SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

Title Page
Facility I.D.#: 800408
Revision #: 27
Date: January 29, 2008

FACILITY PERMIT TO OPERATE

NORTHROP GRUMMAN SPACE & MISSION SYSTEMS
3301 1700 AVIATION & ROSECRANS
MANHATTAN BEACH, CA 90266

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 _____ FOR
Carol Coy
Deputy Executive Officer
Engineering & Compliance

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1 : CONTROL EQUIPMENT					
SCRUBBER, PACKED BED, HARRINGTON, MODEL NO. HPH 78-4, WIDTH: 8FT, LENGTH: 6FT 3IN, DEPTH:7FT, WITH A 4FT PACKING DEPTH, A 30-HP EXHAUST FAN AND THREE 2-HP RECIRCULATION PUMPS A/N: 475715 Permit to Construct Issued: 01/29/08	C6	D428 D429 D430 D431 D432 D433 D434 D435 D501 D502 D503 D537 D595		**PM:** (9) **[RULE 404,2-7-1986]**	C8.3, C8.9, D90.1, E158.1, E159.1, K67.3
SCRUBBER, PACKED BED, HARRINGTON, HPH 78-4 A/N: 455307 Permit to Construct Issued: 11/16/06	C233	D540		**PM:** (9) **[RULE 404,2-7-1986]**	C8.3, C8.9, D90.1, E158.1, K67.3
OXIDIZER, THERMAL, NO. 4, ALLIANCE SYSTEMS, MODEL NO. 306-RTO, 3 BED HOT ROCK TYPE, NATURAL GAS, WITH A 30-HP EXHAUST FAN, 10-HP BYPASS FAN AND A 3.0-HP COMBUSTION BLOWER, 1.5 MMBTU/HR A/N: 455306 Permit to Construct Issued: 11/16/06	C364	D346 D347 D350 D352 D353 D354 D355 D589	NOX: PROCESS UNIT**	**CO:** 2000 PPMV (5) **[RULE 407,4-2-1982]** ; **NOX:** 130 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** ; **PM:** (9) **[RULE 404,2-7-1986]** **PM:** 0.1 GRAINS/SCF (5) **[RULE 409,8-7-1981]**	A72.1, D29.2, E193.1, K40.1
OXIDIZER, THERMAL, NO. 2, ALLIANCE SYSTEMS, MODEL NO. 306-RTO, 3 BED HOT ROCK TYPE, NATURAL GAS, WITH A 30-HP EXHAUST FAN, 10-HP BYPASS FAN AND A 3.0-HP COMBUSTION BLOWER, 1.5 MMBTU/HR A/N: 445656 Permit to Construct Issued: 11/16/06	C460	D301 D481 D587 D588	NOX: PROCESS UNIT**	**CO:** 2000 PPMV (5) **[RULE 407,4-2-1982]** ; **NOX:** 130 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** ; **PM:** (9) **[RULE 404,2-7-1986]**	A72.1, D29.2, E193.1, K40.1

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

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Process 1 : CONTROL EQUIPMENT					
				PM: 0.1 GRAINS/SCF (5) **[RULE 409,8-7-1981]**	
OXIDIZER, HOT BED, NO. 3, GRACE TEC SYSTEMS, MODEL NO. ENTERPRISE IIL-060, NATURAL GAS, TWO ZONES, 8 FT W. X 18 FT L. X 10 FT H., 1.5 MMBTU/HR A/N: 455305 Permit to Construct Issued: 11/09/06	C305	D76 D77 D78 D82 D274 D299 D333 D337 D482 D484 D498 D571 D572	NOX: PROCESS UNIT**	**CO:** 2000 PPMV (5) **[RULE 407,4-2-1982]** ; **NOX:** 130 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** ; **PM:** (9) **[RULE 404,2-7-1986]** **PM:** 0.1 GRAINS/SCF (5) **[RULE 409,8-7-1981]**	A72.1, A72.3, D29.2, E193.1, K40.1
Process 2 : EXTERNAL COMBUSTION					
BOILER, WATER TUBE, NATURAL GAS, PARKER, MODEL T-2970LR, WITH LOW NOX BURNER, 2.97 MMBTU/HR WITH A/N: 464106 Permit to Construct Issued: 06/14/07	D593		NOX: PROCESS UNIT**	**CO:** 2000 PPMV NATURAL GAS (5A) **[RULE 407,4-2-1982]** ; **CO:** 100 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996]** **CO:** 400 PPMV NATURAL GAS (5) **[RULE 1146.1,5-13-1994]** ; **NOX:** 12 PPMV NATURAL GAS (3) **[RULE 2012,5-6-2005]** ; **NOX:** 12 PPMV NATURAL GAS (4) **[RULE 2005,5-6-2005]**	D28.8, D182.3, D332.3, K40.2

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(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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Process 2 : EXTERNAL COMBUSTION					
BURNER, NATURAL GAS, PARKER, MODEL T-2970LR, WITH LOW NOX BURNER, 2.97 MMBTU/HR				**PM:** 0.1 GRAINS/SCF NATURAL GAS (5) **[RULE 409,8-7-1981]**	
Process 9 : BPL LAB					P13.1
System 2 : Integrated Circuit Fabrication					
PLASMA ETCHER, BACKSIDE VIA ETCH, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT, 65-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D428	C6			B59.38
PLASMA ETCHER, BACKSIDE VIA ETCH, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT, 65-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D429	C6			B59.38
PLASMA ETCHER, BACKSIDE VIA ETCH, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT, 65-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D430	C6			B59.38

