

## **FACILITY PERMIT TO OPERATE**

**AIR LIQUIDE LARGE INDUSTRIES U.S., LP  
324 W EL SEGUNDO BLVD  
EL SEGUNDO, CA 90245**

### **NOTICE**

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.  
EXECUTIVE OFFICER

By \_\_\_\_\_  
Mohsen Nazemi, P.E.  
Deputy Executive Officer  
Engineering & Compliance



## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION A: FACILITY INFORMATION

LEGAL OWNER &/OR OPERATOR: AIR LIQUIDE LARGE INDUSTRIES U.S., LP

LEGAL OPERATOR (if different than owner):

EQUIPMENT LOCATION: 324 W EL SEGUNDO BLVD  
EL SEGUNDO, CA 90245-3635

MAILING ADDRESS: 214 MAIN ST PMB 286  
EL SEGUNDO, CA 90245-3803

RESPONSIBLE OFFICIAL: JEAN MARC GOEMINNE

TITLE: PLANT MANAGER

TELEPHONE NUMBER: (310) 535-3628

CONTACT PERSON: MUKESH BHATT

TITLE: ENVIRONMENTAL SPECIALIST

TELEPHONE NUMBER: (713) 624-8775

TITLE V PERMIT ISSUED: May 09, 2008

TITLE V PERMIT EXPIRATION DATE: May 08, 2013

TITLE V	RECLAIM
YES	NOx: YES SOx: YES CYCLE: 2 ZONE: COASTAL



## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NO<sub>x</sub> RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NO<sub>x</sub> emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

#### RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year		Zone	NO <sub>x</sub> RTC Initially Allocated	NO <sub>x</sub> RTC <sup>1</sup> Holding as of 05/09/08 (pounds)	Non-Tradable <sup>2</sup> Non-Usable RTCs (pounds)
Begin (month/year)	End				
7/2006	6 /2007	Coastal	0	0	0
7/2007	6 /2008	Coastal	0	45735	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.
2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.



## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of SO<sub>x</sub> RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total SO<sub>x</sub> emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - TradingZone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

#### RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year		Zone	SO <sub>x</sub> RTC Initially Allocated	SO <sub>x</sub> RTC <sup>1</sup> Holding as of 05/09/08 (pounds)	Non-Tradable <sup>2</sup> Credits (NTCs) (pounds)
Begin (month/year)	End				
7/2006	6 /2007	Coastal	0	0	
7/2007	6 /2008	Coastal	0	12264	

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010 (b). The most recent total RTC information can be obtained from the District's RTC Listing.
2. The use of such credits is subject to restrictions set forth in paragraph (h)(2) of Rule 2002.

**FACILITY PERMIT TO OPERATE  
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**SECTION C: FACILITY PLOT PLAN**

(TO BE DEVELOPED)

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 3 : R-219 EXEMPT EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES</b>					
RULE 219 EXEMPT EQUIPMENT, CLEANING EQUIPMENT	E31			VOC: (9) [RULE 1171,11-7-2003;RULE 1171,7-44-2006]	H23.3
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, SMALL, UNHEATED, NON-CONVEYORIZED	E32			VOC: (9) [RULE 1107,11-9-2001;RULE 1107,1-6-2006;RULE 1171,11-7-2003;RULE 1171,7-44-2006]	H23.4
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E33			VOC: (9) [RULE 1113,11-8-1996;RULE 1113,6-9-2006;RULE 1171,11-7-2003;RULE 1171,7-44-2006]	K67.2
RULE 219 EXEMPT EQUIPMENT, HAND LAY, BRUSH AND ROLL UP RESIN OPERATIONS	E34			VOC: (9) [RULE 1171,11-7-2003;RULE 1171,7-44-2006]	H23.4
RULE 219 EXEMPT EQUIPMENT, LAMINATING EQUIPMENT, LOW USE OR EMISSIONS	E35			VOC: (9) [RULE 1168,10-3-2003;RULE 1168,1-7-2005;RULE 1171,11-7-2003;RULE 1171,7-44-2006]	H23.4

\* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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**SECTION D: DEVICE ID INDEX**

**The following sub-section provides an index  
to the devices that make up the facility  
description sorted by device ID.**

**FACILITY PERMIT TO OPERATE  
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**SECTION D: DEVICE ID INDEX**

<b>Device Index For Section D</b>			
<b>Device ID</b>	<b>Section D Page No.</b>	<b>Process</b>	<b>System</b>
E31	1	3	0
E32	1	3	0
E33	1	3	0
E34	1	3	0
E35	1	3	0

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

#### FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[**RULE 401, 3-2-1984**; RULE 401, 11-9-2001]

F14.1 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[**RULE 431.2, 5-4-1990**; RULE 431.2, 9-15-2000]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[**40CFR 68 - Accidental Release Prevention, 5-24-1996**]

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

40CFR60, Subpart A

[**40CFR 60 Subpart A, 4-9-1993**]

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### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

F60.1 The emission limits identified in Section D and H of the permit shall be defined as emissions discharged to the atmosphere originated from the equipment.

### SYSTEM CONDITIONS

S2.1 The operator shall limit emissions from this system as follows

Contaminant	Emission Limit
VOC	Less than 0.5 LBS PER DAY

For the purposes of this condition, the emission limit(s) refers to the total VOC emissions from the system's process vents.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1]

S2.2 The operator shall limit emissions from this system as follows

Contaminant	Emission Limit
VOC	Less than 0.5 lbs/mmscf of hydrogen produced

For the purposes of this condition, the emission limit(s) refers to the total VOC emissions from the system's process vents.

**[RULE 1189, 1-21-2000]**

[Systems subject to this condition : Process 1, System 1]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

S13.1 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule/Regulation	Number/Subpart
VOC	District Rule	1189

**[RULE 1189, 1-21-2000]**

[Systems subject to this condition : Process 1, System 1]

S15.1 The vent gases from all affected devices of this process/system shall be vented as follows:

All vent gases under normal operating conditions shall be directed to Chevron vapor recovery and/or Chevron flare system.

This process/system shall not be operated unless the Chevron vapor recovery system(s) or Chevron flare(s) is in full use and has a valid permit to receive vent gases from this system.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1]

S15.2 The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to Chevron vapor recovery and/or flare system except Devices IDs D9 (deaerator), D11 (high pressure stripper), and D12 (hydrogen product from PSA) in Process 1, System 1 that vent to the atmosphere.

This process/system shall not be operated unless the Chevron vapor recovery system(s) or flare(s) is in full use and has a valid permit to receive vent gases from this system.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

- S18.1 All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Steam Methane Reforming & Hydrogen Purification (Process: 1, System: 1)

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 2, System 1]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

The operator shall comply with the terms and conditions set forth below:

- S31.1 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 457657 & 457785:

The operator shall provide to the District, no later than 60 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The valves and flanges shall be categorized by size and service. The operator shall submit a listing of all new non-bellows seal valves which shall be categorized by tag no., size, type, operating temperature, operating pressure, body material, application, and reasons why bellows-seal valves were not used.

All new valves in VOC service, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in Rule 1173, shall be bellow-seal valves, except as approved by the District, in the following applications: (see list below)

Heavy liquid service, control valve, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g., drain valves with valve stems in horizontal position), retrofits/special applications with space limitations, and valves not commercially available.

All new valves and major components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in Rule 1173, shall be distinctly identified from other components through their tag numbers (e.g., numbers ending in the letter "N"), and shall be noted in the records.

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA Reference Method 21. All new valves and flanges in VOC service, except those specifically exempted by Rule 1173, shall be inspected monthly using EPA Method 21.

If 98.0 percent or greater of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv for two consecutive months, then the operator may change to a quarterly inspection program with the approval of the District.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv.

All new components in VOC service with a leak greater than 500 ppmv but less than 1,000 ppmv, as methane, measured above background using EPA Method 21 shall be repaired within 14 days of detection. Components shall be defined as any valve, fitting, pump, compressor, pressure relief valve, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. Records shall be kept and maintained for at least two years, and shall be made available to the Executive Officer or his authorized representative upon request. Once Title V permit is issued, records shall be maintained for five years.

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1 , 2]

### DEVICE CONDITIONS

#### H. Applicable Rules

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule / Subpart
VOC	District Rule	1122

**[RULE 1122, 10-1-2004]**

[Devices subject to this condition : E31]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule / Subpart
VOC	District Rule	109

**[RULE 109, 5-2-2003]**

[Devices subject to this condition : E32, E34, E35]

#### K. Record Keeping/Reporting

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

For architectural applications where no thinners, reducers, or other VOC containing materials are added, maintain semi-annual records for all coating consisting of (a) coating type, (b) VOC content as supplied in grams per liter (g/l) of materials for low-solids coatings, (c) VOC content as supplied in g/l of coating, less water and exempt solvent, for other coatings.

For architectural applications where thinners, reducers, or other VOC containing materials are added, maintain daily records for each coating consisting of (a) coating type, (b) VOC content as applied in grams per liter (g/l) of materials used for low-solids coatings, (c) VOC content as applied in g/l of coating, less water and exempt solvent, for other coatings.

**[RULE 1113, 11-8-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E33]



## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION E: ADMINISTRATIVE CONDITIONS**

The operating conditions in this section shall apply to all permitted equipment at this facility unless superseded by condition(s) listed elsewhere in this permit.

1. The permit shall remain effective unless this permit is suspended, revoked, modified, reissued, denied, or it is expired for nonpayment of permit processing or annual operating fees. [201, 203, 209, 301]
  - a. The permit must be renewed annually by paying annual operating fees, and the permit shall expire if annual operating fees are not paid pursuant to requirements of Rule 301(d). [301(d)]
  - b. The Permit to Construct listed in Section H shall expire one year from the Permit to Construct issuance date, unless a Permit to Construct extension has been granted by the Executive Officer or unless the equipment has been constructed and the operator has notified the Executive Officer prior to the operation of the equipment, in which case the Permit to Construct serves as a temporary Permit to Operate. [202, 205]
  - c. The Title V permit shall expire as specified under Section K of the Title V permit. The permit expiration date of the Title V facility permit does not supercede the requirements of Rule 205. [205, 3004]
2. The operator shall maintain all equipment in such a manner that ensures proper operation of the equipment. [204]
3. This permit does not authorize the emissions of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the Rules and Regulations of the AQMD. This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other governmental agencies. [204]
4. The operator shall not use equipment identified in this facility permit as being connected to air pollution control equipment unless they are so vented to the identified air pollution control equipment which is in full use and which has been included in this permit. [204]
5. The operator shall not use any equipment having air pollution control device(s) incorporated within the equipment unless the air pollution control device is in full operation.[204]
6. The operator shall maintain records to demonstrate compliance with rules or permit conditions that limit equipment operating parameters, or the type or quantity of material processed. These records shall be made available to AQMD personnel upon request and be maintained for at least: [204]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION E: ADMINISTRATIVE CONDITIONS

