



## FACILITY PERMIT TO OPERATE

**NASA JET PROPULSION LAB  
4800 OAK GROVE DR  
PASADENA, CA 91109**

### 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 NASA JET PROPULSION LAB

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## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### SECTION A: FACILITY INFORMATION

**LEGAL OWNER &/OR OPERATOR:** NASA JET PROPULSION LAB

**LEGAL OPERATOR (if different than owner):**

**EQUIPMENT LOCATION:** 4800 OAK GROVE DR  
PASADENA, CA 91109

**MAILING ADDRESS:** 4800 OAK GROVE DR MS 171-225  
PASADENA, CA 91109

**RESPONSIBLE OFFICIAL:** EUGENE L. TATTINI

**TITLE:** DEPUTY DIRECTOR - JPL

**TELEPHONE NUMBER:** (818) 354-3400

**CONTACT PERSON:** JAMES M PHAM

**TITLE:** SENIOR MEMBER OF TECHNICAL STAFF

**TELEPHONE NUMBER:** (818) 354-9579

**TITLE V PERMIT ISSUED:** October 18, 2011

**TITLE V PERMIT EXPIRATION DATE:** October 17, 2016

TITLE V	RECLAIM
YES	<b>NOx:</b> YES <b>SOx:</b> NO <b>CYCLE:</b> 2 <b>ZONE:</b> INLAND

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### 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 <sup>1</sup> Holding as of 10/18/2011 (pounds)	Non-Tradable <sup>2</sup> Non-Usable RTCs (pounds)
7/2008 6/2009	Inland	55155	31263	1489
7/2009 6/2010	Inland	55155	26261	2978
7/2010 6/2011	Inland	55155	24261	4468
7/2011 6/2012	Inland	55155	42745	5957
7/2012 6/2013	Inland	55155	42745	5957
7/2013 6/2014	Inland	55155	42745	5957
7/2014 6/2015	Inland	55155	42745	5957
7/2015 6/2016	Inland	55155	42745	5957
7/2016 6/2017	Inland	55155	42745	5957
7/2017 6/2018	Inland	55155	42745	5957
7/2018 6/2019	Inland	55155	42745	5957
7/2019 6/2020	Inland	55155	42745	5957
7/2020 6/2021	Inland	55155	42745	5957
7/2021 6/2022	Inland	55155	42745	5957
7/2022 6/2023	Inland	55155	42745	5957
7/2023 6/2024	Inland	55155	42745	5957
7/2024 6/2025	Inland	55155	42745	5957

**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 NASA JET PROPULSION LAB

### 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 <sup>1</sup> Holding as of 10/18/2011 (pounds)	Non-Tradable <sup>2</sup> Non-Usable RTCs (pounds)
7/2025 6/2026	Inland	55155	42745	5957

**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 NASA JET PROPULSION LAB

### 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	Inland	55155	0

# **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

## **SECTION C: FACILITY PLOT PLAN**

(TO BE DEVELOPED)

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
<b>System 1: BUILDING 150</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. 9NR00534, 6 CYLINDERS, DIESEL FUEL, CATERPILLAR, MODEL 3306 ATTAC, WITH AFTERCOOLER, TURBOCHARGER, 377 BHP A/N: 458450	D3		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]	B61.1, B61.3, D12.2, E448.2, H23.9, K67.10
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DETROIT DIESEL, MODEL NO. 6063-TK35, DIESEL FUEL, WITH AFTERCOOLER, TURBOCHARGER, 550 BHP A/N: 458447	D154		NOX: PROCESS UNIT**	CO: 8.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 6.9 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.4 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; ROG: 1 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	B59.1, B61.3, D12.2, E448.2, H23.9, K67.10
<b>System 2: BUILDING 159</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. 5JF00700, 6 CYLINDERS, DIESEL FUEL, CATERPILLAR, MODEL 3116TA, WITH AFTERCOOLER, TURBOCHARGER, 187 BHP A/N: 458449	D4		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]	B61.1, B61.3, D12.2, E448.2, H23.9, K67.10
<b>System 4: BUILDING 202</b>					

\* (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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. 28914A, 6 CYLINDERS, DIESEL FUEL, ONAN, MODEL 06110T, WITH AFTERCOOLER, TURBOCHARGER, 302 BHP A/N: 285226	D6		NOX: PROCESS UNIT**	<b>NOX:</b> 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	B61.1, B61.3, D12.2, D135.1, E448.1, H23.9, K67.10
<b>System 5: BUILDING 230</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, 16 CYLINDERS, DIESEL FUEL, CATERPILLAR, MODEL 3516 DITA, WITH AFTERCOOLER, TURBOCHARGER, 2151 BHP A/N: 458445	D7		NOX: PROCESS UNIT**	<b>NOX:</b> 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	B61.1, C1.1, C177.1, H23.11, K67.10
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, 16 CYLINDERS, DIESEL FUEL, CATERPILLAR, MODEL 3516 DITA, WITH AFTERCOOLER, TURBOCHARGER, 2151 BHP A/N: 458444	D8		NOX: PROCESS UNIT**	<b>NOX:</b> 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	B61.1, C1.1, C177.1, H23.11, K67.10

\* (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 NASA JET PROPULSION LAB

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. 25Z05039, 16 CYLINDERS, DIESEL FUEL, CATERPILLAR, MODEL 3516 DITA, WITH AFTERCOOLER, TURBOCHARGER, 2151 BHP A/N: 458443	D9		NOX: PROCESS UNIT**	CO: 8.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 6.9 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.4 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; ROG: 1 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	B61.1, C1.1, C177.1, H23.11, K67.10
<b>System 6: BUILDING 268</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. 6A162186, 6 CYLINDERS, DIESEL FUEL, DETROIT DIESEL, MODEL 6061-A4, 170 BHP A/N: 285227	D10		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]	B61.1, B61.3, D12.2, D135.1, E448.1, H23.9, K67.10
<b>System 7: BUILDING 277</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, 90 BHP A/N: 249455	D11		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]	B61.3, D12.2, D135.1, E448.1, H23.9, K67.10
<b>System 8: BUILDING 298</b>					

\* (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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, 12 CYLINDERS, NATURAL GAS, CATERPILLAR, MODEL G398, 450 BHP A/N: 285413	D13		NOX: PROCESS UNIT**	<b>NOX:</b> 3400 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	C1.1, D135.1, K67.10
<b>System 10: BUILDING 302</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. H880147524, 6 CYLINDERS, DIESEL FUEL, CUMMINS, MODEL NNTA855G2, WITH AFTERCOOLER, TURBOCHARGER, 535 BHP A/N: 458452	D15		NOX: PROCESS UNIT**	<b>NOX:</b> 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	B61.1, B61.3, D12.2, E448.3, H23.9, K67.10
<b>System 11: BUILDING 308</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, SERIAL NO. 703994-A, 8 CYLINDERS, NATURAL GAS, PROPANE, FORD, MODEL LSG-875106005-A, WITH TURBOCHARGER, 132 BHP A/N: 366520	D16		NOX: PROCESS UNIT**	<b>NOX:</b> 139 LBS/1000 GAL PROPANE (5) [RULE 2012, 5-6-2005]; <b>NOX:</b> 3400 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	C1.1, E114.1, K67.10
<b>System 13: BUILDING 310</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, 8 CYLINDERS, DIESEL FUEL, DETROIT DIESEL, MODEL 8083-7405 (8V-92TA), WITH AFTERCOOLER, TURBOCHARGER, 568 BHP A/N: 458451	D18		NOX: PROCESS UNIT**	<b>NOX:</b> 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; <b>PM:</b> (9) [RULE 404, 2-7-1986]	B61.1, B61.3, C1.1, C177.1, H23.12, K67.10
<b>System 15: BUILDING 249</b>					

\* (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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, 4 CYLINDERS, DIESEL FUEL, CUMMINS, MODEL 4B3.9-G2, 68 BHP A/N: 458453	D138		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]	B61.1, B61.3, D12.2, E448.3, H23.9, K67.10
<b>System 16: EAST GATE</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, JOHN DEERE, MODEL NO. 3029TF150, DIESEL FUEL, 64 BHP A/N: 458446	D155		NOX: PROCESS UNIT**	CO: 8.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 6.9 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.4 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; ROG: 1 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	B59.1, B61.3, D12.2, E448.2, H23.9, K67.10