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Process 9 : BPL LAB					P13.1
PLASMA ETCHER, BACKSIDE VIA ETCH, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT, 65-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D431	C6			B59.38
PLASMA ETCHER, BACKSIDE VIA ETCH, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT, 65-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D432	C6			B59.38
PLASMA ETCHER, BACKSIDE VIA ETCH, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT, 65-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D433	C6			B59.38
PLASMA ETCHER, MATRIX, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT; 21.4-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D434	C6			B59.12
PLASMA ETCHER, MATRIX, HEIGHT: 6FT; LENGTH: 3FT; WIDTH: 4FT; 21.4-KVA A/N: 475714 Permit to Construct Issued: 01/29/08	D435	C6			B59.12

* (1)(1A)(1B)Denotes RECLAIM emission factor (2)(2A)(2B)Denotes RECLAIM emission rate
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Process 9 : BPL LAB					P13.1
PLASMA ETCHER, ICP NO. 1, TRIKON, MODEL OMEGA, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; 65-KVA, WITH THREE VACUUM PUMPS, 2.0-HP TOTAL A/N: 475714 Permit to Construct Issued: 01/29/08	D501	C6			B59.38
PLASMA ETCHER, ICP NO. 2, TRIKON, MODEL OMEGA, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; 65-KVA, WITH THREE VACUUM PUMPS, 2.0-HP TOTAL A/N: 475714 Permit to Construct Issued: 01/29/08	D502	C6			B59.38
PLASMA ETCHER, CLEANER, TWO CHAMBER, TECHNIX, MODEL 800-II, LENGTH 3FT 5IN; WIDTH 3FT 5IN; HEIGHT 6FT 5IN; WITH 3 VACUUM PUMPS, 2.0-HP TOTAL A/N: 475714 Permit to Construct Issued: 01/29/08	D503	C6			B59.38
PLASMA ETCHER, STS, MODEL MPX HRM, LENGTH: 6 FT; WIDTH: 2 FT 4 IN; HEIGHT: 6 FT 1.75 IN, WITH TWO VACUUM PUMPS A/N: 475714 Permit to Construct Issued: 01/29/08	D595	C6			B59.55

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Process 10 : D1 EAST LAB					P13.1
System 1 : Photolithographic Processes					
BENCH, PHOTORESIST COATER, SILICON VALLEY GROUP, MODEL NO. 8626, 3 FT W. X 4 FT 10 IN L. X 3 FT 7 IN H., WITH TWO TRACKS A/N: 455548 Permit to Construct Issued: 11/16/06	D76	C305			
BENCH, PHOTORESIST COATER, SILICON VALLEY GROUP, MODEL NO. 8626, 3 FT W. X 4 FT 10 IN L. X 3 FT 7 IN H., WITH TWO TRACKS A/N: 455548 Permit to Construct Issued: 11/16/06	D77	C305			
BENCH, PHOTORESIST COATER, SILICON VALLEY GROUP, MODEL NO. 8626, 3 FT W. X 4 FT 10 IN L. X 3 FT 7 IN H., WITH TWO TRACKS A/N: 455548 Permit to Construct Issued: 11/16/06	D78	C305			
BENCH, PHOTORESIST STRIPPER, SEMITOOL NO.4, 3 FT W. X 5 FT L. X 3 FT H., ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D154	C455			
BENCH, PHOTORESIST STRIPPER, SEMITOOL NO.3, MODEL NO. SSTC 621270, 18 KVA ELECTRICALLY HEATED, 6 FT 2 IN W. X 3 FT L. X 5 FT 10 IN H, WITH ONE SPINNER A/N: 455548 Permit to Construct Issued: 11/16/06	D274	C305			

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Process 10 : D1 EAST LAB					P13.1
BENCH, PHOTORESIST COATER/DEVELOPER, NO.1, MODEL SCORPIO 839, 4 FT 4 IN W. X 5 FT 10 L. X 5 FT 4 IN H., WITH TWO SPINNERS AND SIX BAKING OVENS A/N: 455548 Permit to Construct Issued: 11/16/06	D299	C305			
BENCH, PHOTORESIST COATER/DEVELOPER, NO.2, MODEL SCORPIO 839, 4 FT 4 IN W. X 5 FT 10 IN L. X 5 FT 4 IN H., WITH TWO SPINNERS AND SIX BAKING OVENS A/N: 455548 Permit to Construct Issued: 11/16/06	D300	C161			B59.4
BENCH, PHOTORESIST STRIPPER, SEMITOOL NO.7, MODEL NO. EQP222SR, 16.2 KVA ELECTRICALLY HEATED, 4 FT 6 IN W. X 4 FT L. X 5 FT 6 IN H. A/N: 455548 Permit to Construct Issued: 11/16/06	D333	C305			B27.4, C1.15
BENCH, PHOTORESIST STRIPPER, SEMITOOL NO. 8, MODEL NO. SSTC401270, 3 FT 3 IN W. X 5 FT 5 IN L. X 5 FT 7 IN H., 7.2 KW ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D335	C455			B27.4, C1.17

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Process 10 : D1 EAST LAB					P13.1
BENCH, PHOTORESIST COATER/DEVELOPER, NO.4, MODEL SCORPIO 839, 4 FT 4 IN W. X 4 FT 3 IN L. X 5 FT 11 IN H., WITH TWO SPINNERS AND SIX BAKING OVENS A/N: 455548 Permit to Construct Issued: 11/16/06	D337	C305			B27.5, C1.18, H23.2
BENCH, PHOTORESIST STRIPPER, SEMITOOL NO.6, MODEL NO. EQ22PR, 9.36 KVA ELECTRICALLY HEATED, 4 FT W. X 4 FT 8 IN L. X 5 FT 5 IN H. A/N: 455548 Permit to Construct Issued: 11/16/06	D520	C161			B59.4, B59.43
BENCH, PHOTORESIST DEVELOPER TRACK, SILICON VALLEY GROUP, MODEL NO. SVG-8632 CTD, 5 FT L. X 3 FT W. X 2 FT 8 IN H. A/N: 455548 Permit to Construct Issued: 11/16/06	D521	C161			B59.4, B59.43
OVEN, PHOTORESIST BAKE, LABLINE MODEL NO. 3490M, 2 FT W. X 1 FT 9 IN L. X 2 FT 11 IN H., 2 KW ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D79	C455			
OVEN, PHOTORESIST BAKE, LABLINE, MODEL NO. 3490M, 2 FT W. X 1 FT 9 IN L. X 2 FT 11 IN H., 2 KW ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D80	C455			

