



FACILITY PERMIT TO OPERATE

**NORTHROP GRUMMAN 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

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FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

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FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN 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 1: CONTROL EQUIPMENT					
SCRUBBER, PACKED BED, HARRINGTON, MODEL NO. HPH 55-4 A/N: 515057 Permit to Construct Issued: 12/07/10	C4	D545 D546		PM: (9) [RULE 404, 2-7-1986]	C8.2, C8.9, D90.1, E158.1, E159.1, K67.3
SCRUBBER, FS21, HARRINGTON, WITH A MIST ELIMINATOR SECTION A/N: 537102 Permit to Construct Issued: 09/04/12	C160	D189 D211 D371 D373 D374 D375 D378 D382 D386 D388 D390 D391 D394 D395 D403 D404 D478 D537 D574 D613		PM: (9) [RULE 404, 2-7-1986]	C8.3, C8.9, D90.1, E158.1, E159.1, I331.1, K67.3
SCRUBBER, FS-41, HARRINGTON, MODEL NO. HPH 78- FB, MIST ELIMINATOR, A 15 H.P. EXHAUST FAN, 9 FT 8 IN W. X 15 FT L. X 10 FT 1 IN H., WITH THREE 3-HP WATER CIRCULATION PUMP A/N: 516125 Permit to Construct Issued: 02/08/11	C161	D94 D96 D97 D510 D511 D512 D513 D514 D516 D517 D522 D523 D524		PM: (9) [RULE 404, 2-7-1986]	C8.5, C8.9, D90.1, E158.1, E159.1, I331.1, K67.3
SCRUBBER, PACKED BED, HARRINGTON, HPH 66-4, LENGTH: 10FT 5IN; WIDTH:7FT 3IN; HEIGHT: 8FT 2IN, WITH A 4FT PACKING DEPTH, A 20-HP EXHAUST FAN, AND THREE 2-HP CIRCULATION PUMPS A/N: 537100 Permit to Construct Issued: 09/04/12	C232	D349 D372 D383 D397 D398 D406 D407 D447 D477 D507 D508 D509 D525 D540 D552 D584 D596		PM: (9) [RULE 404, 2-7-1986]	C8.1, C8.9, D90.1, E158.1, E159.1, I331.1, K67.3

- * (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.

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Process 1: CONTROL EQUIPMENT					
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: 537105 Permit to Construct Issued: 09/04/12	C460	D157 D481 D572 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]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	A72.1, D29.2, E193.1, I331.1, K40.1
Process 4: DEGREASERS					P13.2
DEGREASER, VAPOR, WITH CONDENSER, BARON-BLAKESLEE, MODEL 37-14-21-VLE, WIDTH: 1 FT 6 IN; LENGTH: 3 FT 5 IN; HEIGHT: 4 FT 10 IN; 3 KW A/N: 516126 Permit to Construct Issued: 02/08/11	D612				B59.21, B59.70, D322.2, H339.1
Process 10: D1 EAST LAB					P13.1
System 2: Integrated Circuit Fabrication					
PLASMA ETCHER, PLASMATHERM WAFER BATCH 730 A/N: 516124 Permit to Construct Issued: 02/08/11	D96	C161			
PLASMA ETCHER, DEPOSITION/ETCHER, PLASMATHERM, MODEL DUAL 790 A/N: 516124 Permit to Construct Issued: 02/08/11	D97	C161			