- a. Three years for a facility not subject to Title V; or
  - b. Five years for a facility subject to Title V.
7. The operator shall maintain and operate all equipment to ensure compliance with all emission limits as specified in this facility permit. Compliance with emission limits shall be determined according to the following specifications, unless otherwise specified by AQMD rules or permit conditions: [204]
- a. For internal combustion engines and gas turbines, measured concentrations shall be corrected to 15 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1110.2, 1134, 204]
  - b. For other combustion devices, measured concentrations shall be corrected to 3 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1146, 1146.1, 204]
  - c. For a large NO<sub>x</sub> source, compliance with a RECLAIM concentration limit shall be measured over a continuous 60 minutes for that source; [2012]
  - d. For non-combustion sources, compliance with emission limits shall be determined and averaged over a period of 60 minutes. [204]
  - e. For the purpose of determining compliance with Rule 407, carbon monoxide (CO) shall be measured on a dry basis and be averaged over 15 consecutive minutes, and sulfur compound which would exist as liquid or gas at standard conditions shall be calculated as sulfur dioxide (SO<sub>2</sub>) and be averaged over 15 consecutive minutes; [407]
  - f. For the purpose of determining compliance with Rule 409, combustion contaminant emission measurements shall be corrected to 12 percent carbon dioxide (CO<sub>2</sub>) at standard conditions and averaged over 15 consecutive minutes. [409]
  - g. For the purpose of determining compliance with Rule 475, combustion contaminant emission measurements shall be corrected to 3 percent of oxygen (O<sub>2</sub>) at standard conditions and averaged over 15 consecutive minutes or any other averaging time specified by the Executive Officer. [475]
8. All equipment operating under the RECLAIM program shall comply concurrently with all provisions of AQMD Rules and Regulation, except those listed in Table 1 of Rule 2001 for NO<sub>x</sub> RECLAIM sources and Table 2 of Rule 2001 for SO<sub>x</sub> RECLAIM sources. Those provisions listed in Tables 1 or 2 shall not apply to NO<sub>x</sub> or SO<sub>x</sub> emissions after the date the facility has demonstrated compliance with all monitoring and reporting requirements of Rules 2011 or 2012, as applicable. Provisions of the listed AQMD rules in Tables 1 or 2 which have initial implementation dates in 1994 shall not apply to a RECLAIM NO<sub>x</sub> or SO<sub>x</sub> source, respectively. [2001]

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### SECTION E: ADMINISTRATIVE CONDITIONS

9. The operator shall, when a source test is required by AQMD, provide a source test protocol to AQMD no later than 60 days before the proposed test date. The test shall not commence until the protocol is approved by AQMD. The test protocol shall contain the following information: [204, 304]
  - a. Brief description of the equipment tested.
  - b. Brief process description, including maximum and normal operating temperatures, pressures, through-put, etc.
  - c. Operating conditions under which the test will be performed.
  - d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts/stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).
  - e. Brief description of sampling and analytical methods used to measure each pollutant, temperature, flow rates, and moisture.
  - f. Description of calibration and quality assurance procedures.
  - g. Determination that the testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (no conflict of interest).
  
10. The operator shall submit a report no later than 60 days after conducting a source test, unless otherwise required by AQMD Rules or equipment-specific conditions. The report shall contain the following information: [204]
  - a. The results of the source test.
  - b. Brief description of the equipment tested.
  - c. Operating conditions under which the test will be performed.
  - d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts/stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).
  - e. Field and laboratory data forms, strip charts and analyses.
  - f. Calculations for volumetric flow rates, emission rates, control efficiency, and overall control efficiency.
  
11. The operator shall, when a source test is required, provide and maintain facilities for sampling and testing. These facilities shall comply with the requirements of AQMD Source Test Method 1.1 and 1.2. [217]

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**SECTION E: ADMINISTRATIVE CONDITIONS**

12. Whenever required to submit a written report, notification or other submittal to the Executive Officer, AQMD, or the District, the operator shall mail or deliver the material to: Deputy Executive Officer, Engineering and Compliance, AQMD, 21865 E. Copley Drive, Diamond Bar, CA 91765-4182. [204]



## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS**

The Facility shall comply with all applicable monitoring and source testing requirements in Regulation XX. These requirements may include but are not limited to the following:

#### **I. NOx Monitoring Conditions**

A. The Operator of a NOx Major Source, as defined in Rule 2012, shall, as applicable:

1. Install, maintain, and operate an AQMD certified direct or time-shared monitoring device or an approved alternative monitoring device for each major NOx source to continuously measure the concentration of NOx emissions and all other applicable variables specified in Rule 2012, Table 2012-1 and Rule 2012, Appendix A, Table 2-A to determine the NOx emissions rate from each source. The time-sharing of CEMS among NOx sources may be allowed by the Executive Officer in accordance with the requirements for time sharing specified in Appendix A. [2012]
2. Install, maintain, and operate a totalizing fuel meter approved by the Executive Officer for each major source. [2012]
3. If the facility is operating existing CEMS and fuel meters, continue to follow recording and reporting procedures required by AQMD Rules and Regulations in effect prior to October 15, 1993 until the CEMS is certified pursuant to Rule 2012. [2012]
4. Use valid data collected by an AQMD certified or provisionally certified CEMS in proper operation that meets all the requirements of Appendix A of Rule 2012, unless final certification of the CEMS is denied, to determine mass emissions for all purposes, including, but not limited to, determining: [2012]
  - a. compliance with the annual Allocation;
  - b. excess emissions;
  - c. the amount of penalties; and
  - d. fees.
5. Follow missing data procedures as specified in Rule 2012 Appendix A whenever valid data is not available or collected to determine mass emissions for all purposes, including, but not limited to, determining: [2012]
  - a. compliance with the annual Allocation;
  - b. excess emissions;
  - c. the amount of penalties; and
  - d. fees.

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS**

B. The Operator of a NO<sub>x</sub> Large Source, as defined in Rule 2012, shall, as applicable:

Not Applicable

C. The Operator of a NO<sub>x</sub> Process Unit, as defined in Rule 2012, shall, as applicable:

Not Applicable

#### **II. NO<sub>x</sub> Source Testing and Tune-up Conditions**

1. The operator shall conduct all required NO<sub>x</sub> source testing in compliance with an AQMD-approved source test protocol. [2012]
2. The operator shall, as applicable, conduct source tests for every large NO<sub>x</sub> source no later than June 30, 1997 and every 3 years thereafter. The source test shall include the determination of NO<sub>x</sub> concentration and a relative accuracy audit of the exhaust stack flow determination (e.g. in-stack flow monitor or fuel flow monitor based F-factor calculation). Such source test results shall be submitted per the schedule described by APEP. In lieu of submitting the first source test report, the facility permit holder may submit the results of a source test not more than 3 years old which meets the requirements when conducted. [2012]
3. All NO<sub>x</sub> large sources and NO<sub>x</sub> process units shall be tuned-up in accordance with the schedule specified in Rule 2012, Appendix A, Chapter 5, Table 5-B. [2012]

#### **III. SO<sub>x</sub> Monitoring Conditions**

D. The Operator of a SO<sub>x</sub> Major Source, as defined in Rule 2011, shall, as applicable:

1. Install, maintain, and operate an AQMD certified direct or time-shared monitoring device or an approved alternative monitoring device for each major SO<sub>x</sub> source to continuously measure the concentration of SO<sub>x</sub> emissions or fuel sulfur content and all other applicable variables specified in Rule 2011, Table 2011-1 and Rule 2011, Appendix A, Table 2-A to determine the SO<sub>x</sub> emissions rate from each source. The time-sharing of CEMS among SO<sub>x</sub> sources may be allowed by the Executive Officer in accordance with the requirements for time sharing specified in Appendix A. [2011]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS

2. Install, maintain, and operate totalizing fuel meter approved by the Executive Officer for each major source. [2011]
  3. If the facility is operating existing CEMS and fuel meters, continue to follow recording and reporting procedures required by AQMD Rules and Regulations in effect prior to October 15, 1993 until the CEMS is certified pursuant to Rule 2011. [2011]
  4. Use valid data collected by an AQMD certified or provisionally certified CEMS in proper operation that meets all the requirements of Appendix A of Rule 2011, unless final certification of the CEMS is denied, to determine mass emissions for all purposes, including, but not limited to, determining: [2011]
    - a. compliance with the annual Allocation;
    - b. excess emissions;
    - c. the amount of penalties; and
    - d. fees.
  5. Follow missing data procedures as specified in Rule 2011 Appendix A whenever valid data is not available or collected to determine mass emissions for all purposes, including, but not limited to, determining: [2011]
    - a. compliance with the annual Allocation;
    - b. excess emissions;
    - c. the amount of penalties; and
    - d. fees.
- E. The Operator of a SO<sub>x</sub> Process Unit, as defined in Rule 2011, shall, as applicable:
- Not Applicable

#### IV. SO<sub>x</sub> Source Testing Conditions

1. The operator shall conduct all required SO<sub>x</sub> source testing in compliance with an AQMD-approved source test protocol. [2011]



## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR RECLAIM SOURCES**

The Facility shall comply with all applicable reporting and recordkeeping requirements in Regulation XX. These requirements may include but are not limited to the following:

#### **I. Recordkeeping Requirements for all RECLAIM Sources**

1. The operator shall maintain all monitoring data required to be measured or reported pursuant to Rule 2011 and Rule 2012, whichever is applicable. All records shall be made available to AQMD staff upon request and be maintained for at least:
  - a. Three years after each APEP report is submitted to AQMD for a facility not subject to Title V, unless a different time period is required in Rule 2011 or Rule 2012 [2011 & 2012]; or
  - b. Five years after each APEP report is submitted to AQMD for a facility subject to Title V. [3004(a)(4)(E)]
  - c. Notwithstanding the above, all data gathered or computed for intervals of less than 15 minutes shall only be maintained a minimum of 48 hours. [2011 & 2012]
2. The operator shall store on site and make available to the Executive Officer upon request: records used to determine emissions, maintenance records, sources test reports, relative accuracy test audit reports, relative accuracy audit reports and fuel meter calibration records. [2011 & 2012]

#### **II. Reporting Requirements for all RECLAIM Sources**

1. The operator shall submit a quarterly certification of emissions including the facility's total NO<sub>x</sub> or SO<sub>x</sub> emissions, whichever is applicable, for the quarter within 30 days after the end of the first three quarters and 60 days after the end of the fourth quarter of a compliance year. [2011 & 2012]

#### **NO<sub>x</sub> Reporting Requirements**

- A. The Operator of a NO<sub>x</sub> Major Source, as defined in Rule 2012, shall, as applicable:
  1. No later than 12 months after entry into the RECLAIM program or after the initial operation of a new major source, whichever is later, install, maintain, and operate a reporting device to electronically report everyday to the AQMD central station for each major NO<sub>x</sub> source, the total daily mass emissions of NO<sub>x</sub> and daily status codes. Such data

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR RECLAIM SOURCES**

shall be transmitted by 5:00 p.m. of the following day. If the facility experiences a power, computer, or other system failure that prevents the submittal of the daily report, the Facility Permit holder shall be granted 24 hours extension to submit the report. [2012]

2. Calculate NO<sub>x</sub> emissions pursuant to missing data procedures set forth in Appendix A, Chapter 2 of Rule 2012 if the Facility Permit holder fails to meet the deadline for submitting the daily report. [2012]
3. Submit an electronic report within 15 days following the end of each month totaling NO<sub>x</sub> emissions from all major NO<sub>x</sub> sources during the month. [2012]
4. For those facilities with existing CEMS and fuel meters as of October 15, 1993, continue to follow recording and reporting procedures required by AQMD Rules and Regulations in effect until the CEMS is certified pursuant to Rule 2011 and/or Rule 2012, as applicable. [2012]

B. The Operator of a NO<sub>x</sub> Large Source, as defined in Rule 2012, shall:

Not Applicable

C. The Operator of a NO<sub>x</sub> Process Unit, as defined in Rule 2012, shall:

Not Applicable

#### **SO<sub>x</sub> Reporting Requirements**

D. The Operator of a SO<sub>x</sub> Major Source, as defined in Rule 2011, shall, as applicable:

1. No later than 12 months after entry into the RECLAIM program or after the initial operation of a new major source, whichever is later, install, maintain, and operate a reporting device to electronically report everyday to the AQMD central station for each major SO<sub>x</sub> source, the total daily mass emissions of SO<sub>x</sub> and daily status codes. Such data shall be transmitted by 5:00 p.m. of the following day. If the facility experiences a power, computer, or other system failure that prevents the submittal of the daily report, the Facility Permit holder shall be granted 24 hours extension to submit the report. [2011]
2. Calculate SO<sub>x</sub> emissions pursuant to missing data procedures set forth in Appendix A, Chapter 2 of Rule 2011 if the Facility Permit holder fails to meet the deadline for submitting the daily report. [2011]

