PERMIT TO OPERATE OR PERMIT TO CONSTRUCT (CHANGE OF CONDITION)

COMPANY NAME, LOCATION ADDRESS

Ultramar Inc. Facility ID. 800026
2402 E. Anaheim Street
Wilmington CA 90744-4081

EQUIPMENT DESCRIPTION

Section D of the Ultramar's Facility Permit:

Deletions to equipment description and conditions are shown with strikeouts. Additions or changes to equipment description and conditions are underlined.

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
Process 1: CRUDE DISTILLATION					P13.1
System 2: CRUDE DISTALLATION UNIT #10 HEATERS					
HEATER, CRUDE, 10-H-100, REFINERY GAS, 159.2 MMBTU/HR WITH A/N: ~~344655~~ 504756 *(Master File)*	D3		NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO**: 2000 PPMV (5) [**RULE 407, 4-2-1982**] **NOX:** 10.75 LBS/HR (7) [**RULE 2005, 5-6-2005**] **NOX**: 0.054 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]** **PM:** (9)[**RULE 404, 2-7-1986] PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	A229.1, B61.1, B61.2, C1.15. D90.3, D328.1, H23.5, A195.5
BURNER, REFINERY GAS, JOHN ZINK, MODEL PSMR-14M, WITH LOW NOX BURNER, 28 BURNERS ~~TOTAL~~	B450				
System 4: CRUDE DISTALLATION UNIT #11 HEATERS					
HEATER, CRUDE, 11-H-1000, REFINERY GAS, RATING BASED ON HHV, WITH LOW NOX BURNER, 136 MMBTU/HR WITH	D6		NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5) [**RULE 407, 4-2-1982**]	B61.1, B61.2, D90.3, D328.1, H23.5, A195.6

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
A/N: ~~273911~~ 504757 BURNER, REFINERY GAS, JOHN ZINK, MODEL PSMT, SIZE 16 M, WITH LOW NOX BURNER, 14 BURNERS	B451			**NOX**: 0.036 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]** **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	
System 6: VACUUM DISTILLATION UNIT HEATERS					
HEATER, VACUUM FEED HEATER, 20-H-200, REFINERY GAS, HHV, WITH LOW NOX BURNER, 49 MMBTU/HR WITH A/N: ~~224453~~ 504758 BURNER, REFINERY GAS, JOHN ZINK, MODEL PNDR-16, WITH LOW NOX BURNER, 10 BURNERS	D8 B452		NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**] **NOX**: 0.057 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005**] **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	B61.1, B61.2, D90.3, D328.1, H23.5, A195.7
Process 2: COKING AND RESIDUAL CONDITIONING					P13.1
System 2: DELAYED COKING UNIT #30 HEATERS					
HEATER, CRUDE, 30-H-301, REFINERY GAS, WITH LOW NOX BURNER, 144 MMBTU/HR WITH A/N: ~~447457~~ 504759	D12	C13	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**] **NOX:** 0.04 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]**	A63.6, B61.1, B61.2, C1.31, D29.1, D90.3, D328.1, H23.5, K67.1, A195.8

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
BURNER, REFINERY GAS, JOHN ZINK, MODEL PXMR-20, WITH LOW NOX BURNER, 32 BURNERS, 144 MMBTU/HR	B454			**PM**: (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	
System 4: DELAYED COKING UNIT #31 HEATERS					
HEATER, DCU, 31-H-3000, REFINERY GAS, HHV, WITH LOW NOX BURNER, 95 MMBTU/HR WITH A/N: ~~273912~~ 504760	D22		NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**]; **NOX:** 0.039 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]** **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	B61.1, B61.2, D90.3, D328.1, H23.5, A195.9
BURNER, REFINERY GAS, JOHN ZINK, MODEL PSMR, SIZE 14, 14 BURNERS	B455				
Process 4: HYDROTREATING					P13.1
System 2: GAS OIL UNIBON HYDROTREATNG UNIT HEATERS					
HEATER, 80-H-2, REFINERY GAS, WITH AMMONIA INJECTION, 68 MMBTU/HR WITH A/N: ~~375762~~ 504761	D53		NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**]; **NOX:** 0.047 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]** **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	B61.2, D90.3, D328.1, H23.5, A195.10
BURNER, REFINERY GAS, CALLIDUS TECHNOLOGIES, MODEL LE-CSF-12W, 6	B458				

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
BURNERS, WITH LOW NOX BURNER					
System 6: GAS OIL HYDRODESULFURIZATION UNIT HEATERS					
HEATER, GAS OIL, HYDROTREATING, 58-H-1, REFINERY GAS, WITH LOW NOX BURNER, 110 MMBTU/HR WITH A/N: ~~447456~~ 504762	D768	C770	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**] **NOX:** 0.015 LBS/MMBTU (8) [**CONSENT DECREE VALERO, 6-16-2005**] **PM**: (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	A63.2, B61.1, B61.2, D90.3, D328.1, H23.5, A195.11
BURNER, REFINERY GAS, 6 BURNERS, WITH LOW NOX BURNER, 110 MMBTU/HR	B769				
System 8: NAPHTHA HYDROTREATER/SPLITTER UNIT HEATERS					S2.1
HEATER, HOT OIL, 56-H-2, REFINERY GAS, 200 MMBTU/HR WITH A/N: ~~447455~~ 504763	D430	C431 *(SCR)*	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**] **NOX:** 0.023 LBS/MMBTU (8) [**CONSENT DECREE VALERO, 6-16-2005**] **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	B61.1, B61.2, D90.3, H23.5 A195.12
BURNER, 15 BURNERS, REFINERY GAS, CALLIDUS, MODEL LECSGW #5, LOW NOX BURNER, 200 MMBTU/HR	B539				
Process 7: ALKYLATION AND ISOMERIZATION					P13.1
System 5: ALKYLATION UNIT #68 HEATERS					
HEATER, 68-H-1, REFINERY GAS, 57 MMBTU/HR WITH	D98		NOX: MAJOR SOURCE; SOX: MAJOR	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**];	A63.1, B61.1, B61.2, D90.3, D328.1, H23.5,

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
A/N: ~~447453~~ 504765 BURNER, 5 BURNERS, REFINERY GAS, JOHN ZINK, MODEL PSMR-18M, LOW NOX BURNER, 57 MMBTU/HR	B463		SOURCE	**NOX:** 0.044 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]** **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	A195.14
Process 15: STEAM GENERATION					
System 2: BOILER					
BOILER, 86-B-9001, REFINERY GAS, 127.8 MMBTU/HR WITH A/N: ~~177991~~ 504767	D378	C379 (SCR)	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**]; **NOX:** 0.01 LBS/MMBTU (8) **[CONSENT DECREE VALERO, 6-16-2005]** **PM:** 0.01 GRAINS/SCF (5B) [**RULE 476, 10-8-1976**]; **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]; **PM:** 11 LBS/HR (5A) [**RULE 476, 10-8-1976**]	A327.1, B61.2, D90.3, D328.1, H23.5, A195.15

Section H of the Ultramar's Facility Permit:

Deletions to equipment description and conditions are shown with strikeouts. Additions or changes to equipment description and conditions are underlined.

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
Process 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
System 2: PLATFOMER UNIT #70 HEATERS					
HEATER, 70-H-1/2/3, PROCESS GAS, REFINERY GAS, BASED ON FUEL HHV OF 1199 BUT/SCF, WITH LOW NOW BURNER, 258 MMBTU/HR WITH A/N: ~~348435~~ 504764 Permit to Construct Issued: 10/29/99 BURNER, REFINERY GAS, CALLIDUS TECHNOLOGIES, MODEL LE-CSG-10W, 23 BURNERS, WITH LOW NOX BURNER	D74 B462	D68 D69 D71 D932 D934 D935 D940 D941 D942 D943	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**]; **NOX:** 10.5 LBS/HR (7) [**RULE 2005, 5-6-2005]** **NOX:** 0.055 LBS/MMBTU (8) [**CONSENT DECREE VALERO, 6-16-2005**] **PM:** (9)[**RULE 404, 2-7-1986**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]	A63.5, A229.2, B61.1, B61.2, C1.16, D90.3, D90.13, D182.3, D182.5, H23.5, A195.13
Process 15: STEAM GENERATION					
System 4: BOILER					S4.4, S31.5
BOILER, 86-B-9002, REFINERY GAS, RENTECH BOILER SYSTEMS, MODEL BAF-200/250, 245 MMBTU/HR WITH A/N: ~~416628~~ 504767 Permit to Construct Issued: 12/16/04	D1550	C1551 (SCR)	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	**CO:** 2000 PPMV (5)[**RULE 407, 4-2-1982**]; **CO:** 50 PPMV (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1)-BACT, 12-6-2002] **NOX:** 0.015 LBS/MMBTU (8) [**CONSENT DECREE VALERO, 6-16-2005**]; **NOX**: 9 PPMV (4) [**RULE 2005, 5-6-2005**]; **NOX:** 7 PPMV (Monthly) (4) [**RULE 2005, 5-6-2005**];	A1.2, A99.6, A99.7, A99.8, A195.1, A327.1, B61.1. B61.2, D29.9, D29.10, D82.5, D90.3, H23.5, H23.28, K67.10, A195.16