\* (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
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, KOHLER, MODEL NO. 100RZG, NATURAL GAS, WITH A THREE-WAY CATALYTIC CONVERTOR, JOHNSON MATTHEY, MODEL NO. CXX6-3, 144 BHP A/N: 436668	D159		NOX: PROCESS UNIT**	CO: 2 GRAM/BHP-HR NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; NOX: 1.5 GRAM/BHP-HR NATURAL GAS (4) [RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]; NOX: 3400 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 1.5 GRAM/BHP-HR NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	C1.1, C1.8, D12.1, E71.4, K67.10
<b>System 17: BUILDING 179</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, JOHN DEERE, MODEL NO. 6068HF485T, DIESEL FUEL, WITH AFTERCOOLER, TURBOCHARGER, 315 BHP A/N: 468704	D164		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; NOX + ROG: 3 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.15 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	B59.1, B61.3, D12.2, E448.2, H23.9, K67.10
<b>System 19: BUILDING 224</b>					

\* (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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, CATERPILLAR, MODEL 3304B, WITH TURBOCHARGER, 186 BHP A/N: 497713	D14		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]	D12.2, E448.3, H23.9, K67.10
<b>Process 3: SURFACE COATING EQUIPMENT</b>					
<b>System 4: COATING OPERATION, BLDG. 18</b>					
SPRAY COATING OPERATION, 8 FT. W. X 8 FT. H. X 6 FT.-9 IN. D., WITH TWELVE FILTERS, 20" X 25" EACH, WITH 1-HP EXHAUST FAN, WITH SPRAY BOOTH A/N: 354582	D38			PM: (9) [RULE 404, 2-7-1986]; VOC: (9) [RULE 1107, 11-9-2001; RULE 1107, 1-6-2006; RULE 1124, 9-21-2001; RULE 1145, 2-14-1997; RULE 1145, 12-4-2009; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	A63.1, C6.1, D322.1, E175.1, H23.1, K67.3
<b>Process 4: DEGREASING/CLEANING EQUIPMENT</b>					
<b>System 3: BUILDING 103</b>					
CLEANER, MICROCEL CENTRIFUGAL SYSTEM, 38 IN. W. X 75 IN. L. X 67 IN. H., 28 GALLON CAPACITY A/N: 375751	D137				H23.4
<b>Process 5: FUEL STORAGE AND DISPENSING</b>					
FUEL DISPENSING NOZZLE, BELLOWS-LESS, PHASE II CARB ENHANCED VAPOR RECOVERY SYSTEM, GASOLINE, HEALY PHASE II EVR SYSTEM INCLUDING VEEDER-ROOT ISD SYSTEM (VR-202-A) A/N: 471739	D68				J110.1, J121.1, J373.1, J373.2, J373.3, J373.4

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 5: FUEL STORAGE AND DISPENSING</b>					
STORAGE TANK, UNDERGROUND, CARB ENHANCED VAPOR RECOVERY PHASE I, GASOLINE, WITH VAPOR RECOVERY SYSTEM, 10000 GALS A/N: 471739	D69				C1.7, J109.1, J373.2, J373.3, J373.4, K67.1
<b>Process 6: CIRCUIT BOARDS R &amp; D</b>					
<b>System 1: BUILDING 103</b>					
SOLDER MACHINE, GPD GLOBAL LTS-1000APC SOLDER DIP TINNING, WITH VAPOR PHASE REFLOW SYSTEM, R&D TECHNICAL SERVICES, MODEL NO. RD2, 7.1 KW A/N: 401919	D75				A63.2, B27.2
<b>Process 7: MICRO-DEVICES R &amp; D</b>					P13.1
<b>System 1: BUILDING 302</b>					S1.1
DEPOSITION REACTOR, THOMAS SWAN, MODEL NO. EPITOR II, METAL ORGANIC VAPOR PHASE EPITAXY A/N: 346766	D83	C128			K67.2
<b>System 3: BUILDING 302</b>					S1.2
ETCHER, REACTIVE ION, PLASMA FAB A/N: 454660	D90	C131			
ETCHER, PLASMA TECH, REACTIVE ION A/N: 454660	D101	C131			
DEPOSITION REACTOR, MICROSCIENCE, CHEMICAL VAPOR DEPOSITION A/N: 454660	D103	C127			

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>* (1) (1A) (1B) Denotes RECLAIM emission factor</li> <li>(3) Denotes RECLAIM concentration limit</li> <li>(5) (5A) (5B) Denotes command and control emission limit</li> <li>(7) Denotes NSR applicability limit</li> <li>(9) See App B for Emission Limits</li> </ul> | <ul style="list-style-type: none"> <li>(2) (2A) (2B) Denotes RECLAIM emission rate</li> <li>(4) Denotes BACT emission limit</li> <li>(6) Denotes air toxic control rule limit</li> <li>(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)</li> <li>(10) See section J for NESHAP/MACT requirements</li> </ul> |
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\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 7: MICRO-DEVICES R &amp; D</b>					P13.1
DEPOSITION REACTOR, GSI, CHEMICAL VAPOR DEPOSITION A/N: 454660	D104	C127			
DEPOSITION REACTOR, GLASS TECH, CHEMICAL VAPOR DEPOSITION A/N: 454660	D105	C127			
DEPOSITION REACTOR, JPL, CHEMICAL VAPOR DEPOSITION A/N: 454660	D106	C127			
FURNACE, THERMCO, MINI BRUTE, DIFFUSION A/N: 454660	D108	C127			
FURNACE, THERMCO, MINI BRUTE, DIFFUSION A/N: 454660	D109	C127			
FURNACE, THERMCO, MINI BRUTE, DIFFUSION A/N: 454660	D110	C127			
FURNACE, TYSTAR, TYTAN, LPCVD A/N: 454660	D117	C131			
FURNACE, TYSTAR, TYTAN, LPCVD A/N: 454660	D118	C127			
FURNACE, TYSTAR, TYTAN, LPCVD A/N: 454660	D119	C127			
FURNACE, TYSTAR, TYTAN, LPCVD A/N: 454660	D120	C127			
DEPOSITION REACTOR, PLASMA THERM, MODEL NO. 790, PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION A/N: 454660	D124	C127			

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|--|--|
| <ul style="list-style-type: none"> <li>* (1) (1A) (1B) Denotes RECLAIM emission factor</li> <li>(3) Denotes RECLAIM concentration limit</li> <li>(5) (5A) (5B) Denotes command and control emission limit</li> <li>(7) Denotes NSR applicability limit</li> <li>(9) See App B for Emission Limits</li> </ul> | <ul style="list-style-type: none"> <li>(2) (2A) (2B) Denotes RECLAIM emission rate</li> <li>(4) Denotes BACT emission limit</li> <li>(6) Denotes air toxic control rule limit</li> <li>(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)</li> <li>(10) See section J for NESHAP/MACT requirements</li> </ul> |
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\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 7: MICRO-DEVICES R &amp; D</b>					P13.1
ETCHER, PLASMA THERM, MODEL NO. SLR770, ELECTRON CYCLOTRON A/N: 454660	D125	C131			
ETCHER, SURFACE TECHNOLOGY, MULTIPLEX INDUCTIVELY COUPLED A/N: 454660	D126	C131			
ETCHER, REACTIVE ION, CHLORINE, UNAXIS, MODEL NO. SLN-ICP A/N: 454660	D160	C131			B27.4
ETCHER, REACTIVE ION, FLUORINE, UNAXIS, MODEL NO. SLN-ICP A/N: 454660	D161	C131			
FURNACE, WET OXIDATION, TYSTAR, MODEL NO. MINI TYTAN 4600 A/N: 454660	D162	C131			
FURNACE, LPCVD, TYSTAR, MODEL NO. MINI TYTAN 4600 A/N: 454660	D163	C127			B27.5
<b>System 4: BUILDING 302</b>					
DEGREASER, AIRLESS, AIR-TIGHT, TIYODA-SEREC, CLEANING CHAMBER DIMENSIONS: 8 IN. DIA. X 12 IN. H., 5 LBS ACTIVATED CARBON FILTER A/N: 415437	D158			<b>HAP: (10) [40CFR 63 Subpart T, #30, 6-5-1995]</b>	A63.3, B27.3, E71.5, H23.8, K67.11
<b>Process 8: AIR POLLUTION CONTROL</b>					
<b>System 1: BUILDING 302</b>					