**FACILITY PERMIT TO OPERATE  
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**SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR  
RECLAIM SOURCES**

3. Submit an electronic report within 15 days following the end of each month totaling SOX emissions from all major SOx sources during the month. [2011]
  4. For those facilities with existing CEMS and fuel meters as of October 15, 1993, continue to follow recording and reporting procedures required by AQMD Rules and Regulations in effect until the CEMS is certified pursuant to Rule 2011 and/or Rule 2012, as applicable. [2011]
- E. The Operator of a SOx Process Unit, as defined in Rule 2011, shall:

Not Applicable

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
<b>System 1 : STEAM METHANE REFORMING &amp; HYDROGEN PURIFICATION</b>					S2.1, S2.2, S13.1, S15.1, S15.2, S31.1
DRUM, V-100, FEED SURGE, PENTANE, WITH 2 PRVS TO ISOMAX FLARE GAS HEADER, HEIGHT: 20 FT 10 IN; DIAMETER: 6 FT 11 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D1				
VESSEL, V-101, HYDROTREATER, WITH A PRV TO ISOMAX FLARE GAS HEADER, HEIGHT: 8 FT 8 IN; DIAMETER: 7 FT 9 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D2				
VESSEL, V-102A, SULFUR ABSORBER, WITH A PRV TO ISOMAX FLARE GAS HEADER, HEIGHT: 7 FT 9 IN; DIAMETER: 7 FT 9 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D3				
VESSEL, V-102B, SULFUR ABSORBER, WITH A PRV TO ISOMAX FLARE GAS HEADER, HEIGHT: 7 FT 9 IN; DIAMETER: 7 FT 9 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D4				
VESSEL, V-103, SULFUR ABSORBER, HEIGHT: 25 FT 7 IN; DIAMETER: 3 FT 2 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D5				

- \* (1) Denotes RECLAIM emission factor
- (2) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

† This permit to construct was issued to the previous operator at a prior date. The equipment was constructed and the permit was subsequently transferred to this operator.

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
VESSEL, V-104, PREREFORMER, HEIGHT: 5 FT 6 IN; DIAMETER: 9 FT 2 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D6				C1.1, E71.1
VESSEL, V-105, MEDIUM TEMPERATURE SHIFT CONVERTER, HEIGHT: 11 FT 6 IN; DIAMETER: 11 FT 2 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D7				
VESSEL, V-106, CONDENSATE FLASH DRUM, HEIGHT: 9 FT 6 IN; DIAMETER: 2 FT 11 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D8				
VESSEL, V-107, DEAERATOR / GASIFIER, WITH AN EMERGENCY PRV TO ATM., HEIGHT: 36 FT 3 IN; DIAMETER: 11 FT 11 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D9				E336.1
DRUM, V-109, BLOWDOWN, HEIGHT: 10 FT 2 IN; DIAMETER: 3 FT 6 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D10				

- |  |   |
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| <ul style="list-style-type: none"> <li>* (1) Denotes RECLAIM emission factor</li> <li>(3) Denotes RECLAIM concentration limit</li> <li>(5)(5A)(5B) Denotes command and control emission limit</li> <li>(7) Denotes NSR applicability limit</li> <li>(9) See App B for Emission Limits</li> </ul> | <ul style="list-style-type: none"> <li>(2) Denotes RECLAIM emission rate</li> <li>(4) Denotes BACT emission limit</li> <li>(6) Denotes air toxic control rule limit</li> <li>(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)</li> <li>(10) See Section J for NESHAP/MACT requirements</li> </ul> |
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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
VESSEL, V-110, HIGH PRESSURE STRIPPER, WITH AN EMERGENCY PRV TO ATM., HEIGHT: 49 FT 4 IN; DIAMETER: 3 FT 2 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D11				
ADSORBER, V-601 TO V-612, 12 UNITS, PSA ADSORPTION A/N: 457657 † Permit to Construct Issued: 11/07/06	D12				E440.1
DRUM, V-613, PSA OFFGAS, WITH TWO PRVS TO THE SMR HYDROGEN PLANT FLARE GAS HEADER, HEIGHT: 97 FT 8 IN; DIAMETER: 12 FT 6 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D13				E336.2
VESSEL, V-114, 1ST PROCESS CONDENSATE SEPARATOR, HEIGHT: 10 FT 10 IN; DIAMETER: 6 FT 8 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D14				
VESSEL, V-115, 2ND PROCESS CONDENSATE SEPARATOR, HEIGHT: 11 FT 2 IN; DIAMETER: 6 FT A/N: 457657 † Permit to Construct Issued: 11/07/06	D15				E336.3

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|--|---|
| <ul style="list-style-type: none"> <li>* (1) Denotes RECLAIM emission factor</li> <li>(3) Denotes RECLAIM concentration limit</li> <li>(5)(5A)(5B) Denotes command and control emission limit</li> <li>(7) Denotes NSR applicability limit</li> <li>(9) See App B for Emission Limits</li> </ul> | <ul style="list-style-type: none"> <li>(2) Denotes RECLAIM emission rate</li> <li>(4) Denotes BACT emission limit</li> <li>(6) Denotes air toxic control rule limit</li> <li>(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)</li> <li>(10) See Section J for NESHAP/MACT requirements</li> </ul> |
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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
DRUM, V-116, STARTUP KNOCKOUT DRUM, HEIGHT: 7 FT 6 IN; DIAMETER: 4 FT A/N: 457657 † Permit to Construct Issued: 11/07/06	D16				
DRUM, V-117, KNOCKOUT DRUM, REFINERY GAS "A", HEIGHT: 7 FT 4 IN; DIAMETER: 3 FT A/N: 457657 † Permit to Construct Issued: 11/07/06	D17				
DRUM, V-118, KNOCKOUT DRUM, REFINERY GAS "B", WITH A PRV TO ISOMAX FLARE GAS HEADER, HEIGHT: 7 FT; DIAMETER: 3 FT 7 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D18				
COMPRESSOR, C-101, NATURAL GAS, 3800 H.P. ELECTRIC-DRIVE (MAIN); 3800 H.P. ELECTRIC-DRIVE (SPARE) A/N: 457657 † Permit to Construct Issued: 11/07/06	D19				
COMPRESSOR, C-102 A & B, REFINERY GAS "A" AND HYDROGEN, EACH 7450 H.P. ELECTRIC-DRIVE, WITH A PRV TO ISOMAX FLARE HEADER A/N: 457657 † Permit to Construct Issued: 11/07/06	D20				H23.2

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| <ul style="list-style-type: none"> <li>* (1) Denotes RECLAIM emission factor</li> <li>(3) Denotes RECLAIM concentration limit</li> <li>(5)(5A)(5B) Denotes command and control emission limit</li> <li>(7) Denotes NSR applicability limit</li> <li>(9) See App B for Emission Limits</li> </ul> | <ul style="list-style-type: none"> <li>(2) Denotes RECLAIM emission rate</li> <li>(4) Denotes BACT emission limit</li> <li>(6) Denotes air toxic control rule limit</li> <li>(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)</li> <li>(10) See Section J for NESHAP/MACT requirements</li> </ul> |
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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
COMPRESSOR, C-106, COMPRESSION, NITROGEN A/N: 457657 † Permit to Construct Issued: 11/07/06	D21				
VESSEL, E-115 A & B, VAPORIZER, WITH 2 PRVS TO ISOMAX FLARE GAS HEADER A/N: 457657 † Permit to Construct Issued: 11/07/06	D22				
VESSEL, V-119, INTERMITTENT BLOWDOWN DRUM A/N: 457657 † Permit to Construct Issued: 11/07/06	D30				E71.2
VESSEL, V-108, STEAM DRUM, HEIGHT: 40 FT; DIAMETER: 7 FT 10 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D36				
VESSEL, V-120, COALESCER, REFINERY FUEL GAS "B", HEIGHT: 10 FT 1 IN; DIAMETER: 1 FT 8 IN A/N: 457657 † Permit to Construct Issued: 11/07/06	D37				
HEAT EXCHANGER, E-101, NO. 1 PROCESS STEAM GENERATOR, SHELL AND TUBE TYPE, 168 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D38				

- \* (1) Denotes RECLAIM emission factor
- (2) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
HEAT EXCHANGER, E-102, 1ST BFW PREHEATER, SHELL AND TUBE TYPE, 27 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D39				
HEAT EXCHANGER, E-103, 2ND BFW PREHEATER, SHELL AND TUBE TYPE, 20 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D40				
HEAT EXCHANGER, E-104A/B, 3RD BFW PREHEATERS, 2 TOTAL, SHELL AND TUBE TYPE, 48 MMBTU/HR EACH A/N: 457657 † Permit to Construct Issued: 11/07/06	D41				
HEAT EXCHANGER, E-105, DMW HEATER, SHELL AND TUBE TYPE, 35 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D42				
HEAT EXCHANGER, E-106, AIR COOLER, SHELL AND TUBE TYPE, 34 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D43				
HEAT EXCHANGER, E-107, WATER COOLER, SHELL AND TUBE TYPE, 4 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D44				

- \* (1) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
HEAT EXCHANGER, E-113, PROCESS CONDENSATE, SHELL AND TUBE TYPE, 14.6 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D45				
HEAT EXCHANGER, E-116A/B, FEED PREHEATERS, 2 TOTAL, SHELL AND TUBE TYPE, 12.3 MMBTU/HR EACH A/N: 457657 † Permit to Construct Issued: 11/07/06	D46				
HEAT EXCHANGER, E-117, NH3 PREHEATER/VAPORIZER, 3.6 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D47				
HEAT EXCHANGER, E-118, NH3 HEATER, SHELL AND TUBE TYPE, 0.6 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D48				
HEAT EXCHANGER, E-120, START-UP N2 HEATER, SHELL AND TUBE TYPE, 4.9 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D49				
HEAT EXCHANGER, E-121, START-UP N2 COOLER, SHELL AND TUBE TYPE, 5.7 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D50				

- \* (1) Denotes RECLAIM emission factor
- (2) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
HEAT EXCHANGER, E-123, HDS START-UP COOLER, SHELL AND TUBE TYPE, 8.6 MMBTU/HR A/N: 457657 † Permit to Construct Issued: 11/07/06	D51				
PUMP, P-102A/B, HIGH PRESSURE STRIPPER PUMPS, 2 TOTAL, 157 GPM EACH A/N: 457657 † Permit to Construct Issued: 11/07/06	D53				
PUMP, P-103A/B, PENTANE FEED, 2 TOTAL, 213 GPM EACH A/N: 457657 † Permit to Construct Issued: 11/07/06	D54				
PUMP, P-104A/B, AMMONIA FEED, 2 TOTAL, 20 GPM EACH A/N: 457657 † Permit to Construct Issued: 11/07/06	D55				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 457657 † Permit to Construct Issued: 11/07/06	D23				H23.2
<b>System 2 : STEAM METHANE REFORMER HEATING SYSTEM</b>					S31.1
HEATER, H-101, TUBULAR REFORMER, HALDOR TOPSOE, NATURAL GAS / PSA OFFGAS / REFINERY GAS FUEL, 780 MMBTU/HR WITH A/N: 457785 † Permit to Construct Issued: 11/07/06	D24	C26	NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; CO: 10 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996] ; NOX: 5 PPMV (4) [RULE 2005,4-20-2001]	A63.1, A99.1, A99.2, A195.1, A195.2, B61.1, B61.2, C1.2, C1.3, C1.4, C1.5, C1.6, D12.3, D12.4,

- \* (1) Denotes RECLAIM emission factor
- (2) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
BURNER, LOW NOX, CALLIDUS, NATURAL GAS / PSA OFFGAS / REFINERY GAS, 360 TOTAL; 780 MMBTU/HR				PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: (9) [RULE 404,2-7-1986]	D12.5, D28.1, D82.1, E54.1, H23.5, K67.1
SELECTIVE CATALYTIC REDUCTION, V-113, PEERLESS, WITH 644.14 CU. FT. OF HALDOR TOPSOE DNX-930 CATALYST, WIDTH: 25 FT; HEIGHT: 11 FT; LENGTH: 16 FT WITH A/N: 457787 † Permit to Construct Issued: 11/19/04 AMMONIA INJECTION, 29% AQUEOUS AMMONIA	C26	D24		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996]	A99.3, A195.3, D12.1, D12.2, D12.6, D28.2, D82.2, E448.1
BLOWER, C-105, AMMONIA MIXING, 364 SCFM A/N: 457785 † Permit to Construct Issued: 11/07/06	D52				
BLOWER, C-103, FURNACE FORCED DRAFT, 800 H.P. A/N: 457785 † Permit to Construct Issued: 11/07/06	D56				
BLOWER, C-104, FURNACE INDUCED DRAFT, 1500 H.P. A/N: 457785 † Permit to Construct Issued: 11/07/06	D57				

- \* (1) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

† This permit to construct was issued to the previous operator at a prior date. The equipment was constructed and the permit was subsequently transferred to this operator.