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Process 10 : D1 EAST LAB					P13.1
OVEN, PHOTORESIST BAKE, LABLINE, MODEL NO. 3490M, 2 FT W. X 1 FT 9 IN L. X 2 FT 11 IN H., 2 KW ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D81	C455			
OVEN, TRW NO. 1, PHOTORESIST BAKE, ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D276	C455			
OVEN, TRW NO. 2, PHOTORESIST BAKE, ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D277	C455			
OVEN, TRW NO. 3, PHOTORESIST BAKE, ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D278	C455			
OVEN, TRW NO. 7, PHOTORESIST BAKE, ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D279	C455			
OVEN, VAPOR PRIME, YEILD ENGINEERING, MODEL NO. YES-6, 1 FT 9 IN W. X 2 FT 11 IN L. X 1 FT 9 IN H., ELECTRICALLY HEATED A/N: 455548 Permit to Construct Issued: 11/16/06	D82	C305			

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Process 10 : D1 EAST LAB					P13.1
BENCH, PHOTORESIST COATER, C&D, SEMICONDUCTOR SERVICES, MODEL 8800 SERIES A/N: 455548 Permit to Construct Issued: 11/16/06	D571	C305			B59.53, C1.51
BENCH, PHOTORESIST COATER, C&D, SEMICONDUCTOR SERVICES, MODEL 8800 SERIES A/N: 455548 Permit to Construct Issued: 11/16/06	D572	C305			B59.53, C1.51
OVEN, VAPOR PRIME, YIELD ENGINEERING SERVICES, MODEL NO. 310TA A/N: 455548 Permit to Construct Issued: 11/16/06	D573	C6			B59.53
BENCH, MANUAL PHOTORESIST COATER A/N: 455548 Permit to Construct Issued: 11/16/06	D484	C305			B59.60, C1.53
BENCH, DEVELOPER, TRACK, C&D A/N: 455548 Permit to Construct Issued: 11/16/06	D537	C6			B59.4, B59.55
System 4 : Solvent Cleaning					
BENCH, SOLVENT STRIP/LIFTOFF, WAFER PROCESS SYSTEM, MODEL NO. SLFFH-600-SS, 4FT 7IN W X 5FT 10IN L X 5FT 10IN H, ELECTRICALLY HEATE A/N: 455303 Permit to Construct Issued: 06/23/06	D474	C455			B59.47, C1.44

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Process 10 : D1 EAST LAB					P13.1
BENCH, SOLVENT STRIP/LIFTOFF, WAFER PROCESS SYSTEM, MODEL NO. SLFFH-600-SS, 4FT 7IN W X 5FT 10IN L X 5FT 10IN H, ELECTRICALLY HEATE A/N: 455303 Permit to Construct Issued: 06/23/06	D476	C455			B59.47, C1.44
BENCH, PHOTORESIST DEVELOPER, PHOTORESIST DEVELOPER, CHLOROBENZENE SINK, WAFER PROCESS SYSTEMS, MODEL NO. WPS-, 400-FA-SS, 3 FT 4 IN W. X 3 FT 10 IN L. X 6 FT 4 IN H., HEATED 5.4 KVA A/N: 455303 Permit to Construct Issued: 06/23/06	D498	C305			B59.34, C1.47
BENCH, SOLVENT STRIP/LIFTOFF, WAFER PROCESS SYSTEMS, 2-KVA ELECTRICALLY HEATED A/N: 455303 Permit to Construct Issued: 06/23/06	D482	C305			B59.61, C1.54
Process 11 : D1 WEST LAB					P13.1
System 1 : Photolithographic Processes					
BENCH, PHOTORESIST COATER/DEVELOPER, NO.3, MODEL SCORPIO 841, 4 FT 4 IN W. X 5 FT 10 IN L. X 5 FT 4 IN H., WITH TWO SPINNERS AND ONE BAKING OVEN A/N: 455302 Permit to Construct Issued: 11/16/06	D301	C460			

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
BENCH, PHOTORESIST COATER NO. 1, 82 IN L. X 36 IN W. X 80 IN H., WITH TWO WAFER CONVEYORS, TWO SPINNERS AND FOUR HOT PLATES A/N: 455302 Permit to Construct Issued: 11/16/06	D346	C364			B59.50, C1.42
BENCH, PHOTORESIST COATER NO. 2, 82 IN L. X 52 IN W. X 80 IN H., WITH TWO WAFER CONVEYORS, TWO SPINNERS AND FOUR HOT PLATES A/N: 455302 Permit to Construct Issued: 11/16/06	D347	C364			B59.50, C1.42
BENCH, TRACK DEVELOP STATION NO. 1, POTASSIUM HYDROXIDE A/N: 455302 Permit to Construct Issued: 11/16/06	D397	C232			B59.9
BENCH, TRACK DEVELOP STATION NO. 2, POTASSIUM HYDROXIDE A/N: 455302 Permit to Construct Issued: 11/16/06	D398	C232			B59.9
BENCH, DEVELOPER, C&D SEMICONDUCTOR, MODEL 8800, WIDTH: 3FT 11 IN, HEIGHT: 5FT 10 IN, LENGTH:4FT 11 IN A/N: 455302 Permit to Construct Issued: 11/16/06	D477	C232			B59.4, B59.36

