

FACILITY PERMIT TO OPERATE

**AIR PRODUCTS AND CHEMICALS, INC.
700 N HENRY FORD AVE
WILMINGTON, CA 90744**

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 PRODUCTS AND CHEMICALS, INC.

TABLE OF CONTENTS

Section	Description	Revision #	Date Issued
A	Facility Information	DRAFT	05/09/2014
B	RECLAIM Annual Emission Allocation	DRAFT	05/09/2014
C	Facility Plot Plan	TO BE DEVELOPED	
D	Facility Description and Equipment Specific Conditions	DRAFT	05/09/2014
E	Administrative Conditions	DRAFT	05/09/2014
F	RECLAIM Monitoring and Source Testing Requirements	DRAFT	05/09/2014
G	Recordkeeping and Reporting Requirements for RECLAIM Sources	DRAFT	05/09/2014
H	Permit To Construct and Temporary Permit to Operate	DRAFT	05/09/2014
I	Compliance Plans & Schedules	DRAFT	05/09/2014
J	Air Toxics	DRAFT	05/09/2014
K	Title V Administration	DRAFT	05/09/2014
Appendix			
A	NOx and SOx Emitting Equipment Exempt From Written Permit Pursuant to Rule 219	DRAFT	05/09/2014
B	Rule Emission Limits	DRAFT	05/09/2014

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION A: FACILITY INFORMATION

LEGAL OWNER &/OR OPERATOR: AIR PRODUCTS AND CHEMICALS, INC.

LEGAL OPERATOR (if different than owner):

EQUIPMENT LOCATION: 700 N HENRY FORD AVE
 WILMINGTON, CA 90744-1501

MAILING ADDRESS: 700 N HENRY FORD AVE
 WILMINGTON, CA 90744

RESPONSIBLE OFFICIAL: CHRIS MC WILLIAMS

TITLE: PLANT MANAGER

TELEPHONE NUMBER: (310) 952-9928

CONTACT PERSON: JIM REEBEL

TITLE: ENVIRONMENTAL SPECIALIST

TELEPHONE NUMBER: (310) 952-9172

INITIAL TITLE V PERMIT ISSUED: February 02, 2009

TITLE V PERMIT EXPIRATION DATE: February 01, 2014

TITLE V	RECLAIM
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YES	NOx: YES SOx: NO CYCLE: 2 ZONE: COASTAL
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FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx 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 Begin End (month/year)	Zone	NOx RTC Initially Allocated	NOx RTC ¹ Holding as of 07/01/2013 (pounds)	Non-Tradable ² Non-Usable RTCs (pounds)
7/2010 6/2011	Coastal	0	0	0
1/2011 12/2011	Coastal	0	4304	0
7/2011 6/2012	Coastal	0	0	0
1/2012 12/2012	Coastal	0	0	0
7/2012 6/2013	Coastal	0	0	0
1/2013 12/2013	Coastal	0	24585	0
7/2013 6/2014	Coastal	0	5262	0
1/2014 12/2014	Coastal	0	35912	0
7/2014 6/2015	Coastal	0	0	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 PRODUCTS AND CHEMICALS, INC.

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. If the facility submits a permit application to increase in an annual allocation to a level greater than the facility's starting Allocation plus Non-Tradable credits as listed below, the application will be evaluated for compliance with Rule 2005 (c)(4). Rule 2005 (e) - Trading Zone Restrictions applies if an annual allocation is increased to a level greater than the facility's Starting Allocation plus Non-Tradable Credits:

Year		Zone	NOx RTC	Non-Tradable
Begin	End		Starting Allocation	Credits(NTC)
(month/year)			(pounds)	(pounds)
7/1994	6/1995	Coastal	0	0

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

SECTION C: FACILITY PLOT PLAN

(TO BE DEVELOPED)

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
System 1: HYDROGEN PRODUCTION - 88.0 MMSCFD Maximum Rated Capacity					S2.1, S13.1, S15.1, S31.1
VESSEL, V-119, FEED COMPRESSOR SUCTION, LENGTH: 11 FT 4 IN; DIAMETER: 6 FT A/N:	D1				
VESSEL, V-133, PROCESS OILY WATER, HEIGHT: 11 FT 10 IN; DIAMETER: 3 FT A/N:	D2				E336.2
FILTER, X-110A/B, FEED GAS COMPRESSOR, 2 TOTAL, 20 CU.FT. CAPACITY EACH A/N:	D3				
COMPRESSOR, C-101A/B, DUAL SERVICES, 2 TOTAL, 7,500 HP EACH WITH BUFFERED PACKING SEALS A/N:	D4				E336.3
HEAT EXCHANGER, E-101/E-104, FG-1A/1B 1ST STAGE FEED DISCHARGE COOLER, 2 TOTAL, 2.81 MMBTU/HR EACH A/N:	D6				
KNOCK OUT POT, V-131A/B, FEED INTERSTAGE, 2 TOTAL, HEIGHT: 9 FT ; DIAMETER: 3 FT 6 IN A/N:	D8				
HEAT EXCHANGER, E-102/E117, FEED COMPRESSOR DISCHARGE COOLER, 2 TOTAL, 2.74 MMBTU/HR EACH A/N:	D10				

* (1) (1A) (1B) 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) (2A) (2B) 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
VESSEL, COALESCER, V-102A/B, FEED COMPRESSOR DISCHARGE, 2 TOTAL, HEIGHT: 5 FT ; DIAMETER: 1 FT A/N:	D12				
REACTOR, V-104, HYDROGENATION, WITH CHLORIDE GUARD, LENGTH: 20 FT ; DIAMETER: 8 FT A/N:	D14				
VESSEL, V-105A/B, FEED DESULFURIZER, 2 TOTAL, LENGTH: 19 FT ; DIAMETER: 9 FT A/N:	D15				
REACTOR, H101, REFINERY GAS/STEAM REFORMING, TUBULAR TYPE A/N:	D49				
HEAT EXCHANGER, E-103, PROCESS GAS, 163.5 MMBTU/HR, SHELL AND TUBE TYPE A/N:	D17				
REACTOR, V-109, HIGH TEMPERATURE SHIFT, LENGTH: 19 FT ; DIAMETER: 11 FT A/N:	D18				
HEAT EXCHANGER, E-105, FEED PREHEATER II, 12.76 MMBTU/HR, SHELL AND TUBE TYPE A/N:	D19				

