report to the Department on the emission factors that are used for this pilot plant on a semiannual basis (March 1 and September 1 of each year). The reports shall indicate any changes that have been made to the emisson factors being used for each project that is being performed in this pilot plant.

VI. WORK PRACTICE REQUIREMENTS.

009 [25 Pa. Code §127.441]

Operating permit terms and conditions.

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

010 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall perform inspections and / or maintenance on the scrubber connected with this source on at least a monthly basis.

011 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall develop emission factors (in pounds of pollutant per unit per hour, pounds of pollutant per day, or pounds of pollutant per batch) for the estimation of VOC and HAP emissions for this source.
- (b). The permittee shall provide proof in the derivation of the emission factors to indicate why a particular frequency (hour, day, or batch) for the emission factor was chosen.
- (c). The emission factors shall be developed from material balances on each project that is performed in this source, and the emission factor shall be adjusted for each new project that takes place in this source.

VII. ADDITIONAL REQUIREMENTS.

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

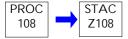
SECTION D.



Source Level Requirements

Source ID: 108 Source Name: COLD CLEANING MACHINE

Source Capacity/Throughput: N/A SAFETY KLEEN SOLVENT



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.

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

IV. RECORDKEEPING REQUIREMENTS.

001 [25 Pa. Code §129.63]

Degreasing operations

- (a). A person who sells or offers for sale any solvent containing VOCs for use in a cold cleaning machine shall provide, to the purchaser, the following written information:
 - (1). The name and address of the solvent supplier.
 - (2). The type of solvent including the product or vendor identification number.
 - (3). The vapor pressure of the solvent measured in mm Hg at 20 degrees C (68 degrees F).
- (b). The permittee shall maintain for at least two (2) years and shall provide to the Department, on request, the information specified in paragraph (a) above. An invoice, bill of sale, certificate that corresponds to the number of sales, Material Safety Data Sheet (MSDS), or other appropriate documentation acceptable to the Department may be used to comply with this section.

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.

002 [25 Pa. Code §129.63]

Degreasing operations

- (a). Cold cleaning machines shall be operated in accordance with the following procedures:
- (1). Waste solvent shall be collected and stored in closed containers. The closed containers may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.
- (2). Flushing of parts using a flexible hose or other flushing device shall be performed only within the cold cleaning machine. The solvent spray shall be a solid fluid stream, not a atomized or shower spray.





SECTION D. Source Level Requirements

- (3). Sponges, fabric, wood, leather, paper products and other absorbent material may not be cleaned in the cold cleaning machine.
 - (4). Air agitated solvent baths may not be used.
 - (5). Spills during solvent transfer and use of the cold cleaning machine shall be cleaned up immediately.
- (b). Remote reservoir cold cleaning machines shall:
- (1). Have a permanent conspicuous label summarizing the operating procedures in paragraphs (a)(1) (a)(5) listed above. In addition, the label shall include the following discretionary good operating practices:
- (i). Cleaned parts should be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining tipping, or rotating, the parts should be positioned so that the solvent drains directly back into the cold cleaning machine.
- (ii). When a pump-agitated solvent bath is used, the agitator should be operated to produce a rolling motion of the solvent with no observable splashing of the solvent against the tank walls or the parts being cleaned.
 - (iii). Work area fans should be located and positioned so that they do not blow across the opening of the degreaser unit.
- (2). Be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent. For remote reservoir cold cleaning machines which drain directly into the solvent storage reservoir, a perforated drain witha diameter of not more than 6 inches shall constitute an acceptable cover.

003 [25 Pa. Code §129.63]

Degreasing operations

- (a). The permittee shall not use, sell, or offer for sale for use in a cold cleaning machine any solvent with a vapor pressure of 1.0 millimeter of mercury (mm Hg) or greater and containing greater than 5 % VOC by weight, measured at 20 degrees C (68 degrees F) containing VOCs.
- (b). Paragraph (a) does not apply:
 - (1). To cold cleaning machines used in extreme cleaning service.
- (2). If the owner or operator of the cold cleaning machine demonstrates, and the Department approves in writing, that compliance with paragraph (a) will result in unsafe operating conditions.