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : HYDROGEN GENERATION</b>					
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 457785 † Permit to Construct Issued: 11/07/06	D27				H23.2
<b>Process 2 : AIR POLLUTION CONTROL</b>					
<b>System 1 : SMR HYDROGEN PLANT CO CONTROL FLARE</b>					
FLARE, GROUND FLARE, FL-201, ENCL. CO CTRL, 2 STGE, 24 BURNERS, NON-ASSTD, 5 NAT. GAS FIRED PILTS, N2 PURGE OF FLARE GAS HEADER, CALLIDUS MODEL BTZ-TEGF-36/60, WIDTH: 36 FT; HEIGHT: 60 FT A/N: 457788 † Permit to Construct Issued: 07/15/05	C28			CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: (9) [RULE 404,2-7-1986]	S18.1  D12.7, D12.8, D28.3, D323.1, H23.5, H23.6

- \* (1) Denotes RECLAIM emission factor
- (2) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

† This permit to construct was issued to the previous operator at a prior date. The equipment was constructed and the permit was subsequently transferred to this operator.

**FACILITY PERMIT TO OPERATE  
AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**SECTION H: DEVICE ID INDEX**

**The following sub-section provides an index  
to the devices that make up the facility  
description sorted by device ID.**

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: DEVICE ID INDEX

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D3	1	1	1
D4	1	1	1
D5	1	1	1
D6	2	1	1
D7	2	1	1
D8	2	1	1
D9	2	1	1
D10	2	1	1
D11	3	1	1
D12	3	1	1
D13	3	1	1
D14	3	1	1
D15	3	1	1
D16	4	1	1
D17	4	1	1
D18	4	1	1
D19	4	1	1
D20	4	1	1
D21	5	1	1
D22	5	1	1
D23	8	1	1
D24	8	1	2
C26	9	1	2
D27	10	1	2
C28	10	2	1
D30	5	1	1
D36	5	1	1
D37	5	1	1
D38	5	1	1
D39	6	1	1
D40	6	1	1
D41	6	1	1
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## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: DEVICE ID INDEX

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D52	9	1	2
D53	8	1	1
D54	8	1	1
D55	8	1	1
D56	9	1	2
D57	9	1	2

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

#### FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

- (a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or
- (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[**RULE 401, 3-2-1984**; RULE 401, 11-9-2001]

F14.1 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[**RULE 431.2, 5-4-1990**; RULE 431.2, 9-15-2000]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

- a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).
- b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[**40CFR 68 - Accidental Release Prevention, 5-24-1996**]

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

40CFR60, Subpart A

[**40CFR 60 Subpart A, 4-9-1993**]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

F60.1 The emission limits identified in Section D and H of the permit shall be defined as emissions discharged to the atmosphere originated from the equipment.

### SYSTEM CONDITIONS

S2.1 The operator shall limit emissions from this system as follows

Contaminant	Emission Limit
VOC	Less than 0.5 LBS PER DAY

For the purposes of this condition, the emission limit(s) refers to the total VOC emissions from the system's process vents.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1]

S2.2 The operator shall limit emissions from this system as follows

Contaminant	Emission Limit
VOC	Less than 0.5 lbs/mmscf of hydrogen produced

For the purposes of this condition, the emission limit(s) refers to the total VOC emissions from the system's process vents.

**[RULE 1189, 1-21-2000]**

[Systems subject to this condition : Process 1, System 1]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

S13.1 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule/Regulation	Number/Subpart
VOC	District Rule	1189

**[RULE 1189, 1-21-2000]**

[Systems subject to this condition : Process 1, System 1]

S15.1 The vent gases from all affected devices of this process/system shall be vented as follows:

All vent gases under normal operating conditions shall be directed to Chevron vapor recovery and/or Chevron flare system.

This process/system shall not be operated unless the Chevron vapor recovery system(s) or Chevron flare(s) is in full use and has a valid permit to receive vent gases from this system.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1]

S15.2 The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to Chevron vapor recovery and/or flare system except Devices IDs D9 (deaerator), D11 (high pressure stripper), and D12 (hydrogen product from PSA) in Process 1, System 1 that vent to the atmosphere.

This process/system shall not be operated unless the Chevron vapor recovery system(s) or flare(s) is in full use and has a valid permit to receive vent gases from this system.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- S18.1 All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Steam Methane Reforming & Hydrogen Purification (Process: 1, System: 1)

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 2, System 1]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- S31.1 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 457657 & 457785:

The operator shall provide to the District, no later than 60 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The valves and flanges shall be categorized by size and service. The operator shall submit a listing of all new non-bellows seal valves which shall be categorized by tag no., size, type, operating temperature, operating pressure, body material, application, and reasons why bellows-seal valves were not used.

All new valves in VOC service, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in Rule 1173, shall be bellow-seal valves, except as approved by the District, in the following applications: (see list below)

Heavy liquid service, control valve, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g., drain valves with valve stems in horizontal position), retrofits/special applications with space limitations, and valves not commercially available.

All new valves and major components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in Rule 1173, shall be distinctly identified from other components through their tag numbers (e.g., numbers ending in the letter "N"), and shall be noted in the records.

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA Reference Method 21. All new valves and flanges in VOC service, except those specifically exempted by Rule 1173, shall be inspected monthly using EPA Method 21.

If 98.0 percent or greater of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv for two consecutive months, then the operator may change to a quarterly inspection program with the approval of the District.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv.

All new components in VOC service with a leak greater than 500 ppmv but less than 1,000 ppmv, as methane, measured above background using EPA Method 21 shall be repaired within 14 days of detection. Components shall be defined as any valve, fitting, pump, compressor, pressure relief valve, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. Records shall be kept and maintained for at least two years, and shall be made available to the Executive Officer or his authorized representative upon request. Once Title V permit is issued, records shall be maintained for five years.

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Systems subject to this condition : Process 1, System 1 , 2]

### DEVICE CONDITIONS

#### A. Emission Limits

A63.1 The operator shall limit emissions from this equipment as follows:

Contaminant	Emission Limit
VOC	Less than or equal to 3,399 LBS IN ANY CALENDAR MONTH
PM10	Less than or equal to 3,642 LBS IN ANY CALENDAR MONTH
CO	Less than or equal to 3,843 LBS IN ANY CALENDAR MONTH

The operator shall calculate the emission limit(s) for compliance determination purposes for VOC and PM10 based on at least three one-hour source tests using District-approved test methods for emission rates and fuel usage as determined by a RECLAIM-certified fuel meter during the day of the test (0000 - 2400 hours). For compliance determination purposes, CO emissions shall be calculated based on certified continuous monitor, which shall have the capability to show cumulative daily emissions.

The operator shall calculate the emission limit(s) for purposes of determining compliance with the PM10 emission limit specified above, and to avoid double counting of SO2 emissions, the PM10 that may be formed due to the reaction of SO2 with NH3 in the sampling impingers used in such analysis shall be deducted and excluded as PM10 emission. This methodology shall be included in a District-approved test protocol and shall be used to calculate PM10 emissions based on source test results.

**[RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : D24]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A99.1 The 5 PPM NOX emission limit(s) shall not apply during startup and shutdown.

**[RULE 2005, 4-20-2001]**

[Devices subject to this condition : D24]

A99.2 The 10 PPM CO emission limit(s) shall not apply during startup and shutdown.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D24]

A99.3 The 5 PPM NH3 emission limit(s) shall not apply during startup and shutdown.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : C26]

A195.1 The 5 PPMV NOX emission limit(s) is averaged over 3 consecutive hours @ 3 percent oxygen, dry basis.

**[RULE 2005, 4-20-2001]**

[Devices subject to this condition : D24]

A195.2 The 10 PPMV CO emission limit(s) is averaged over 3 consecutive hours @ 3 percent oxygen, dry basis.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D24]

A195.3 The 5 PPMV NH3 emission limit(s) is averaged over 3 consecutive hours @ 3 percent oxygen, dry basis.

**[RULE 2005, 4-20-2001]**

[Devices subject to this condition : C26]

### **B. Material/Fuel Type Limits**

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

B61.1 The operator shall not use refinery gas fuel containing the following specified compounds:

Compound	ppm by volume
total sulfur compounds calculated as H <sub>2</sub> S greater than	40

The total sulfur concentration limit as H<sub>2</sub>S shall be based on a 4-hr averaging period.

**[RULE 2005, 4-20-2001]**

[Devices subject to this condition : D24]

B61.2 The operator shall not use fuel gas, except uncombined natural gas containing the following specified compounds:

Compound	ppm by volume
H <sub>2</sub> S greater than	160

The H<sub>2</sub>S concentration limit shall be based on a rolling 3-hour averaging period.

Air Liquide shall monitor and record the H<sub>2</sub>S concentration of the PSA Off-gas that is combusted in this heater according to the methodology and schedule specified in the Alternative Monitoring Plan (AMP) for the 40 CFR Part 60, Subpart J monitoring requirements for the "Pressure Swing Adsorption (PSA) Off-gas Stream to Reformer Heater H-101" as approved for Chevron by the United States Environmental Protection Agency (USEPA) on December 1, 2006.

Air Liquide shall also comply with all other applicable requirements of the subject AMP.

Air Liquide shall ensure that the H<sub>2</sub>S concentration of the refinery fuel gas, which is supplied to this heater from the Chevron refinery, is being continuously monitored and recorded by an instrument that meets the requirements of 40CFR60 Subpart J.

**[40CFR 60 Subpart J, 10-4-1991]**

[Devices subject to this condition : D24]

### C. Throughput or Operating Parameter Limits

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- C1.1 The operator shall limit the production rate to no more than 90 MM cubic feet per day.

For the purpose of this condition, production rate shall be defined as the production capacity of the process system for hydrogen gas at standard conditions.

**[RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : D6]

- C1.2 The operator shall limit the firing rate to no more than 780 MM Btu per hour.

For the purpose of this condition, firing rate shall be defined as the sum total of energy or heat inputs to the equipment combustion chamber based on the higher heating values (HHVs) of the fuel gases used.

**[RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : D24]

- C1.3 The operator shall limit the refinery gas fuel usage to no more than 224.6 MM Btu per hour.

For the purpose of this condition, fuel usage shall be defined as the equivalent total heat input to the equipment combustion chamber based on the fuel consumption and the corresponding higher heating value of refinery fuel gas used.

**[RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : D24]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

C1.4 The operator shall limit the duration of startup to no more than 144 hour(s).