* (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
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Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
HEAT EXCHANGER, E-106A, BFW PREHEATER I, 47.0 MMBTU/HR, SHELL AND TUBE TYPE A/N:	D20				
HEAT EXCHANGER, E-106B/C, BFW PREHEATER II, 67.01 MMBTU/HR, SHELL AND TUBE TYPE, 2 TOTAL A/N:	D21				
REACTOR, V-110, LOW TEMPERATURE SHIFT, LENGTH: 16 FT ; DIAMETER: 11 FT A/N:	D22				
HEAT EXCHANGER, E-107, FEED PREHEATER I, 5.0 MMBTU/HR, SHELL AND TUBE TYPE A/N:	D23				
HEAT EXCHANGER, E-108, BFW MAKEUP HEATER, 49.0 MMBTU/HR, SHELL AND TUBE TYPE A/N:	D24				
HEAT EXCHANGER, E-109, PSA FEED AIR COOLER, 47.57 MMBTU/HR, FIN-FAN TYPE A/N:	D25				
HEAT EXCHANGER, E-110, PSA FEED TRIM COOLER, 15.85 MMBTU/HR, SHELL AND TUBE TYPE A/N:	D26				

* (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.)
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
KNOCK OUT POT, V-112, COLD CONDENSATE, LENGTH: 11 FT 10 IN; DIAMETER: 7 FT 3 IN A/N:	D27				
ADSORBER, X-101A-J, PRESSURE SWING ADSORPTION (PSA) UNIT, 10 TOTAL, DIAMETER: 10 FT 6 IN; HEIGHT: 21 FT 6 IN EACH A/N:	D28				D90.3, E336.1
VESSEL, V-113A/B, PSA PURGE GAS, 2 TOTAL, DIAMETER: 12 FT; HEIGHT: 80 FT EACH A/N:	D29				
VESSEL, V-114, STEAM DEAERATOR, TWO SECTIONS, WITH UPPER SECTION VENTED TO ATMOSPHERE, LENGTH: 22 FT ; DIAMETER: 9 FT A/N:	D31			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D332.1
TANK, V-137, CONDENSATE BREAK, VENTED TO ATMOSPHERE, HEIGHT: 7 FT ; DIAMETER: 6 FT A/N:	D32			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D332.1
VESSEL, V-107, BLOWDOWN, LENGTH: 11 FT 4 IN; DIAMETER: 4 FT A/N:	D33				
VESSEL, V-108, STEAM, HEIGHT: 50 FT ; DIAMETER: 9 FT A/N:	D34				

- * (1) (1A) (1B) Denotes RECLAIM emission factor
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 - (7) Denotes NSR applicability limit
 - (9) See App B for Emission Limits
 - (2) (2A) (2B) Denotes RECLAIM emission rate
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 - (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 PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
VESSEL, V-129, INTERMITTENT BLOWDOWN, VENTED TO ATMOSPHERE, HEIGHT: 11 FT 4 IN; DIAMETER: 4 FT A/N:	D35			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D332.1
CONDENSER, E-130, SURFACE, LENGTH: 32 FT ; DIAMETER: 8 FT 8 IN A/N:	D36				
TURBINE, T-101, STEAM, GENERAL ELECTRIC, DOUBLE EXTRACTION, NON-FIRED TYPE WITH A/N: GENERATOR, ELECTRIC, 31.9 MW	D37				
FUGITIVE EMISSIONS, MISCELLANEOUS, (PUMPS, COMPRESSORS, VALVES, FLANGES, PRV) A/N:	D52				H23.2
System 2: HYDROGEN PRODUCTION UNIT HEATER					S31.1

- * (1) (1A) (1B) Denotes RECLAIM emission factor
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 - (7) Denotes NSR applicability limit
 - (9) See App B for Emission Limits
 - (2) (2A) (2B) 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.)
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FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
HEATER, H-101, REFORMING, NATURAL GAS, PSA GAS, REFINERY GAS, 785 MMBTU/HR WITH A/N: 310075 BURNER, 132, LOW NOX, NATURAL GAS, PSA GAS, REFINERY GAS	D38	C40	NOX: MAJOR SOURCE**	CO: 400 PPMV (5) [RULE 1146, 11-17-2000; RULE 1146, 9-5-2008]; CO: 2000 PPMV (5A) [RULE 407, 4-2-1982]; NOX: 9 PPMV (4) [RULE 1303(a)(1) -BACT, 5-10-1996]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	A63.1, A63.2, A99.1, A195.1, B61.1, C1.3, D12.1, D90.3, D182.1, E54.1, E54.2, I298.1, K67.1
FUGITIVE EMISSIONS, MISCELLANEOUS, (COMPRESSORS, VALVES, FLANGES) A/N: 310075	D55				H23.2
System 3: SCR SYSTEM SERVING HYDROGEN PRODUCTION UNIT HEATER H101					
SELECTIVE CATALYTIC REDUCTION, X-102, WITH HONEYCOMB CATALYST IN MODULES WITH A/N: 311314 AMMONIA INJECTION, AQUEOUS AMMONIA	C40	D38		NH3: 20 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	D12.2, D28.1, E71.1
MIXER, V-126, AMMONIA, 54 GPH CAPACITY A/N: 311314	D41				
PUMP, P-115A/B, AQUEOUS AMMONIA, 2 TOTAL (1 SPARE), 18 GPH EACH A/N: 311314	D42				

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 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
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FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
BLOWER, C-104A/B, AMMONIA INJECTION, 2 TOTAL (1 SPARE), 380 SCFM EACH A/N: 311314	D43				
BLOWER, C-103, ID FAN, 313,550 ACFM, VENTING A REFORMING HEATER A/N: 311314	D44				
System 4: AMMONIA (AQUEOUS) TRANSFER & STORAGE SYSTEM SERVING SCR					
STORAGE TANK, PRESSURIZED, V-135, SERVING SCR OF H2 PLANT, AQUEOUS AMMONIA, WITH TRUCK UNLOADING STATION, VAPOR RETURN SYSTEM & TRANSFER PUMP, 9300 GALS; DIAMETER: 8 FT 6 IN; HEIGHT: 19 FT A/N: 293120	D47				B61.4, E71.2, E144.1
Process 2: INTERNAL COMBUSTION ENGINE (ICE)					
System 1: EMERGENCY ICE					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, DIESEL FUEL, CLARKE DETROIT DIESEL-ALLISON, MODEL DDFP-L6FA, SERIAL NO.8393, WITH AFTERCOOLER, TURBOCHARGER, 305 BHP A/N: 308377	D48		NOX: PROCESS UNIT**	NOX: 9.455 LBS/HR (1) [RULE 2012, 1-7-2005]; PM: (9) [RULE 404, 2-7-1986]	A63.1, B61.2, B61.3, C1.1, C1.2, H23.12, K67.2
Process 3: FLARE					
System 1: FLARE					S18.1, S31.1