VII. ADDITIONAL REQUIREMENTS.

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





SECTION D.

Source Level Requirements

Source ID: 110 Source Name: SURFACE COATING PROCESSES

Source Capacity/Throughput: N/A COATING

PROC STAC S110

I. RESTRICTIONS.

Emission Restriction(s).

001 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Additional authority for this permit condition is also derived from 25 Pa. Code § 129.52(a).]

The permittee shall limit the emissions of VOC from this source to less than 3.0 pounds per hour, 15.0 pounds per day, and 2.7 tons per year on a 12-month rolling basis.

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

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

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 amount of each coating that is used and the volatile organic compound content and hazardous air pollutant content of each coating that is used on a daily basis when coating is being performed in this source.

IV. RECORDKEEPING REQUIREMENTS.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall record the amount of each coating that is used and the volatile organic compound content and hazardous air pollutant content of each coating that is used on a daily basis when coating is being performed in this source.

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.

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





SECTION D. Source Level Requirements

VII. ADDITIONAL REQUIREMENTS.

23-00059

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





SECTION D. Source Level Requirements

Source ID: 111 Source Name: INTEGRATED PROPYLENE OXIDE PILOT UNIT

Source Capacity/Throughput: N/A ORGANIC COMPOUNDS



I. RESTRICTIONS.

Emission Restriction(s).

001 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The total volatile organic compound (VOC) emissions from this Integrated Propylene Oxide Pilot Unit from bypassing the flameless thermal oxidizer (FTO) shall not exceed 5 tons in any consecutive 12-month rolling period.

Control Device Efficiencies Restriction(s).

002 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The Flameless Thermal Oxidizer (FTO) associated with this source must be at a minimum operating temperature before the source is operated. The minimum operating temperature is defined as when the thermocouple at the top of the ceramic bed reaches a minimum temperature of 1400 degrees F.
- (b). The FTO associated with this source shall have a minimum destruction efficiency of 98.0 percent.

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 monitor the amount of each VOC and/or HAP containing raw material used in this pilot unit.

004 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously monitor the temperature of the thermocouple at the top of the ceramic bed in the FTO associated with this source when this source is in operation.

IV. RECORDKEEPING REQUIREMENTS.

005 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall keep records of the type and amount of training provided to each employee.

006 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall keep records, either electronically or by other appropriate method approved by the Department, of the amount of each VOC and/or HAP containing raw material used in this pilot unit.
- (b). The records in paragraph (a) above should be able to demonstrate that the fume to the FTO associated with this source is approximately 40 BTU/scf or less.





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SECTION D. Source Level Requirements

- (c). The permittee shall calculate and electronically record the VOC and HAP emissions from this source on a monthly basis.
- (d). The permittee shall maintain a binder with a monthly printout of all VOC and HAP emissions from the facility. This binder shall be made available to the Department upon request.

007 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall continuously record, either electronically or by other appropriate Department approved method, the temperature of the thermocouple at the top of the ceramic bed in the FTO associated with this source when this source is in operation.

008 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall record all Flameless Thermal Oxidizer (FTO) malfunctions.
- (b). The records of FTO malfunctions shall include, but not be limited to, the following:
 - (1). Date and time of the malfunction.
 - (2). Type of malfunction.
 - (3). Operator's name.
 - (4). Corrective action taken.

009 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The permittee shall record and track all bypasses of the Flameless Thermal Oxidizer (FTO).
- (b). The records of FTO bypasses shall include, but not be limited to, the following:
 - (1). Date and time of the bypass.
 - (2). Reason for the bypass.
 - (3). Amount of emissions released.

010 [25 Pa. Code §127.441]

Operating permit terms and conditions.

All records required to be kept for this source under this State Only Operating Permit shall be kept for a period of five (5) years, and these records shall be made available to the Department upon request.

V. REPORTING REQUIREMENTS.

011 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall notify the Department in the event that the 5-ton VOC per any consecutive 12-month rolling period limit is exceeded or is about to be exceeded through bypassing the flameless thermal oxidizer (FTO).