For the purpose of this condition, startup shall be defined as the initial cold startup or initial firing of the equipment after its refractory dry-out operation has been completed. The time allowed for the startup specified under this condition shall be within a period of 60 days after start of refractory dry-out operation.

The operator shall be allowed 192 hours total within a period of 60 calendar days from start to complete its refractory dry-out operation.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

**[RULE 2012, 12-5-2003; RULE 2012, 1-7-2005]**

[Devices subject to this condition : D24]

C1.5 The operator shall limit the duration of startup to no more than 24 hour(s).

The duration of startup allowed under this condition for each event shall occur during normal operation of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

**[RULE 2012, 12-5-2003; RULE 2012, 1-7-2005]**

[Devices subject to this condition : D24]

C1.6 The operator shall limit the duration of shutdown to no more than 4 hour(s).

The duration of shutdown allowed under this condition for each event shall occur during normal operation of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

**[RULE 2012, 12-5-2003; RULE 2012, 1-7-2005]**

[Devices subject to this condition : D24]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

#### **D. Monitoring/Testing Requirements**

D12.1 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the SCR catalyst beds in inches water column.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : C26]

D12.2 The operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature at the inlet to the SCR catalyst bed.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : C26]

D12.3 The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the oxygen concentration at the exhaust stack.

The continuous monitoring system required under this condition shall be in accordance with RECLAIM requirements.

The operator shall also install and maintain a device to continuously record the parameter being measured.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2005, 4-20-2001]**

[Devices subject to this condition : D24]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- D12.4 The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the fuel usage being supplied to the fuel supply line.

The continuous fuel monitoring system required under this condition shall be a non-resettable fuel meter that would accurately indicate the fuel gas usage in the natural gas and refinery gas fuel supply lines per RECLAIM requirements.

The operator shall also install and maintain a device to continuously record the parameter being measured.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2005, 4-20-2001]**

[Devices subject to this condition : D24]

- D12.5 The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the energy input at the combustion chamber.

The continuous fuel monitoring system required under this condition shall be in accordance with RECLAIM requirements.

The operator shall also install and maintain a device to continuously record the parameter being measured.

This condition is for the purpose of showing compliance with the heat input limit specified under Condition No. C1.2 and C1.3.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2005, 4-20-2001]**

[Devices subject to this condition : D24]

- D12.6 The operator shall install and maintain a(n) flow meter to accurately indicate the ammonia injection rate at the inlet to the SCR catalyst bed.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : C26]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- D12.7 The operator shall install and maintain a(n) thermocouple to accurately indicate the presence of a flame at the pilot light.

The operator shall also install and maintain a device to continuously record the parameter being measured.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]**

[Devices subject to this condition : C28]

- D12.8 The operator shall install and maintain a(n) thermocouple to accurately indicate the temperature at the flare stack.

The thermocouple shall extend into the flare a minimum of 8 inches beyond the flare wall insulation.

The thermocouple shall be located at a height of 8 to 12 feet from the top of the flare stack.

The operator shall also install and maintain a device to continuously record the temperature during any time that there is flow of syngas or PSA offgas to the flare. For the purpose of this condition, continuous recording is defined as once every 60 seconds.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : C28]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted within 90 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test shall be conducted when this equipment is operating at 80 percent or greater of the heater maximum design capacity or at 90 percent or greater based on the maximum demonstrated hydrogen production capacity if it is not possible to reach 80 percent of the heater maximum design capacity.

The test shall be conducted to demonstrate compliance with the emission limits of 5 ppmv NO<sub>x</sub>, 5 ppmv NH<sub>3</sub>, and 10 ppmv CO, all at 3 percent oxygen, dry basis, three-hour average.

The test shall be conducted to determine and report the mass emission rate in pounds per day for NO<sub>x</sub>, SO<sub>x</sub>, ROG, CO, Total PM and PM<sub>10</sub>.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted only at the stack outlet of the APC device serving the equipment.

The test shall be conducted to determine the non-methane and non-ethane hydrocarbon emissions.

The test shall be conducted to determine the oxygen concentration.

The test shall be conducted to determine the Acetaldehyde emissions.

The test shall be conducted to determine the Benzene emissions.

The test shall be conducted to determine the Formaldehyde emissions.

The test shall be conducted to determine the PAHs emissions.

The test shall be conducted to speciate organic compounds at the outlet using District-approved methods.

The test shall be conducted every three years after the initial source test for NO<sub>x</sub>, SO<sub>x</sub>, ROG, CO, PM<sub>10</sub>, total PM, and O<sub>2</sub>. Subsequent test after initial test for CO and O<sub>2</sub> shall be conducted until their required CEMS are certified by the District. Once certified, source test data may be substituted with CEMS data.

The test shall be conducted for NO<sub>x</sub> and SO<sub>x</sub> (for initial and subsequent testing) until their CEMS are Reclaim certified. Once certified, source test data may be substituted with CEMS data.

The test shall be conducted after District approval of a source test protocol submitted in accordance with Section E - Administrative Conditions.

The test shall be conducted and test report submitted to the District in accordance with Section E - Administrative Conditions.

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

**[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2005, 4-20-2001; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]**

[Devices subject to this condition : D24]

D28.2 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted within 90 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test shall be conducted when this equipment is operating at 80 percent or greater of the heater maximum design capacity or at 90 percent or greater based on the maximum demonstrated hydrogen production capacity if it is not possible to reach 80 percent of the heater maximum design capacity.

The test shall be conducted to demonstrate compliance with the emission limit of 5 ppmv NH<sub>3</sub>, at 3 percent oxygen, dry basis, three-hour average.

The test shall be conducted to determine and report the mass emission rate in pounds per day for NH<sub>3</sub>.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted only at the stack outlet of this equipment.

The test shall be conducted to determine the oxygen concentration.

The test shall be conducted every year after the initial source test for NH<sub>3</sub> and O<sub>2</sub>. Subsequent test after initial test for NH<sub>3</sub> and O<sub>2</sub> shall be conducted until their required CEMS are certified by the District. Once certified, source test data may be substituted with CEMS data.

The test shall be conducted after District approval of a source test protocol submitted in accordance with Section E - Administrative Conditions.

The test shall be conducted and test report submitted to the District in accordance with Section E - Administrative Conditions.

**[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2005, 4-20-2001; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : C26]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

D28.3 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted at the first planned shutdown or startup of the SMR Hydrogen Plant following the issuance of a permit to construct under application number 440494.

The test shall be conducted during a time that PSA offgas is being vented to the flare.

The test shall be conducted to determine the CO emissions (ppmv) at the outlet of the flare.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted after District approval of a source test protocol submitted in accordance with Section E - Administrative Conditions with the exception that the test protocol shall be submitted to the District no later than 30 days before the proposed test date.

The test shall be conducted and test report submitted to the District in accordance with Section E - Administrative Conditions.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : C28]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D82.1 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv

CO concentration in ppmv

Oxygen concentration in percent volume

Concentrations shall be corrected to 3 percent oxygen on a dry basis.

The CEMS shall be installed prior to initial cold startup and shall be certified within a year of installation. Certification test data shall be submitted within 60 days following test completion.

The CEMS will convert the actual NOX concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

**[RULE 1303(a)-BACT, 5-10-1996; RULE 2012, 12-5-2003; RULE 2012, 1-7-2005; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]**

[Devices subject to this condition : D24]

D82.2 The operator shall install and maintain a CEMS to measure the following parameters:

NH3 concentration in ppmv

Concentrations shall be corrected to 3 percent oxygen on a dry basis.

The CEMS shall be installed and maintained to continuously record the parameter being measured.

The CEMS shall be installed after consultation with the SCAQMD on the appropriate CEMS. The operator shall submit to the SCAQMD at least 60 days prior to the installation of the CEMS, a CEMS application proposal and a Quality Control and Performance Evaluation plan for the operation of the CEMS. The CEMS shall be accurate to within plus or minus 20 percent relative accuracy. It shall be calibrated at least once every 12 months or as outlined in the Quality Control and Performance Evaluation plan.

**[RULE 1303(a)-BACT, 5-10-1996]**

[Devices subject to this condition : C26]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever visible emissions are observed, and on an annual (calendar year) basis, at least, unless syngas or PSA offgas is not vented to the flare during the entire annual period. The annual inspection shall be conducted during daylight hours and during a time when syngas or PSA offgas is being vented to the flare.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984]**

[Devices subject to this condition : C28]

### **E. Equipment Operation/Construction Requirements**

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- E54.1 The operator is not required to vent this equipment to the following equipment if any of the requirements listed below are met:

Device ID: C026 [[Selective Catalytic Reduction, V-113, Peerless, with Haldor Topsoe DNX-930 catalyst, 644.14 cu. ft. total]]

Requirement number 1: During startup or shutdown period.

Requirement number 2: During the refractory dry-out period (up to 192 cumulative hours) to allow the curing of refractory materials, during which time no production of hydrogen shall occur.

Requirement number 3: The heater exhaust is below 562 degrees Fahrenheit as measured at the inlet of the SCR.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D24]

- E71.1 The operator shall only use this equipment to process refinery fuel gas, pentane, natural gas, or anhydrous ammonia as feedstock(s).

**[RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : D6]

- E71.2 The operator shall only vent this equipment to the atmosphere for a total of 20 minutes per day. Daily records indicating the time and duration of each blowdown event shall be kept and maintained to show compliance with this condition.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D30]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

E336.1 The operator shall vent the vent gases from this equipment as follows:

All exhaust gases from this equipment shall be vented to the reformer heater H-101 (D024) convection section operating at a temperature of at least 1400 deg. F as indicated by a process thermocouple.

The equipment may be vented directly to atmosphere only during startup and shutdown of the SMR H2 Plant (Process 1, System 1). Such venting during startup may last up to 24 consecutive hours and shall not be more than 4 consecutive hours during a shutdown. Records shall be kept and maintained to show compliance with this condition.

This equipment shall not be operated or vented unless the reformer heater H-101 (D024) is in normal operation and has a valid permit to receive vent gases from this equipment.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D9]

E336.2 The operator shall vent the vent gases from this equipment as follows:

All PSA offgases shall be directed to the reformer heater during normal operating conditions.

All PSA offgases shall be vented to the SMR Hydrogen Plant Flare (C028 in Process 2, System 1) during startup until the gases can be vented to the SMR Heater (D024) and during shutdown and emergency/process upset conditions.

This equipment shall not be operated unless the flare is in full use and has a valid permit to receive vent gases from this equipment.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D13]

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

E336.3 The operator shall vent the vent gases from this equipment as follows:

All syngas that is not directed to D012 (PSA) during startup, shutdown or emergency/upset conditions shall be vented to the SMR Hydrogen Plant Flare (C028 in Process 2, System 1).

This equipment shall not be operated unless the flare is in full use and has a valid permit to receive vent gases from this equipment.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D15]

E440.1 The operator shall operate and maintain this equipment according to the following specifications:

Atmospheric venting of product/impure hydrogen shall be permitted only during periods of emergency/upset, startup, shutdown, during purity problems, or controlling the hydrogen system pressure in the refinery provided that such discharges do not endanger the health and safety of the public, or cause damage to business or property.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D12]

E448.1 The operator shall comply with the following requirements:

The operator shall inject aqueous ammonia into this equipment if the flue gas inlet temperature is 562 degrees Fahrenheit or greater.

**[RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : C26]

### **H. Applicable Rules**

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

H23.2 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule / Subpart
VOC	District Rule	1173
VOC	40CFR60, SUBPART	GGG

**[RULE 1173, 5-13-1994; 40CFR 60 Subpart GGG, 6-7-1985]**

[Devices subject to this condition : D20, D23, D27]

H23.5 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule / Subpart
H2S	40CFR60, SUBPART	J

**[40CFR 60 Subpart J, 10-4-1991]**

[Devices subject to this condition : D24, C28]

H23.6 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule / Subpart
SOX	District Rule	1118

**[RULE 1118, 11-4-2005]**

[Devices subject to this condition : C28]

### **K. Record Keeping/Reporting**

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

During startup, shutdown and dry-out periods, the firing rates, the flue gas temperature at the inlet to the SCR and process feed flow rates. Excess oxygen and NOx emissions on an hourly basis shall also be measured except during the dry-out period.