- * (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 10: D1 EAST LAB					P13.1
PLASMA ETCHER, PLASMA THERM, MODEL NO. SL720 A/N: 516124 Permit to Construct Issued: 02/08/11	D113				
DEPOSITION REACTOR, CHEMICAL VAPOR DEPOSITION, LOCATED IN BUILDING D1 GAAS PILOT LINE, PECVD TYPE, ELECTROTECH, MODEL DELTA 201, WITH THREE VACUUM PUIMPS A/N: 516124 Permit to Construct Issued: 02/08/11	D306			PM: (9) [RULE 405, 2-7-1986]	C1.6, K48.4
PLASMA ETCHER, PLASMATHERM, BACKSIDE VIA ETCH A/N: 516124 Permit to Construct Issued: 02/08/11	D510	C161			B59.40
PLASMA ETCHER, MATRIX #6, ,MATRIX SYSTEM ONE STRIPPER, MODEL NO. 106 A/N: 516124 Permit to Construct Issued: 02/08/11	D511	C161			B59.40
PLASMA ETCHER, NITRIDE ETCH, VLR II, UNAXIS/PLASMATHERM, MODEL NO. VLR700 A/N: 516124 Permit to Construct Issued: 02/08/11	D512	C161			B59.40
PLASMA ETCHER, UNAXIS/PLASMATHERM, MODEL NO. VLR700 A/N: 516124 Permit to Construct Issued: 02/08/11	D513	C161			B59.40

* (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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Process 10: D1 EAST LAB					P13.1
PLASMA ETCHER, NO. 7, MATRIX SYSTEM ONE STRIPPER, MODEL NO. E2053 A/N: 516124 Permit to Construct Issued: 02/08/11	D514	C161			B59.40
PLASMA ETCHER, NO. 14, MATRIX SYSTEM ONE STRIPPER, MODEL NO. 105E A/N: 516124 Permit to Construct Issued: 02/08/11	D516	C161			B59.40
PLASMA ETCHER, NITRIDE ETCH, TEGAL, MODEL NO. 901E A/N: 516124 Permit to Construct Issued: 02/08/11	D517	C161			B59.40
PLASMA ETCHER, NO. 3, PLASMA THERM, MODEL NO. SLR SERIES, TWO VACUUM PUMPS A/N: 516124 Permit to Construct Issued: 02/08/11	D522	C161			B59.44, C1.36
BENCH, PLASMA DESCUMMER NO.1, TECHNICS, MODEL NO. PE II/IIA, 2 FT 8 IN L X 2 FT 6 IN W, X 2 FT H, 2.2 KVA, AND 0.8 H.P. VACUUM SYSTEM A/N: 516124 Permit to Construct Issued: 02/08/11	D523	C161			B59.4, B59.43
BENCH, PLASMA DESCUMMER NO. 2, TECHNICS, MODEL NO. PE II/IIA, 2 FT 8 IN L X 2 FT 6 IN W, X 2 FT H, 2.2 KVA AND 0.8 H.P. VACUUM SYSTEM A/N: 516124 Permit to Construct Issued: 02/08/11	D524	C161			B59.4, B59.43