\* (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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 8: AIR POLLUTION CONTROL</b>					
INCINERATOR, CONTROLLED DECOMPOSITION OXIDATION UNITS, 14 TOTAL, EACH DELATECH, MODEL NO. 805, 3 KVA A/N: 415436	C127	D103 D104 D105 D106 D108 D109 D110 D118 D119 D120 D124 C131 D163			
SCRUBBER, AIXTRON, MODEL NO. A2STE, WITH TWO ABSORPTION COLUMNS A/N: 415436	C128	D83 C131			
SCRUBBER, VIRON, MODEL NO. VHS108108FRP, WITH MIST ELIMINATOR A/N: 415436	C131	D90 D101 D117 D125 D126 C127 C128 D160 D161 D162		PM: (9) [RULE 404, 2-7-1986]	C8.1, C8.2, K67.4
<b>Process 10: R219 EXEMPT EQUIPMENT SUBJECT TO SOURCE-SPECIFIC RULES</b>					
RULE 219 EXEMPT EQUIPMENT, LAMINATING EQUIPMENT, LOW USE OR EMISSIONS	E140			VOC: (9) [RULE 1168, 1-7-2005; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	H23.5
RULE 219 EXEMPT EQUIPMENT, COOLING TOWERS	E141				H23.2
RULE 219 EXEMPT EQUIPMENT, REFRIGERANT RECOVERY AND/OR RECYCLING UNITS,	E142				H23.3
RULE 219 EXEMPT EQUIPMENT, ABRASIVE BLASTING EQUIPMENT, GLOVE-BOX, <= 53 FT3, WITH DUST FILTER	E143			PM: (9) [RULE 1140, 2-1-1980; RULE 1140, 8-2-1985; RULE 404, 2-7-1986; RULE 405, 2-7-1986]	D322.3, D381.1, E102.1, K67.5
RULE 219 EXEMPT EQUIPMENT, CLEANING EQUIPMENT	E144				H23.4

- \* (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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 10: R219 EXEMPT EQUIPMENT SUBJECT TO SOURCE-SPECIFIC RULES</b>					
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, LOW USE OR EMISSIONS	E145			<b>VOC: (9) [RULE 1107, 11-9-2001; RULE 1107, 1-6-2006; RULE 1124, 9-21-2001; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]</b>	H23.5
RULE 219 EXEMPT EQUIPMENT, FOAM PACKAGING EQUIPMENT USING <= 20 GPD	E146				
RULE 219 EXEMPT EQUIPMENT, EQUIPMENT USED FOR THE TRANSFER OF <20,000 GPD OF UNHEATED ORGANIC MATERIAL	E147				
RULE 219 EXEMPT EQUIPMENT, AIR CONDITIONING UNITS	E148				H23.3
RULE 219 EXEMPT EQUIPMENT, REFRIGERATION UNITS	E149				H23.3
RULE 219 EXEMPT EQUIPMENT, EXEMPT HAND WIPING OPERATIONS	E150			<b>VOC: (9) [RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]</b>	H23.5
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E151			<b>VOC: (9) [RULE 1113, 11-8-1996; RULE 1113, 6-3-2011; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]</b>	K67.6
RULE 219 EXEMPT EQUIPMENT, SMALL BOILERS, WATER HEATERS AND PROCESS HEATERS, >1 MMBTU/HR AND <= 2 MMBTU/HR	E152			<b>CO: 400 PPMV (5A) [RULE 1146.2, 5-5-2006]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]</b>	
RULE 219 EXEMPT EQUIPMENT, FIRE EXTINGUISHING EQUIPMENT USING HALONS	E153				H23.10

- \* (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 NASA JET PROPULSION LAB**

## **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  
 NASA JET PROPULSION LAB  
 SECTION D: DEVICE ID INDEX**

<b>Device Index For Section D</b>			
<b>Device ID</b>	<b>Section D Page No.</b>	<b>Process</b>	<b>System</b>
D3	1	1	1
D4	1	1	2
D6	2	1	4
D7	2	1	5
D8	2	1	5
D9	3	1	5
D10	3	1	6
D11	3	1	7
D13	4	1	8
D14	7	1	19
D15	4	1	10
D16	4	1	11
D18	4	1	13
D38	7	3	4
D68	7	5	0
D69	8	5	0
D75	8	6	1
D83	8	7	1
D90	8	7	3
D101	8	7	3
D103	8	7	3
D104	9	7	3
D105	9	7	3
D106	9	7	3
D108	9	7	3
D109	9	7	3
D110	9	7	3
D117	9	7	3
D118	9	7	3
D119	9	7	3
D120	9	7	3
D124	9	7	3
D125	10	7	3
D126	10	7	3
C127	11	8	1

**FACILITY PERMIT TO OPERATE  
 NASA JET PROPULSION LAB  
 SECTION D: DEVICE ID INDEX**

<b>Device Index For Section D</b>			
<b>Device ID</b>	<b>Section D Page No.</b>	<b>Process</b>	<b>System</b>
C128	11	8	1
C131	11	8	1
D137	7	4	3
D138	5	1	15
E140	11	10	0
E141	11	10	0
E142	11	10	0
E143	11	10	0
E144	11	10	0
E145	12	10	0
E146	12	10	0
E147	12	10	0
E148	12	10	0
E149	12	10	0
E150	12	10	0
E151	12	10	0
E152	12	10	0
E153	12	10	0
D154	1	1	1
D155	5	1	16
D158	10	7	4
D159	6	1	16
D160	10	7	3
D161	10	7	3
D162	10	7	3
D163	10	7	3
D164	6	1	17

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

#### **FACILITY CONDITIONS**

F1.1 The operator shall limit the material processed to no more than 1 ton(s) in any one year.

For the purpose of this condition, material processed shall be defined as the total of all non-ferrous metals melted at this facility.

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

[RULE 1407, 7-8-1994]

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 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]

F14.2 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

This condition shall become effective on or after June 1, 2004.

[RULE 431.2, 9-15-2000]

#### PROCESS CONDITIONS

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109
VOC	District Rule	1164

[RULE 109, 5-2-2003; RULE 1164, 1-13-1995]

[Processes subject to this condition : 7]

#### SYSTEM CONDITIONS

S1.1 The operator shall limit the material processed to no more than 800 cubic feet per year.

For the purpose of this condition, material processed shall be defined as the total quantity of 100 percent Arsine used.

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

[Systems subject to this condition : Process 7, System 1]

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

S1.2 The operator shall limit the material processed to no more than 400 cubic feet per year.

For the purpose of this condition, material processed shall be defined as the total quantity of 50 percent Arsine used.

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

[Systems subject to this condition : Process 7, System 3]

#### DEVICE CONDITIONS

##### A. Emission Limits

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

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 2.25 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D38]

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

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 4.8 LBS IN ANY ONE DAY

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

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

[Devices subject to this condition : D75]

A63.3 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 2.29 LBS IN ANY ONE MONTH

The operator shall calculate the emission limit(s) in a manner approved by the District.

**[RULE 1303(b)(2)-Offset, 5-10-1996; 40CFR 63 Subpart T, 12-8-2000]**

[Devices subject to this condition : D158]

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

B27.2 The operator shall not use materials, with the exception of those containing isopropyl alcohol and lead, containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 15-jun-2001.

[RULE 1401, 6-15-2001]

[Devices subject to this condition : D75]

B27.3 The operator shall not use materials, with the exception of those containing ethyl benzene, hexane, IPA, MEK, methanol, methylene chloride, trichloroethylene, toluene and xylene, containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 05/03/2002.

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

[RULE 1401, 5-3-2002]

[Devices subject to this condition : D158]

- B27.4 The operator shall not use materials, with the exception of those containing chlorine, containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 03/04/2005.

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D160]

- B27.5 The operator shall not use materials, with the exception of those containing ammonia, containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 03/04/2005.

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D163]

- B59.1 The operator shall only use the following material(s) in this device :

Fuel oil with a sulfur content that complies with Rule 431.2.

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

[Devices subject to this condition : D154, D155, D164]

- B61.1 The operator shall only use fuel oil containing the following specified compounds:

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Compound	weight percent
Sulfur less than or equal to	0.05

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

[Devices subject to this condition : D3, D4, D6, D7, D8, D9, D10, D15, D18, D138]

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

Compound	ppm by weight
Sulfur less than or equal to	15

**[RULE 1470, 6-1-2007]**

[Devices subject to this condition : D3, D4, D6, D10, D11, D15, D18, D138, D154, D155, D164]

### **C. Throughput or Operating Parameter Limits**

C1.1 The operator shall limit the operating time to no more than 200 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 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 2012, 5-6-2005]**

[Devices subject to this condition : D7, D8, D9, D13, D16, D18, D159]

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

- C1.7 The operator shall limit the material processed to no more than 18750 gallon(s) per month.

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

[Devices subject to this condition : D69]

- C1.8 The operator shall limit the operating time to no more than 50 hour(s) in any one year.

For the purpose of this condition, operating time shall be defined as maintenance and testing hours only. Operation beyond 50 hours per year for maintenance and testing is allowed only during emergencies resulting in an interruption of service of the primary power supply or during Stage II or III electrical emergencies declared by the electrical grid operator. Operators are allowed to use emergency spark-ignition engines as part of an interruptible electric service program.