Daily fuel rate and average high heating value of each of the fuel gases used.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**

[Devices subject to this condition : D24]



## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION I: PLANS AND SCHEDULES**

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules.

NONE

NOTE: This section does not list compliance schedules pursuant to the requirements of Regulation XXX - Title V Permits; Rule 3004(a)(10)(C). For equipment subject to a variance, order for abatement, or alternative operating condition granted pursuant to Rule 518.2, equipment specific conditions are added to the equipment in Section D or H of the permit.

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**SECTION J: AIR TOXICS**

**NOT APPLICABLE**

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION K: TITLE V Administration**

#### **GENERAL PROVISIONS**

1. This permit may be revised, revoked, reopened and reissued, or terminated for cause, or for failure to comply with regulatory requirements, permit terms, or conditions. [3004(a)(7)(C)]
2. This permit does not convey any property rights of any sort or any exclusive privilege. [3004(a)(7)(E)]

#### **Permit Renewal and Expiration**

3. (A) Except for solid waste incineration facilities subject to standards under Section 129(e) of the Clean Air Act, this permit shall expire five years from the date that the initial Title V permit is issued. The operator's right to operate under this permit terminates at midnight on this date, unless the facility is protected by an application shield in accordance with Rule 3002(b), due to the filing of a timely and complete application for a Title V permit renewal, consistent with Rule 3003. [3004(a)(2), 3004(f)]  
  
(B) A Title V permit for a solid waste incineration facility combusting municipal waste subject to standards under Section 129(e) of the Clean Air Act shall expire 12 years from the date of issuance unless such permit has been renewed pursuant to this regulation. These permits shall be reviewed by the Executive Officer at least every five years from the date of issuance. [3004(f)(2)]
4. To renew this permit, the operator shall submit to the Executive Officer an application for renewal at least 180 days, but not more than 545 days, prior to the expiration date of this permit. [3003(a)(6)]

#### **Duty to Provide Information**

5. The applicant for, or holder of, a Title V permit shall furnish, pursuant to Rule 3002(d) and (e), timely information and records to the Executive Officer or designee within a reasonable time as specified in writing by the Executive Officer or designee. [3004(a)(7)(F)]

#### **Payment of Fees**

6. The operator shall pay all required fees specified in Regulation III - Fees. [3004(a)(7)(G)]

#### **Reopening for Cause**

7. The Executive Officer will reopen and revise this permit if any of the following circumstances occur:  
  
(A) Additional regulatory requirements become applicable with a remaining permit term of three or more years. Reopening is not required if the effective date of the requirement is later than the expiration date of this permit, unless the permit or any of its terms and conditions has been extended pursuant to paragraph (f)(4) of Rule 3004.

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION K: TITLE V Administration

- (B) The Executive Officer or EPA Administrator determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
- (C) The Executive Officer or EPA Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [3005(g)(1)]

### COMPLIANCE PROVISIONS

- 8. The operator shall comply with all regulatory requirements, and all permit terms and conditions, except:
  - (A) As provided for by the emergency provisions of condition no. 17 or condition no. 18, or
  - (B) As provided by an alternative operating condition granted pursuant to a federally approved (SIP-approved) Rule 518.2.

Any non-compliance with any federally enforceable permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or denial of a permit renewal application. Non-compliance may also be grounds for civil or criminal penalties under the California State Health and Safety Code. [3004(a)(7)(A)]

- 9. The operator shall allow the Executive Officer or authorized representative, upon presentation of appropriate credentials to:
  - (A) Enter the operator's premises where emission-related activities are conducted, or records are kept under the conditions of this permit;
  - (B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
  - (C) Inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - (D) Sample or monitor at reasonable times, substances or parameters for the purpose of assuring compliance with the facility permit or regulatory requirements. [3004(a)(10)(B)]
- 10. All terms and conditions in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the EPA Administrator and citizens under the federal Clean Air Act, unless the term or condition is designated as not federally enforceable. Each day during any portion of which a violation occurs is a separate offense. [3004(g)]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

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11. A challenge to any permit condition or requirement raised by EPA, the operator, or any other person, shall not invalidate or otherwise affect the remaining portions of this permit. [3007(b)]
12. The filing of any application for a permit revision, revocation, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition. [3004(a)(7)(D)]
13. It shall not be a defense for a person in an enforcement action, including those listed in Rule 3002(c)(2), that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit, except as provided for in "Emergency Provisions" of this section. [3004(a)(7)(H)]
14. The operator shall not build, erect, install, or use any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the California Health and Safety Code or of AQMD rules. This rule shall not apply to cases in which the only violation involved is of Section 41700 of the California Health and Safety Code, or Rule 402 of AQMD Rules. [408]
15. Nothing in this permit or in any permit shield can alter or affect:
  - (A) Under Section 303 of the federal Clean Air Act, the provisions for emergency orders;
  - (B) The liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance;
  - (C) The applicable requirements of the Acid Rain Program, Regulation XXXI;
  - (D) The ability of EPA to obtain information from the operator pursuant to Section 114 of the federal Clean Air Act;
  - (E) The applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do apply to the facility, such as toxics requirements unique to the State; and
  - (F) The applicability of regulatory requirements with compliance dates after the permit issuance date. [3004(c)(3)]
16. For any portable equipment that requires an AQMD or state permit or registration, excluding a) portable engines, b) military tactical support equipment and c) AQMD-permitted portable equipment that are not a major source, are not located at the facility for more than 12 consecutive months after

## **FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

### **SECTION K: TITLE V Administration**

commencing operation, and whose operation does not conflict with the terms or conditions of this Title V permit: 1) the facility operator shall keep a copy of the AQMD or state permit or registration; 2) the equipment operator shall comply with the conditions on the permit or registration and all other regulatory requirements; and 3) the facility operator shall treat the permit or registration as a part of its Title V permit, subject to recordkeeping, reporting and certification requirements. [3004(a)(1)]

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION K: TITLE V Administration

#### **EMERGENCY PROVISIONS**

17. An emergency<sup>1</sup> constitutes an affirmative defense to an action brought for non-compliance with a technology-based emission limit only if:
- (A) Properly signed, contemporaneous operating records or other credible evidence demonstrate that:
    - (1) An emergency occurred and the operator can identify the cause(s) of the emergency;
    - (2) The facility was operated properly (i.e. operated and maintained in accordance with the manufacturer's specifications, and in compliance with all regulatory requirements or a compliance plan), before the emergency occurred;
    - (3) The operator took all reasonable steps to minimize levels of emissions that exceeded emissions standard, or other requirements in the permit; and,
    - (4) The operator submitted a written notice of the emergency to the AQMD within two working days of the time when the emissions limitations were exceeded due to the emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
  - (B) The operator complies with the breakdown provisions of Rule 430 - Breakdown Provisions, or subdivision (i) of Rule 2004 - Requirements, whichever is applicable. [3002(g), 430, 2004(i)]
18. The operator is excused from complying with any regulatory requirement that is suspended by the Executive Officer during a state of emergency or state of war emergency, in accordance with Rule 118 - Emergencies. [118]

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<sup>1</sup> "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the operator, including acts of God, which: (A) requires immediate corrective action to restore normal operation; and (B) causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency; and (C) is not caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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#### **RECORDKEEPING PROVISIONS**

19. In addition to any other recordkeeping requirements specified elsewhere in this permit, the operator shall keep records of required monitoring information, where applicable, that include:
  - (A) The date, place as defined in the Title V permit, and time of sampling or measurements;
  - (B) The date(s) analyses were performed;
  - (C) The company or entity that performed the analyses;
  - (D) The analytical techniques or methods used;
  - (E) The results of such analyses; and
  - (F) The operating conditions as existing at the time of sampling or measurement. [3004(a)(4)(B)]
20. The operator shall maintain records pursuant to Rule 109 and any applicable material safety data sheet (MSDS) for any equipment claimed to be exempt from a written permit by Rule 219 based on the information in those records. [219(t)]
21. The operator shall keep all records of monitoring data required by this permit or by regulatory requirements for a period of at least five years from the date of the monitoring sample, measurement, report, or application. [3004(a)(4)(E)]

#### **REPORTING PROVISIONS**

22. The operator shall comply with the following requirements for prompt reporting of deviations:
  - (A) Breakdowns shall be reported as required by Rule 430 - Breakdown Provisions or subdivision (i) of Rule 2004 - Requirements, whichever is applicable.
  - (B) Other deviations from permit or applicable rule emission limitations, equipment operating conditions, or work practice standards, determined by observation or by any monitoring or testing required by the permit or applicable rules that result in emissions greater than those allowed by the permit or applicable rules shall be reported within 72 hours (unless a shorter reporting period is specified in an applicable State or Federal Regulation) of discovery of the deviation by contacting AQMD enforcement personnel assigned to this facility or otherwise calling (800) CUT-SMOG.

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### SECTION K: TITLE V Administration

- (C) A written report of such deviations reported pursuant to (B), and any corrective actions or preventative measures taken, shall be submitted to AQMD, in an AQMD approved format, within 14 days of discovery of the deviation.
  - (D) All other deviations shall be reported with the monitoring report required by condition no. 23. [3004(a)(5)]
23. Unless more frequent reporting of monitoring results are specified in other permit conditions or in regulatory requirements, the operator shall submit reports of any required monitoring to the AQMD at least twice per year. The report shall include a) a statement whether all monitoring required by the permit was conducted; and b) identification of all instances of deviations from permit or regulatory requirements. A report for the first six calendar months of the year is due by August 31 and a report for the last six calendar months of the year is due by February 28. [3004(a)(4)(F)]
24. The operator shall submit to the Executive Officer and to the Environmental Protection Agency (EPA), an annual compliance certification. For RECLAIM facilities, the certification is due when the Annual Permit Emissions Program (APEP) report is due and shall cover the same reporting period. For other facilities, the certification is due on March 1 for the previous calendar year. The certification need not include the period preceding the date the initial Title V permit was issued. Each compliance certification shall include:
- (A) Identification of each permit term or condition that is the basis of the certification;
  - (B) The compliance status during the reporting period;
  - (C) Whether compliance was continuous or intermittent;
  - (D) The method(s) used to determine compliance over the reporting period and currently, and
  - (E) Any other facts specifically required by the Executive Officer to determine compliance.
- The EPA copy of the certification shall be sent to: Director of the Air Division Attn: Air-3 USEPA, Region IX 75 Hawthorne St. San Francisco, CA 94105 [3004(a)(10)(E)]
25. All records, reports, and documents required to be submitted by a Title V operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000). [3004(a)(12)]

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**PERIODIC MONITORING**

26. All periodic monitoring required by this permit pursuant to Rule 3004(a)(4)(c) is based on the requirements and justifications in the AQMD document "Periodic Monitoring Guidelines for Title V Facilities" or in case-by-case determinations documented in the Title V application file. [3004(a)(4)]

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*FACILITY RULES*

*This facility is subject to the following rules and regulations:*

With the exception of Rule 402, 473, 477, 1118 and Rules 1401 through 1420, the following rules that are designated as non-federally enforceable are pending EPA approval as part of the state implementation plan. Upon the effective date of that approval, the approved rule(s) will become federally enforceable, and any earlier versions of those rules will no longer be federally enforceable.