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 10: D1 EAST LAB					P13.1
FURNACE, ELECTRIC, MRL INDUSTRIES, MODEL THERMTEC, 80 KW A/N: 516124 Permit to Construct Issued: 02/08/11	D94	C161			
ION IMPLANTER, VARIAN, MODEL EHP 500, HEIGHT: 8FT; LENGTH: 16FT; WIDTH: 10FT 6IN A/N: 516124 Permit to Construct Issued: 02/08/11	D425	C6			B59.12
PLASMA ETCHER, PLASMA THERM, MODEL 790, HEIGHT: 6FT 6IN; LENGTH: 3FT 5IN; WIDTH: 3FT 5IN, 65-KVA A/N: 516124 Permit to Construct Issued: 02/08/11	D426				
DEPOSITION REACTOR A/N: 516124 Permit to Construct Issued: 02/08/11	D462				
Process 11: D1 WEST LAB					P13.1
System 1: Photolithographic Processes					
BENCH, PHOTORESIST COATER NO. 1, LENGTH: 6FT 10IN; WIDTH: 3FT; HEIGHT: 6FT 8IN; WITH TWO WAFER CONVEYORS, TWO SPINNERS AND FOUR HOT PLATES A/N: 537099 Permit to Construct Issued: 09/04/12	D346	C364			B59.49, 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.)
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Process 11: D1 WEST LAB					P13.1
BENCH, PHOTORESIST COATER NO. 2, LENGTH: 6FT 10IN; WIDTH: 4FT 4IN; HEIGHT: 6FT 8IN;, WITH TWO WAFER CONVEYORS, TWO SPINNERS AND FOUR HOT PLATES A/N: 537099 Permit to Construct Issued: 09/04/12	D347	C364			B59.49, C1.42
BENCH, TRACK DEVELOP STATION NO. 1, POTASSIUM HYDROXIDE A/N: 537099 Permit to Construct Issued: 09/04/12	D397	C232			B59.9
BENCH, TRACK DEVELOP STATION NO. 2, POTASSIUM HYDROXIDE A/N: 537099 Permit to Construct Issued: 09/04/12	D398	C232			B59.9
BENCH, DEVELOPER, C&D SEMICONDUCTOR, MODEL 8800, LENGTH: 4FT 11IN; WIDTH: 3FT 11IN; HEIGHT: 5FT 10IN A/N: 537099 Permit to Construct Issued: 09/04/12	D477	C232			B59.4, B59.36
BENCH, PHOTORESIST COATER, C&D, SEMICONDUCTOR SERVICES, MODEL 8800, LENGTH: 8FT; WIDTH: 2FT 11IN; HEIGHT:3FT 11IN A/N: 537099 Permit to Construct Issued: 09/04/12	D481	C460			B59.49, C1.42
OVEN, NO. 2, VAPOR PRIME, LENGTH: 1FT 10IN; WIDTH 2FT; HEIGHT: 2FT 11IN;, ELECTRICALLY HEATED, 2.2 KVA A/N: 537099 Permit to Construct Issued: 09/04/12	D349	C232			

- * (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.)
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Process 11: D1 WEST LAB					P13.1
OVEN, NO. 1, PHOTORESIST BAKE, LENGTH: 1FT 10IN; WIDTH: 2FT; HEIGHT: 2FT 11IN,, ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D350	C364			
OVEN, NO. 3, PHOTORESIST BAKE, LENGTH: 1FT 10IN; WIDTH: 2FT; HEIGHT: 2FT 11IN,, ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D352	C364			
OVEN, NO. 4, PHOTORESIST BAKE, LENGTH: 1FT 10IN; WIDTH: 2FT; HEIGHT: 2FT 11IN,, ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D353	C364			
OVEN, NO. 5, PHOTORESIST BAKE, LENGTH: 1FT 10IN; WIDTH: 2FT; HEIGHT: 2FT 11IN,, ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D354	C364			
OVEN, LABLINE,, LENGTH: 1FT 10IN; WIDTH: 2FT; HEIGHT: 2FT 11IN; ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D587	C460			
OVEN, LABLINE,, LENGTH: 1FT 10IN; WIDTH: 2FT; HEIGHT: 2FT 11IN; ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D588	C460			

- * (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.)
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Process 11: D1 WEST LAB					P13.1
OVEN, BARNSTEAD, LABLINE, MODEL 3497M-3 A/N: 537099 Permit to Construct Issued: 09/04/12	D589	C364			
OVEN, TRW, PHOTORESIST BAKE, ELECTRICALLY HEATED A/N: 537099 Permit to Construct Issued: 09/04/12	D277	C364			
BENCH, PHOTORESIST COATER, C&D, SEMICONDUCTOR SERVICES, MODEL 8800 SERIES A/N: 537099 Permit to Construct Issued: 09/04/12	D572	C460			B59.49, C1.42
System 2: Integrated Circuit Fabrication					
PLASMA ETCHER, ETCH NO. 1, 65-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D374	C160			B59.8
PLASMA ETCHER, ETCH NO. 2, 65-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D375	C160			B59.8
PLASMA ETCHER, CLEAN NO. 1, MATRIX, 6.0-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D378	C160			B59.8
PLASMA ETCHER, CLEAN NO. 5, MATRIX, 6.0-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D382	C160			B59.8