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
BENCH, PHOTORESIST COATER, C&D, SEMICONDUCTOR SERVICES, MODEL 8800, WIDTH: 2 FT 11 IN, LENGTH: 8 FT, HEIGHT:3 FT 11 IN A/N: 455302 Permit to Construct Issued: 11/16/06	D481	C460			B59.49, C1.37, C1.42
OVEN, NO. 2, VAPOR PRIME, 21.625 IN L. X 24.25 IN W. X 35 IN H., ELECTRICALLY HEATED, 2.2 KVA A/N: 455302 Permit to Construct Issued: 11/16/06	D349	C232			B59.52, C1.46
OVEN, NO. 1, PHOTORESIST BAKE, 21.6 IN L. X 24.25 IN W. X 35 IN H., ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D350	C364			B59.5, C1.42
OVEN, NO. 3, PHOTORESIST BAKE, 21.6 IN L. 24.25 IN W. X 35 IN H., ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D352	C364			B59.5, C1.42
OVEN, NO. 4, PHOTORESIST BAKE, 21.6 IN L. X 24.25 IN W. X 35 IN H., ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D353	C364			B59.5, C1.42
OVEN, NO. 5, PHOTORESIST BAKE, 21.6 IN L. X 24.25 W. X 35 IN H., ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D354	C364			B59.5, C1.42

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
OVEN, NO. 6, PHOTORESIST BAKE, 21.6 IN L. X 24.25 IN W. X 35 IN H., ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D355	C364			B59.5, C1.42
OVEN, NO. 1, VAPOR PRIME, 19.5 IN L. X 23.75 IN W. X 27.5 IN H., ELECTRICALLY HEATED, 2.2 KVA A/N: 455302 Permit to Construct Issued: 11/16/06	D348	C233			B59.4, B59.57, C1.42
OVEN, LABLINE,, LENGTH: 21.6 IN, WIDTH: 24.25 IN, HEIGHT: 35 IN, ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D587	C460			B59.62, C1.42
OVEN, LABLINE,, LENGTH: 21.6 IN, WIDTH: 24.25 IN, HEIGHT: 35 IN, ELECTRICALLY HEATED A/N: 455302 Permit to Construct Issued: 11/16/06	D588	C460			B59.62, C1.42
OVEN, BARNSTEAD, LABLINE, MODEL 3497M-3 A/N: 455302 Permit to Construct Issued: 11/16/06	D589	C364			B59.62, C1.42
System 2 : Integrated Circuit Fabrication					
PLASMA ETCHER, ETCH NO. 1, 65-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D374	C160			B59.8

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
PLASMA ETCHER, ETCH NO. 2, 65-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D375	C160			B59.8
PLASMA ETCHER, CLEAN NO. 1, MATRIX, 6.0-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D378	C160			B59.8
PLASMA ETCHER, CLEAN NO. 5, MATRIX, 6.0-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D382	C160			B59.8
PLASMA ETCHER, CLEAN NO. 6, MATRIX, 6.0-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D383	C232			B59.8
PLASMA ETCHER, CLEAN NO. 9, MATRIX, 6.0-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D386	C160			B59.8
PLASMA ETCHER, CLEAN NO. 11, MATRIX, 6.0-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D388	C160			B59.8
PLASMA ETCHER, DEPOSITION NO. 1, PLASMA THERM INC. 65-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D390	C160			B59.8

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
PLASMA ETCHER, DEPOSITION NO. 2, PLASMA THERM INC. 65-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D391	C160			B59.8
PLASMA ETCHER, CLEAN NO. 1, MATRIX, 21.4-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D403	C160			B59.52
PLASMA ETCHER, CLEAN NO. 2, MATRIX, 21.4-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D404	C160			B59.52
PLASMA ETCHER, CLEAN NO. 4, MATRIX, 21.4-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D406	C232			B59.52
PLASMA ETCHER, MATRIX, MODEL EHP500,, WIDTH: 4FT, LENGTH: 3FT, HEIGHT: 6FT, WITH THREE VACUUM PUMPS A/N: 455550 Permit to Construct Issued: 11/16/06	D450	C233			B59.13
PLASMA ETCHER, ICP NO. 1, TRIKON, MODEL OMEGA, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; 65-KVA, WITH THREE VACUUM PUMPS, 2.0-HP TOTAL A/N: 455550 Permit to Construct Issued: 11/16/06	D507	C232			B59.52

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
PLASMA ETCHER, ICP NO. 2, TRIKON, MODEL OMEGA, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; 65-KVA, WITH THREE VACUUM PUMPS, 2.0-HP TOTAL A/N: 455550 Permit to Construct Issued: 11/16/06	D508	C232			B59.52
PLASMA ETCHER, ICP NO. 3, TRIKON, MODEL OMEGA, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; 65-KVA, WITH THREE VACUUM PUMPS, 2.0-HP TOTAL A/N: 455550 Permit to Construct Issued: 11/16/06	D509	C232			B59.52
PLASMA ETCHER, DESCUMMER, BRANSON/IPC, MODEL REACTOR CENTER PM 1813, DIMENSIONS: HEIGHT: 3FT; LENGTH: 3FT; WIDTH: 3FT A/N: 455550 Permit to Construct Issued: 11/16/06	D528	C160			B27.7
FURNACE, PHOTORESIST COATER/DEVELOPER, THERMCO A/N: 455550 Permit to Construct Issued: 11/16/06	D183	C160			
ION IMPLANTER, ION BEAM MILL VACUUM PUMP A/N: 455550 Permit to Construct Issued: 11/16/06	D182	C233			