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

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 3: FLARE					
FLARE, X-113, GROUND LEVEL, WITH A CYCLONE SEPARATOR, HEIGHT: 68 FT ; DIAMETER: 32 FT A/N:	C46			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	B61.1, D12.3, D12.4, D90.3, H23.11
FUGITIVE EMISSIONS, MISCELLANEOUS, (PUMPS, COMPRESSORS, VALVES, FLANGES, PRV) A/N:	D56				H23.2
Process 4: R-219 EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES					
RULE 219 EXEMPT EQUIPMENT, AIR CONDITIONING UNITS	E57				H23.4
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E62			VOC: (9) [RULE 1113, 7-13-2007; RULE 1113, 9-6-2013; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]	K67.4
RULE 219 EXEMPT EQUIPMENT, CLEANING EQUIPMENT	E63			VOC: (9) [RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (5) [RULE 1122, 10-1-2004; RULE 1122, 5-1-2009]	H23.13

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 (2) (2A) (2B) 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.)
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**FACILITY PERMIT TO OPERATE
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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
AIR PRODUCTS AND CHEMICALS, INC.
SECTION D: DEVICE ID INDEX**

Device ID	Section D Page No.	Process	System
D1	1	1	1
D2	1	1	1
D3	1	1	1
D4	1	1	1
D6	1	1	1
D8	1	1	1
D10	1	1	1
D12	2	1	1
D14	2	1	1
D15	2	1	1
D17	2	1	1
D18	2	1	1
D19	2	1	1
D20	3	1	1
D21	3	1	1
D22	3	1	1
D23	3	1	1
D24	3	1	1
D25	3	1	1
D26	3	1	1
D27	4	1	1
D28	4	1	1
D29	4	1	1
D31	4	1	1
D32	4	1	1
D33	4	1	1
D34	4	1	1
D35	5	1	1
D36	5	1	1
D37	5	1	1
D38	6	1	2
C40	6	1	3
D41	6	1	3
D42	6	1	3
D43	7	1	3

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

SECTION D: DEVICE ID INDEX

Device Index For Section D			
Device ID	Section D Page No.	Process	System
D44	7	1	3
C46	8	3	1
D47	7	1	4
D48	7	2	1
D49	2	1	1
D52	5	1	1
D55	6	1	2
D56	8	3	1
E57	8	4	0
E62	8	4	0
E63	8	4	0

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

F14.2 The operator shall not use fuel oil containing sulfur compounds in excess of 0.05 percent by weight.

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

F14.3 The operator shall not use natural gas containing sulfur compounds in excess of 16 ppmv, calculated as hydrogen sulfide.

[RULE 431.1, 6-12-1998]

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

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):

40CFR 60, Subpart A

[40CFR 60SubpartA, 4-4-2014]

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

SYSTEM CONDITIONS

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

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than 2.5 lbs/mmscf of hydrogen produced

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A totallizing flow meter shall be installed and maintained to accurately indicate and record the flow rate of hydrogen produced.

[RULE 1189, 1-21-2000]

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

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

Contaminant	Rule	Rule/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 shall be directed to the flare system except Devices IDs D31, D35 and D70 that vent to the atmosphere..

This process/system shall not be operated unless the flare system 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 PRODUCTS AND CHEMICALS, INC.

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:

Hydrogen Production Plant (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 3, System 1]

S31.1 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 310073, 310075 & 293123:

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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.

All new components in VOC service, except pressure relief devices for which a leak in excess of 200 ppmv shall be repaired within 5 days of detection, 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.

All new valves greater than 2-inch size and major components in VOC service as defined by Rule 1173, except those specifically exempted by 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 valves in VOC service, except those specifically exempted by Rule 1173, shall be bellows seal valves for 2-inch and smaller sizes, except as approved by the District, in the following applications: 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.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator shall revert to a quarterly inspection program with the approval of the executive officer. This condition shall not apply to bellow sealed valves.

The operator shall keep records of the monthly inspection (and quarterly where applicable), subsequent repairs and reinspections, in a manner approved by the District.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

[Systems subject to this condition : Process 1, System 1 , 2; Process 3, System 1]

DEVICE CONDITIONS

A. Emission Limits

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

CONTAMINANT	EMISSIONS LIMIT
SOX	Less than or equal to 109 LBS IN ANY ONE DAY
ROG	Less than or equal to 120 LBS IN ANY ONE DAY
PM10	Less than or equal to 361 LBS IN ANY ONE DAY
CO	Less than or equal to 703 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) of PM10 excluding sulfate from ammonia injection.

The operator shall calculate the daily mass emissions for compliance determination based on the source test required under this permit.

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

[Devices subject to this condition : D38, D48]

A63.2 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
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FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

NOX | Less than or equal to 255 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D38]

A99.1 The 9 PPM NOX emission limit(s) shall not apply when the equipment is in startup and shutdown periods.

Startup or shutdown period shall be kept at a minimum.

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

[Devices subject to this condition : D38]

A195.1 The 9 PPM NOX emission limit(s) is averaged over 24 hours.

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

[Devices subject to this condition : D38]

B. Material/Fuel Type Limits

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

Compound	ppm by volume
Total Sulfur greater than	40

The total sulfur compounds, calculated as hydrogen sulfide, are averaged over 4-hour period.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[RULE 431.1, 6-12-1998]

[Devices subject to this condition : D38, C46]

B61.2 The operator shall only use diesel fuel containing the following specified compounds:

Compound	weight percent
Sulfur Compounds less than	0.05

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

[Devices subject to this condition : D48]

B61.3 The operator shall only use diesel fuel containing the following specified compounds:

Compound	ppm by weight
Sulfur less than	15

[RULE 1470, 5-4-2012; RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

[Devices subject to this condition : D48]

B61.4 The operator shall not use aqueous ammonia containing the following specified compounds:

Compound	weight percent
Ammonia greater than	30

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

[Devices subject to this condition : D47]

C. Throughput or Operating Parameter Limits

C1.1 The operator shall limit the operating time to no more than 199 hour(s) in any one year.

To comply with this condition, the operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1110.2, 2-1-2008; RULE 1110.2, 9-7-2012; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]

[Devices subject to this condition : D48]

C1.2 The operator shall limit the maintenance testing to no more than 34 hour(s) in any one year.

The purpose(s) of this condition is to ensure compliance with requirements of National Fire Protection Association (NFPA) 25 standards.

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

[RULE 1470, 5-4-2012]

[Devices subject to this condition : D48]

C1.3 The operator shall limit the duration of startup or shutdown to no more than 48 hour(s).

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

[Devices subject to this condition : D38]

D. Monitoring/Testing Requirements

D12.1 The operator shall install and maintain a(n) measuring device to accurately indicate the oxygen concentration in the flue gas at the convective section or exhaust stack of this heater. The excess oxygen such measured shall be at a minimum of 1 percent, dry basis, except during startup, shutdown, or process upset.