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 (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 11: D1 WEST LAB					P13.1
PLASMA ETCHER, CLEAN NO. 6, MATRIX, 6.0-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D383	C232			B59.8
PLASMA ETCHER, CLEAN NO. 9, MATRIX, 6.0-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D386	C160			B59.8
PLASMA ETCHER, CLEAN NO. 11, MATRIX, 6.0-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D388	C160			B59.8
PLASMA ETCHER, DEPOSITION NO. 1, PLASMA THERM INC. 65-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D390	C160			B59.8
PLASMA ETCHER, DEPOSITION NO. 2, PLASMA THERM INC. 65-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D391	C160			B59.8
PLASMA ETCHER, CLEAN NO. 1, MATRIX, 21.4-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D403	C160			B59.52
PLASMA ETCHER, CLEAN NO. 2, MATRIX, 21.4-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D404	C160			B59.52
PLASMA ETCHER, CLEAN NO. 4, MATRIX, 21.4-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D406	C232			B59.52

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 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
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Process 11: D1 WEST LAB					P13.1
PLASMA ETCHER, MATRIX, MODEL EHP500,, LENGTH: 3FT; WIDTH: 4FT; HEIGHT: 6FT; WITH THREE VACUUM PUMPS A/N: 537112 Permit to Construct Issued: 09/04/12	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: 537112 Permit to Construct Issued: 09/04/12	D507	C232			B59.52
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: 537112 Permit to Construct Issued: 09/04/12	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: 537112 Permit to Construct Issued: 09/04/12	D509	C232			B59.52
PLASMA ETCHER, DESCUMMER, BRANSON/IPC, MODEL REACTOR CENTER PM 1813, LENGTH: 3FT; WIDTH: 3FT; HEIGHT: 3FT A/N: 537112 Permit to Construct Issued: 09/04/12	D528	C233			B27.7

- * (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
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 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
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Process 11: D1 WEST LAB					P13.1
ION IMPLANTER, ION BEAM MILL VACUUM PUMP A/N: 537112 Permit to Construct Issued: 09/04/12	D182	C233			
DEPOSITION REACTOR, SPUTTERING NO. 1, 21.4-KVA A/N: 537112 Permit to Construct Issued: 09/04/12	D407	C232			B59.52
PROCESS TANK, PASS-THRU ACID UNIT A/N: 537112 Permit to Construct Issued: 09/04/12	D189	C160			
DEPOSITION REACTOR, VAPOR PRIME, Y.E.S., LENGTH: 1FT 8IN; WIDTH: 2FT; HEIGHT: 2FT 4IN,; ELECTRICALLY HEATED A/N: 537112 Permit to Construct Issued: 09/04/12	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: 537112 Permit to Construct Issued: 09/04/12	D584	C232			B59.58
PLASMA ETCHER, NO. 1, MATRIX, MODEL 105E, LENGTH: 3FT; WIDTH:4FT; HEIGHT: 6FT A/N: 537112 Permit to Construct Issued: 09/04/12	D540	C232			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 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, TEGAL, MODEL 110, LENGTH: 2 FT 9IN; WIDTH: 6 FT 4 IN; HEIGHT: 6 FT 10IN, WITH TWO VACUUM PUMPS A/N: 537112 Permit to Construct Issued: 09/04/12	D596	C232			B59.66, C1.55
PLASMA ETCHER, SURFACE TECHNOLOGY SYSTEMS, MPX A/N: 537112 Permit to Construct Issued: 09/04/12	D613	C160			B59.71
BENCH, TRACK DEVELOPER, C & D SEMICONDUCTOR SERVICES, MODEL NO. 8800 SERIES, 4 FT 10 IN, L X 4 FT W X 3 FT 8 IN H A/N: 537112 Permit to Construct Issued: 09/04/12	D525	C232			B59.4, B59.70
BENCH, DEVELOPER, TRACK, C&D A/N: 537112 Permit to Construct Issued: 09/04/12	D537	C160			B59.4, B59.70
VACUUM METALIZING/VAPOR DEPOSITION, FIJI F200 PLASMA ATOMIC LAYER DEPOSITION(ALD) A/N: 537112 Permit to Construct Issued: 09/04/12	D611				B59.4, B59.70
OVEN, OZONE PHOTOREACTOR, MODEL PR-100 A/N: 537112 Permit to Construct Issued: 09/04/12	D614				B59.4, B59.70
Process 14: SURFACE PREPARATION					
System 1: Etching Line					