An interruptible electric service program is a program in which the facility receives payment or reduced rates in return for a requirement to reduce its electric load on the grid when requested to do so by the utility, the grid operator or other organization.

**[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]**

[Devices subject to this condition : D159]

- C6.1 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, does not exceed 0.25 inches water column.

To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the exhaust filters.

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

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

[Devices subject to this condition : D38]

- C8.1 The operator shall use this equipment in such a manner that the pH being monitored, as indicated below, is not less than 7 of the pH scale.

To comply with this condition, the operator shall install and maintain a(n) pH meter to accurately indicate the pH of the caustic solution.

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

[Devices subject to this condition : C131]

- C8.2 The operator shall use this equipment in such a manner that the flow rate being monitored, as indicated below, is not less than 270 gpm.

To comply with this condition, the operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the caustic solution supplied to the scrubber.

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

[Devices subject to this condition : C131]

- C177.1 The operator shall set and maintain the fuel injection timing of the engine at 4 degrees retarded relative to standard timing.

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

[Devices subject to this condition : D7, D8, D9, D18]

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

- D12.1 The operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature at the inlet and outlet of the catalyst.

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

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

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D159]

- D12.2 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, 7-9-2010; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;  
RULE 1470, 6-1-2007; RULE 2012, 5-6-2005]**

[Devices subject to this condition : D3, D4, D6, D10, D11, D14, D15, D138, D154, D155, D164]

- D135.1 The operator shall inspect, adjust, and certify the ignition or fuel injection timing of this engine a minimum of once every 3 years of operation. Inspections, adjustments, and certifications shall be performed by a qualified mechanic and performed in accordance with the engine manufacturer's specifications and procedures.

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

[Devices subject to this condition : D6, D10, D11, D13]

- D322.1 The operator shall perform a weekly inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D38]

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

D322.3 The operator shall perform annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E143]

D381.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emissions (not including condensed water vapor) are detected, the operator shall take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit.

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

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions; and
- 3). Date and time visible emission was abated.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E143]

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

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

E71.4 The operator shall only operate this equipment during emergencies resulting in an interruption of service of the primary power supply or during Stage II or III electrical emergency declared by the California Independent System Operator. The engine may also be operated for maintenance and testing purposes.

**[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]**

[Devices subject to this condition : D159]

E71.5 The operator shall not operate this equipment if the concentration of hydrocarbons from the carbon filter exceeds 15 ppmv, as methane, using a photo ionization detector or any other AQMD-approved method. The carbon shall be changed before this concentration is reached. Hydrocarbon concentrations shall be measured each time the equipment is in operation and records shall be maintained of the measurement dates, measured concentrations and the carbon replacement dates. These records shall be retained at the facility for at least five years.

**[RULE 109, 5-2-2003; RULE 1303(a)(1)-BACT, 5-10-1996]**

[Devices subject to this condition : D158]

E102.1 The operator shall discharge dust collected in this equipment only into closed containers.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E143]

E114.1 The operator shall not use this equipment in conjunction with any utility voluntary demand reduction program.

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### 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 : D16]

E175.1 The operator shall not use this equipment unless all exhaust air passes through the following:

Filter media at least 2 inches thick

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

[Devices subject to this condition : D38]

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

The engine shall not be operated more than 200 hours in any one year, which includes 20 hours in any one year for maintenance and testing.

Operation beyond the allotted time for engine maintenance and testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

In the event as described in the paragraph above, the engine shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

This engine shall not be used as part of an interruptible service contract in which a facility receives a payment or reduced rates in return for reducing electric load on the grid when requested by the utility or the grid operator.

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

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

[RULE 1470, 6-1-2007]

[Devices subject to this condition : D6, D10, D11]

E448.2 The operator shall comply with the following requirements:

The engine shall not be operated more than 200 hours in any one year, which includes 50 hours in any one year for maintenance and testing.

Operation beyond the allotted time for engine maintenance and testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

In the event as described in the paragraph above, the engine shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

This engine shall not be used as part of an interruptible service contract in which a facility receives a payment or reduced rates in return for reducing electric load on the grid when requested by the utility or the grid operator.

[RULE 1110.2, 7-9-2010; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;**  
RULE 1470, 6-1-2007; **RULE 2012, 5-6-2005]**

[Devices subject to this condition : D3, D4, D154, D155, D164]

E448.3 The operator shall comply with the following requirements:

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

The engine shall not be operated more than 200 hours in any one year, which includes 30 hours in any one year for maintenance and testing.

Operation beyond the allotted time for engine maintenance and testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

In the event as described in the paragraph above, the engine shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

This engine shall not be used as part of an interruptible service contract in which a facility receives a payment or reduced rates in return for reducing electric load on the grid when requested by the utility or the grid operator.

[RULE 1470, 6-1-2007]

[Devices subject to this condition : D14, D15, D138]

#### **H. Applicable Rules**

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109
PM	District Rule	481
Chromium, Hexavalent	District Rule	1469.1

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

[**RULE 109, 5-2-2003**; RULE 1469.1, 3-4-2005; **RULE 481, 1-11-2002**]

[Devices subject to this condition : D38]

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

Contaminant	Rule	Rule/Subpart
Chromium, Hexavalent	District Rule	1404

[RULE 1404, 4-6-1990]

[Devices subject to this condition : E141]

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

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

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

[Devices subject to this condition : E142, E148, E149]

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

Contaminant	Rule	Rule/Subpart
ROG	District Rule	1122

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

**[RULE 1122, 10-1-2004; RULE 1122, 5-1-2009]**

[Devices subject to this condition : D137, E144]

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109

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

[Devices subject to this condition : E140, E145, E150]

H23.8 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109
HAPs	40CFR63, SUBPART	T
VOC	District Rule	1122

**[RULE 109, 5-2-2003; RULE 1122, 10-1-2004; RULE 1122, 5-1-2009; 40CFR 63 Subpart T, 12-8-2000]**

[Devices subject to this condition : D158]

H23.9 This equipment is subject to the applicable requirements of the following rules or regulations:

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Contaminant	Rule	Rule/Subpart
Sulfur compounds	District Rule	431.2
PM	District Rule	1470

[RULE 1470, 6-1-2007; **RULE 431.2, 5-4-1990**; RULE 431.2, 9-15-2000]

[Devices subject to this condition : D3, D4, D6, D10, D11, D14, D15, D138, D154, D155, D164]

H23.10 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Halon	District Rule	1418

[RULE 1418, 9-10-1999]

[Devices subject to this condition : E153]

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

Contaminant	Rule	Rule/Subpart
Sulfur compounds	District Rule	431.2

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

[Devices subject to this condition : D7, D8, D9]

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

Contaminant	Rule	Rule/Subpart
Sulfur compounds	District Rule	431.2
PM	District Rule	1470

This equipment shall be operated in compliance with Rule 1470 effective 1/1/2008.

[RULE 1470, 6-1-2007; **RULE 431.2, 5-4-1990**; RULE 431.2, 9-15-2000]

[Devices subject to this condition : D18]

#### **J. Rule 461**

J109.1 The operator shall use, except for diesel transfer, the phase I vapor recovery system in full operation whenever this equipment is in use. This system shall be installed, operated and maintained to meet all CARB certification requirements.

[**RULE 461, 6-3-2005**; RULE 461, 3-7-2008]

[Devices subject to this condition : D69]

J110.1 The operator shall use, except for diesel transfer, the phase II vapor recovery system in full operation whenever gasoline from this equipment is dispensed to motor vehicles as defined in Rule 461. This system shall be installed, operated and maintained to meet all CARB certification requirements.

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

[**RULE 461, 6-3-2005**; RULE 461, 3-7-2008]

[Devices subject to this condition : D68]

J121.1 The operator shall replace seals, fittings, and piping with methanol-compatible materials before the dispensing system is charged with methanol.

[RULE 1170, 5-6-1988]

[Devices subject to this condition : D68]

J373.1 The operator shall comply with the following gasoline transfer and dispensing requirements:

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

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

a). The Phase II vapor recovery systems shall be installed, operated, and maintained such that the maximum allowable pressure through the system including nozzle, vapor hose, swivels, and underground piping does not exceed the dynamic back pressures described by the California Air Resources Board (CARB) Executive Order by which the system was certified:

Nitrogen Flowrates (CFH)      Dynamic Back Pressure (Inches of Water)

60                                      0.50

Within thirty days of the issuance date of this permit or within thirty days of the start of operation of the equipment, dynamic back pressure tests shall be conducted to determine the Phase II system vapor recovery back pressures. The tests shall be conducted in accordance with CARB Test Procedure Method TP-201.4. Results shall be submitted to the AQMD, Engineering and Compliance, within thirty (30) days of tests.