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

[Devices subject to this condition : D38]

D12.2 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature across the SCR bed.

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

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

[Devices subject to this condition : C40]

D12.3 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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 3004(a)(4)-Periodic Monitoring,
12-12-1997; RULE 407, 4-2-1982]**

[Devices subject to this condition : C46]

D12.4 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 5 to 8 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 : C46]

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

The test shall be conducted annually to determine the NH₃ emission.

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

[Devices subject to this condition : C40]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

D90.3 The operator shall continuously monitor the H₂S concentration of fuel gas before being burned in this device according to the following specifications:

The operator shall use a total sulfur fuel analyzer approved by the District to monitor the parameter.

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

The operator may monitor the H₂S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H₂S in the fuel gas being burned in this device.

The operator shall install and maintain a totalizing fuel meter to accurately indicate the amount of fuel being used at the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 431.1, 6-12-1998]

[Devices subject to this condition : D28, D38, C46]

D182.1 The operator shall test this equipment in accordance with the following specifications:

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

The test shall be conducted at least annually.

During the test, the hydrogen plant or the heater shall be operated at least 80 percent of the permitted maximum rated capacity or within a capacity range approved by the District.

A source test protocol shall be submitted to the District no later than 60 days before the proposed test date. The annual test may commence without prior approval from the District if it is conducted according to a source test protocol previously approved by the District for this equipment. The District shall be notified of the date and time of the test at least 15 days prior to the test. A report shall be submitted to the District no later than 90 days after conducting the test.

Testing and sampling facilities shall be provided and maintained in accordance with District Source Test Method 1.1 or 1.2 and District Guidelines for Construction of Sampling and Testing Facilities.

The test shall determine and report the concentrations and mass emission rates for NOX, SOX, CO, Total PM, PM10, ROG, and the following:

- a) NOX in lb/MMBTU of heat input, from the inlet and outlet of the SCR unit,
- b) Excess oxygen in percent dry basis, from the SCR unit outlet,
- c) Flue gas flow rate in scf/hr, from the SCR unit outlet,
- d) Heating value (HHV), in BTU/SCF, of fuel gases supplied to the hydrogen reforming heater, and
- e) Control efficiency of the SCR unit.

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

[Devices subject to this condition : D38]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

D332.1 The operator shall determine compliance with the CO emission limit(s) by conducting a test at least once every five years using a portable analyzer and AQMD-approved test method or, if not available, a non-AQMD approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with the CO emission limit. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]

[Devices subject to this condition : D31, D32, D35]

E. Equipment Operation/Construction Requirements

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

Device ID: C40 [SELECTIVE CATALYTIC REDUCTION]

Requirement number 1: During startup or shutdown period.

Requirement number 2: The heater exhaust is below 570 degrees F.

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

[Devices subject to this condition : D38]

E54.2 The operator is not required to vent this equipment to the following equipment if all of the requirements listed below are met:

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Device ID: C40 [SELECTIVE CATALYTIC REDUCTION]

Requirement number 1: During the refractory dry-out period (up to 144 consecutive hours) to allow the curing of the refractory materials and blow out of steam lines, during which time no production of hydrogen shall occur.

Requirement number 2: The heater exhaust is below 570 degrees F.

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

[Devices subject to this condition : D38]

E71.1 The operator shall only inject ammonia into this equipment if the flue gas inlet temperature is at least 570 degrees F.

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

[Devices subject to this condition : C40]

E71.2 The operator shall not use this equipment to store aqueous ammonia unless the pressure relief valves are set at 100 psig or higher.

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

[Devices subject to this condition : D47]

E144.1 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

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

[Devices subject to this condition : D47]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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 PSA purge gas shall be vented to the heater (Device D38) except during emergencies, process upset, startup or shutdown.

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

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

[Devices subject to this condition : D28]

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

All vent gases shall be vented to the flare (Process 3, 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; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D2]

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

All vent gases from the buffered packing seals shall be vented to the flare (Process 3, 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

[Devices subject to this condition : D4]

H. Applicable Rules

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

[RULE 1173, 6-1-2007; RULE 1173, 2-6-2009]

[Devices subject to this condition : D52, D55, D56]

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

Contaminant	Rule	Rule/Subpart
Refrigerants	40CFR82, SUBPART	F
Refrigerants	District Rule	1415

[RULE 1415, 12-3-2010; 40CFR 82 Subpart F, 5-14-1993]

[Devices subject to this condition : E57]

H23.11 This equipment is subject to the applicable requirements of the following rules or regulations:

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Contaminant	Rule	Rule/Subpart
SOX	District Rule	1118

[RULE 1118, 11-4-2005]

[Devices subject to this condition : C46]

H23.12 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
PM	District Rule	1470

[RULE 1470, 5-4-2012]

[Devices subject to this condition : D48]

H23.13 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1122
VOC	District Rule	1171

[RULE 1122, 10-1-2004; RULE 1122, 5-1-2009; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]

[Devices subject to this condition : E63]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

I. Administrative

1298.1 This equipment shall not be operated unless the facility holds 91800 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. The RTCs held to satisfy the first year of operation portion of this condition may be transferred only after one year from the initial start of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds 91800 pounds of NOx RTCs valid during that compliance year. RTCs held to satisfy the compliance year portion of this condition may be transferred only after the compliance year for which the RTCs are held. If the initial or annual hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

In lieu of holding RTCs on an annual basis as specified above, RTCs held for the purpose of demonstrating compliance with this condition may be transferred as specified below, provided quarterly emissions do not exceed the corresponding quarterly limit listed in the table below. The amount available for transfer after each calendar quarter shall be as specified in Rule 2005(f)(3). Such amount may be transferred only after the end of the subject calendar quarter. If the quarterly certified emissions for any calendar quarter exceed the corresponding quarterly emission limit, the facility may only sell RTCs held pursuant to Rule 2005(f) for that compliance year after the fourth quarter of that compliance year. This early sale option shall permanently be unavailable in the event that quarterly emissions exceed the corresponding quarterly limits for a total of 3 times in any five consecutive years.

Calendar Quarter	Emission Limit (Pounds of NOx RTCs)
January 1 through March 31	22950
April 1 through June 30	22950
July 1 through September 30	22950

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

October 1 through December 31 | 22950

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D38]

K. Record Keeping/Reporting

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/steam blow periods, the hourly firing rates, flue gas temperature, process feed flow rates, inlet and outlet process fluid temperatures, excess oxygen, and NOX emissions.

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

[Devices subject to this condition : D38]

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

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

An engine operating log shall be maintained which on a monthly basis shall include manual and automatic operation and shall list all engine operations in each of the following areas:

- A. Emergency use hours of operation
- B. Maintenance and testing hours
- C. Other operating hours (describe the reason for operation)

In addition, each time the engine is started manually, the log shall include the date of operation and the timer reading in hours at the beginning and end of operation. The log shall be kept for a minimum of three calendar years prior to the current year and made available to the District personnel upon request. The total hours of operation for the previous calendar year shall be recorded sometime during the first 15 days of January of each year.