* (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 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 14: SURFACE PREPARATION					
BENCH, WET STATION, HBT, NO. 1, 6FT, UNHEATED A/N: 515056 Permit to Construct Issued: 12/07/10	D545	C4			B59.4, B59.69, L341.1
BENCH, WET STATION, HBT, NO. 2, 6FT, UNHEATED A/N: 515056 Permit to Construct Issued: 12/07/10	D546	C4			B59.4, B59.63

* (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 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 SYSTEMS

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
C4	1	1	0
D94	5	10	2
D96	2	10	2
D97	2	10	2
D113	3	10	2
C160	1	1	0
C161	1	1	0
D182	11	11	2
D189	11	11	2
C232	1	1	0
D277	8	11	1
D306	3	10	2
D346	5	11	1
D347	6	11	1
D349	6	11	1
D350	7	11	1
D352	7	11	1
D353	7	11	1
D354	7	11	1
D374	8	11	2
D375	8	11	2
D378	8	11	2
D382	8	11	2
D383	9	11	2
D386	9	11	2
D388	9	11	2
D390	9	11	2
D391	9	11	2
D397	6	11	1
D398	6	11	1
D403	9	11	2
D404	9	11	2
D406	9	11	2
D407	11	11	2

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D425	5	10	2
D426	5	10	2
D450	10	11	2
C460	2	1	0
D462	5	10	2
D477	6	11	1
D481	6	11	1
D507	10	11	2
D508	10	11	2
D509	10	11	2
D510	3	10	2
D511	3	10	2
D512	3	10	2
D513	3	10	2
D514	4	10	2
D516	4	10	2
D517	4	10	2
D522	4	10	2
D523	4	10	2
D524	4	10	2
D525	12	11	2
D528	10	11	2
D537	12	11	2
D540	11	11	2
D545	13	14	1
D546	13	14	1
D552	11	11	2
D572	8	11	1
D584	11	11	2
D587	7	11	1
D588	7	11	1
D589	8	11	1
D596	12	11	2
D611	12	11	2

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D612	2	4	0
D613	12	11	2
D614	12	11	2

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN 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 efficiencies 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 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 efficiencies 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; RULE 1122, 5-1-2009]

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN 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 efficiencies 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 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 effective 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

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

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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; RULE 1122, 5-1-2009]

[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]

DEVICE CONDITIONS

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A. Emission Limits

A72.1 The operator shall maintain this equipment to achieve a minimum destruction efficiency 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)-Offset, 5-10-1996]

[Devices subject to this condition : C460]

B. Material/Fuel Type Limits

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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Devices subject to this condition : D477, D523, D524, D525, D537, D545, D546,
D611, D614]

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]

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : 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 : D425]

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]

B59.21 The operator shall not use the following material(s) in this device :

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

methylene chloride

1,1,1 trichloroethane

chloroform

perchloroethylene

trichloroethylene

carbon tetrachloride

HCFC-141b

The purpose of this condition is to ensure that this equipment is not subject to the degreaser NESHAP 40CFR63 SUBPART T requirements.

[40CFR 63 Subpart T, 12-8-2000]

[Devices subject to this condition : D612]

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]

B59.40 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, hydrochloric acid, phosphoric acid, hydrofluoric acid, ammonia and isopropyl alcohol

[RULE 1401, 5-2-2003]

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D510, D511, D512, D513, D514, D516, D517]

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 : D523, D524]

B59.44 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, arsenic, and isopropyl alcohol

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D522]

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 9/10/10 or earlier except cresol, isopropyl alcohol, methanol, xylene, phenol , cellosolve acetate and chlorobenzene.l

[RULE 1401, 5-2-2003]

[Devices subject to this condition : D346, D347, D481, D572]

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

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[RULE 1401, 5-2-2003]

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

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 : D540]

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]

B59.63 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 and hydrofluoric acid.