The AQMD shall be notified by e-mail at [R461testing@aqmd.gov](mailto:R461testing@aqmd.gov) or by facsimile at telephone number (909) 396-3606 at least twenty-four hours prior to testing. Such notification shall include the name of the owner or operator; the name of the contractors; the location of the facility; and the scheduled start and completion dates of the dynamic back pressure test.

The test shall be conducted as frequently as that required by the most recent amendment to Rule 461 or CARB Executive Order requirements, whichever is more stringent.

[**RULE 461, 6-3-2005**; RULE 461, 3-7-2008]

[Devices subject to this condition : D68]

J373.2 The operator shall comply with the following gasoline transfer and dispensing requirements:

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

Depending on the system configuration, a leak rate test of drop tube/drain valve assembly shall be conducted to quantify the pressure integrity of both the drop tube and drain valve seal or a leak rate test of drop tube overflow prevention device and drain valve shall be conducted to quantify the pressure integrity of the drop tube overflow prevention device and the pressure integrity of the spill container drain valve. Either test shall be conducted as a performance test and as a reverification test.

The test shall be conducted in accordance with test procedure method TP-201.1C or TP-201.1D, respectively. Results shall be submitted to the AQMD, Office of Engineering and Compliance, within seventy-two (72) hours of test.

[RULE 461, 6-3-2005; RULE 461, 3-7-2008]

[Devices subject to this condition : D68, D69]

J373.3 The operator shall comply with the following gasoline transfer and dispensing requirements:

A leak rate and cracking pressure test of pressure/vacuum relief vent valves shall be conducted within thirty days (30) after the start of operation of the opw phase I EVR equipment and at least once every three (3) years thereafter to determine the pressure and vacuum at which the pressure/vacuum vent valve actuates, and to determine the volumetric leak rate at a given pressure.

The test shall be conducted in accordance with the test procedure method TP-201.1E. Results shall be submitted to the AQMD, Office of Engineering and Compliance, within seventy-two (72) hours of test. This test result shall be kept on site for three (3) years and made available to District representatives upon request.

[RULE 461, 6-3-2005; RULE 461, 3-7-2008]

[Devices subject to this condition : D68, D69]

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

J373.4 The operator shall comply with the following gasoline transfer and dispensing requirements:

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

All phase I and phase II vapor recovery equipment at this facility shall be installed, operated and maintained to meet all California Air Resources Board certification requirements.

A static torque test of rotatable phase I adaptors shall be conducted to quantify the amount of static torque required to start the rotation of the rotatable phase I adaptors. The test shall be conducted in accordance with the test procedure method outlined in TP-201.1B as a performance test and as a reverification test. Results shall be submitted to the AQMD, Office of Engineering and Compliance, within seventy-two (72) hours of test.

A static pressure leak decay test shall be conducted to demonstrate that the storage tanks, the remote and/or nozzle vapor recovery check valves, associated vapor return piping and fittings are free from vapor leaks. The test shall be conducted in accordance with CARB test procedure method TP-201.3 as a performance test and as a reverification test. Results shall be submitted to the AQMD, Office of Engineering and Compliance, within seventy-two (72) hours of test.

A static pressure performance test for the Healy clean air separator using both the vacuum decay procedure and the positive pressure procedure shall be conducted to quantify the vapor tightness of the Healy clean air separator tank pressure management system. These tests shall be conducted in accordance with exhibit 4 of CARB Executive Order VR-202-A as a performance test and reverification test. Results shall be submitted to the AQMD, Office of Engineering and Compliance within seventy-two (72) hours of

A vapor to liquid volume ratio test shall be conducted to quantify the vapor to liquid (v/l) volumetric ratio of the Healy clean air separator system. The test shall be conducted in accordance with exhibit 5 of CARB Executive Order VR-202-A as a performance test and as a reverification test. Results shall be submitted to the AQMD, Office of Engineering and Compliance within seventy-two (72) hours of test.

A nozzle bag test shall be conducted on the Healy phase II EVR nozzles to verify the integrity of the vapor valve. The test shall be conducted on any newly installed or replaced Healy phase II EVR nozzles and in accordance with exhibit 7 of CARB

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

Executive Order VR-202-A results shall be submitted to the AQMD, Office of Engineering and Compliance within seventy-two (72) hours of test.

The static pressure leak decay test TP-201.3, shall be conducted in accordance with exhibit 8 of CARB Executive Order VR-202-A verification of completing each step as outlined shall be documented by submitting a copy of exhibit 8 to the AQMD, Office of Engineering and Compliance within seventy-two (72) hours of test.

An ISD operability test shall be conducted in accordance with exhibit 9 of CARB Executive Order VR-202-A to verify the equipment's operability for vapor containment monitoring and vapor collection monitoring. The test shall be conducted as a performance test and as a reverification test. Furthermore, the ISD operability test shall be conducted immediately whenever a vapor pressure sensor or a vapor flow meter is replaced. Results shall be submitted to the AQMD, Office of Engineering and Compliance within

The AQMD shall be notified by e-mail at R461testing@aqmd.gov or by facsimile at telephone number (909) 396-3606 at least seventy-two (72) hours prior to any of the above mentioned testing requirements. Such notification shall include the name of the owner or operator; the name of the contractor; the location of the facility; and the scheduled start and completion dates of the tests to be performed.

The testing for the above mentioned tests shall be conducted in accordance with the most recent Rule 461 amendment or CARB Executive Order requirements, whichever is more stringent.

The vapor return piping shall only use straight length Upp piping and installed in accordance with the manufacturer's instructions and specified conditions as outlined in CARB approval letter #02-13.

All records and test results that are required to be maintained by rule 461 shall be kept on site for five years and made available to District representatives upon request.

**[RULE 461, 6-3-2005; RULE 461, 3-7-2008]**

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

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

[Devices subject to this condition : D68, D69]

#### **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):

Records which clearly identify and locate the methanol compatible storage tank and its piping, such records shall state the tank manufacturer and date of installation.

[RULE 1170, 5-6-1988]

[Devices subject to this condition : D69]

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

Monthly records of the total amount of 100 percent Arsine used. All records shall be prepared in a format which is acceptable to the AQMD

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

[Devices subject to this condition : D83]

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Name of person conducting inspection and maintenance of the filter media.

Date, time and results of the inspection.

Date, time and description of repairs made.

Weekly record of pressure drop across the filter media.

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

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

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D38]

K67.4 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Flow rate of the scrubbing solution, determined and recorded once every day.

Scrubbing solution pH, determined and recorded once every day.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : C131]

K67.5 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Name of person conducting inspection and maintenance of the filter media.

Date, time, and results of inspection.

Date, time and description of repairs made.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E143]

K67.6 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

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.

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.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E151]

K67.10 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

An engine operating log shall be kept and maintained on file to record when this engine is started manually. The log shall list the date of operation, the timer reading in hours at the beginning and end of operation and the reason for operation.

By January 15th of each year, the operator shall total and record the total hours of operation (including hours for both manual operation and automatic operation) for the previous calendar year.

All records required by this permit shall be kept in a format that is acceptable to the District, shall be retained on the premises for at least five years and shall be made available to any District representative upon request.

**[RULE 1110.2, 7-9-2010; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;  
RULE 1470, 6-1-2007; RULE 2012, 5-6-2005]**

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

[Devices subject to this condition : D3, D4, D6, D7, D8, D9, D10, D11, D13, D14, D15, D16, D18, D138, D154, D155, D159, D164]

K67.11 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Type of solvent used.

Total quantity of solvent used in any one day and in any one month.

Daily and monthly VOC emissions expressed in pounds per day or month.

VOC content of the solvent.