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1470, 5-4-2012]

[Devices subject to this condition : D48]

K67.4 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

**[RULE 1113, 7-13-2007; RULE 1113, 9-6-2013; RULE 3004(a)(4)-Periodic
Monitoring, 12-12-1997]**

[Devices subject to this condition : E62]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION E: ADMINISTRATIVE CONDITIONS

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]
 - 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_x 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]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION E: ADMINISTRATIVE CONDITIONS

- 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 (SO₂) 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 (CO₂) 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 (O₂) 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_x RECLAIM sources and Table 2 of Rule 2001 for SO_x RECLAIM sources. Those provisions listed in Tables 1 or 2 shall not apply to NO_x or SO_x 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_x or SO_x source, respectively. [2001]
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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION E: ADMINISTRATIVE CONDITIONS

- 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION E: ADMINISTRATIVE CONDITIONS

- 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]
- 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 PRODUCTS AND CHEMICALS, INC.

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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS

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.

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

Not Applicable

C. The Operator of a NOx Process Unit, as defined in Rule 2012, shall, as applicable:

1. Install, maintain, and operate a totalizing fuel meter or any device approved by the Executive Officer to measure quarterly fuel usage or other applicable variables specified in Rule 2012, Table 2012-1, and Rule 2012, Appendix A, Table 4-A. The sharing of totalizing fuel meters may be allowed by the Executive Officer if the fuel meter serves process units which have the same emission factor or emission rate. The sharing of totalizing meter shall not be allowed for process units which are required to comply with an annual heat input limit. [2012]

II. NOx Source Testing and Tune-up conditions

1. The operator shall conduct all required NOx source testing in compliance with an AQMD-approved source test protocol. [2012]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS

2. The operator shall, as applicable, conduct source tests for every large NO_x source no later than June 30, 1997 and every 3 years thereafter. The source test shall include the determination of NO_x 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_x large sources and NO_x process units shall be tuned-up in accordance with the schedule specified in Rule 2012, Appendix A, Chapter 5, Table 5-B. [2012]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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_x or SO_x 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_x Reporting Requirements

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

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR RECLAIM SOURCES

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 NOx source, the total daily mass emissions of NOx 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. [2012]
2. Calculate NOx 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 NOx emissions from all major NOx 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 NOx Large Source, as defined in Rule 2012, shall:

Not Applicable

C. The Operator of a NOx Process Unit, as defined in Rule 2012, shall:

1. Electronically report the calculated quarterly NOx emissions for each NOx process unit. The Operator shall comply with this requirement within 12 months of the date of entry to the RECLAIM Program. [2012]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
System 1: HYDROGEN PRODUCTION - 88.0 MMSCFD Maximum Rated Capacity					S2.1, S13.1, S15.1, S31.1
VESSEL, V-119, FEED COMPRESSOR SUCTION, LENGTH: 11 FT 4 IN; DIAMETER: 6 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D1				
VESSEL, V-133, PROCESS OILY WATER, HEIGHT: 11 FT 10 IN; DIAMETER: 3 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D2				E336.2
FILTER, X-110A/B, FEED GAS COMPRESSOR, 2 TOTAL, 20 CU.FT. CAPACITY EACH A/N: 561635 Permit to Construct Issued: 05/08/14	D3				
COMPRESSOR, C-101A/B, DUAL SERVICES, 2 TOTAL, 7,500 HP EACH WITH BUFFERED PACKING SEALS A/N: 561635 Permit to Construct Issued: 05/08/14	D4				E336.3
HEAT EXCHANGER, E-101/E-104, FG-1A/1B 1ST STAGE FEED DISCHARGE COOLER, 2 TOTAL, 2.81 MMBTU/HR EACH A/N: 561635 Permit to Construct Issued: 05/08/14	D6				
KNOCK OUT POT, V-131A/B, FEED INTERSTAGE, 2 TOTAL, HEIGHT: 9 FT ; DIAMETER: 3 FT 6 IN A/N: 561635 Permit to Construct Issued: 05/08/14	D8				

- * (1) (1A) (1B) 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) (2A) (2B) 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
HEAT EXCHANGER, E-102/E117, FEED COMPRESSOR DISCHARGE COOLER, 2 TOTAL, 2.74 MMBTU/HR EACH A/N: 561635 Permit to Construct Issued: 05/08/14	D10				
VESSEL, COALESCER, V-102A/B, FEED COMPRESSOR DISCHARGE, 2 TOTAL, HEIGHT: 5 FT ; DIAMETER: 1 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D12				
REACTOR, V-104, HYDROGENATION, WITH CHLORIDE GUARD, LENGTH: 20 FT ; DIAMETER: 8 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D14				
VESSEL, V-105A/B, FEED DESULFURIZER, 2 TOTAL, LENGTH: 19 FT ; DIAMETER: 9 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D15				
REACTOR, H101, REFINERY GAS/STEAM REFORMING, TUBULAR TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D49				
HEAT EXCHANGER, E-103, PROCESS GAS, 163.5 MMBTU/HR, SHELL AND TUBE TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D17				

- * (1) (1A) (1B) 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) (2A) (2B) 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process I: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
REACTOR, V-109, HIGH TEMPERATURE SHIFT, LENGTH: 19 FT ; DIAMETER: 11 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D18				
HEAT EXCHANGER, E-105, FEED PREHEATER II, 12.76 MMBTU/HR, SHELL AND TUBE TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D19				
HEAT EXCHANGER, E-106A, BFW PREHEATER I, 47.0 MMBTU/HR, SHELL AND TUBE TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D20				
HEAT EXCHANGER, E-106B/C, BFW PREHEATER II, 67.01 MMBTU/HR, SHELL AND TUBE TYPE, 2 TOTAL A/N: 561635 Permit to Construct Issued: 05/08/14	D21				
REACTOR, V-110, LOW TEMPERATURE SHIFT, LENGTH: 16 FT ; DIAMETER: 11 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D22				
HEAT EXCHANGER, E-107, FEED PREHEATER I, 5.0 MMBTU/HR, SHELL AND TUBE TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D23				