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
BURNER, REFINERY GAS, COEN, MODEL DAF-42, WITH LOW NOW BURNER, 245 MMBTU/HR	B1557			**NOX:** 0.035 LBS/MMBTU REFINERY GAS (1) [**RULE 2012, 5-6-2005**] ~~**PM:** (9) [RULE 404, 2-7-1986];~~ **PM:** 11 LBS/HR (5A) [**RULE 476, 10-8-1976**]; **PM:** 0.01 GRAINS/SCF (5B) [**RULE 476, 10-8-1976**] **PM:** 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**] **SOX:** 16.9 LBS/MMSCF REFINERY GAS (1) [**RULE 2011, 5-6-2005**]	

CONDITIONS:

PROCESS CONDITIONS

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

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61	SUBPART FF

40CFR 61 Subpart FF

SYSTEM CONDITIONS:

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

CONTAMINANT	EMISSIONS LIMIT		
ROG	Less than or equal to	34	LBS IN ANY ONE DAY

CONTAMINANT	EMISSIONS LIMIT		
CO	Less than or equal to	76	LBS IN ANY ONE DAY
PM	Less than or equal to	101	LBS IN ANY ONE DAY

For the purposes of this condition, the emission limit(s) are the combined emissions from Heaters 56-H-1 and 56-H-2 measured at the outlet of the common stack when both equipment are in operation.

The operator shall calculate the emission limit(s) using monthly fuel use data, and the following emission factors: 7.0 lbs/mmscf; CO: 17.5 lbs/mmscf; and PM: 21 lbs/mmscf.

In lieu of using the default emission factors whenever source test are required by this facility permit, the operator shall calculate the emissions using fuel usage during the calendar month as determined by a RECLAIM certified fuel meter and source test emission data. The source test emissions data will be converted to lb/mmcf, multiplied by the actual calendar month fuel usage, and divided by 30 to determine the daily mass emissions.

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

[Systems subject to this condition: Process 4, System 8]

S4.4 The following condition(s) shall apply to all affected devices listed under Sections D and H of this system for fugitive emissions of volatile organic compounds (VOC):

All components are subject to the applicable requirements of District Rule 1173, 40CFR60, Subpart GGG, 40CFR60, Subpart QQQ, and to the requirements set forth in system condition S31.5.

The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The operator shall also submit a process instrumentation diagram(s) with a listing of all non-leakless type valves categorized by tag no., size, type, service, operating conditions (temperature and pressure), body material, application, and reasons why leakless valves were not used.

[**RULE 1173, 5-13-1994**; RULE 1173, 6-1-2007; **40CFR 60 Subpart GGG, 6-2-2008; 40CFR 60 Subpart QQQ, 10-17-2000**]

[Systems subject to this condition: Process 4, System 7; Process 7, System 1, 3; Process 8, System 4; Process 14, System 5; Process 15, System 4]

S31.5 The following BACT requirements shall apply to voc service fugitive components associated with the devices that are covered by application number(s) 416627 (Unit 43), 416624 (Unit 56), 416622 (Unit 68), 416626 (Unit 69), 416633 (Unit 81-V-9), 504767 ~~416628~~ (Unit 86-B-9003), and 465660 (Unit 88):

All open-ended lines shall be equipped with cap, blind flange, plug, or a second valve.

All pressure relief valves shall be connected to closed vent system or equipped with rupture disc.

All process drain shall be equipped with water seal, or a closed-vent system and control device complying with the requirements of 40CFR60 Subpart QQQ section 60.692-5.

All sampling connections shall be closed-purge, closed-loop, or closed-vent system.

All valves in VOC service shall be of leakless type, except those specifically exempted by Rule 1173 or approved by the District in the following applications: heavy liquid service, control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where failures could pose safety hazards (e.g. drain valves with valve stems in horizontal position), retrofits with space limitations, and valves not commercially available at the time of Permit to Construct issuance.

For the purpose of this condition, leakless valve shall be defined as any valve equipped with sealed bellow or equivalent as approved in writing by the District prior to installation. Components shall be defined as any valve, flange, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, meter, and any instrumentation which are not exempted by Rule 1173.

All components in VOC service, except those specifically exempted by Rule 1173 and valves and flanges, shall be inspected quarterly using EPA reference method 21. All valves and flanges in VOC service except those specifically exempted by Rule 1173 shall be inspected monthly using EPA method 21.

All components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background using EPA Method 21, shall be repaired within 14 days of detection. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

If 98.0 percent or greater of the new valve and flange population inspected is found to leak gaseous or liquid VOC at a rate less than 500 ppm for two consecutive months, then the operator may revert to a quarterly inspection program with the approval of the Executive Officer.

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

[**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]

[Systems subject to this condition: Process 4, System 7; Process 7, System 1, 3; Process 8, System 4; Process 14, System 5, Process 15, System 4]

Note: A/N 504767 is the subsequent application to A/N 416628.

DEVICE CONDITIONS:

A. Emission Limits

A1.2 Compliance with the emission limit(s) specified in the emissions and requirements column for this device shall be determined as follows:

Emittant	Emission Limit Type	Averaging time	Compliance Verification Method
CO	(5) - Command and Control	15 minute (3 percent oxygen)	Source test
CO	(4)- BACT	1 hour (3 percent oxygen)	Certified CEMS
NOx	(4)- BACT	1 hour (3 percent oxygen)	Source test, Certified CEMS
PM	(5) - Command and Control	1 hour (3 percent oxygen)	Source test

The NOx BACT identified above applies only to the 9 PPM limit.

[**RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 2005, 5-6-2005; ~~RULE 404, 2-7-1986;~~ RULE 407, 4-2-1982; RULE 409, 8-7-181; RULE 476, 10-8-1976**]

[Devices subject to this condition: D1550]

Note: The references to Rule 404 are being removed and being replaced with Rule 476. Rule 404 was inadvertently included and while Rule 476 was inadvertently not included when the Permit to Construct was issued. Rule 404(c) states this rule shall not apply to emissions resulting from the combustion of gaseous fuels in steam generators. Rule 476 applies to steam generators and contains both NOx and PM limits. While the NOx limits have been subsumed by Rule 2001, the PM limits of Rule 476 do apply to Boiler 86-B-9002.

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

CONTAMINANT	EMISSIONS LIMIT
ROG	Less than or equal to 7 LBS IN ANY ONE DAY
CO	Less than or equal to 18 LBS IN ANY ONE DAY
PM	Less than or equal to 22 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) using monthly fuel usage data, and the following emission factors: ROG: 7.0 lbs/mmscf; CO: 17.5 lbs/mmscf; and PM: 21 lb/mmscf.

In lieu of using the default emission factors whenever source test are required by this facility permit, the operator shall calculate the emissions using fuel usage during the calendar month as determined by a RECLAIM certified fuel meter and source test emission data. The source test emissions data will be converted to lb/mmcf, multiplied by the actual calendar month fuel usage, and divided by 30 to determine the daily mass emissions.

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

[Devices subject to this condition: D98]

A63.5 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 180 LBS IN ANY ONE DAY
PM10	Less than or equal to 86 LBS IN ANY ONE DAY
ROG	Less than or equal to 37 LBS IN ANY ONE DAY

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from equipment device ID Nos. D74, D68, D69, D71, D934, D940, D94, D942, and D943.

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

[Devices subject to this condition: D74]

A63.6 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 50 LBS IN ANY ONE DAY
ROG	Less than or equal to 20 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) using monthly fuel usage data, and the following emission factors: ROG: 7.0 lbs/mmscf and CO: 17.5 lbs/mmscf.

In lieu of using the default emission factors whenever source test are required by this facility permit, the operator shall calculate the emissions using fuel usage during the calendar month as determined by a RECLAIM certified fuel meter and source test emission data. The source test emissions data will be converted to lb/mmcf, multiplied

by the actual calendar month fuel usage, and divided by 30 to determine the daily mass emissions.

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

[Devices subject to this condition: D12]

A99.6 The 9 ppm NOx emission limit(s) shall not apply during any startup.

For the purposes of this condition, startup shall be defined as the period when the exhaust temperature of this equipment is below 475 degrees F, which is the minimum ammonia injection temperature.