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
EVAPORATOR, CHA MK50 A/N: 455550 Permit to Construct Issued: 11/16/06	D191				
DEPOSITION REACTOR, SPUTTERING NO. 1, 21.4-KVA A/N: 455550 Permit to Construct Issued: 11/16/06	D407	C232			B59.52
PROCESS TANK, PASS-THRU ACID UNIT A/N: 455550 Permit to Construct Issued: 11/16/06	D189	C160			
DEPOSITION REACTOR, VAPOR PRIME, Y.E.S., LENGTH: 19.5IN; WIDTH: 23.75IN; HEIGHT: 27.5IN;, ELECTRICALLY HEATED A/N: 455550 Permit to Construct Issued: 11/16/06	D552	C232			B59.52, C1.46
PLASMA ETCHER, ICP NO. 3, TRIKON, MODEL OMEGA, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; 65-KVA, WITH THREE VACUUM PUMPS, 2.0-HP TOTAL A/N: 455550 Permit to Construct Issued: 11/16/06	D584	C232			B59.58

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 11 : D1 WEST LAB					P13.1
DEPOSITION REACTOR, PECVD DIELECTRIC, TRIKON TECHNOLGIES, DELTA 201,65-KVA,, LENGTH: 5FT; WIDTH: 3FT 4IN; HEIGHT: 6FT 1IN, WITH 3 VACUUM PUMPS, 4-HP TOTAL A/N: 455550 Permit to Construct Issued: 11/16/06	D585				B59.59
PLASMA ETCHER, NO. 1, MATRIX, MODEL 105E, WIDTH:4FT;LENGTH: 3FT; HEIGHT: 6FT A/N: 455550 Permit to Construct Issued: 11/16/06	D540	C233			B59.55
Process 13 : 3D LAB					P13.1
System 1 : Photolithographic Processes					
BENCH, MANUAL PHOTORESIST COATER A/N: 455548 Permit to Construct Issued: 11/16/06	D484	C305			B59.60, C1.53
BENCH, DEVELOPER, TRACK, C&D A/N: 455548 Permit to Construct Issued: 11/16/06	D537	C6			B59.4, B59.55
System 2 : Integrated Circuit Fabrication					
PLASMA ETCHER, NO. 1, MATRIX, MODEL 105E, WIDTH:4FT;LENGTH: 3FT; HEIGHT: 6FT A/N: 455550 Permit to Construct Issued: 11/16/06	D540	C233			B59.55

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 13 : 3D LAB					P13.1
System 4 : Solvent Cleaning					
BENCH, SOLVENT STRIP/LIFTOFF, WAFER PROCESS SYSTEMS, 2-KVA ELECTRICALLY HEATED A/N: 455303 Permit to Construct Issued: 06/23/06	D482	C305			B59.61, C1.54

* (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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	**Section H Page No.**	**Process**	**System**
C6	1	1	0
D76	6	10	1
D77	6	10	1
D78	6	10	1
D79	8	10	1
D80	8	10	1
D81	9	10	1
D82	9	10	1
D154	6	10	1
D182	17	11	2
D183	17	11	2
D189	18	11	2
D191	18	11	2
C233	1	1	0
D274	6	10	1
D276	9	10	1
D277	9	10	1
D278	9	10	1
D279	9	10	1
D299	7	10	1
D300	7	10	1
D301	11	11	1
C305	2	1	0
D333	7	10	1
D335	7	10	1
D337	8	10	1
D346	12	11	1
D347	12	11	1
D348	14	11	1
D349	13	11	1
D350	13	11	1
D352	13	11	1
D353	13	11	1
D354	13	11	1
D355	14	11	1
C364	1	1	0

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	**Section H Page No.**	**Process**	**System**
D374	14	11	2
D375	15	11	2
D378	15	11	2
D382	15	11	2
D383	15	11	2
D386	15	11	2
D388	15	11	2
D390	15	11	2
D391	16	11	2
D397	12	11	1
D398	12	11	1
D403	16	11	2
D404	16	11	2
D406	16	11	2
D407	18	11	2
D428	3	9	2
D429	3	9	2
D430	3	9	2
D431	4	9	2
D432	4	9	2
D433	4	9	2
D434	4	9	2
D435	4	9	2
D450	16	11	2
C460	1	1	0
D474	10	10	4
D476	11	10	4
D477	12	11	1
D481	13	11	1
D482	20	13	4
D482	11	10	4
D484	10	10	1
D484	19	13	1
D498	11	10	4
D501	5	9	2
D502	5	9	2

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	**Section H Page No.**	**Process**	**System**
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D507	16	11	2
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D509	17	11	2
D520	8	10	1
D521	8	10	1
D528	17	11	2
D537	10	10	1
D537	19	13	1
D540	19	11	2
D540	19	13	2
D552	18	11	2
D571	10	10	1
D572	10	10	1
D573	10	10	1
D584	18	11	2
D585	19	11	2
D587	14	11	1
D588	14	11	1
D589	14	11	1
D593	2	2	0
D595	5	9	2

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

FACILITY CONDITIONS

F2.1 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 833 LBS IN ANY ONE MONTH

To ensure compliance with the monthly Volatile Organic Compound(VOC) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

(1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).

(2) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from all equipment and operations covered by the monthly emission limit(s). The record shall include any procedures used to account for control device e ciencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.

(3) The operator shall maintain a single list which includes only the name and address of each person from whom the facility acquired VOC-containing material regulated by the District that was used or stored at the facility during the preceding 12 months.

(4) The operator shall retain all purchase invoices for all VOC-containing material used or stored at the facility, and all waste manifests for all waste VOC-containing material removed from the facility, for five years.

For the purpose of this condition, the VOC emission limit shall be from all equipment and operations that are subject to Rule 442.