* (1) (1A) (1B) 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) (2A) (2B) 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process I: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
HEAT EXCHANGER, E-108, BFW MAKEUP HEATER, 49.0 MMBTU/HR, SHELL AND TUBE TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D24				
HEAT EXCHANGER, E-109, PSA FEED AIR COOLER, 47.57 MMBTU/HR, FIN-FAN TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D25				
HEAT EXCHANGER, E-110, PSA FEED TRIM COOLER, 15.85 MMBTU/HR, SHELL AND TUBE TYPE A/N: 561635 Permit to Construct Issued: 05/08/14	D26				
KNOCK OUT POT, V-112, COLD CONDENSATE, LENGTH: 11 FT 10 IN; DIAMETER: 7 FT 3 IN A/N: 561635 Permit to Construct Issued: 05/08/14	D27				
ADSORBER, X-101A-J, PRESSURE SWING ADSORPTION (PSA) UNIT, 10 TOTAL, DIAMETER: 10 FT 6 IN; HEIGHT: 21 FT 6 IN EACH A/N: 561635 Permit to Construct Issued: 05/08/14	D28				D90.3, E336.1
VESSEL, V-113A/B, PSA PURGE GAS, 2 TOTAL, DIAMETER: 12 FT; HEIGHT: 80 FT EACH A/N: 561635 Permit to Construct Issued: 05/08/14	D29				

- * (1) (1A) (1B) 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) (2A) (2B) 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process I: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
HEATER, E-451, METHANATOR PRE-HEAT, 75 KW ELECTRICALLY HEATED A/N: 561635 Permit to Construct Issued: 05/08/14	D66				
REACTOR, V-451, METHANATOR, LENGTH: 5 FT ; DIAMETER: 4 FT 6 IN A/N: 561635 Permit to Construct Issued: 05/08/14	D67				
HEAT EXCHANGER, SHELL AND TUBE TYPE, E-452, ECONOMIZER, METHANATOR PRODUCT, 0.461 MMBTU/HR A/N: 561635 Permit to Construct Issued: 05/08/14	D68				
COOLER, E-455, PURE H2 PRODUCT CONDENSER, CRYOQUIP MODEL NO. VAI-1248-SSBL23, 0.092 MMBTU/HR, AMBIENT VAPORIZER A/N: 561635 Permit to Construct Issued: 05/08/14	D69				
VESSEL, V-452A/B, MOLECULAR SIEVE DRIER, WITH REGENERATION VENT TO ATMOSPHERE, 2 IN PARALLEL, LENGTH: 7 FT ; DIAMETER: 2 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D70			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D28.2, D332.1, E336.4
COMPRESSOR, E-453/454, PURE H2 PRODUCT, 2 TOTAL, 100 HP EACH A/N: 561635 Permit to Construct Issued: 05/08/14	D71				

- * (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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
LOADING ARM, H2 TRAILER, STANCHIONS A/B, PURE H2 PRODUCT, 2 TOTAL A/N: 561635 Permit to Construct Issued: 05/08/14	D72				
VESSEL, V-114, STEAM DEAERATOR, TWO SECTIONS, WITH UPPER SECTION VENTED TO ATMOSPHERE, LENGTH: 22 FT ; DIAMETER: 9 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D31			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D29.1, D332.1, II.1
TANK, V-137, CONDENSATE BREAK, HEIGHT: 7 FT ; DIAMETER: 6 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D32	C46		CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D90.4, E336.2, II.1
VESSEL, V-107, BLOWDOWN, LENGTH: 11 FT 4 IN; DIAMETER: 4 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D33				
VESSEL, V-108, STEAM, HEIGHT: 50 FT ; DIAMETER: 9 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D34				
VESSEL, V-129, INTERMITTENT BLOWDOWN, VENTED TO ATMOSPHERE, HEIGHT: 11 FT 4 IN; DIAMETER: 4 FT A/N: 561635 Permit to Construct Issued: 05/08/14	D35			CO: 2000 PPMV (5) [RULE 407, 4-2-1982]	D29.1, D332.1, II.1

* (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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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
Process 1: HYDROGEN PRODUCTION PLANT (Refinery gas/Steam Reforming)					
CONDENSER, E-130, SURFACE, LENGTH: 32 FT ; DIAMETER: 8 FT 8 IN A/N: 561635 Permit to Construct Issued: 05/08/14	D36				
TURBINE, T-101, STEAM, GENERAL ELECTRIC, DOUBLE EXTRACTION, NON-FIRED TYPE WITH A/N: 561635 Permit to Construct Issued: 05/08/14 GENERATOR, ELECTRIC, 31.9 MW	D37				
FUGITIVE EMISSIONS, MISCELLANEOUS, (PUMPS, COMPRESSORS, VALVES, FLANGES, PRV) A/N: 561635 Permit to Construct Issued: 05/08/14	D52				H23.2
Process 3: FLARE					
System 1: FLARE					
FLARE, X-113, GROUND LEVEL, WITH A CYCLONE SEPARATOR, HEIGHT: 68 FT ; DIAMETER: 32 FT A/N: 561636 Permit to Construct Issued: 05/08/14	C46	D32		CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	S18.1, S31.1 B61.1, D12.3, D12.4, D90.3, H23.11
FUGITIVE EMISSIONS, MISCELLANEOUS, (PUMPS, COMPRESSORS, VALVES, FLANGES, PRV) A/N: 561636 Permit to Construct Issued: 05/08/14	D56				H23.2

- * (1) (1A) (1B) 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) (2A) (2B) 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.

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

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 PRODUCTS AND CHEMICALS, INC.**

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D1	1	1	1
D2	1	1	1
D3	1	1	1
D4	1	1	1
D6	1	1	1
D8	1	1	1
D10	2	1	1
D12	2	1	1
D14	2	1	1
D15	2	1	1
D17	2	1	1
D18	3	1	1
D19	3	1	1
D20	3	1	1
D21	3	1	1
D22	3	1	1
D23	3	1	1
D24	4	1	1
D25	4	1	1
D26	4	1	1
D27	4	1	1
D28	4	1	1
D29	4	1	1
D31	6	1	1
D32	6	1	1
D33	6	1	1
D34	6	1	1
D35	6	1	1
D36	7	1	1
D37	7	1	1
C46	7	3	1
D49	2	1	1
D52	7	1	1
D56	7	3	1

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D66	5	1	1
D67	5	1	1
D68	5	1	1
D69	5	1	1
D70	5	1	1
D71	5	1	1
D72	6	1	1

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

F14.2 The operator shall not use fuel oil containing sulfur compounds in excess of 0.05 percent by weight.

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

F14.3 The operator shall not use natural gas containing sulfur compounds in excess of 16 ppmv, calculated as hydrogen sulfide.

[RULE 431.1, 6-12-1998]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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):

40CFR 60, Subpart A

[40CFR 60SubpartA, 4-4-2014]

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

SYSTEM CONDITIONS

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

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than 2.5 lbs/mmscf of hydrogen produced

A totallizing flow meter shall be installed and maintained to accurately indicate and record the flow rate of hydrogen produced.