<b>RULE SOURCE</b>	<b>Adopted/Amended Date</b>	<b>FEDERAL Enforceability</b>
RULE 109	5-2-2003	Federally enforceable
RULE 1107	1-6-2006	Non federally enforceable
RULE 1107	11-9-2001	Federally enforceable
RULE 1113	11-8-1996	Federally enforceable
RULE 1113	6-9-2006	Non federally enforceable
RULE 1118	11-4-2005	Federally enforceable
RULE 1122	10-1-2004	Federally enforceable
RULE 1168	1-7-2005	Non federally enforceable
RULE 1168	10-3-2003	Federally enforceable
RULE 1171	11-7-2003	Federally enforceable
RULE 1171	7-14-2006	Non federally enforceable
RULE 1173	5-13-1994	Federally enforceable
RULE 1189	1-21-2000	Federally enforceable
RULE 1303(a)(1)-BACT	12-6-2002	Non federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable
RULE 1303(a)-BACT	5-10-1996	Federally enforceable
RULE 1303(b)(2)-Offset	5-10-1996	Federally enforceable
RULE 2005	4-20-2001	Federally enforceable
RULE 2011	5-6-2005	Federally enforceable
RULE 2012	1-7-2005	Federally enforceable
RULE 2012	12-5-2003	Federally enforceable
RULE 2012	5-6-2005	Federally enforceable
RULE 3004(a)(4)-Periodic Monitoring	12-12-1997	Federally enforceable
RULE 401	11-9-2001	Non federally enforceable
RULE 401	3-2-1984	Federally enforceable
RULE 404	2-7-1986	Federally enforceable
RULE 407	4-2-1982	Federally enforceable
RULE 409	8-7-1981	Federally enforceable
RULE 431.2	5-4-1990	Federally enforceable

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### SECTION K: TITLE V Administration

<b>RULE SOURCE</b>	<b>Adopted/Amended Date</b>	<b>FEDERAL Enforceability</b>
RULE 431.2	9-15-2000	Non federally enforceable
40CFR 60 Subpart A	4-9-1993	Federally enforceable
40CFR 60 Subpart GGG	6-7-1985	Federally enforceable
40CFR 60 Subpart J	10-4-1991	Federally enforceable
40CFR 68 - Accidental Release Prevention	5-24-1996	Federally enforceable



**FACILITY PERMIT TO OPERATE  
AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX A: NOX AND SOX EMITTING EQUIPMENT EXEMPT FROM WRITTEN  
PERMIT PURSUANT TO RULE 219**

NONE

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1107 1-6-2006]**

Except as otherwise provided in Rule 1107

(1) VOC Content of Coatings

A person shall not apply to metal parts and products subject to the provisions of this rule any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits specified below:

<b>VOC LIMITS</b>								
<b>Less Water and Less Exempt Compounds</b>								
<b>Effective Dates</b>								
<b>Coating</b>	<b>Air-Dried</b>				<b>Baked</b>			
	<b>gm/l</b>		<b>lb/gal</b>		<b>gm/l</b>		<b>lb/gal</b>	
	<b>Current</b>	<b>7/1/07</b>	<b>Current</b>	<b>7/1/07</b>	<b>Current</b>	<b>7/1/07</b>	<b>Current</b>	<b>7/1/07</b>
General One-Component	275	275	2.3	2.3	275	275	2.3	2.3
General Multi-Component	340	340	2.8	2.8	275	275	2.3	2.3
Military Specification	340	340	2.8	2.8	275	275	2.3	2.3
Etching Filler	420	420	3.5	3.5	420	420	3.5	3.5
Solar-Absorbent	420	420	3.5	3.5	360	360	3.0	3.0
Heat-Resistant	420	420	3.5	3.5	360	360	3.0	3.0
Extreme High-Gloss	420	340	3.5	2.8	360	360	3.0	3.0
Metallic	420	420	3.5	3.5	420	420	3.5	3.5

**FACILITY PERMIT TO OPERATE  
 AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS  
 [RULE 1107 1-6-2006]**

VOC LIMITS Less Water and Less Exempt Compounds Effective Dates, cont.								
Coating	Air-Dried				Baked			
	gm/l		lb/gal		gm/l		lb/gal	
	Current	7/1/07	Current	7/1/07	Current	7/1/07	Current	7/1/07
Extreme Performance	420	420	3.5	3.5	360	360	3.0	3.0
Prefabricated Architectural One-Component	420	275	3.5	2.3	275	275	2.3	2.3
Prefabricated Architectural Multi-Component	420	340	3.5	2.8	275	275	2.3	2.3
Touch Up	420	420	3.5	3.5	360	360	3.0	3.0
Repair	420	420	3.5	3.5	360	360	3.0	3.0
Silicone Release	420	420	3.5	3.5	420	420	3.5	3.5
High-Performance Architectural	420	420	3.5	3.5	420	420	3.5	3.5
Camouflage	420	420	3.5	3.5	420	420	3.5	3.5
Vacuum-Metalizing	420	420	3.5	3.5	420	420	3.5	3.5
Mold-Seal	420	420	3.5	3.5	420	420	3.5	3.5
High-Temperature	420	420	3.5	3.5	420	420	3.5	3.5
Electric-Insulating Varnish	420	420	3.5	3.5	420	420	3.5	3.5
Pan Backing	420	420	3.5	3.5	420	420	3.5	3.5
Pretreatment Coatings	420	420	3.5	3.5	420	420	3.5	3.5

- (2) A person shall not use VOC-containing materials which have a VOC content of more than 200 grams per liter of material for stripping any coating governed by this rule.

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1107 11-9-2001]**

Except as otherwise provided in Rule 1107

(1) VOC Content of Coatings

A person shall not apply to metal parts and products subject to the provisions of this rule any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits specified below:

<u>Coating</u>	<b>LIMITS</b>			
	<b>Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds</b>			
	<u>Air Dried</u>	<u>(lb/gal)</u>	<u>Baked</u>	<u>(lb/gal)</u>
General				
One-Component	275	(2.3)	275	(2.3)
Multi-Component	340	(2.8)	275	(2.3)
Military Specification	340	(2.8)	275	(2.3)
Etching Filler	420	(3.5)	420	(3.5)
Solar-Absorbent	420	(3.5)	360	(3.0)
Heat-Resistant	420	(3.5)	360	(3.0)
Extreme High-Gloss	420	(3.5)	360	(3.0)
Metallic	420	(3.5)	420	(3.5)
Extreme Performance	420	(3.5)	360	(3.0)
Prefabricated Architectural Component	420	(3.5)	275	(2.3)
Touch Up	420	(3.5)	360	(3.0)
Repair	420	(3.5)	360	(3.0)
Silicone Release	420	(3.5)	420	(3.5)
High Performance Architectural	420	(3.5)	420	(3.5)
Camouflage	420	(3.5)	420	(3.5)
Vacuum-Metalizing	420	(3.5)	420	(3.5)
Mold-Seal	420	(3.5)	420	(3.5)
High-Temperature	420	(3.5)	420	(3.5)
Electric-Insulating Varnish	420	(3.5)	420	(3.5)
Pan Backing	420	(3.5)	420	(3.5)
Pretreatment Coatings	420	(3.5)	420	(3.5)

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1107 11-9-2001]**

- (2) A person shall not use VOC-containing materials which have a VOC content of more than 200 grams per liter of material for stripping any coating governed by this rule.

**FACILITY PERMIT TO OPERATE  
 AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS  
 [RULE 1113 11-8-1996]**

- (1) Except as provided in paragraphs (c)(2), (c)(3), and (c)(4) of Rule 1113, the operator shall not supply, sell, offer for sale, apply, or solicit the application of, any architectural coating which, at the time of sale or manufacture, contains more than 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, and less any colorant added to tint bases, or manufacture, blend, or repackage such a coating for use within the District.
- (2) Except as provided in paragraphs (c)(3) and (c)(4) of Rule 1113, the operator shall not supply, sell, offer for sale, apply, solicit the application of, manufacture, blend, or repackage, for use within the District, any architectural coating listed in the Table of Standards which contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified.

**TABLE OF STANDARDS**

**VOC LIMITS**

**Grams of VOC Per Liter of Coating,  
 Less Water And Less Exempt Compounds**

<b>COATING</b>	<b>Limit*</b>	<b>Effective Date of Adoption</b>	<b>Effective 1/1/1998</b>	<b>Effective 1/1/1999</b>	<b>Effective 7/1/2001</b>	<b>Effective 1/1/2005</b>	<b>Effective 7/1/2008</b>
Bond Breakers	350						
Clear Wood Finishes							
Varnish	350						
Sanding Sealers	350						
Lacquer	680		550			275	
Concrete-Curing Compounds	350						
Dry-Fog Coatings	400						
Fire-proofing Exterior Coatings	350	450		350			
Fire-Retardant Coatings							
Clear	650						
Pigmented	350						
Flats	250						
Graphic Arts (Sign) Coatings	500				100		50
Industrial Maintenance							

## FACILITY PERMIT TO OPERATE AIR LIQUIDE LARGE INDUSTRIES U.S., LP

### APPENDIX B: RULE EMISSION LIMITS [RULE 1113 11-8-1996]

Primers and Topcoats						
Alkyds	420					
Catalyzed Epoxy	420					
Bituminous Coatings	420					
Materials						
Inorganic Polymers	420					
Vinyl Chloride Polymers	420					
Chlorinated Rubber	420					
Acrylic Polymers	420					
Urethane Polymers	420					
Silicones	420					
Unique Vehicles	420					
Japans/Faux Finishing	350	700		350		
Coatings						
Magnesite Cement Coatings	600			450		
Mastic Coatings	300					
Metallic Pigmented Coatings	500					
Multi-Color Coatings	420		250			
Pigmented Lacquer	680		550		275	
Pre-Treatment Wash Primers	780					
Primers, Sealers, and	350					
Undercoaters						
Quick-Dry Enamels	400					
Roof Coatings	300					
Shellac						
Clear	730					
Pigmented	550					
Stains	350					
Swimming Pool Coatings						
Repair	650					
Other	340					
Traffic Coatings	250		150			
Waterproofing Sealers	400					
Wood Preservatives						
Below-Ground	350					
Other	350					

\* The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards

**FACILITY PERMIT TO OPERATE  
AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS  
[RULE 1113 11-8-1996]**

**TABLE OF STANDARDS (cont.)**

**VOC LIMITS**

**Grams of VOC Per Liter of Material**

COATING	Limit
Low-Solids Coating	120

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1113 6-9-2006]**

- (1) Except as provided in paragraphs (c)(2), (c)(3), (c)(4), and specified coatings averaged under (c)(6), no person shall supply, sell, offer for sale, manufacture, blend, or repackage any architectural coating for use in the District which, at the time of sale or manufacture, contains more than 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, and less any colorant added to tint bases, and no person shall apply or solicit the application of any architectural coating within the District that exceeds 250 grams of VOC per liter of coating as calculated in this paragraph.
- (2) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, manufacture, blend, or repackage, for use within the District, any architectural coating listed in the Table of Standards which contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified, and no person shall apply or solicit the application of any architectural coating within the District that exceeds the VOC limit as specified in this paragraph. No person shall apply or solicit the application within the District of any industrial maintenance coatings for residential use or for use in areas such as office space and meeting rooms of industrial, commercial or institutional facilities not exposed to such extreme environmental conditions described in the definition of industrial maintenance coatings; or of any rust-preventative coating for industrial use, unless such a rust preventative coating complies with the Industrial Maintenance Coating VOC limit specified in the Table of Standards.