VI. WORK PRACTICE REQUIREMENTS.

012 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The company shall install and operate temperature-monitoring instrumentation, which continuously indicates the temperature of the ceramic bed while the pilot unit and FTO associated with this pilot unit are operating.



SECTION D.

Source Level Requirements



013 [25 Pa. Code §127.441]

Operating permit terms and conditions.

- (a). The low temperature interlock on the FTO associated with this source shall be set at 1400 degrees F and the high temperature interlock shall be set at 2100 degrees F. The low and high temperature interlocks will be set to the thermocouple at the top of the ceramic bed. The FTO shall be bypassed when the temperature exceeds 2100 degrees F.
- (b). The interlock shall be installed in the dilution airline, which will shut the pilot unit down in the event of a low-flow condition.
- (c). The FTO may be bypassed only in emergency situations. When the FTO is bypassed, the pilot unit shall be shut down as soon as possible.

014 [25 Pa. Code §127.441]

Operating permit terms and conditions.

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

015 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee shall provide introductory training to new employees and refresher training on the proper operation and maintenance of the propylene oxide pilot unit and associated FTO.

VII. ADDITIONAL REQUIREMENTS.

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





SECTION E. Alternative Operation Requirements.

No Alternative Operations exist for this State Only facility.







SECTION F. Emission Restriction Summary.

Source to	Source Descrip	ж		
110	SURFACE COATING PROCESSES			
Emission Limit			Pollutant	
2.700	Tons/Yr	12-month rolling basis	VOC	
3.000	Lbs/Hr		VOC	
15.000	Lbs/Day		VOC	

INTEGRATED PROPYLENE OXIDE PILOT UNIT 111

Emission Limit			Pollutant
5.000	Tons/Yr	any consecutive 12-month period; for bypass of FTO	VOC

Site Emission Restriction Summary

Emission Limit		Pollutant
24.900 Tons/Yr	Combined HAPs; less than or equal to stated value on a 12-month rolling period	Hazardous Air Pollutants
9.900 Tons/Yr	Single HAP; less than or equal to stated value on a 12- month rolling period	Hazardous Air Pollutants
24.900 Tons/Yr	less than or equal to stated value on a 12-month rolling period	VOC







SECTION G. Miscellaneous.

#001. The Department has determined that the emissions from the following activities, excluding those indicated as Site Level Requirements, in Section C, of this permit, do not require additional limitations, monitoring or recordkeeping.

- (a). Loading Losses Vent and Dry Ice Condenser (Waste solvents are pumped into tanker trucks and a line is connected from the truck to a vent).
 - (b). Two 11 Hp, gasoline powered, portable emergency generators.
 - (c). Maintenance shop welding area.
 - (d). Two industrial wastewater tanks (primarily non-contact cooling water).
 - (e). Small propane burner used during fire extinguisher training.
 - (f). Four underground storage tanks (empty and temporarily out of service).
 - (g). One 4 hp portable gasoline powered emergency pump.
 - (h). PO Dispensing Station (Main Drum Pad).

#002. The company shall calculate actual emissions of VOCs and HAPs for the sources listed in (a) above and include them in the annual AIMS emission inventory report in order to verify compliance with the facility-wide VOC emissions cap.

#003. For informational purposes only, the boilers listed in Operating Permit 23-302-076 and all boilers, emergency generators, and cooling towers in the cottages, chairman's house, the executive office building, the fitness center, and the boiler house that were listed in ARCO Chemical Company's (now Lyondell Chemical Company's) state only permit application were first sold to West LB and operated by SAP Properties, Inc. then sold to BPG Real Estate Investors, Straw Party I, LP. Lyondell Chemical Company is not liable for any further ownership changes for the sources listed under this condition.

#004. APS No. 345720; Authorization No. 673361 - The State Only Operating Permit for Lyondell Chemical Corporation was revised in accordance with 25 Pa. Code § 127.450(a)(5) to incorporate plan approval PA-23-0059. The plan approval was issued for the addition of an integrated propylene oxide pilot unit and flameless thermal oxidizer to the facility.





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