[**RULE 2005, 5-6-2005**]

[Devices subject to this condition: D1550]

A99.7 The 0.035 lb/MM Btu NOx emission limit(s) shall only apply during the interim reporting period to report RECLAIM emissions. The interim reporting period, which is defined as the period between the initial startup of the major NOx source and the provisional approval of the CEMS, shall not exceed 12 months from the initial startup date. The operator shall provide the AQMD with written notification of the initial startup date.

To comply with this condition, the operator shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage of the combustion device.

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

[**RULE 2012, 5-6-2005**]

[Devices subject to this condition: D1550]

A99.8 The 16.9 LBS/MMSCF SOx emission limit(s) shall only apply during the interim reporting period to report RECLAIM emissions. The interim reporting period, which is defined as the period between the initial startup of the major sox source and the provisional approval of the CEMS, shall not exceed 12 months from the initial startup date. The operator shall provide the AQMD with written notification of the initial startup date.

To comply with this condition, the operator shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage of the combustion device.

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

[**RULE 2011, 5-6-2005**]

[Devices subject to this condition: D1550]

A195.1 The 7 ppmv (monthly) NOx emission limit(s) is averaged over a calendar month and is at dry condition, corrected to 3 percent oxygen.

This NOx calendar monthly emission limit shall be calculated based on the measured NOx emissions using a certified RECLAIM CEMS and the heat input during all boiler operating hours for the calendar month except during:

Any District required source test performed without ammonia;
Periods of the exhaust temperature entering the SCR catalyst is less than 475 degrees F, which is the minimum ammonia injection temperature);
RATA testing;
RECLAIM Missing Data period;
Calibration and maintenance periods;
Equipment breakdown periods as defined in Rule 2004; and
Periods of zero fuel flow.

The heat input weighted average NOx concentration shall be calculated using this equation, or other equivalent equation: PPMV at 3 percent oxygen = (Et/Qt) x K, where:

PPMV at 3 percent oxygen = Concentration of NOx in PPMV at 3 percent oxygen
Et = Total measured NOx emissions during the averaging period (excluding exempt periods as noted above)
Qt = Total heat input during the averaging period (excluding exempt periods as noted above)
K =A conversion factor from lbs/MMBtu to PPM, which can be determined using EPA 40 CFR60 Method 19

A data acquisition system (DAS) shall be installed and maintained to record the parameters necessary to determine the calendar monthly NOx concentration. In addition, the DAS shall calculate and display on demand the average monthly NOx PPM.

Any corrections to the DAS data and calculation shall be completed within 72 hours after the end of the calendar month. The recorded parameters and the calculated average monthly NOx PPM shall be kept for a period as stated in the Section E of this facility permit and shall be readily available to the District personnel upon request.

A violation of the 7 PPM NOX limit shall be a violation of the emission limit for the entire averaging period.

[**RULE 2005, 5-6-2005**]

[Devices subject to this condition: D1550]

A195.5 The 0.054 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D3]

A195.6 The 0.036 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[**Consent Decree Valero, 6-16-2005]**

[Devices subject to this condition: D6]

A195.7 The 0.057 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D8]

A195.8 The 0.04 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D12]

A195.9 The 0.039 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D22]

A195.10 The 0.047 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D53]

A195.11 The 0.015 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[**Consent Decree Valero, 6-16-2005**]

[Devices subject to this condition: D768]

A195.12 The 0.023 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[**Consent Decree Valero, 6-16-2005**]

[Devices subject to this condition: D430]

A195.13 The 0.055 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[**Consent Decree Valero, 6-16-2005**]

[Devices subject to this condition: D74]

A195.14 The 0.044 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D98]

A195.15 The 0.01 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D378]

A195.16 The 0.015 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D1550]

A229.1 The 10.75 lbs/hr emission limit is calculated by the parameters measured and recorded in accordance with Rule 2012. The mass emission limit is solely for the purpose of ensuring that there is no net increase in emission of NOx that will trigger BACT requirement pursuant to Rule 2005(c)(1)(A).

[**RULE 2005, 5-6-2005**]

[Devices subject to this condition: D3]

A229.2 The 10.5 lbs/hr emission limit is calculated by the parameters measured and recorded in accordance with Rule 2012. The mass emission limit is solely for the purpose of ensuring that there is no net increase in emission of NOx that will trigger BACT requirement pursuant to Rule 2005(c)(1)(A)

[**RULE 2005, 5-6-2005**]

[Devices subject to this condition: D74]

A327.1 For the purpose of determining compliance with District Rule 476, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[**RULE 476, 10-8-1976**]

[Devices subject to this condition: D378, D1550]

Note: Boiler 86-B-9002, Device D1550, has been added as subject to Rule 476. Rule 476 PM emission limits were inadvertently not included when the Permit to Construct was issued. The emission limits have now been included in the emission limits column for this device.

B. Material/Fuel Type Limits

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

Compound	ppm by volume
Sulfur	less than 100

The operator shall maintain a continuous total sulfur analyzer to monitor the sulfur content of the fuel gas.

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

[Devices subject to this condition: D3, D6, D8, D9, D12, D22, D59, D60, D73, D74, D98, D429, D430, D768, D1550]

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

Compound	ppm by volume	
H2S	greater than	160

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, D429, D430, D768, D1550]

C. Throughput or Operating Parameter Limits

C1.15 The operator shall limit the fuel usage to no more than 130000 cubic feet per hour.

To comply with this condition, the operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the heater in accordance with Rule 2012.

The operator shall also maintain a device to continuously record the parameters being measured and the fuel gas usage in an hourly basis.

The purpose(s) of this condition is to ensure that the maximum increase in emissions will not exceed the emission offset provided for this heater for CO, PM10, and ROG pursuant to Rule 1303(b)(3).

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

[Devices subject to this condition: D3]

C1.16 The operator shall limit the fuel usage to no more than 214000 cubic feet per hour.

To comply with this condition, the operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the heater in accordance with Rule 2012.

The operator shall also maintain a device to continuously record the parameters being measured and the fuel gas usage in an hourly basis.

The purpose(s) of this condition is to ensure that the maximum increase in emissions will not exceed the emission offset provided for this heater for CO, PM10, and ROG pursuant to Rule 1303(b)(3).

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

[Devices subject to this condition: D74]

C1.31 The operator shall limit the firing rate to no more than 144 MM BTU per hour.

For the purpose of this condition, firing rate shall be defined as heat input to this equipment based on the higher heating value (HHV) of the fuel gas used.

To comply with this condition, the operator shall install and maintain a(n) continuous monitoring system to accurately indicate the energy input being supplied to the heater.

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

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

[Devices subject to this condition: D12]

D. Monitoring and Testing Requirements

D29.1 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
ROG emissions	Approved District Method	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted when this equipment is operating at 80 percent or greater of its maximum design heat rating or within a capacity approved by the District.

The test(s) shall be conducted at least once every three years.

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

[Devices subject to this condition: D12]

D29.9 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
CO emissions	District Method 100.1	1 hour	Outlet of the SCR
PM emissions	Approved District Method	District-approved averaging time	Outlet of the SCR
NOX emissions	Approved District Method	1 hour	Outlet of the SCR
NH3 emissions	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of the SCR

The test shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after the construction/modification is completed.

The test shall be conducted when this equipment is operating at 80 percent or greater of its maximum design heat rating, or within a capacity approved by the District, with ammonia injection.

During the source test(s), the facility permit holder shall also measure the oxygen levels in the exhaust, flue flow rate (CFH), the flue gas rate, and flue gas temperature.

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit the protocol to the AQMD engineer no later than 45 days prior to the proposed test date, and notify the District of the date and time of the test at least 10 days prior to the test.

The operator shall also provide to the District a source test report containing, at a minimum, the following information:

Required Data	Reported As
Emissions data	Concentration (ppmv) corrected to 3 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM Cubic Feet
Moisture concentration	Grains per DSCF
Exhaust flow rate	Dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM)
Flue gas temperature	Degrees F
Moisture concentration	Percent oxygen
Fuel flow rate (CFH)	cubic feet per hour (cfh)

Not withstanding the requirements of Section E conditions, the source test results shall be submitted to the District no later than 60 days after the source test was conducted.

The test shall be conducted to demonstrate compliance with Rules 1303(a)(1)-BACT, 2005~~,~~ ~~404~~, 407, ~~and~~ 409, and 476.

[**RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 2005, 5-6-2005; ~~RULE 404, 2-7-1986;~~ RULE 407, 4-2-1982; RULE 409, 8-7-1981; RULE 476, 10-8-1976**]

[Devices subject to this condition: D1550]

Note: The references to Rule 404 are being removed and being replaced with Rule 476. Rule 404 was inadvertently included and while Rule 476 was inadvertently not included when the Permit to Construct was issued. Rule 404(c) states this rule shall not apply to emissions resulting from the combustion of gaseous fuels in steam generators. Rule 476 applies to steam

generators and contains both NOx and PM limits. While the NOx limits have been subsumed by Rule 2001, the PM limits of Rule 476 do apply to Boiler 86-B-9002.