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

[Devices subject to this condition : D158]

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB**

### **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<sub>x</sub> source, compliance with a RECLAIM concentration limit shall be measured over a continuous 60 minutes for that source; [2012]
  - d. For non-combustion sources, compliance with emission limits shall be determined and averaged over a period of 60 minutes. [204]

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **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 (SO<sub>2</sub>) and be averaged over 15 consecutive minutes; [407]
  - f. For the purpose of determining compliance with Rule 409, combustion contaminant emission measurements shall be corrected to 12 percent carbon dioxide (CO<sub>2</sub>) at standard conditions and averaged over 15 consecutive minutes. [409]
  - g. For the purpose of determining compliance with Rule 475, combustion contaminant emission measurements shall be corrected to 3 percent of oxygen (O<sub>2</sub>) at standard conditions and averaged over 15 consecutive minutes or any other averaging time specified by the Executive Officer. [475]
8. All equipment operating under the RECLAIM program shall comply concurrently with all provisions of AQMD Rules and Regulation, except those listed in Table 1 of Rule 2001 for NO<sub>x</sub> RECLAIM sources and Table 2 of Rule 2001 for SO<sub>x</sub> RECLAIM sources. Those provisions listed in Tables 1 or 2 shall not apply to NO<sub>x</sub> or SO<sub>x</sub> emissions after the date the facility has demonstrated compliance with all monitoring and reporting requirements of Rules 2011 or 2012, as applicable. Provisions of the listed AQMD rules in Tables 1 or 2 which have initial implementation dates in 1994 shall not apply to a RECLAIM NO<sub>x</sub> or SO<sub>x</sub> source, respectively. [2001]
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 NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB**

### **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. NO<sub>x</sub> Monitoring Conditions**

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

Not Applicable

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

Not Applicable

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

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. NO<sub>x</sub> Source Testing and Tune-up conditions**

1. The operator shall conduct all required NO<sub>x</sub> source testing in compliance with an AQMD-approved source test protocol. [2012]

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

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

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

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

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

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

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

Not Applicable

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

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

Not Applicable

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

1. Electronically report the calculated quarterly NO<sub>x</sub> emissions for each NO<sub>x</sub> 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 NASA JET PROPULSION LAB

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION EQUIPMENT</b>					
<b>System 1: BUILDING 150</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, CUMMINS, MODEL NO. QSB7-G3, DIESEL FUEL, WITH AFTERCOOLER, TURBOCHARGER, 250 BHP A/N: 509746 Permit to Construct Issued: 07/13/10	D165		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; NOX + ROG: 3 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.15 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	B61.1, B61.3, D12.2, E448.2, H23.9, K67.10
<b>System 7: BUILDING 277</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, CATERPILLAR, MODEL NO. C18 DITA, DIESEL FUEL, WITH AFTERCOOLER, TURBOCHARGER, 900 BHP A/N: 510207 Permit to Construct Issued: 07/13/10	D166		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; NOX + ROG: 4.8 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.15 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	B61.1, B61.3, D12.2, E448.2, H23.9, K67.10

\* (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 NASA JET PROPULSION LAB**

## **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  
NASA JET PROPULSION LAB**

**SECTION H: DEVICE ID INDEX**

<b>Device Index For Section H</b>			
<b>Device ID</b>	<b>Section H Page No.</b>	<b>Process</b>	<b>System</b>
D165	1	1	1
D166	1	1	7

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

#### FACILITY CONDITIONS

F1.1 The operator shall limit the material processed to no more than 1 ton(s) in any one year.

For the purpose of this condition, material processed shall be defined as the total of all non-ferrous metals melted at this facility.

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

[RULE 1407, 7-8-1994]

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 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]

F14.2 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

This condition shall become effective on or after June 1, 2004.

[RULE 431.2, 9-15-2000]

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

#### PROCESS CONDITIONS

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109
VOC	District Rule	1164

**[RULE 109, 5-2-2003; RULE 1164, 1-13-1995]**

[Processes subject to this condition : 7]

#### SYSTEM CONDITIONS

S1.1 The operator shall limit the material processed to no more than 800 cubic feet per year.

For the purpose of this condition, material processed shall be defined as the total quantity of 100 percent Arsine used.

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

[Systems subject to this condition : Process 7, System 1]

S1.2 The operator shall limit the material processed to no more than 400 cubic feet per year.

For the purpose of this condition, material processed shall be defined as the total quantity of 50 percent Arsine used.

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

[Systems subject to this condition : Process 7, System 3]

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

#### DEVICE CONDITIONS

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

B61.1 The operator shall only use fuel oil containing the following specified compounds:

Compound	weight percent
Sulfur less than or equal to	0.05

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

[Devices subject to this condition : D165, D166]

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

Compound	ppm by weight
Sulfur less than or equal to	15

[RULE 1470, 6-1-2007]

[Devices subject to this condition : D165, D166]

##### D. Monitoring/Testing Requirements

D12.2 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, 7-9-2010; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;  
RULE 1470, 6-1-2007; RULE 2012, 5-6-2005]

[Devices subject to this condition : D165, D166]

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

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

E448.2 The operator shall comply with the following requirements:

The engine shall not be operated more than 200 hours in any one year, which includes 50 hours in any one year for maintenance and testing.

Operation beyond the allotted time for engine maintenance and testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

In the event as described in the paragraph above, the engine shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

This engine shall not be used as part of an interruptible service contract in which a facility receives a payment or reduced rates in return for reducing electric load on the grid when requested by the utility or the grid operator.

[RULE 1110.2, 7-9-2010; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;**  
 RULE 1470, 6-1-2007; **RULE 2012, 5-6-2005]**

[Devices subject to this condition : D165, D166]

#### **H. Applicable Rules**

H23.9 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Sulfur compounds	District Rule	431.2

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

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

PM | District Rule | 1470

[RULE 1470, 6-1-2007; **RULE 431.2, 5-4-1990**; RULE 431.2, 9-15-2000]

[Devices subject to this condition : D165, D166]

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

K67.10 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

An engine operating log shall be kept and maintained on file to record when this engine is started manually. The log shall list the date of operation, the timer reading in hours at the beginning and end of operation and the reason for operation.

By January 15th of each year, the operator shall total and record the total hours of operation (including hours for both manual operation and automatic operation) for the previous calendar year.

All records required by this permit shall be kept in a format that is acceptable to the District, shall be retained on the premises for at least five years and shall be made available to any District representative upon request.

[RULE 1110.2, 7-9-2010; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**;  
RULE 1470, 6-1-2007; **RULE 2012, 5-6-2005**]

[Devices subject to this condition : D165, D166]

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### 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<sub>x</sub> or SO<sub>x</sub> 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<sub>x</sub> or SO<sub>x</sub> 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
517067	1472

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 NASA JET PROPULSION LAB**

### **SECTION J: AIR TOXICS [40CFR 63 Subpart T, #30 06-05-1995]**

#### **BATCH VAPOR CLEANING MACHINES WITHOUT A SOLVENT/AIR INTERFACE COMPLYING WITH OVERALL EMISSION LIMIT**

1. The operator shall comply with all applicable requirements and standards of Subpart T and Subpart A - General Provisions by the date(s) specified in these subparts.
2. The operator shall comply with the alternative standards of 40 CFR 63.464 and the 3-month rolling average monthly emission limit specified in Section D or H for this device.
3. The operator shall comply with the emission calculation and measuring requirements of 40 CFR 63.465(b) and (c).
4. The operator shall comply with all applicable recordkeeping and reporting required by 40 CFR 63.10, 63.467 and 63.468. All records and reports, including data, calculations and any supporting documentation shall be prepared in a format which is acceptable to the AQMD.
5. The operator shall file application(s) and be granted approval by the AQMD prior to the installation/modification of equipment to comply with this NESHAP or implementing equivalent methods of control as allowed by 40 CFR 63.469.
6. The operator shall submit all reports, notifications, plans, submittals and other communications required by Subpart T or Subpart A to the AQMD and, unless notified to the contrary by AQMD or US EPA, to US EPA Region IX. (See Sections E and K of this permit for addresses.)

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB

### 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 NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB

### SECTION K: TITLE V Administration EMERGENCY PROVISIONS

17. An emergency<sup>1</sup> 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]

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

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB

### 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 NASA JET PROPULSION LAB**

### **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 NASA JET PROPULSION LAB

### 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.

<b>RULE SOURCE</b>	<b>Adopted/Amended Date</b>	<b>FEDERAL Enforceability</b>
RULE 109	5-2-2003	Federally enforceable
RULE 1107	1-6-2006	Non federally enforceable
RULE 1107	11-9-2001	Federally enforceable
RULE 1110.2	7-9-2010	Non federally enforceable
RULE 1113	11-8-1996	Federally enforceable
RULE 1113	6-3-2011	Non federally enforceable
RULE 1122	10-1-2004	Federally enforceable
RULE 1122	5-1-2009	Non federally enforceable
RULE 1124	9-21-2001	Federally enforceable
RULE 1140	2-1-1980	Federally enforceable
RULE 1140	8-2-1985	Non federally enforceable
RULE 1145	12-4-2009	Non federally enforceable
RULE 1145	2-14-1997	Federally enforceable
RULE 1146.2	5-5-2006	Federally enforceable
RULE 1164	1-13-1995	Federally enforceable
RULE 1168	1-7-2005	Federally enforceable
RULE 1170	5-6-1988	Non federally enforceable
RULE 1171	11-7-2003	Federally enforceable
RULE 1171	5-1-2009	Non federally enforceable
RULE 118	12-7-1995	Non federally enforceable
RULE 1303(a)(1)-BACT	12-6-2002	Non federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### SECTION K: TITLE V Administration