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D546]

B59.66 The operator shall not use the following material(s) in this device :

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Toxic air contaminants in table 1 of rule 1401 with a listing date of 3/07/08 or earlier.

[RULE 1401, 3-7-2008]

[Devices subject to this condition : D596]

B59.69 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 9/10/10 or earlier except nitric acid and hydrofluoric acid.

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D545]

B59.70 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 9/10/10 or earlier.

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D525, D537, D611, D612, D614]

B59.71 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 9/10/10 or earlier except chlorine.

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D613]

C. Throughput or Operating Parameter Limits

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

C1.6 The operator shall limit the material processed to no more than 3600 in any one month.

For the purpose of this condition, material processed shall be defined as the total number of wafers processed.

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

[Devices subject to this condition : D306]

C1.36 The operator shall limit the material processed to no more than 0.50 gallon(s) per month.

For the purpose of this condition, material processed shall be defined as isopropyl alcohol.

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

[Devices subject to this condition : D522]

C1.42 The operator shall limit the material processed to no more than 790 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 D277, D346, D347, D350, D352 through D354, D481, D587 through D589.

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

[Devices subject to this condition : D346, D347, D481, D572]

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..

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : D552]

C1.55 The operator shall limit the material processed to no more than 240 in any one month.

For the purpose of this condition, material processed shall be defined as number of wafers processed in this equipment.

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

[Devices subject to this condition : D596]

C8.1 The operator shall use this equipment in such a manner that the flow rate being monitored, as indicated below, is not less than 100 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**]

[Devices subject to this condition : C232]

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 60 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**]

[Devices subject to this condition : C4]

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.

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : C160]

C8.5 The operator shall use this equipment in such a manner that the flow rate being monitored, as indicated below, is not less than 125 gpm.

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

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

[Devices subject to this condition : C161]

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 : C4, C160, C161, C232]

D. Monitoring/Testing Requirements

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

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The test shall be conducted at least once during the life of the permit but no later than July 9, 2015 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 : C460]

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 : C4, C160, C161, C232]

D322.2 The operator shall perform a monthly inspection of the cover to assure compliance with Rule 1122(c)(2)(A).

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

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

[Devices subject to this condition : D612]

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 : C4, C160, C161, C232]

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 : C4, C160, C161, C232]

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

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

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

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

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

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 : C460]

H. Applicable Rules

H339.1 The operator shall determine compliance with Rule 1122(e)(1)(B) requirements by measuring the temperature at the center of the air blanket once a month if the freeboard refrigeration device is used, or measuring the temperature at the center of the superheated solvent vapor zone once a month if superheated vapor system is used. In addition to the recordkeeping requirements in Section K of this Facility Permit, the operator shall keep records of the corrective actions taken when the monitoring demonstrates non-compliance.

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

[Devices subject to this condition : D612]

I. Administrative

I331.1 The conditions and requirements for this device in Section H shall take effect, and shall supersede those in Section D, when the modifications authorized in Section H are completed. The operator shall notify the AQMD when the modifications are completed.

[RULE 202, 5-7-1976]

[Devices subject to this condition : C160, C161, C232, C460]

K. Record Keeping/Reporting

FACILITY PERMIT TO OPERATE NORTHROP GRUMMAN SYSTEMS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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 60 days after the source test was conducted.

[RULE 1164, 1-13-1995; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2012, 5-6-2005]

[Devices subject to this condition : C460]

K48.4 The operator shall maintain records in a manner approved by the District, to demonstrate compliance with the following condition number(s):

Condition Number C 1- 6

[RULE 109, 5-2-2003]

[Devices subject to this condition : D306]

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 : C4, C160, C161, C232]

L. Expiration Date

L341.1 Within 7 days after start-up of this equipment, the following device(s) shall be removed from operation:

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

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

[Devices subject to this condition : D545]