[RULE 442, 12-15-2000]

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

F2.2 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 22 LBS IN ANY ONE MONTH

To ensure compliance with the monthly Volatile Organic Compound(VOC) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

(1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).

(2) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from all equipment and operations covered by the monthly emission limit(s). The record shall include any procedures used to account for control device e ciencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.

(3) The operator shall maintain a single list which includes only the name and address of each person from whom the facility acquired VOC-containing material regulated by the District that was used or stored at the facility during the preceding 12 months.

(4) The operator shall retain all purchase invoices for all VOC-containing material used or stored at the facility, and all waste manifests for all waste VOC-containing material removed from the facility, for five years.

For the purpose of this condition, the VOC emission limit shall be from all vapor degreasers operating under the Rule 1122 exemption pursuant to Rule 1122(k)(2).

[RULE 1122, 10-1-2004]

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

F2.3 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
Single Volatile Hazardous Air Pollutant (VHAP)	Less than 10 TONS IN ANY 12-MONTH PERIOD
Combination of Volatile Hazardous Air Pollutants (VHAPs)	Less than 25 TONS IN ANY 12-MONTH PERIOD

To ensure compliance with the 12-month Volatile Hazardous Air Pollutant (VHAP) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

(1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).

(2) Within 14 calendar days after the end of each month, the operator shall total and record VHAP emissions for the month and for the previous 12 month period from all equipment and operations covered by the 12-month emission limit(s). The record shall include any procedures used to account for control device e ciencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.

(3) The operator shall maintain a single list which includes only the name and address of each person from whom the facility acquired VHAP-containing material regulated by the District that was used or stored at the facility during the preceding 12 months.

(4) The operator shall retain all purchase invoices for all VHAP-containing material used or stored at the facility, and all waste manifests for all waste VHAP-containing material removed from the facility, for five years.

[40CFR 63 Subpart BBBBB, 5-22-2003]

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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 e ective on or after June 1, 2004.

[RULE 431.2, 9-15-2000]

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

District Rule 1420

[RULE 1420, 9-11-1992]

PROCESS CONDITIONS

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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

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	1164
VOC	District Rule	109

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

[Processes subject to this condition : 8, 9, 10, 11, 12, 13]

P13.2 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1122
VOC	District Rule	109

[RULE 109, 5-2-2003; RULE 1122, 10-1-2004]

[Processes subject to this condition : 4]

SYSTEM CONDITIONS

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

Contaminant	Rule	Rule/Subpart
HAPs	District Rule	1426

[RULE 1426, 5-2-2003]

[Systems subject to this condition : Process 14, System 2]

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NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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

DEVICE CONDITIONS

A. Emission Limits

A72.1 The operator shall maintain this equipment to achieve a minimum destruction e ciency of 95 percent for ROG during the normal operation of the equipment it vents.

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

[Devices subject to this condition : C305, C364, C460]

A72.3 The operator shall maintain this equipment to achieve a minimum overall control e ciency of 90 percent for ROG during the normal operation of the equipment it vents.

[RULE 1164, 1-13-1995]

[Devices subject to this condition : C305]

B. Material/Fuel Type Limits

B27.4 The operator shall not use materials containing any carcinogenic compounds identified in the SCAQMD Rule 1401, as amended 07-dec-1990.

For the purposes of this condition, carcinogenic compounds are those in Table I of the above mentioned rule, with an e ective date of 07-dec-1990 or earlier.

[RULE 1401, 12-7-1990]

[Devices subject to this condition : D333, D335]

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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

B27.5 The operator shall not use materials containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 12-mar-1999.

For the purposes of this condition, toxic air contaminants (TACs) are those in Table I of the above mentioned rule, with an e ective date of 12-mar-1999 or earlier.

[RULE 1401, 3-12-1999]

[Devices subject to this condition : D337]

B27.7 The operator shall not use materials containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 05-02-2003.

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D528]

B59.4 The operator shall not use the following material(s) in this device :

Materials containing VOC.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-O set, 5-10-1996**; RULE 1303(b)(2)-O set, 12-6-2002]

[Devices subject to this condition : D300, D348, D477, D520, D521, D537]

B59.5 The operator shall not use the following material(s) in this device :

Toxic Air contaminants in table 1 of rule 1401 with a listing date of 8/13/99 or earlier except nitric acid and hydrofluoric acid

[RULE 1401, 8-13-1999]

[Devices subject to this condition : D350, D352, D353, D354, D355]

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NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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

B59.8 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 3/17/00 or earlier except ammonia

[RULE 1401, 3-17-2000]

[Devices subject to this condition : D374, D375, D378, D382, D383, D386, D388, D390, D391]

B59.9 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 3/17/00 or earlier except hydrochloric acid

[RULE 1401, 3-17-2000]

[Devices subject to this condition : D397, D398]

B59.12 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 8/13/99 or earlier

[RULE 1401, 8-13-1999]

[Devices subject to this condition : D434, D435]

B59.13 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of Rule 1401 with a listing date of 8/18/00 or earlier

[RULE 1401, 8-18-2000]

[Devices subject to this condition : D450]

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

B59.34 The operator shall not use the following material(s) in this device :

Materials containing any toxic air contaminants identified in the Rule 1401, Table 1, with a date of listing of of 5/02/03 or earlier except chlorobenzene, isopropyl alcohol, and methanol.

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D498]

B59.36 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 5/02/03 or earlier except hydrochloric acid and hydrofluoric acid

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D477]

B59.38 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 5/02/03 or earlier except chlorine

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D428, D429, D430, D431, D432, D433, D501, D502, D503]

B59.43 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 5/02/03 or earlier

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D520, D521]

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

B59.47 The operator shall not use the following material(s) in this device :

Materials containing any toxic air contaminants identified in the Rule 1401, Table 1, with a date of listing of of 5/02/03 or earlier except isopropyl alcohol, methanol, phenol and naphtalene.