<b>RULE SOURCE</b>	<b>Adopted/Amended Date</b>	<b>FEDERAL Enforceability</b>
RULE 1303(b)(2)-Offset	12-6-2002	Non 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 1401	3-4-2005	Non federally enforceable
RULE 1401	5-3-2002	Non federally enforceable
RULE 1404	4-6-1990	Non federally enforceable
RULE 1407	7-8-1994	Non federally enforceable
RULE 1415	12-3-2010	Non federally enforceable
RULE 1418	9-10-1999	Non federally enforceable
RULE 1469.1	3-4-2005	Non federally enforceable
RULE 1470	6-1-2007	Non federally enforceable
RULE 2005	5-6-2005	Federally enforceable
RULE 2005	6-3-2011	Non federally enforceable
RULE 2012	5-6-2005	Federally enforceable
RULE 204	10-8-1993	Federally enforceable
RULE 217	1-5-1990	Federally enforceable
RULE 219	6-1-2007	Non federally enforceable
RULE 219	9-4-1981	Federally enforceable
RULE 3002	11-14-1997	Federally enforceable
RULE 3002	11-5-2010	Non federally enforceable
RULE 3003	11-14-1997	Federally enforceable
RULE 3003	11-5-2010	Non federally enforceable
RULE 3004	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	11-5-2010	Non federally enforceable
RULE 3007	10-8-1993	Federally enforceable
RULE 304	5-6-2011	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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### SECTION K: TITLE V Administration

<b>RULE SOURCE</b>	<b>Adopted/Amended Date</b>	<b>FEDERAL Enforceability</b>
RULE 404	2-7-1986	Federally enforceable
RULE 405	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 431.2	5-4-1990	Federally enforceable
RULE 431.2	9-15-2000	Non federally enforceable
RULE 442	12-15-2000	Federally enforceable
RULE 461	3-7-2008	Non federally enforceable
RULE 461	6-3-2005	Federally enforceable
RULE 481	1-11-2002	Federally enforceable
RULE 701	6-13-1997	Federally enforceable
40CFR 63 Subpart T	12-8-2000	Federally enforceable
40CFR 63 Subpart T, #30	6-5-1995	Federally enforceable
40CFR 82 Subpart F	5-14-1993	Federally enforceable

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

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

1. ICE, TRAINING
2. SMALL BOILERS, WATER HEATERS
3. EMERGENCY ICE, GASOLINE
4. EMERGENCY ICE, DIESEL
5. EMERGENCY ICE, NATURAL GAS
6. CHARBROILERS, NATURAL GAS
7. CHARBROILERS, PROPANE

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1107 01-06-2006]

Except as otherwise provided in Rule 1107

(1) VOC Content of Coatings

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1107 01-06-2006]

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

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **APPENDIX B: RULE EMISSION LIMITS [RULE 1107 01-06-2006]**

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1107 11-09-2001]

Except as otherwise provided in Rule 1107

(1) VOC Content of Coatings

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1107 11-09-2001]

Except as otherwise provided in Rule 1107

(1) VOC Content of Coatings

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1107 11-09-2001]

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1113 11-08-1996]

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

### TABLE OF STANDARDS

#### VOC LIMITS

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1113 11-08-1996]

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

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

### TABLE OF STANDARDS (cont.)

#### VOC LIMITS

#### Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **APPENDIX B: RULE EMISSION LIMITS [RULE 1113 06-03-2011]**

- (1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6) of Rule 1113, no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solicit the application of any architectural coating within 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 NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1113 06-03-2011]

#### TABLE OF STANDARDS 1 VOC LIMITS

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

COATING CATEGORY	Ceiling Limit <sup>1</sup>	Current Limit <sup>2</sup>	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 <sup>3</sup>		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	
Decorative Coatings		350			100
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	340	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	200	100			
Reactive Penetrating Sealers		350			
Recycled Coatings		250			
Roof Coatings	250	50			
Roof Coatings, Aluminum		100			

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1113 06-03-2011]

Roof Primers, Bituminous	350	350		
Rust Preventative Coatings	400	100		
Stone Consolidant		450		
Sacrificial Anti-Graffiti Coatings		100		50
Shellac				
Clear		730		
Pigmented		550		
Specialty Primers	350	100		
Stains		100		

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1113 06-03-2011]

COATING CATEGORY	Ceiling Limit <sup>1</sup>	Current Limit <sup>2</sup>	Effective Date		
			7/1/08	1/1/12	1/1/14
Stains, Interior	250	250			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers	250	100			
Waterproofing Concrete/Masonry Sealers	400	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	Limit <sup>4</sup>
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1124 09-21-2001]

Except as otherwise provided in Rule 1124

- (1) VOC Content of Aerospace Materials
  - (A) A person shall not apply to aerospace components any materials, including any VOC-containing materials added to the original material supplied by the manufacturer, which contain VOC in excess of the limits specified below:

<b>VOC Limit</b>			
<b>Grams of VOC per Liter, Less Water and Less Exempt Compounds</b>			
<b>Primers</b>	<b>Current VOC Limit</b>	<b>VOC Limit Effective 1-1-03</b>	<b>VOC Limit Effective 1-1-05</b>
General Primer	350	350	350
Low-Solids Corrosion Resistant Primer	350	350	350
Pretreatment Primer	780	780	780
Rain Erosion-Resistant Coating Compatible Primer	850	850	850
Adhesion Promoter	850	850	250
<b>Adhesive Bonding Primer</b>			
New Commercial Aircraft	805	250	250
All Military Aircraft	805	805	805
Remanufactured Commercial Aircraft Parts	805	805	805
Sonic and Acoustic Applications	805	805	805
<b>Adhesive Bonding Primer</b>			
Long Term	250	250	250
Short Term	250	250	250

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1124 09-21-2001]

Coatings	Current VOC Limit	VOC Limit Effective 3-01-02
Topcoat	420	420
Clear Topcoat	520	520
Unicoat	420	420
Wing Coating	750	750
Impact Resistant Coating	420	420
High-Temperature Coating	850	850
Antichafe Coating	600	420
Rain Erosion-Resistant Coating	800	800
Conformal Coating	750	750
Optical Anti-Reflective Coating	700	700
Scale Inhibitor	880	880
Metallized Epoxy Coating	700	700
Electric or Radiation Effect Coating	800	800
Temporary Protective Coating	250	250
Fuel Tank Coatings	420	420
Mold Release Coatings	780	780
Flight Test Coatings		
Used on Missiles or Single Use Target Craft	420	420
All Other	840	840
Fire Resistant Coatings		
Commercial	650	650
Military	970	800
Wire Coatings		
Phosphate Ester Resistant Ink	925	925
Other	420	420
Space Vehicle Coatings		
Electrostatic Discharge Protection Coating	800	800
Other	1000	1000

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1124 09-21-2001]

<b>Adhesives</b>	<b>Current VOC Limit</b>
Non-Structural Adhesive	250
Structural Adhesive	
Autoclavable	50
Non-Autoclavable	850
Space Vehicle Adhesive	800
Fuel Tank Adhesive	620

<b>Sealants</b>	<b>Current VOC Limit</b>	<b>VOC Limit Effective 3-01-02</b>
Fastener Sealant	675	675
Extrudable, Rollable or Brushable Sealant	600	280
Other	600	600

<b>Maskants</b>	<b>Current VOC Limit</b>
For Chemical Processing	250
For Chemical Milling	
Type I	250
Type II	160
Photolithographic	850
Touch-up, Line Sealer Maskants	750

<b>Lubricants</b>	<b>Current VOC Limit</b>
Fastener Installation	
Solid-Film Lubricant	880
Dry Lubricative Materials	675
Fastener-Lubricative Coatings, Fastener Manufacturing	
Solid Film Lubricant	250
Dry Lubricative Materials	120
Barrier Coating	420
Non-Fastener Lubricative Coatings, Fastener Manufacturing	
Solid Film Lubricant	880
Dry Lubricative Materials	675

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1124 09-21-2001]

<b>VOC LIMIT</b>	
<b>Grams of VOC per Liter of Material</b>	
<b>Cleaning Solvents and Strippers</b>	<b>Current VOC Limit</b>
Cleaning Solvents	200 g/L or 45 mm Hg VOC Composite Partial Pressure
Strippers	300 g/L or 9.5 mm Hg VOC Composite Partial Pressure

- (B) Documents shall be provided to the Executive Officer or his designee demonstrating that unicoat is being used in lieu of the application of a primer and topcoat, and the applicant must receive written approval for the use of unicoat specifying the conditions of application from the Executive Officer or his designee.
  - (C) For low-solids adhesives, coatings, primers or sealants, the appropriate limits in subparagraph (c)(1)(A) shall be expressed in grams of VOC per liter of material.
- (2) Solvent Cleaning Operations; Storage and Disposal of VOC-Containing Materials
- (A) Cleaning of material application equipment and storage of solvent laden cloth and paper shall comply with provisions of Rule 1171.
  - (B) A person shall not atomize any solvent into open air.