D29.10 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
PM emissions	Approved District Method	District-approved averaging time	Outlet of the SCR
CO emissions	Approved District Method	District-approved averaging time	Outlet of the SCR

The test(s) shall be conducted at least once every three years.

The test shall be conducted when the combustion devices being vented to the SCR are operating under normal operating conditions.

The test shall be conducted to demonstrate compliance with Rules ~~404,~~ 407, ~~and~~ 409, and 476.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; ~~RULE 404, 2-7-1986;~~ RULE 407, 4-2-1982; RULE 409, 8-7-1981; RULE 476, 10-8-1976**]

[Devices subject to this condition: D1550]

Note: The references to Rule 404 are being removed and being replaced with Rule 476. Rule 404 was inadvertently included and while Rule 476 was inadvertently not included when the Permit to Construct was issued. Rule 404(c) states this rule shall not apply to emissions resulting from the combustion of gaseous fuels in steam generators. Rule 476 applies to steam generators and contains both NOx and PM limits. While the NOx limits have been subsumed by Rule 2001, the PM limits of Rule 476 do apply to Boiler 86-B-9002.

D82.5 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

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

The CEMS shall be installed and operated in accordance with an approved AQMD Rule 218 CEMS plan application.

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

[Devices subject to this condition: D1550]

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

The operator shall use an NSPS Subpart J approved instrument meeting the requirements of 40CFR60 Subpart J to monitor the parameter.

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

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

[40CFR 60 Subpart J, 6-24-2008]

Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, D429, D430, D768, D1550]

D90.13 The operator shall periodically analyze the H2S concentration in the process gas streams vented to this device according to the following specifications:

The Alternative Monitoring Plan (AMP) approved by the United States Environmental Protection Agency (USEPA) on November 15, 2005 for the periodic analysis and reporting of H2S concentration for the process gas streams vented from the Catalytic Reformer Unit (CRU) to Heater 70-H-1/2/3.

[40CFR 60 Subpart J, 6-24-2008]

Devices subject to this condition: D74]

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

The test shall determine and report the mass emission rates (lb/hr) for chlorine and chlorinated compounds listed in District Rule 1401 Table 1. The test shall also report the operation conditions of the Platformer Unit during the test in terms of fuel gas flow rate, gross heating value, catalyst regeneration rate, chlorination gas flow rate, catalyst recirculation rate and trichloroethane injection rate.

During the test, the equipment (D74, D68, D69, D71, D932, D934, D935, D940, D941, D942, and D943) shall be in full operation or operated within a capacity range approved by the District.

A source test protocol shall be submitted to the District no later than 60 days before the proposed test date. The District shall be notified of the date and time of the test at least 15 days prior to the test. A report shall be submitted to the District no later than 90 days after conducting the test.

The test shall be conducted within 180 days from the start-up of this equipment.

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

[Devices subject to this condition: D74]

D182.5 The operator shall test this equipment in accordance with the following specifications:

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

The test shall determine and report the concentrations (ppmv at 3 percent oxygen) and mass emission rates (lb/hr) for CO, PM10, and ROG.

The test shall also include catalyst recirculation rate.

The test shall be conducted at least once every three years after conducting the initial performance test

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

Testing and sampling facilities shall be provided and maintained in accordance with District source test method 1.1 or 1.2 and District guidelines for construction of sampling and testing facilities.

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

[Devices subject to this condition: D74]

D328.1 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD method 100.1 or 10.1; or (b)

conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with the CO emission limit(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; RULE 407, 4-2-1982**]

[Devices subject to this condition: D3, D6, D8, D12, D22, D52, D53, D98, D378, D429, D768]

H. Applicable Rules

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

Contaminant	Rule	Rule/Subpart
H2S	40CFR60, SUBPART	J

[**40CFR 60 Subpart J, 6-24-2008**]

Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, C400, C402, C403, D429, D430, D768, D1550]

H23.28 This equipment is subject to the applicable requirements of the following rules or regulations:

Rule	Rule/Subpart
40CFR60, SUBPART	Db

[40 CFR60, Subpart Db, 11-16-2006]

[Devices subject to this condition: D1550]

K. Recordkeeping/Reporting

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

fuel rate and heating value of the fuel gas

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

[Devices subject to this condition: D12]

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

fuel gas usage

fuel gas heating value

[RULE 2011, 5-6-2005, RULE 2012, 5-6-2005]

[Devices subject to this condition: D1550]

COMPLIANCE RECORD REVIEW

A check of the AQMD Compliance Database shows that this facility was issued 22 notices of violation (NOVs) and one Notice to Comply (NC) since January 1, 2007. Since January 1, 2007, the only NOV (P53523) issued associated with the heaters and boilers was on 4/21/2010 for exceeding the 100 ppm total sulfur content in the fuel gas BACT limit as required by condition B61.1 of the Facility Permit. The facility is currently in compliance with this condition.

BACKGROUND

On June 16, 2005, the U.S. Justice Department and the U.S. EPA filed a Consent Decree (Civil Action No. SA-05-CA-0569) with Valero Refining Company (Valero). The Consent Decree is a comprehensive Clean Air Act settlement with refineries and was part of EPA's national effort to reduce air emissions from all refineries in the nation. Valero's 13 petroleum refineries subject to the Consent Decree SA-05-CA-0569 are: Ardmore, Oklahoma; Benicia, California; Corpus Christi (East), Texas; Corpus Christi (West), Texas; Denver, Colorado; Houston, Texas; Krotz Springs, Louisiana; Sunray (McKee), Texas; Paulsboro, New Jersey; St. Charles Parrish, Louisiana; Texas City, Texas; Three Rivers, Texas; and Wilmington, California. **For the purpose of this evaluation, Valero refers to all 13 refineries subject to the Consent Decree unless otherwise noted. Ultramar refers only to the Wilmington refinery.**

One of the requirements in the Consent Decree was for Valero to implement a program to reduce NOx emissions from refinery heaters and boilers greater than 40 MMBtu/hr (HHV) by committing to an interim system-wide weighted average NOx concentration emission limit of no greater than **0.060 lbs/MMBtu** to be achieved by **December 31, 2009** and a final system-wide weighted average concentration NOx emission limit of no greater than **0.044 lbs/MMBtu** to be achieved by December **31, 2011** [Consent Decree, Item IV]. Item IV of the Consent Decree is shown in Appendix A. The system-wide interim NOx emission limit is, therefore, effective from December 31, 2009 to December 31, 2011 [Consent Decree, Items IV.B.17 and IV.C.21]. According to the Consent Decree, refinery heaters and boilers greater than 40 MMBtu/hr (HHV) regardless of any applicable

firing rate permit limitations are subject to the interim and final system-wide weighted average concentration emission limit and are referred to as "Covered Heaters and Boilers". For the purposes of the Consent Decree, "heaters and boilers" are defined as stationary combustion unit used for the purpose of burning fossil fuel for the purpose of (i) producing power, steam or heat by heat transfer or (ii) heating a material for initiating or promoting a process or chemical reaction in which the material participates as a reactant or catalyst. As of March 31, 2010, Valero had 257 covered heaters and boilers subject to the Consent Decree and subject to the interim system-wide weighted NOx concentration emission limit.

The Ultramar Wilmington refinery operates 12 covered process heaters and boilers with ratings greater than 40 MMBtu/hr (HHV). Ultramar submitted the applications listed in Table 1 to incorporate interim NOx emission limits to each of these 12 refinery heaters and boilers to assist Valero in meeting the system-wide weighted average of no greater than 0.060 lbs/MMBtu. Ultramar will submit new applications to incorporate the final NOx emission rate to meet Valero's system-wide final NOx emission limit (of no greater than 0.040 lbs/MMBtu) before December 31, 2011.

Table 1: AQMD Applications Submitted

A/N	Date Submitted	Equipment	Device ID	Type	Status	Previous A/N
504756 (Master File)	12/22/2009	Heater, 10-H-100	D3	60	21	344655
504757	12/22/2009	Heater, 11-H-1000	D6	60	21	273911
504758	12/22/2009	Heater, 20-H-200	D8	60	21	224453
504759	12/22/2009	Heater, 30-H-301	D12	60	21	447457
504760	12/22/2009	Heater, 31-H-3000	D22	60	21	273912
504765	12/22/2009	Heater, 80-H-2	D53	60	21	375762
504762	12/22/2009	Heater, 58-H-1	D768	60	21	447456
504761	12/22/2009	Heater, 56-H-2	D430	60	21	447455
504764	12/22/2009	Heater, 70-H-1/2/3	D74	60	21	348435 (Status 26)
504763	12/22/2009	Heater, 68-H-1	D98	60	21	447453
504766	12/22/2009	Boiler, 86-B-9001	D378	60	21	177991
504767	12/22/2009	Boiler, 86-B-9002	D1550	60	21	416628 (Status 26)

A/N	Date Submitted	Equipment	Device ID	Type	Status	Previous A/N
504768	12/22/2009	RECLAIM/Title V Minor Permit Revision	n/a	85	25	n/a

In addition, Ultramar submitted **A/N 485017** as an administrative revision for Heater, 70-H-1/2/3, D74 in 2008 to include devices D392 (Regeneration Tower) and D935 (Disengaging Hopper) to existing permit condition A63.5. D392 and D935 appeared to be omissions from condition A63.5 since devices D392 and D935 are currently listed as connected to D74. However, D392 already has existing condition A63.3. Therefore, A/N 485017 is not necessary and has requested to be cancelled.