[RULE 1189, 1-21-2000]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

Contaminant	Rule	Rule/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 shall be directed to the flare system except Devices IDs D31, D35 and D70 that vent to the atmosphere..

This process/system shall not be operated unless the flare system 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]

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:

Hydrogen Production Plant (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 3, System 1]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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) 310073, 310075 & 293123:

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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.

All new components in VOC service, except pressure relief devices for which a leak in excess of 200 ppmv shall be repaired within 5 days of detection, 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.

All new valves greater than 2-inch size and major components in VOC service as defined by Rule 1173, except those specifically exempted by 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 valves in VOC service, except those specifically exempted by Rule 1173, shall be bellows seal valves for 2-inch and smaller sizes, except as approved by the District, in the following applications: 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.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator shall revert to a quarterly inspection program with the approval of the executive officer. This condition shall not apply to bellows sealed valves.

The operator shall keep records of the monthly inspection (and quarterly where applicable), subsequent repairs and reinspections, in a manner approved by the District.

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

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Systems subject to this condition : Process 1, System 1 , 2; Process 3, System 1]

DEVICE CONDITIONS

B. Material/Fuel Type Limits

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

Compound	ppm by volume
Total Sulfur greater than	40

The total sulfur compounds, calculated as hydrogen sulfide, are averaged over 4-hour period.

[RULE 431.1, 6-12-1998]

[Devices subject to this condition : C46]

D. Monitoring/Testing Requirements

D12.3 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 : C46]

D12.4 The operator shall install and maintain a(n) thermocouple to accurately indicate the temperature at the flare stack.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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 5 to 8 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 : C46]

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

The test shall be conducted during the first drier regeneration following startup of this equipment while H₂ product is vented.

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 to determine the CO emissions.

The test shall be conducted to determine the CH₄ emissions.

The test shall be conducted to determine the VOC emissions.

[RULE 1301(b)(1), 12-7-1995; RULE 1703 - PSD Analysis, 10-7-1988; RULE 1714, 11-5-2010]

[Devices subject to this condition : D70]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	Approved District method	15 minutes	Combined Atmospheric Vent

The test shall determine and report the concentration and mass emission rate for CO.

The test may commence without prior approval from the District, if it is conducted according to a source test protocol previously approved by the District for this equipment. A copy of the approval letter shall be submitted to the District at least 30 days prior to the test.

With AQMD approval of the source test protocol, the test shall be conducted within 60 days after the atmospheric vent stream of condensate break tank (V-137) has been rerouted to ground flare (C46) for disposal. The test shall be conducted annually thereafter (with a minimum interval of 10 months between tests) to demonstrate compliance with the CO concentration limit of Rule 407.

The test shall be conducted when the hydrogen plant is operating at least 80 percent of the maximum rated capacity or within a capacity range approved by the District.

The operator shall comply with all general testing, monitoring, reporting and recordkeeping requirements in Section E and K of this permit.

The requirement of this condition shall no longer be applicable after two successive annual tests demonstrating compliance with the CO concentration limit of Rule 407.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]

[Devices subject to this condition : D31, D35]

D90.3 The operator shall continuously monitor the H₂S concentration of fuel gas before being burned in this device according to the following specifications:

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The operator shall use a total sulfur fuel analyzer approved by the District to monitor the parameter.

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

The operator may monitor the H₂S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H₂S in the fuel gas being burned in this device.

The operator shall install and maintain a totalizing fuel meter to accurately indicate the amount of fuel being used at the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 431.1, 6-12-1998]

[Devices subject to this condition : D28, C46]

D90.4 The operator shall periodically monitor the composition and HHV of the vent gas from condensate break tank V-137 according to the following specifications:

For the purpose of this condition, 'periodically monitor' shall be defined as source testing within 60 days after the vent from V-137 (D32) has been rerouted to the flare (C46) and once per year thereafter to determine and record the parameter being monitored.

The source test shall be conducted in accordance with AQMD-approved test protocol and test method using EPA TO-15 and ASTM D3588/D1945 for gas composition and HHV, respectively.

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

The requirement of this condition shall no longer be applicable after two successive annual tests demonstrating the gas composition and HHV remain fixed.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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]

[Devices subject to this condition : D32]

D332.1 The operator shall determine compliance with the CO emission limit(s) by conducting a test at least once every five years using a portable analyzer and AQMD-approved test method or, if not available, a non-AQMD approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with the CO emission limit. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]

[Devices subject to this condition : D31, D35, D70]

E. Equipment Operation/Construction Requirements

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

All PSA purge gas shall be vented to the heater (Device D38) except during emergencies, process upset, startup or shutdown.

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

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

[Devices subject to this condition : D28]

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

All vent gases shall be vented to the flare (Process 3, 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.

**FACILITY PERMIT TO OPERATE
 AIR PRODUCTS AND CHEMICALS, INC.**

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]

[Devices subject to this condition : D2, D32]

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

All vent gases from the buffered packing seals shall be vented to the flare (Process 3, 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; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D4]

E336.4 The operator shall vent the vent gases from this equipment as follows:

The drier regeneration vent shall vent to atmosphere only during periods of drier regeneration. Drier regeneration shall occur no more than once per day.

[RULE 1714, 11-5-2010]

[Devices subject to this condition : D70]

H. Applicable Rules

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

[RULE 1173, 6-1-2007; RULE 1173, 2-6-2009]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D52, D56]

H23.11 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 : C46]

I. Administrative

11.1 The operator shall comply with all the requirements of the condition and compliance schedule as specified in the variance case no. 4276-14, issued on March 6, 2014, in accordance with the Order and Decision of the Hearing Board or as subsequently modified by the Hearing Board. The operator shall submit progress reports at least semi-annually, or more frequently if specified in the Order and Decision. The progress reports shall contain dates for achieving activities, milestones or compliance required in the schedule of compliance and dates when such activities, milestones or compliance were achieved; and an explanation of why any dates in the schedule of compliance were not, or will not be met, and any preventative or corrective measures adopted.

The variance (or Order for Abatement) referenced in this condition does not affect federal or citizen enforceability of the underlying SIP approved rules for which the applicant is receiving the variance (or Order for Abatement).

[**RULE 3004(a)(10)(C), 12-12-1997**]

[Devices subject to this condition : D31, D32, D35]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION I: PLANS AND SCHEDULES

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules specified below. The operator shall comply with all conditions specified in the approval of these plans, with the following exceptions:

- a. The operator does not have to comply with NO_x or SO_x emission limits from rules identified in Table 1 or Table 2 of Rule 2001(j) which become effective after December 31, 1993.
- b. The operator does not have to comply with NO_x or SO_x emission limits from rules identified in Table 1 or Table 2 of Rule 2001(j) after the facility has received final certification of all monitoring and reporting requirements specified in Section F and Section G.