**FACILITY PERMIT TO OPERATE  
 AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS  
 [RULE 1113 6-9-2006]**

**TABLE OF STANDARDS  
 VOC LIMITS**

**Grams of VOC Per Liter of Coating,  
 Less Water and Less Exempt Compounds**

COATING CATEGORY	Ceiling Limit*	Current Limit	Effective Date					
			1/1/03	1/1/04	1/1/05	7/1/06	7/1/07	7/1/08
Bond Breakers	350							
Clear Wood Finishes	350					275		
Varnish	350					275		
Sanding Sealers	350					275		
Lacquer	680	550			275			
Clear Brushing Lacquer	680				275			
Concrete-Curing Compounds	350						100	
Concrete-Curing Compounds For Roadways and Bridges**	350							
Dry-Fog Coatings	400						150	
Fire-Proofing Exterior Coatings	450	350						
Fire-Retardant Coatings***								
Clear	650							
Pigmented	350							
Flats	250	100						50
Floor Coatings	420		100			50		
Graphic Arts (Sign) Coatings	500							
Industrial Maintenance (IM) Coatings	420			250		100		
High Temperature IM Coatings			420					
Zinc-Rich IM Primers	420		340			100		
Japans/Faux Finishing Coatings	700	350						
Magnesite Cement Coatings	600	450						
Mastic Coatings	300							
Metallic Pigmented Coatings	500							
Multi-Color Coatings	420	250						
Nonflat Coatings	250		150			50		
Nonflat High Gloss	250		150				50	
Pigmented Lacquer	680	550			275			

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1113 6-9-2006]**

COATING CATEGORY	Ceiling Limit*	Current Limit	Effective Date					
			1/1/03	1/1/04	1/1/05	7/1/06	7/1/07	7/1/08
Pre-Treatment Wash Primers	780		420					
Primers, Sealers, and Undercoaters	350		200			100		
Quick-Dry Enamels	400		250			150	50	
Quick-Dry Primers, Sealers, and Undercoaters	350		200			100		
Recycled Coatings			250					
Roof Coatings	300		250		50			
Roof Coatings, Aluminum	500				100			
Roof Primers, Bituminous	350		350					
Rust Preventative Coatings	420		400			100		
Shellac								
Clear	730							
Pigmented	550							
Specialty Primers	350					250	100	
Stains	350		250				100	
Stains, Interior	250							
Swimming Pool Coatings								
Repair	650		340					
Other	340							
Traffic Coatings	250	150					100	
Waterproofing Sealers	400		250			100		
Waterproofing Concrete/Masonry Sealers	400					100		
Wood Preservatives								
Below-Ground	350							
Other	350							

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1113 6-9-2006]**

- \* The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
- \*\* Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.
- \*\*\* The Fire-Retardant Coating category will be eliminated on January 1, 2007 and subsumed by the coating category for which they are formulated.

**TABLE OF STANDARDS (cont.)**  
**VOC LIMITS**

**Grams of VOC Per Liter of Material**

COATING	Limit
Low-Solids Coating	120

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 1-7-2005]**

- (1) Unless otherwise specified in paragraph (c)(2), a person shall not apply any adhesives, adhesive bonding primers, adhesive primers, or any other primer which have a VOC content in excess of 250 g/L less water and less exempt compounds.
- (2) A person shall not apply adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primer which have a VOC content in excess of the limits specified below:

**VOC Limit\*, Less Water and Less Exempt Compounds in Grams per Liter**

<b>Architectural Applications</b>	<b>Current VOC Limit*</b>
Indoor Carpet Adhesives	50
Carpet Pad Adhesives	50
Outdoor Carpet Adhesives	150
Wood Flooring Adhesive	100
Rubber Floor Adhesives	60
Subfloor Adhesives	50
Ceramic Tile Adhesives	65
VCT and Asphalt Tile Adhesives	50
Dry Wall and Panel Adhesives	50
Cove Base Adhesives	50
Multipurpose Construction Adhesives	70
Structural Glazing Adhesives	100
Single Ply Roof Membrane Adhesives	250

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 1-7-2005]**

Specialty Applications	VOC Limits and Effective Dates**			
	Current VOC Limit*	1-1-05	7-1-05	1-1-07
PVC Welding	510			
CPVC Welding	490			
ABS Welding	400		325	
Plastic Cement Welding	350	250		
Adhesive Primer for Plastic	650		550	
Computer Diskette Manufacturing	350			
Contact Adhesive	80			
Special Purpose Contact Adhesive	250			
Tire Retread	100			
Adhesive Primer for Traffic Marking Tape	150			
Structural Wood Member Adhesive	140			
Sheet Applied Rubber Lining Operations	850			
Top and Trim Adhesive	540			250

\*\* The specified limits remain in effect unless revised limits are listed in subsequent columns.

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 1-7-2005]**

For adhesives, adhesive bonding primers, or any other primer not regulated by the above two tables and applied to the following substrates, the following limits shall apply:

Substrate Specific Applications	Current VOC Limit*
Metal to Metal	30
Plastic Foams	50
Porous Material (except wood)	50
Wood	30
Fiberglass	80

If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

Sealants	Current VOC Limit*
Architectural	250
Marine Deck	760
Nonmembrane Roof	300
Roadway	250
Single-Ply Roof Membrane	450
Other	420

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 1-7-2005]**

<b>Sealant Primers</b>	<b>Current VOC Limit*</b>
Architectural	
Non Porous	250
Porous	775
Modified Bituminous	500
Marine Deck	760
Other	750

\* For low-solid adhesives or sealants the VOC limit is expressed in grams per liter of material as determined in paragraph (b)(32); for all other adhesives and sealants, VOC limits are expressed as grams of VOC per liter of adhesive or sealant less water and less exempt compounds as determined in paragraph (b)(31).

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 10-3-2003]**

- (1) Unless otherwise specified in paragraph (c)(2), a person shall not apply any adhesives, adhesive bonding primers, adhesive primers, or any other primer which have a VOC content in excess of 250 g/L less water and less exempt compounds.
- (2) A person shall not apply adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primer which have a VOC content in excess of the limits specified below:

**VOC Limit\*, Less Water and Less Exempt Compounds in Grams per Liter**

<b>Architectural Applications</b>	<b>Current VOC Limit</b>
Indoor Carpet Adhesives	50
Carpet Pad Adhesives	50
Outdoor Carpet Adhesives	150
Wood Flooring Adhesive	100
Rubber Floor Adhesives	60
Subfloor Adhesives	50
Ceramic Tile Adhesives	65
VCT and Asphalt Tile Adhesives	50
Dry Wall and Panel Adhesives	50
Cove Base Adhesives	50
Multipurpose Construction Adhesives	70
Structural Glazing Adhesives	100
Single Ply Roof Membrane Adhesives	250

\* For low-solid adhesives or sealants the VOC limit is expressed in grams per liter of material as determined in paragraph (b)(32); for all other adhesives and sealants, VOC limits are expressed as grams of VOC per liter of adhesive or sealant less water and less exempt compounds as determined in paragraph (b)(31).

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 10-3-2003]**

.Specialty Applications	VOC Limits and Effective Dates**			
	Current VOC Limit	6-7-02	1-1-03	1-1-05
PVC Welding	510			285
CPVC Welding	490			270
ABS Welding	400			
Plastic Cement Welding	350			250
Adhesive Primer for Plastic	650			250
Computer Diskette Manufacturing	350			
Contact Adhesive	250		80	
Special Purpose Contact Adhesive	250			
Tire Retread	100			
Adhesive Primer for Traffic Marking Tape	150			
Structural Wood Member Adhesive	140			
Sheet Applied Rubber Lining Operations	850			
Top and Trim Adhesive	250	540		250

\*\* The specified limits remain in effect unless revised limits are listed in subsequent columns.

Substrate Specific Applications	Current VOC Limit
Metal to Metal	30
Plastic Foams	50
Porous Material (except wood)	50

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1168 10-3-2003]**

Substrate Specific Applications	Current VOC Limit
Wood	30
Fiberglass	80

If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

Sealants	Current VOC Limit
Architectural	250
Marine Deck	760
Nonmembrane Roof	300
Roadway	250
Single-Ply Roof Membrane	450
Other	420

Sealant Primers	Current VOC Limit
Architectural	
Non Porous	250
Porous	775
Modified Bituminous	500
Marine Deck	760
Other	750

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1171 11-7-2003]**

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS
	VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application	
(i) General	25 (0.21)
(ii) Electrical Apparatus Components & Electronic Components	500 (4.2)
(iii) Medical Devices & Pharmaceuticals	800 (6.7)
(B) Repair and Maintenance Cleaning	
(i) General	25 (0.21)
(ii) Electrical Apparatus Components & Electronic Components	900 (7.5)
(iii) Medical Devices & Pharmaceuticals	
(A) Tools, Equipment, & Machinery	800 (6.7)
(B) General Work Surfaces	600 (5.0)

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1171 11-7-2003]**

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS
	VOC g/l (lb/gal)
(C) Cleaning of Coatings or Adhesives Application Equipment	550 (4.6)
(D) Cleaning of Ink Application Equipment	
(i) General	25 (0.21)
(ii) Flexographic Printing	25 (0.21)
(iii) Gravure Printing	
(A) Publication	750 (6.3)
(B) Packaging	25 (0.21)
(iv) Lithographic or Letter Press Printing	
(A) Roller Wash – Step 1	600 (5.0)
(B) Roller Wash-Step 2, Blanket Wash, & On-Press Components	800 (6.7)
(C) Removable Press Components	25 (0.21)
(v) Screen Printing	750 (6.3)
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	800 (6.7)

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1171 11-7-2003]**

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS
	VOC g/l (lb/gal)
(vii) Specialty Flexographic Printing	600 (5.0)
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)

**FACILITY PERMIT TO OPERATE**  
**AIR LIQUIDE LARGE INDUSTRIES U.S., LP**

**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1171 7-14-2006]**

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	<b>CURRENT LIMITS*</b>	<b>EFFECTIVE 1/1/2008</b>
<b>SOLVENT CLEANING ACTIVITY</b>	<b>VOC g/l (lb/gal)</b>	<b>VOC g/l (lb/gal)</b>
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	
(iii) Medical Devices & Pharmaceuticals	800 (6.7)	
(B) Repair and Maintenance Cleaning		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	

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**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 1171 7-14-2006]**

	<b>CURRENT LIMITS*</b>	<b>EFFECTIVE 1/1/2008</b>
<b>SOLVENT CLEANING ACTIVITY (cont.)</b>	<b>VOC g/l (lb/gal)</b>	<b>VOC g/l (lb/gal)</b>
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	
(D) Cleaning of Ink Application Equipment		
(i) General	25 (0.21)	
(ii) Flexographic Printing	25 (0.21)	
(iii) Gravure Printing		
(A) Publication	100 (0.83)	
(B) Packaging	25 (0.21)	
(iv) Lithographic (Offset) or Letter Press Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components		
(I) Newsprint	100 (0.83)	

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**APPENDIX B: RULE EMISSION LIMITS**  
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	<b>CURRENT LIMITS*</b>	<b>EFFECTIVE 1/1/2008</b>
<b>SOLVENT CLEANING ACTIVITY (cont.)</b>	<b>VOC g/l (lb/gal)</b>	<b>VOC g/l (lb/gal)</b>
(II) Other Substrates	500 (4.2)	100 (0.83)
(B) Removable Press Components	25 (0.21)	
(v) Screen Printing	500 (4.2)	100 (0.83)
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)	
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)	

\* The specified limits remain in effect unless revised limits are listed in subsequent columns.

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**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 404 2-7-1986]**

The operator shall not discharge into the atmosphere from this equipment, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a).

Where the volume discharged is between figures listed in the Table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

**TABLE 404(a)**

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
		Milligrams per Cubic Meter	Grains per Cubic Foot			Milligrams per Cubic Meter	Grains per Cubic Foot
Cubic meters Per Minute	Cubic feet Per Minute			Cubic meters Per Minute	Cubic feet Per Minute		
25 or less	883 or less	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463
45	1589	361	.158	1300	45910	102	.0445
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402

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**APPENDIX B: RULE EMISSION LIMITS**  
**[RULE 404 2-7-1986]**

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100