FEE SUMMARY

Table 2: Fee Summary

A/N	Equipment	Type	Schedule	Fee Required, $	Fee Submitted, $
504756	Heater, 10-H-100	60	E	$4,416.74	$4,416.74
504757	Heater, 11-H-1000	60	E	$4,416.74	$4,416.74
504758	Heater, 20-H-200	60	D	$3,008.18	$3,008.18
504759	Heater, 30-H-301	60	E	$4,416.74	$4,416.74
504760	Heater, 31-H-3000	60	E	$4,416.74	$4,416.74
504765	Heater, 80-H-2	60	E	$4,416.74	$4,416.74
504762	Heater, 58-H-1	60	E	$4,416.74	$4,416.74
504761	Heater, 56-H-2	60	E	$4,416.74	$4,416.74
504764	Heater, 70-H-1/2/3	60	E	$4,416.74	$4,416.74
485017	Heater, 70-H-1/2/3	63	E	$ 609.54	$ 609.54
504763	Heater, 68-H-1	60	E	$4,416.74	$4,416.74
504766	Boiler, 86-B-9001	60	E	$4,416.74	$4,416.74
504767	Boiler, 86-B-9002	60	E	$4,416.74	$4,416.74

A/N	Equipment	Type	Schedule	Fee Required, $	Fee Submitted, $
504768	RECLAIM/Title V Minor Permit Revision	85	n/a	$1,687.63	$1,687.63
Total				$53,889.49	$53,889.49

EVALUATION:

CONSENT DECREE CHANGE OF CONDITION EVALUATION

In Valero's Consent Decree (Civil Action No. SA-05-CA-0569), Item IV. NOx Emissions Reductions from Heaters and Boilers, Valero was to implement a program to reduce NOx emissions from refinery heaters and boilers greater than 40 MMBtu/hr (HHV) by committing to an interim system-wide weighted average concentration emission limit for NOx of no greater than 0.060 lbs/MMBtu, to be achieved by December 31, 2009, and a final system-wide weighted average concentration emission limit for NOx of no greater than 0.044 lbs/MMBtu, to be achieved by December 31, 2011 [Consent Decree, Item IV, Program Summary]. The Consent Decree, Item IV.B.17 (a.k.a, Paragraph 17) specifically requires Valero to install NOx control technologies on, or otherwise limit NOx emissions from, certain covered heaters and boilers such that the system-wide weighted average is no greater than 0.060 lbs NOx/MMBtu no later than December 31, 2009. This system-wide interim NOx emission limit is effective from December 31, 2009 to December 31, 2011 [Consent Decree, Items IV.B.17 and IV.C.21]. The proposed NOx emission limits are in pounds per MMBtu (lbs/MMBtu) at HHV and would be based on a 365 day rolling average basis if demonstrated using CEMS data or 3-hour average if based on stack tests [Consent Decree, Items IV.E.27.a and IV.F.29].

The Consent Decree provided an initial list of all of covered heaters and boilers at Valero for which the heat input capacity is greater than 40 MMBtu/hr (HHV) regardless of any applicable firing rate permit limitations. This list of heaters and boilers for Ultramar is the same as that noted in Table 1 with the addition of Boiler 86-B-9002, which was constructed after the Consent Decree was filed on June 16, 2005. Boiler 86-B-9002 is a new 245 MMBtu/hr constructed as a result of Ultramar's Alkylation Improvement Project (a.k.a. ReVAP-Reduced Volatility Alkylation Process) and whose initial startup date was September 6, 2006.

Consent Decree Item IV.E.28 (a.k.a, Paragraph 28) requires Valero to demonstrate compliance with the 0.060 lb/MMBtu NOx limit by the following inequality:

$$0.060 \ \frac{\text{lb}}{\text{MMBtu}} \ \geq \ \sum_{i}^{n} (EL_i \ \text{x} \ HIR_i) \ / \ \sum_{i}^{n} HIR_i \qquad \text{(Paragraph 28 Inequality)}$$

where,

EL_i = The relevant NOx emission limit for covered heater or boiler

"i", in lbs/MMBtu (HHV)

HIR_i = Heat input capacity of covered heater or boiler "i", in MMBtu/hr (HHV)

n = The total number of covered heaters and boilers at all of Valero's refineries subject to the Consent Decree

On March 31, 2010, Valero submitted a report to EPA to demonstrate how all of Valero's covered heaters and boilers will meet the interim system-wide weighted average concentration NOx emission limit of no greater than 0.060 lbs/MMBtu [Consent Decree, Item IV.E.27]. This report is shown in Appendix B of this evaluation. Based on this March 31, 2010 report to EPA, Appendix C is a spreadsheet listing all of Valero's 261 heaters and boilers, the proposed NOx emission limits (lb/MMBtu), the heat input capacities (HHV) (MMBtu/hr), and the calculated system-wide weighted average NOx emission limit for Valero and each of the 13 individual Valero/Ultramar refineries. Please note that in Appendix C, 261 heaters and boilers are listed, but 4 heaters and boilers are less than 40 MMBtu/hr. Therefore, 257 covered heaters and boilers are subject to the Consent Decree NOx emission limit. With the NOx emission limits proposed, Valero's system-wide weighted average NOx emission limit is 0.048 lb/MMBtu, which meets the Consent Decree's concentration limit of no greater than 0.060 lbs/MMBtu.

$$0.060 \ \frac{\text{lb}}{\text{MMBtu}} \ \geq \ \sum_{i}^{n}(EL_i \ x \ HIR_i) \ \Big/ \ \sum_{i}^{n} \ HIR_i \qquad \text{(Paragraph 28 Inequality)}$$

where,

		Covered Heaters and Boilers, HIR_i > 40 MMBtu/hr (HHV)	
n	=	257	*See Appendix C*
$\sum_{i}^{n}(EL_i \ x \ HIR_i)$	=	1,986.91 $\frac{\text{lb}}{\text{hr}}$	*See Appendix C*
$\sum_{i}^{n} \ HIR_i$	=	41,193.95 $\frac{\text{MMBtu}}{\text{hr}}$	*See Appendix C*
$\frac{\sum_{i}^{n}(EL_i \ x \ HIR_i)}{\sum_{i}^{n} \ HIR_i}$	=	0.048 $\frac{\text{lb}}{\text{MMBtu}}$	*See Appendix C*
Complies with Paragraph 28 Inequality ($\leq$ 0.060 lb/MMBtu)?		Yes	

$$0.060 \ \frac{\text{lb}}{\text{MMBtu}} \geq 1{,}986.91 \ \frac{\text{MMBtu}}{\text{hr}} \Big/ 41{,}193.95 \ \frac{\text{lb}}{\text{hr}}$$

$$0.060 \ \frac{\text{lb}}{\text{MMBtu}} \geq 0.048 \ \frac{\text{lb}}{\text{MMBtu}}$$ Complies with Paragraph 28 Inequality

To meet the system-wide weighted NOx concentration emission limit of 0.060 lb/MMBtu, Valero proposes that the Ultramar Wilmington refinery limit the NOx emissions for (Ultramar's) 12 boilers and heaters subject to the Consent Decree according to the proposed NOx emission limits listed in Table 3. The weighted average NOx limit for the Ultramar refinery is 0.034 lb/MMBtu.