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D474, D476]

B59.49 The operator shall not use the following material(s) in this device :

Materials containing any toxic air contaminants identified in the Rule 1401, Table 1, with a date of listing of of 5/02/03 or earlier except cresol, isopropyl alcohol, methanol, xylene, phenol and chlorobenzene.1

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D481]

B59.50 The operator shall not use the following material(s) in this device :

Materials containing any toxic air contaminants identified in the Rule 1401, Table 1, with a date of listing of of 5/02/03 or earlier except nitric acid, hydrofluoric acid, cresol, xylene, isopropyl alcohol, methanol, and chlorobenzene.

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D346, D347]

B59.52 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 5/02/03 or earlier except hydrofluoric acid, hydrochloric acid, ammonia, chlorine or isopropyl alcohol

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D349, D403, D404, D406, D407, D507, D508, D509, D552]

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

B59.53 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of Rule 1401 with a listing date of 3/04/05 or earlier except xylene, cresol, isopropyl alcohol and ammonia

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D571, D572, D573]

B59.55 The operator shall not use the following material(s) in this device :

Toxic air contaminants in Table 1 of Rule 1401 with a listing date of 3/04/05 or earlier

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D537, D540, D595]

B59.57 The operator shall not use the following material(s) in this device :

Toxic Air contaminants in table 1 of rule 1401 with a listing date of 3/04/05 or earlier except nitric acid, hydrofluoric acid and ammonia

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D348]

B59.58 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of Rule 1401 with a listing date of 3/4/05 or earlier except hydrofluoric acid or chlorine

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D584]

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

B59.59 The operator shall not use the following material(s) in this device :

Toxic air contaminants in table 1 of rule 1401 with a listing date of 3/04/05 or earlier except ammonia

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D585]

B59.60 The operator shall not use the following material(s) in this device :

Toxic Air Contaminants in Table 1 of Rule 1401 with a listing date of 3/04/05 or earlier except xylene, cresol. chlorobenzene and formaldehyde

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D484]

B59.61 The operator shall not use the following material(s) in this device :

Toxic Air Contaminants in Table 1 of rule 1401 with a listing date of 3/04/05 or earlier except isopropyl alcohol, methanol, napthalene and phenol

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D482]

B59.62 The operator shall not use the following material(s) in this device :

Toxic air contaminants in Table 1 of Rule 1401 with a listing date of 3/04/05 or earlier except xylene, cresol, and cellosolve acetate

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D587, D588, D589]

C. Throughput or Operating Parameter Limits

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

C1.15 The operator shall limit the material processed to no more than 180 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as photoresist coatings and solvents containing VOC.

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

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

[Devices subject to this condition : D333]

C1.17 The operator shall limit the material processed to no more than 93 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as photoresist coatings and solvents containing VOC.

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

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

[Devices subject to this condition : D335]

C1.18 The operator shall limit the material processed to no more than 430 lb(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as photoresist coatings and solvents containing VOC.

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

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

[Devices subject to this condition : D337]

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

C1.37 The operator shall limit the material processed to no more than 80 lb(s) in any one month.

For the purpose of this condition, material processed shall be defined as photoresist coatings (Microposit 1822 / 1813).

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

[RULE 1303(b)(2)-O set, 5-10-1996; RULE 1303(b)(2)-O set, 12-6-2002; RULE 1401, 5-2-2003]

[Devices subject to this condition : D481]

C1.42 The operator shall limit the material processed to no more than 649 gallon(s) per month.

For the purpose of this condition, material processed shall be defined as materials containing VOC.

This limit shall be based on the total combined limit for equipment D346 through D348, D350, D352 through D355 and D481.

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

[Devices subject to this condition : D346, D347, D348, D350, D352, D353, D354, D355, D481, D587, D588, D589]

C1.44 The operator shall limit the material processed to no more than 660 gallon(s) per month.

For the purpose of this condition, material processed shall be defined as materials containing VOC.

This limit shall be based on the total combined limit for equipment D474 and D476.

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

[Devices subject to this condition : D474, D476]

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

C1.46 The operator shall limit the material processed to no more than 2.0 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as material containing VOC. The limit shall be based on the total combined limit for equipment D349 and D552.

[RULE 1303(b)(2)-O set, 5-10-1996; RULE 1303(b)(2)-O set, 12-6-2002]

[Devices subject to this condition : D349, D552]

C1.47 The operator shall limit the material processed to no more than 325 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as solvents containing VOC.

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

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

[Devices subject to this condition : D498]

C1.51 The operator shall limit the material processed to no more than 282 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as material containing VOC.

[RULE 1303(b)(2)-O set, 5-10-1996; RULE 1303(b)(2)-O set, 12-6-2002]

[Devices subject to this condition : D571, D572]

C1.53 The operator shall limit the material processed to no more than 2 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as material containing VOC.

[RULE 1303(b)(2)-O set, 5-10-1996; RULE 1303(b)(2)-O set, 12-6-2002]

[Devices subject to this condition : D484]

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

C1.54 The operator shall limit the material processed to no more than 16 gallon(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as material containing VOC.

[RULE 1303(b)(2)-O set, 5-10-1996; RULE 1303(b)(2)-O set, 12-6-2002]

[Devices subject to this condition : D482]

C8.3 The operator shall use this equipment in such a manner that the flow rate being monitored, as indicated below, is not less than 150 gpm.

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

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C6, C233]

C8.9 The operator shall use this equipment in such a manner that the pH being monitored, as indicated below, is not less than 8 of the pH scale.