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **APPENDIX B: RULE EMISSION LIMITS [RULE 1140 02-01-1980]**

- (1) The operator shall not, if he complies with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as No. 2 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 (1)(A).
- (2) The operator shall not, if he is not complying with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as 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 (2)(A).

## **FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB**

### **APPENDIX B: RULE EMISSION LIMITS [RULE 1140 08-02-1985]**

- (1) The operator shall not, if he complies with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as No. 2 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 (1)(A).
- (2) The operator shall not, if he is not complying with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as 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 (2)(A).

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1145 12-04-2009]

Except as otherwise provided in Rule 1145, no person shall apply on plastics, rubber, leather, or glass any coatings which are applied with a VOC content in excess of the limits listed in the Table of Standards.

### TABLE OF STANDARDS

<b>VOC LIMITS</b>		
<b>LESS WATER AND LESS EXEMPT COMPOUNDS</b>		
COATING CATEGORIES	g/L	lbs/gal
Electrical dissipating and shock free coatings	360	3.0
Extreme performance two-component coatings	420	3.5
General one-component coatings	120	1.0
General two-component coatings	120	1.0
Leather antique coatings	156	1.3
Leather color coatings	60	0.5
Leather sealer coatings	60	0.5
Leather stain coatings	216	1.8
Leather top coatings	120	1.0
Metallic coatings	420	3.5
Military specification one-component coatings	340	2.8
Military specification two-component coatings	420	3.5
Mirror backing curtain coated coatings	500	4.2
Mirror backing rolled coated coatings	312	2.6
Mold seal coatings	750	6.3
Multi-color coatings	680	5.7
Refrigerated glass door coatings	480	4.0
Optical coatings	50	0.4
Vacuum metalizing coatings	800	6.7

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1145 02-14-1997]

Except as otherwise provided in Rule 1145, the operator shall not apply on plastics, glass, or rubber any coatings which are applied with a VOC content in excess of the limits specified below:

#### COATING

	<b>VOC LIMITS</b>			
	<b><u>Less Water and Less Exempt</u></b>			
	<b><u>Compounds</u></b>			
	<u>Current</u>		<u>On and After 1-1-98</u>	
	<u>g/L</u>	<u>lbs/gal</u>	<u>g/L</u>	<u>lbs/gal</u>
General Coatings				
One-component	275	2.3	275	2.3
Two-component	420	3.5	420	3.5
Military Spec. Coating				
One-component	340	2.8	340	2.8
Two-component	420	3.5	420	3.5
Multi-Colored Coatings	685	5.7	685	5.7
Mold Seal Coatings	750	6.3	750	6.3
Vacuum Metalizing Coatings	800	6.7	800	6.7
Mirror Backing				
Curtain Coated	500	4.2	500	4.2
Roll Coated	430	3.6	430	3.6
Optical Coatings	800	6.7	800	6.7
Electric Dissipating Coatings and Shock-				
Free Coatings	800	6.7	360	3.0
Metallic Coatings	420	3.5	420	3.5

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1168 01-07-2005]

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

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1168 01-07-2005]

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1168 01-07-2005]

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

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

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1168 01-07-2005]

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1171 11-07-2003]

(1) Solvent Requirements

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

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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1171 11-07-2003]

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS
	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	550 (4.6)
(D) Cleaning of Ink Application Equipment	
(i) General	25 (0.21)
(ii) Flexographic Printing	25 (0.21)
(iii) Gravure Printing	
(A) Publication	750 (6.3)
(B) Packaging	25 (0.21)
(iv) Lithographic or Letter Press Printing	

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 1171 11-07-2003]

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS
	VOC g/l (lb/gal)
(A) Roller Wash – Step 1	600 (5.0)
(B) Roller Wash-Step 2, Blanket Wash, & On-Press Components	800 (6.7)
(C) Removable Press Components	25 (0.21)
(v) Screen Printing	750 (6.3)
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	800 (6.7)
(vii) Specialty Flexographic Printing	600 (5.0)
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### 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:

	<b>CURRENT LIMITS*</b>	<b>EFFECTIVE 1/1/2010</b>
<b>SOLVENT CLEANING ACTIVITY</b>	<b>VOC g/l (lb/gal)</b>	<b>VOC g/l (lb/gal)</b>
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	
(iii) Medical Devices & Pharmaceuticals	800 (6.7)	
(B) Repair and Maintenance Cleaning		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

	<b>CURRENT LIMITS*</b>	<b>EFFECTIVE 1/1/2010</b>
<b>SOLVENT CLEANING ACTIVITY (cont.)</b>	<b>VOC g/l (lb/gal)</b>	<b>VOC g/l (lb/gal)</b>
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	
(D) Cleaning of Ink Application Equipment		
(i) General	25 (0.21)	
(ii) Flexographic Printing	25 (0.21)	
(iii) Gravure Printing		
(A) Publication	100 (0.83)	
(B) Packaging	25 (0.21)	
(iv) Lithographic (Offset) or Letter Press Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components	100 (0.83)	

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

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

	<b>CURRENT LIMITS*</b>	<b>EFFECTIVE 1/1/2010</b>
<b>SOLVENT CLEANING ACTIVITY (cont.)</b>	<b>VOC g/l (lb/gal)</b>	<b>VOC g/l (lb/gal)</b>
(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 NASA JET PROPULSION LAB

### 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 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 NASA JET PROPULSION LAB

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

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter” Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
		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		
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 NASA JET PROPULSION LAB

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

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter” Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
		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		
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

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 405 02-07-1986]

The operator shall not discharge into the atmosphere from this equipment, solid particulate matter including lead and lead compounds in excess of the rate shown in Table 405(a).

Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge 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 405(a)**

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
		Kilograms Per Hour	Pounds Per Hour			Kilograms Per Hour	Pounds Per Hour
100 or less	220 or less	0.450	0.99	9000	19840	5.308	11.7
150	331	0.585	1.29	10000	22050	5.440	12.0
200	441	0.703	1.55	12500	27560	5.732	12.6
250	551	0.804	1.77	15000	33070	5.982	13.2
300	661	0.897	1.98	17500	38580	6.202	13.7
350	772	0.983	2.17	20000	44090	6.399	14.1
400	882	1.063	2.34	25000	55120	6.743	14.9
450	992	1.138	2.51	30000	66140	7.037	15.5
500	1102	1.209	2.67	35000	77160	7.296	16.1
600	1323	1.340	2.95	40000	88180	7.527	16.6

## FACILITY PERMIT TO OPERATE NASA JET PROPULSION LAB

### APPENDIX B: RULE EMISSION LIMITS [RULE 405 02-07-1986]

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour
700	1543	1.461	3.22	45000	99210	7.738	17.1
800	1764	1.573	3.47	50000	110200	7.931	17.5
900	1984	1.678	3.70	60000	132300	8.277	18.2
1000	2205	1.777	3.92	70000	154300	8.582	18.9
1250	2756	2.003	4.42	80000	176400	8.854	19.5
1500	3307	2.206	4.86	90000	198400	9.102	20.1
1750	3858	2.392	5.27	100000	220500	9.329	20.6
2000	4409	2.563	5.65	125000	275600	9.830	21.7
2250	4960	2.723	6.00	150000	330700	10.26	22.6
2500	5512	2.874	6.34	175000	385800	10.64	23.5
2750	6063	3.016	6.65	200000	440900	10.97	24.2
3000	6614	3.151	6.95	225000	496000	11.28	24.9
3250	7165	3.280	7.23	250000	551200	11.56	25.5
3600	7716	3.404	7.50	275000	606300	11.82	26.1
4000	8818	3.637	8.02	300000	661400	12.07	26.6
4500	9921	3.855	8.50	325000	716500	12.30	27.1
5000	11020	4.059	8.95	350000	771600	12.51	27.6
6000	13230	4.434	9.78	400000	881800	12.91	28.5
7000	15430	4.775	10.5	450000	992100	13.27	29.3
8000	17640	5.089	11.2	500000 or more	1102000 or more	13.60	30.0