Table 3. Proposed NOx Consent Decree Emission Limits for Ultramar Wilmington Refinery, lb/MMBtu

A/N	Equipment	Process/ System	Device	Heat Input Rating, HIR_i, MMBtu/hr	**Proposed NOx Emission Limit, EL_i lb/MMBtu**	NOx Emission, EL_i x HIR_i, lbs NOx/hr
504756	Heater, 10-H-100	P1/S2	D3	159.2	**0.054**	8.5968
504757	Heater, 11-H-1000	P1/S4	D6	136	**0.036**	4.896
504758	Heater, 20-H-200	P1/S6	D8	49	**0.057**	2.793
504759	Heater, 30-H-301	P2/S2	D12	144	**0.04**	5.76
504760	Heater, 31-H-3000	P2/S4	D22	95	**0.039**	3.705
504765	Heater, 80-H-2	P4/S2	D53	68	**0.047**	3.196
504762	Heater, 58-H-1	P4/S6	D768	110	**0.015**	1.65
504761	Heater, 56-H-2	P4/S8	D430	200	**0.023**	4.6
504764	Heater, 70-H-1/2/3	P5/S2	D74	258	**0.055**	14.19
504763	Heater, 68-H-1	P7/S5	D98	57	**0.044**	2.508
504766	Boiler, 86-B-9001	P15/S2	D378	127.8	**0.01**	1.278
504767	Boiler, 86-B-9002	P15/S4	D1550	245	**0.015**	3.675
Total Heat Input Rating, MMBtu/hr, $\sum_{i}^{12} HIR_i$				1,649.0	----	----
Total NOx Limit, lb/hr, $\sum_{i}^{12} (EL_i \text{ x } HIR_i)$				------	----	56.8478

A/N	Equipment	Process/ System	Device	Heat Input Rating, HIR_i, MMBtu/hr	**Proposed NOx Emission Limit, EL_i lb/MMBtu**	NOx Emission, EL_i x HIR_i, lbs NOx/hr
Ultramar's weighted average NOx limit, lb/MMBtu, $\frac{\sum_{i}^{12}(ELi \times HIRi)}{\sum_{i}^{12} HIRi} = 56.8478$ lbs/hr/1,649 MMBtu/hr				------	0.034	----

Item IV.F.29 of the Consent Decree requires Valero shall monitor each covered heater or boiler as follows:

(a) For a covered heater or boiler with a heat input capacity of 150 MMBtu/hr (HHV) or greater, Valero shall install or continue to operate a NOx CEMS;

(b) For a covered heater or boiler with a heat input capacity greater than 100 MMBtu/hr (HHV) but less than 150 MMBtu/hr (HHV), Valero shall install or continue to operate a NOx CEMS, or monitor the NOx emissions with a predictive emissions monitoring system (PEMS);

(c) For a covered heater or boiler with a heat input capacity equal to less than 100 MMBtu/hr (HHV), Valero shall conduct an initial performance test and any periodic tests that may be required by EPA or other local permitting authority under the applicable regulatory authority. Valero shall report the results of the initial performance testing to EPA.

Emissions will be based on a 365-day rolling average if based on CEMS or a 3-hour average if based on stack tests. The Consent Decree also does not preclude a facility from converting a 3-hour rolling average limit to the same limit expressed as a 365-day rolling average limit if such demonstration of compliance is based on a CEMS or PEMS [Item IV.F.29].

All of Ultramar's heaters and boilers subject to the Consent Decree are monitored by a certified RECLAIM NOx CEMS since they are all designated as RECLAIM Major NOx sources. Therefore, the NOx emission limits proposed by Ultramar will be based on data measured and recorded by the certified RECLAIM CEMS and averaged over a 365-rolling days. A condition will be tagged to each heater and boiler as such.

OTHER ADMINISTRATIVE CHANGES

Administrative changes will be made to Boiler 86-B-9002, D1550: The references to Rule 404 in the Emission Limit Column and Device Conditions A1.2, D29.9, and D29.10 are being removed and

being replaced with Rule 476. Rule 404 was inadvertently included and while Rule 476 was inadvertently not included when the Permit to Construct was issued. Rule 404(c) states this rule shall not apply to emissions resulting from the combustion of gaseous fuels in steam generators. Rule 476 applies to steam generators and contains both NOx and PM limits. While the NOx limits have been subsumed by Rule 2001, the PM limits of Rule 476 do apply to Boiler 86-B-9002. Therefore, the following changes have been made to device D1550:

(a) Emissions Column: Rule 404 removed; Rule 476 PM limits of 11 lbs/hr and 0.01 grains/scf added.
(b) Device Conditions: Rule 404 references in Conditions A1.2, D29.9 and D29.10 removed; Rule 476 references added in Conditions A1.2, D29.9 and D29.10. Condition A327.1 added also.

EMISSIONS:

There is no change in emissions due to these change of condition applications. As noted above, there is no change to the operation or physical design of the heaters and boilers. The refinery is requesting to add NOx emission limits on these heaters and boilers to comply with the Consent Decree. These emission limits will assist Valero with meeting the system-wide 0.060 lb/MMBtu NOx Consent Decree emission limit. The administrative changes are to correct mistakes when the Permit to Construct was issued.

Based on the Ultramar's historical emissions, Ultramar's heaters and boilers should meet the proposed NOx emission limits (lbs NOx/MMBtu). See Table 4 for the emissions from each heaters and boiler from January 1, 2009 to January 1, 2010, February 1, 2009 to February 1, 2010, March 1, 2009 – March 1, 2010, and April 1, 2009 – April 1, 2010 (365-day average). The daily emissions for each heater or boiler during this time frame can found in the evaluation folder.

Table 4. Historical Heaters/Boilers NOx Emissions (lbs NOx/MMBtu), January 1, 2009 – January 1, 2010, February 1, 2009 - February 1, 2010, March 1, 2009 - March 1, 2010, and April 1, 2009 - April 1, 2010 (365-day Average)

A/N	Equipment	Tag No.	Device ID.	Heat Input Rating, HIR_i MMBtu/hr	Proposed NOx Emission Limit, EL_i lb NOx/MMBtu	Historical NOx Emissions* lb NOx/MMBtu	Emission Year (365-day avg)
504756	Heater	10-H-100	D3	159.2	**0.054**	0.026	Jan 1, 2009 - Jan 1, 2010
						0.027	Feb 1, 2009 - Feb 1, 2010
						0.028	Mar 1, 2009 - Mar 1, 2010
						0.028	Apr 1, 2009 – Apr 1, 2010
504757	Heater	11-H-1000	D6	136	**0.036**	0.022	Jan 1, 2009 - Jan 1, 2010
						0.022	Feb 1, 2009 - Feb 1, 2010
						0.021	Mar 1, 2009 - Mar 1, 2010

A/N	Equipment	Tag No.	Device ID.	Heat Input Rating, HIR_i MMBtu/hr	Proposed NOx Emission Limit, EL_i lb NOx/MMBtu	Historical NOx Emissions* lb NOx/MMBtu	Emission Year (365-day avg)
						0.022	Apr 1, 2009 – Apr 1, 2010
504758	Heater	20-H-200	D8	49	**0.057**	0.025	Jan 1, 2009 - Jan 1, 2010
						0.026	Feb 1, 2009 - Feb 1, 2010
						0.026	Mar 1, 2009 - Mar 1, 2010
						0.025	Apr 1, 2009 – Apr 1, 2010
504759	Heater	30-H-301	D12	144	**0.04**	0.011	Jan 1, 2009 - Jan 1, 2010
						0.011	Feb 1, 2009 - Feb 1, 2010
						0.011	Mar 1, 2009 - Mar 1, 2010
						0.011	Apr 1, 2009 – Apr 1, 2010
504760	Heater	31-H-3000	D22	95	**0.039**	0.014	Jan 1, 2009 - Jan 1, 2010
						0.014	Feb 1, 2009 - Feb 1, 2010
						0.013	Mar 1, 2009 - Mar 1, 2010
						0.013	Apr 1, 2009 – Apr 1, 2010
504765	Heater	80-H-2	D53	68	**0.047**	0.018	Jan 1, 2009 - Jan 1, 2010
						0.018	Feb 1, 2009 - Feb 1, 2010
						0.018	Mar 1, 2009 - Mar 1, 2010
						0.019	Apr 1, 2009 – Apr 1, 2010
504762	Heater	58-H-1	D768	110	**0.015**	0.009	Jan 1, 2009 - Jan 1, 2010
						0.009	Feb 1, 2009 - Feb 1, 2010
						0.009	Mar 1, 2009 - Mar 1, 2010
						0.009	Apr 1, 2009 – Apr 1, 2010
504761	Heater	56-H-2	D430	200	**0.023**	0.011	Jan 1, 2009 - Jan 1, 2010
						0.011	Feb 1, 2009 - Feb 1, 2010
						0.011	Mar 1, 2009 - Mar 1, 2010
						0.011	Apr 1, 2009 – Apr 1, 2010
504764	Heater	70-H-1/2/3	D74	258	**0.055**	0.022	Jan 1, 2009 - Jan 1, 2010
						0.022	Feb 1, 2009 - Feb 1, 2010
						0.022	Mar 1, 2009 - Mar 1, 2010
						0.021	Apr 1, 2009 – Apr 1, 2010
504763	Heater	68-H-1	D98	57	**0.044**	0.014	Jan 1, 2009 - Jan 1, 2010
						0.015	Feb 1, 2009 - Feb 1, 2010
						0.015	Mar 1, 2009 - Mar 1, 2010
						0.015	Apr 1, 2009 – Apr 1, 2010
504766	Boiler	86-B-9001	D378	127.8	**0.01**	0.004	Jan 1, 2009 - Jan 1, 2010
						0.004	Feb 1, 2009 - Feb 1, 2010
						0.004	Mar 1, 2009 - Mar 1, 2010
						0.004	Apr 1, 2009 – Apr 1, 2010

A/N	Equipment	Tag No.	Device ID.	Heat Input Rating, HIR_i MMBtu/hr	Proposed NOx Emission Limit, EL_i lb NOx/MMBtu	Historical NOx Emissions* lb NOx/MMBtu	Emission Year (365-day avg)
504767	Boiler	86-B-9002	D1550	245	**0.015**	0.004	Jan 1, 2009 - Jan 1, 2010
						0.004	Feb 1, 2009 - Feb 1, 2010
						0.004	Mar 1, 2009 - Mar 1, 2010
						0.004	Apr 1, 2009 – Apr 1, 2010

* From WATERS (Web Access To Electronic Reporting System), assuming 24 hrs/day operation.