Documents pertaining to the plan applications listed below are available for public review at AQMD Headquarters. Any changes to plan applications will require permit modification in accordance with Title V permit revision procedures.

List of approved plans:

Application	Rule
458529	1118

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.

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

SECTION J: AIR TOXICS

NOT APPLICABLE

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

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 this 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)]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

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.
 - (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)]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

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)]

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)]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

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 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 PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration EMERGENCY PROVISIONS

17. An emergency¹ constitutes an affirmative defense to an action brought for noncompliance 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]

¹ "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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration 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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

- (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.
 - (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;

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

- (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)]

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 TitleV application file. [3004(a)(4)]

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

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.

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 1110.2	2-1-2008	Federally enforceable
RULE 1110.2	9-7-2012	Non federally enforceable
RULE 1113	7-13-2007	Federally enforceable
RULE 1113	9-6-2013	Non federally enforceable
RULE 1118	11-4-2005	Federally enforceable
RULE 1118	2-13-1998	Non federally enforceable
RULE 1122	10-1-2004	Federally enforceable
RULE 1122	5-1-2009	Non federally enforceable
RULE 1146	11-17-2000	Federally enforceable
RULE 1146	9-5-2008	Non federally enforceable
RULE 1171	2-1-2008	Federally enforceable
RULE 1171	5-1-2009	Non federally enforceable
RULE 1173	2-6-2009	Federally enforceable
RULE 1173	6-1-2007	Non federally enforceable
RULE 118	12-7-1995	Non federally enforceable
RULE 1189	1-21-2000	Federally enforceable
RULE 1301(b)(1)	12-7-1995	Federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable
RULE 1303(b)(2)-Offset	5-10-1996	Federally enforceable
RULE 1304(a)-Modeling and Offset Exemption	6-14-1996	Federally enforceable
RULE 1415	12-3-2010	Non federally enforceable

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

SECTION K: TITLE V Administration

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 1470	5-4-2012	Non federally enforceable
RULE 1703 - PSD Analysis	10-7-1988	Federally enforceable
RULE 1714	11-5-2010	Non federally enforceable
RULE 2005	6-3-2011	Federally enforceable
RULE 2012	1-7-2005	Federally enforceable
RULE 204	10-8-1993	Federally enforceable
RULE 217	1-5-1990	Federally enforceable
RULE 219	7-11-2003	Non federally enforceable
RULE 219	9-4-1981	Federally enforceable
RULE 3002	11-14-1997	Federally enforceable
RULE 3003	11-14-1997	Federally enforceable
RULE 3003	3-16-2001	Non federally enforceable
RULE 3004	12-12-1997	Federally enforceable
RULE 3004(a)(10)(C)	12-12-1997	Federally enforceable
RULE 3004(a)(4)-Periodic Monitoring	12-12-1997	Federally enforceable
RULE 3005	11-14-1997	Federally enforceable
RULE 3005	3-16-2001	Non federally enforceable
RULE 3007	10-8-1993	Federally enforceable
RULE 304	5-11-2001	Non federally enforceable
RULE 401	11-9-2001	Non federally enforceable
RULE 401	3-2-1984	Federally enforceable
RULE 402	5-7-1976	Non federally enforceable
RULE 404	2-7-1986	Federally enforceable
RULE 407	4-2-1982	Federally enforceable
RULE 408	5-7-1976	Federally enforceable
RULE 409	8-7-1981	Federally enforceable
RULE 430	7-12-1996	Non federally enforceable
RULE 431.1	6-12-1998	Federally enforceable
RULE 431.2	5-4-1990	Federally enforceable
RULE 431.2	9-15-2000	Non federally enforceable
RULE 701	6-13-1997	Federally enforceable
40CFR 60SubpartA	4-4-2014	Federally enforceable

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

SECTION K: TITLE V Administration

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
40CFR 68 - Accidental Release Prevention	5-24-1996	Federally enforceable
40CFR 82 Subpart F	5-14-1993	Federally enforceable

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

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

NONE

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 07-13-2007]

- (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, except anti-graffiti 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 PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 07-13-2007] 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		

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 07-13-2007]

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
Nonflat High Gloss	250		150				50	
Pigmented Lacquer	680	550			275			
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							

* 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.

**FACILITY PERMIT TO OPERATE
AIR PRODUCTS AND CHEMICALS, INC.**

**APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 07-13-2007]**

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

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013]

- (1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solid the application of any architectural coating within in the District:
 - (A) That is listed in the Table of Standards 1 and 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; or
 - (B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).
- (2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013] TABLE OF STANDARDS 1 VOC LIMITS

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

COATING CATEGORY	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges ³		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	100
Decorative Coatings		350			
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-Sacrificial Anti-Graffiti Coatings		100			
Zinc-Rich IM Primers		100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters		100			
Reactive Penetrating Sealers		350			

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013]

Recycled Coatings		250			
Roof Coatings		50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous		350			
Rust Preventative Coatings	400	100			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013]

COATING CATEGORY	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Pigmented		550			
Specialty Primers		100			
Stains	350	100			
Stains, Interior	250	250			
Stone Consolidant		450			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers		100			
Waterproofing Concrete/Masonry Sealers		100			
Wood Preservatives		350			

- 1 The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.
- 2 The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.) VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2 VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant Less Water and Less Exempt Compounds

COLORANT ADDED TO	Limit ⁴
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 02-01-2008]

(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:

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY	VOC g/l (lb/gal)	VOC g/l (lb/gal)	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	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)		

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 02-01-2008]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
	VOC g/l (lb/gal)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(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)		

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 02-01-2008]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
	VOC g/l (lb/gal)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(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)	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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 05-01-2009]

(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:

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY	VOC g/l (lb/gal)	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	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)	

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 05-01-2009]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS*	EFFECTIVE 1/1/2010
	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(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	100 (0.83)	

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 05-01-2009]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS*	EFFECTIVE 1/1/2010
	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(B) Removable Press Components	25 (0.21)	
(v) Screen Printing	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.

FACILITY PERMIT TO OPERATE AIR PRODUCTS AND CHEMICALS, INC.

APPENDIX B: RULE EMISSION LIMITS [RULE 404 02-07-1986]

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 ² 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

**FACILITY PERMIT TO OPERATE
 AIR PRODUCTS AND CHEMICALS, INC.**

**APPENDIX B: RULE EMISSION LIMITS
 [RULE 404 02-07-1986]**

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter ² 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
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
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

**FACILITY PERMIT TO OPERATE
 AIR PRODUCTS AND CHEMICALS, INC.**

**APPENDIX B: RULE EMISSION LIMITS
 [RULE 404 02-07-1986]**

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter ⁷ 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
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