To comply with this condition, the operator shall monitor and record the pH as specified in condition number 90-1.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C6, C233]

D. Monitoring/Testing Requirements

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

D28.8 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted within the first 12 months after the issuance of this permit and once every 5-year period.

The test shall be conducted to demonstrate compliance with the source testing requirements of Rule 2012 for a Process Unit opting to comply with a NOx concentration limit.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D593]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
VOC	Approved District method	District-approved averaging time	Simultaneous inlet and outlet

The test shall be conducted at least once during the life of the permit but no later than July 9, 2010 unless otherwise approved in writing by the District.

The test shall be conducted to determine the VOC emissions using an approved District method to determine compliance with all applicable permit condition(s), Rules and Regulations.

The test shall be conducted while the oxidizer is operating at a temperature of not less than the minimum operating temperature specified in this permit. If the operating temperature during the source test is greater than the minimum operating temperature specified in the permit, the minimum operating temperature specified in this permit may be increased to reflect the operating temperature during the source test.

The operator shall comply with administrative conditions NOs. 8, 9, and 10 of Section E of this facility permit

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

[Devices subject to this condition : C305, C364, C460]

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

D90.1 The operator shall periodically monitor the pH of the scrubbing solution according to the following specifications:

The operator shall use litmus paper or a portable pH analyzer to monitor the parameter.

The operator shall monitor once every day provided any equipment served by this control system is in operation.

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

[Devices subject to this condition : C6, C233]

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

D182.3 The operator shall test this equipment in accordance with the following specifications:

The test shall be conducted within 180 days after the initial start-up unless otherwise approved in writing by the Executive O cer..

The source tests shall be performed to verify compliance with the NOx and CO emission limits specified by this permit

The tests shall be conducted while the burner is firing at maximum, minimum, and average firing rates

Written notice of the source tests shall be submitted to the District (addressed to South Coast Air Quality Management District, P.O. Box 4941, Diamond Bar, CA 91765) at least 14 days prior to testing so that an observer can be present

Two complete copies of the source test reports shall be submitted to the District (South Coast Air Quality Management District, P.O. Box 4941, Diamond Bar, CA 91765) within 45 days after the test. The report shall include, but may not be limited to emissions rates in pounds per hour and concentrations in ppmv at the outlet of the boiler, measured on a dry basis at 3% oxygen. The following operating data shall also be included for each firing rate:

A. The exhaust flow rates, in actual cubic feet per minute (ACFM)

B. The firing rates, in BTU per hour

C. The exhaust temperature, in degrees F

D. The oxygen content of the the exhaust gases, in percent

E. The fuel flow rate

A testing laboratory certified by the California Air Resources Board in the required test methods for criteria pollutant to be measured, and in compliance with District Rule 304 (non conflict of interest) shall conduct the test

Sampling facilities shall comply with the District Guidelines for Construction of Sampling and Testing Facilities, pursuant to Rule 217

[RULE 1146.1, 5-13-1994; **RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 2012, 5-6-2005]**

[Devices subject to this condition : D593]

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

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

D332.3 The operator shall determine compliance with the CO emission limit(s) by conducting a test at least every five years using a portable analyzer and AQMD-approved test method or, if not available, a non-AQMD approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with the CO concentration limit(s). The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

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

[Devices subject to this condition : D593]

E. Equipment Operation/Construction Requirements

E158.1 The operator shall maintain a continuous overflow of water from the scrubber sump to prevent build up of contamination.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C6, C233]

E159.1 The operator shall maintain inspection ports which, when opened, allow the observation of the spray nozzles and the scrubbing solution being sprayed on the packing.

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

[Devices subject to this condition : C6]

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

E193.1 The operator shall operate and maintain this equipment according to the following requirements:

The combustion chamber temperature shall be maintained at a minimum of 1,500 degrees Fahrenheit whenever the equipment it serves is in operation

The operator shall operate and maintain a temperature measuring and recording system to continuously measure and record the combustion chamber temperature pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy of within 1% of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer's specifications

For the purpose of this condition, a deviation shall be defined as when a combustion chamber temperature of less than 1,500 degrees Fahrenheit occurs whenever the equipment it serves is in operation. The operator shall review the records of the combustion chamber temperature on a daily basis to determine if a deviation occurs or shall install an alarm system to alert the operator when a deviation occurs

Whenever a deviation occurs, the operator shall inspect this equipment to identify the cause of such a deviation, take immediate corrective action to maintain the combustion chamber temperature at or above 1,500 degrees Fahrenheit, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken

All deviations shall be reported to the AQMD pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit. The report shall include the total operating time of this equipment and the total accumulated duration of all deviations for each semi-annual reporting period specified in Condition No. 23 in Section K of this permit

The operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the AQMD if an accumulation of deviations exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the AQMD within 90 calendar days after the due date for the semi-annual monitoring report

The operator shall inspect and maintain all components of this equipment on an annual basis in accordance with the manufacturer's specifications

The operator shall keep adequate records in a format that is acceptable to the AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years

[RULE 1303(a)(1)-BACT, 5-10-1996; 40CFR Part 64, 10-22-1997]

[Devices subject to this condition : C305, C364, C460]

H. Applicable Rules

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109

[RULE 109, 5-2-2003]

[Devices subject to this condition : D337]

K. Record Keeping/Reporting

K40.1 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 30 days after the source test was conducted.

[RULE 1164, 1-13-1995; RULE 1303(a)(1)-BACT, 5-10-1996]

[Devices subject to this condition : C305, C364, C460]

K40.2 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D593]

FACILITY PERMIT TO OPERATE
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

pH of scrubbing solution on a daily basis

flow rate of recirculating scrubbing solution on a daily basis

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

[Devices subject to this condition : C6, C233]