RULE EVLAUATION:

PART 1 SCAQMD REGULATIONS

Rule 212	**Standards for Approving Permits** **November 14, 1997**
	In accordance with Rule 219(c), a significant project is a new or modified facility in which: (1) the new or modified permit unit is located within 1000 feet of a school; (2) the new or modified facility has on-site emission increases exceeding the daily maximum specified in subdivision (g); or (3) the new or modified permit unit has an increased cancer risk greater than, or equal to, one in a million ($1x\ 10^{-6}$) during a lifetime of 70 years or pose a risk of nuisance. This change of condition is not considered a significant project under this rule since the permit unit is not being modified and: (1) does not located within 1,000 feet of a school; (2) does not exceed the daily maximum specified in subdivision (g); or (3) does not increase the cancer risk greater than, or equal to, one in a million ($1x\ 10^{-6}$). Therefore, a public notice is not required.

Rule 401	**Visible Emissions** **November 9, 2001**
	Visible emissions are not expected under normal operating conditions.

Rule 402	**Nuisance** **May 7, 1976**
	Nuisance complaints associated with the above project are not expected under normal operating conditions.

Rule 404	**Particulate Matter-Concentration**	**February 7, 1986**
	This rule sets forth particulate mater emission standards based on the gas discharge rate. Normally, equipment which fires on gaseous fuel can be met these standards. These heaters are fired on refinery gas only, therefore compliance is expected. Rule 404(c) states this rule shall not apply to emissions resulting from the combustion of gaseous fuels in steam generators. Therefore, Rule 404 does not apply to the boilers.	

Rule 407	**Liquid and Gaseous Air Contaminants**	**April 2, 1982**

This rule limits CO emissions to 2,000 ppm. The table below shows the latest source test results for the heaters and boiler subject to the Consent Decree.

Table 5. CO Source Test Emissions

Equipment	Tag No.	Device ID.	Source Test Date	CO emissions, ppmv
Heater	10-H-100	D3	Oct. 20, 2009	24
Heater	11-H-1000	D6	Oct. 15, 2009	20.8
Heater	20-H-200	D8	Oct. 21, 2009	23.5
Heater	30-H-301	D12	Oct. 7, 2009	25.4
Heater	31-H-3000	D22	Oct. 14, 2009	21.9
Heater	80-H-2	D53	Oct. 13, 2009	21.7
Heater	58-H-1	D768	Oct. 8, 2009	21.3
Heater	56-H-2	D430	June 3, 2005	2.05
Heater	70-H-1/2/3	D74	Oct. 26, 2009	20
Heater	68-H-1	D98	Nov. 2, 2009	22.45
Boiler	86-B-9001	D378		
Boiler	86-B-9002	D1550	Oct. 12, 2009	21.48

All source test performed recently show the actual measured CO concentration to be well below 2,000 ppm. No source test was found for Boiler 86-B-9001. A CO source test for Boiler 86-B-9001 will be conducted in accordance with condition D328.1 (Periodic Monitoring for Rule 407). Therefore, compliance is met and is expected to continue to

Rule 407	**Liquid and Gaseous Air Contaminants**	**April 2, 1982**
	be met.	

Rule 409	**Combustion Contaminants**	**August 7, 1981**
	This rule limits PM emissions to 0.1 grain per cubic foot of gas calculated to 12 percent of carbon dioxide (CO_2) at standard conditions averaged over a minimum of 15 consecutive minutes. For gaseous and liquid fueled equipment, compliance is expected. All the heaters and boilers at Ultramar operate on refinery gas. Therefore, compliance is expected	

Rule 476	**Steam Generating Equipment**	**October 8, 1976**
(a)(2)	PM emissions from the boilers shall not exceed: (A) 11 pounds per hour; or (B) 0.01 gr/scf calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes. For gaseous fueled equipment, compliance is expected. The boilers at Ultramar operate on refinery gas. Source tests are required to determine compliance.	

Rule 431.1	**Sulfur Content of Gaseous Fuels**	**June 12, 1998**
	Ultramar is a SOx RECLAIM facility. In accordance with Rule 2001(j), Rule 431.1 was subsumed by RECLAIM. Therefore, the SOx limits do not apply to this facility.	

Rule 1123	**Refinery Process Turnarounds**	**December 7, 1990**
	This process unit is subject to the turnaround requirements of this rule. Ultramar currently keeps records of the process unit turnaround and is expected to comply with this rule.	

Rule 1146	**Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters**	**September 5, 2008**
	This rule applies to boilers, steam generators, and process heaters of equal to or greater than 5 million Btu per hour rated heat input capacity used in all industrial, institutional, and commercial operations with the exception of: (1) Boilers used by electric utilities to generate electricity; and (2) Boilers and process heaters with a rated heat input capacity greater than 40	

Rule 1146	**Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters** **September 5, 2008**
	million Btu per hour that are used in petroleum refineries; and (3) Sulfur plant reaction boilers.
	All of the heaters and boilers subject to the Consent Decree are greater than 40 million Btu per hour that are used in petroleum refineries and, therefore, are not subject to Rule 1146.

REG XIII	**New Source Review** **December 6, 2002 (Application deem complete date: 2010)**

All of the covered heaters and boilers are post-NSR equipment. There is no change in emissions due to these change of condition applications. As noted above, there is no change to the operation or physical design of the heaters and boilers. The refinery is requesting to add NOx emission limits on these heaters and boilers in order to comply with the Consent Decree. These emission limits will assist Valero with meeting the system-wide 0.060 lb/MMBtu NOx Consent Decree emission limit. Therefore, the requirements of NSR are not triggered.

Table 6 is a summary of the emissions entered in NSR for the previous applications and to be entered for the current applications:

Table 6: NSR Emissions

Current A/N	Previous A/N	Description	NSR 30-day Average, lbs/day				
			CO	NOx	PM_{10}	ROG	SOx
504756	344655	Heater, 10-H-100	156	197	66	27	66
504757	273911	Heater, 11-H-1000	12	98	30	20	48
504758	224453	Heater, 20-H-200	4	59	9	6	15
504759	447457	Heater, 30-H-301	51	106	57	20	48
504760	273912	Heater, 31-H-3000	8	68	42	14	34
504765	375762	Heater, 80-H-2	6	29	10	9	22
504762	447456	Heater, 58-H-1	36	30	43	14	35
504761	447455	Heater, 56-H-2	65	72	88	29	71
504764	348435	Heater, 70-H-1/2/3	182	222	86	37	88
504763	447453	Heater, 68-H-1	18	41	22	7	28
504766	177991	Boiler, 86-B-9001	12	746	59	48	75
504767	416628	Boiler, 86-B-9002	235	71	88	33	71

Rule 1401	**New Source Review of Toxic Air Contaminants**	**June 5, 2009** **Application Deem Complete Date: 2010**
	Rule 1401 should not apply to this change of condition since this rule applies to new, relocated, and modified permit units. Rule 1401(c)(9) defines *modification* as "*any physical change in, change in method of operation, or addition to an existing permit unit that requires an application….*" Therefore, since this change in condition is not a modification according to Rule 1401(c)(9), Rule 1401 does not apply in this case.	

REG XVII	**Prevention of Significant Deterioration (PSD)**	**August 13, 1999**
1701(b)-Applicability	This regulation applies to preconstruction review of stationary sources that emit attainment air contaminants. On June 11, 2007, EPA re-designated the South Coast Basin as attainment with respect to National Ambient Air Quality Standards (NAAQS) for NO_2, SO_2, CO, and lead. There is no change in emissions due to these change of condition applications. Therefore, a PSD analysis not required.	

Rule 2005	**New Source Review for RECLAIM**	**May 6, 2005** **Application Deem Complete Date: 2010**
	Since no increase in NOx and SOx emission is expected, these applications are not subject to NSR.	

Regulation XXX	**Title V**	**March 16, 2001**
	Ultramar is a designated as a Title V facility. The facility's Title V permit has been issued. Therefore, the facility is subject to the requirements of Reg XXX. This application is subject to the requirements of a Minor Permit Revision.	

PART 2 STATE REGULATIONS

California Environmental Quality Act (CEQA)

According to the District's CEQA guidelines, the thresholds for significant effect are:

NOx	55 pounds per day
ROG	55 pounds per day
PM10	150 pounds per day

California Environmental Quality Act (CEQA)

CO	550 pounds per day
SOx	150 lbs per day

Based on the emissions shown in Emissions section, this proposed change of condition is not a significant project. Therefore, preparation of a CEQA document is not required.

PART 3 FEDERAL REGULATIONS

Regulation IX: Standards of Performance for New Stationary Sources (NSPS)

Subpart Db	**Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units**
§60.40b	This subpart applies to boilers that commence construction, modification, or reconstruction after June 19, 1984, and that have a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). Boiler 86-B-9001 was constructed before 1986 and is thus not subject to this subpart. Boiler 86-B-9002 (D1550) was constructed after 2005 and is therefore subject to this subpart.
§60.42b	Standard for sulfur dioxide (SO_2). This section specifies the SO_2 emission limits standards when the boiler combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels. Boiler 86-B-9002 only operates on refinery gas and thus the emission limits do not apply. In addition, §60.40b(c) specifies that affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the SO_2 standards under Subpart J (§60.104), not Subpart Db. Therefore, the SO_2 under Subpart Db do not apply to Boiler 86-B-9002 (D1550).
§ 60.43b	Standard for particulate matter (PM). This section specifies the PM emission limits standards when the boiler combusts coal, wood, or municipal-type solid waste, and mixtures of these fuels with other fuels. Boiler 86-B-9002 only operates on refinery gas and thus the emission limits do not apply.
§ 60. 44b	Standard for nitrogen oxides (NOx). This section specifies the NOx emission limits standards when the boiler combusts coal, oil, or natural gas, and mixtures of these fuels with other fuels. Boiler 86-B-9002 only operates on refinery gas and thus the emission limits do not apply.
	Although there are no PM and NOx standards that apply to boiler 86-B-9002 (D1550), the facility is required to maintain records of the heat input capacity of the boiler and fuels combusted in the boiler.

Subpart J	**Standards of Performance for Petroleum Refineries**
§60.100	*Applicability, designation of affected facility, and reconstruction.* Since the heaters and boilers are fuel combustion devices, the subject heaters and boilers are subject to this subpart.
§60.104(a)(1)	*Standards for sulfur oxides*. The operator shall not burn in the heaters and boilers any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf)*. Ultramar operates two H_2S CEMS on their fuel gas system. The 88-AI-942 CEMS analyzes all treated fuel gas that is normally used within the refinery for heater and boiler fuel gas combustion and other process purposes. The 88-AI-945 CEMS analyzes all treated fuel gas that is normally sent directly to the flare for combustion purposes. In the Periodic Monitoring & Exception Report for the report period July 1 through December 31, 2009 submitted by Ultramar to EPA, Ultramar reported 6 hours (out of 3,840 hours) in which the H2S exceeded 230 mg/dscm in the fuel gas burned. According to Ultramar, the 6 hours of exceedence during the 6-month period was attributed to process problems. The exceedence represents 0.156% of the total operating time (6 hrs/3,840 hrs * 100%).
§60.105(a)(4)	*Monitoring of emissions and operations.* Ultramar operates two H_2S CEMS on their fuel gas system. The 88-AI-942 CEMS analyzes all treated fuel gas that is normally used within the refinery for heater and boiler fuel gas combustion and other process purposes. The 88-AI-945 CEMS analyzes all treated fuel gas that is normally sent directly to the flare for combustion purposes. Each of these analyzers was installed to demonstrate compliance with 40CFR 60.104(a)(1) and 60.105(a)(4)-Monitoring of emissions and operations.

***160 ppm**

Regulation X: National Emission Standards for Hazardous Air Pollutants (NESHAPS)

Subpart DDDDD	**National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters**
§63.7485	*Am I subject to this subpart?* A facility is subject to this subpart if it operates an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP as defined in §63.2. §63.7575 defines *Large gaseous fuel subcategory* as "any watertube boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent". All of the heaters and boilers subject to the Consent Decree operate only on refinery gas and are therefore considered in the *large gaseous fuel subcategory*. All of heaters and boilers subject to the Consent Decree are subject to this subpart. Subpart DDDDD (Boiler MACT) was vacated and remanded by the US Court of

Subpart DDDDD	**National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters**
	Appeals for the District of Columbia on July 30, 2007. As a result, Subpart DDDDD is no longer in effect in its entirety. A new MACT for heaters and boilers was proposed on April 15, 2010. EPA has been mandated to promulgate the new MACT by December 16, 2010.
§63.7595	*When do I have to comply with this subpart?* New or reconstructed boiler or process heater must comply with this subpart by November 12, 2004 or upon startup of the boiler or process heater, whichever is later. Existing boiler or process heater must comply with this subpart no later than September 13, 2007.
§ 63.7500	*What emission limits, work practice standards, and operating limits must I meet?* The refinery must meet the applicable emission limit and work practice standards (in Table 1 to this subpart) and must each applicable operating limit (in Tables 2 through 4 to this subpart). Table 1 of this subpart specifies the emission limits and work practice standards for particulate matter (or total selected metals), hydrogen chloride, mercury, and/or carbon monoxide for the following subcategories of boilers and heaters: 1. New or reconstructed large solid fuel 2. New or reconstructed limited use solid fuel 3. New or reconstructed small solid fuel 4. New reconstructed large liquid fuel 5. New or reconstructed limited use liquid fuel 6. New or reconstructed small liquid fuel 7. New reconstructed large gaseous fuel 8. New or reconstructed limited use gaseous fuel 9. Existing large solid fuel 10. Existing limited use solid fuel The existing heaters and boiler and new boiler (86-B-9002) subject to the Consent Decree operate only on refinery gas and are categorized as either *existing large gaseous fuel* or *new large gaseous fuel* sources. There is no emission limit or work practice standard in Table 1 that applies to the heaters and boilers at this time. Table 2 specifies the operating limits for boilers and heaters with particulate matter emission limits. Table 3 specifies the operating limits for boilers and heaters with mercury emission limits and boilers and heaters that choose to comply with the alternative total selected metals emission limits. Table 4 specifies operating limits for

Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
	boilers and heaters with hydrogen chloride emission limits. None of the existing heaters and boilers have particulate matter, mercury, or hydrogen chloride emission limits since they are considered as *existing large gaseous fuel* or *new large gaseous fuel* sources. Therefore, although the heaters and boilers are subject to the subpart and the rule has been vacated, none of the operating limits in Tables 2-4 apply to the subject heaters and boilers at this time.
§63.7525	*What are my monitoring, installation, operation, and maintenance requirements?* Although none of the emission limits and operating limits apply to the subject boilers and heaters and the rule has been vacated, Ultramar installed a CO CEMS on their one new large gaseous fuel source, Boiler 86-B-9002 (1550). This CO CEMS is in continuous operation and based on the 30-day rolling average CO values (dry, corrected to 3% oxygen), the unit is in compliance with the 400 ppmv CO standard for new reconstructed large gaseous fuel source [Ref. Table 1, Item 7]. The CO CEMS was granted final certification by the District on February 6, 2008. Note that Boiler 86-B-9002 (1550) is not a new reconstructed large gaseous fuel source but a new large gaseous fuel source so the CO standard does not apply to the boiler.

RECOMMENDATION:

Based on the above evaluation, the following is recommended:

- Issue a Permit to Operate with the conditions listed in the Conditions Section to:

A/N	Equipment
504756	Heater, 10-H-100
504757	Heater, 11-H-1000
504758	Heater, 20-H-200
504759	Heater, 30-H-301
504760	Heater, 31-H-3000
504765	Heater, 80-H-2
504762	Heater, 58-H-1
504761	Heater, 56-H-2

A/N	Equipment
504763	Heater, 68-H-1
504766	Boiler, 86-B-9001

- Issue a Permit to Construct with the conditions listed in the Conditions Section to:

A/N	Equipment
504764	Heater, 70-H-1/2/3
504767	Boiler, 86-B-9002

- Cancel the following application since it is not needed:

A/N	Equipment
485017	Heater, 70-H-1/2/3

- Approve the following revision application:

A/N	Description
504768	RECLAIM/Title V Minor Permit Revision