

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <i>ENGINEERING &amp; COMPLIANCE</i>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	PAGES 14	PAGE 1
	APPL. NO. 447455	DATE October 15, 2009
	PROCESSED BY: Connie Yee	CHECKED BY:

**PERMIT TO OPERATE (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
<b>Process 4: HYDROTREATING</b>					P13.1
<b>System 8: NAPHTHA HYDROTREATER/SPLITTER UNIT HEATERS</b>					<u>S2.1</u>
HEATER, HOT OIL, 56-H-2, REFINERY GAS, 200 MMBTU/HR WITH  A/N: <del>277667</del> <u>447455</u>  BURNER, 15 BURNERS, REFINERY GAS, CALLIDUS, MODEL LECSGW #5, LOW NOX BURNER, 200 MMBTU/HR	D430           B539	C431 (SCR)	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	CO: 2000 PPMV (5)[RULE 407];  PM: 0.1 GRAINS/SCF (5) [RULE 409] PM: (9)[RULE 404]	B61.1, B61.2, D90.3, H23.5

**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

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**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
CO	Less than or equal to	<del>26</del> <u>76</u>	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 for ~~Heater 56-H-1~~: ROG: 7.0 lbs/mmscf; CO: 17.5 lbs/mmscf; and PM: 21 lbs/mmscf.

~~The operator shall calculate the emission limit(s) using monthly fuel use data, and the following emission factors for Heater 56-H-2: ROG: 7.0 lbs/mmscf; CO: 4.1 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

*Note: The emission limits are the combined emissions from Heaters 56-H-1 and 56-H-2 since the share a common stack. Of the 26 lbs/day limit for CO, Heater 56-H-1 accounted for 11 lbs/day, while the remaining 15 lbs was attributed to Heater 56-H-2. With the new 76 lbs/day CO limit, Heater 56-H-1 accounts for 11 lbs/day, while the remaining 65 lbs is attributed to Heater 56-H-2. The 11 lbs/day CO emission limit for Heater 56-H-1 already accounts for the CO emission factor change which was permitted back in 2007 under A/N 447454.*

**DEVICE CONDITIONS:**

**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

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

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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, 10-4-1991

**D. Monitoring and Testing Requirements**

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]**

**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, 10-4-1991

**COMPLIANCE RECORD REVIEW**

A check of the AQMD Compliance Database shows that this facility was issued 18 notices of violation (NOVs) and no Notices to Comply (NCs) since January 1, 2007. No NOVs have been issued to this heater in the past two years.

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## **BACKGROUND**

Ultramar (Wilmington) Refinery operates several process heaters. On August 5, 2005, the refinery submitted the following application listed in Table 1 to modify the CO emission limit and emission factor currently in a permit condition S2.1 for heater 56-H-2.

**Table 1: AQMD Applications Submitted**

A/N	Date Submitted	Equipment	Type	Status	Previous A/N
447455	08/05/2005	Heater, 56-H-2 (D430)	60	21	277667/ F62074
494183	12/17/2008	RECLAIM/Title V Permit Revision	86	21	n/a

Note: Ultramar submitted 4 applications (A/Ns 447453-447456) for 4 different heaters to change the CO emission limit and emission factor. The Permits to Operate for A/N 447453, 447454, and 447456 were issued in 2007.

## **FEE SUMMARY**

**Table 2 : Fee Summary**

A/N	Equipment	Type	Schedule	Fee Required, \$	Fee Submitted, \$
447455	Heater, 56-H-2 (D430)	60	C	\$3,518.07	\$3,518.07
494183	RECLAIM/Title V Permit Revision	86	C	\$1,687.63	\$1,687.63

## **HISTORY**

Heater 56-H-2 (Device D430) is rated at 200 mmBtu/hr and burns refinery gas. This heater heats hot oil for the Naphtha Hydrotreater/Splitter Unit 56 and Debutanizer Unit 63 reboilers. The NOx emissions from this heater are controlled by low NOx burners and a Selective Catalytic Reduction (SCR) unit (common to Heater 56-H-1, D429). It is a Major Source RECLAIM NOx and SOx source. The maximum operating schedule is 24 hours per day, 7 days per week, and 52 weeks per year.

This heater was originally constructed under A/N 277667 due to the Reformulated Fuels Project mandated by EPA's 1990 Clean Air Act Amendments and CARB's California Clean Air Act (a.k.a., Clean Fuels Project) in the early 1990s. The Permit to Operate was issued to Heater 56-H-2 in 2003 under permit # F62074. Heater 56-H-2 was constructed in conjunction with the new Naphtha Hydrotreater (NHT)/Splitter Unit 56 and new Naphtha Hydrotreater Heater 56-H-1 (A/N 447454,

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Permit # F93443). The Naphtha Hydrotreater/Splitter Unit pretreats the straight run and purchased naphtha to remove sulfur and nitrogen impurities. The hydrotreated stream will then be routed through the Splitter column. The light ends, which contain the benzene precursors, will be taken off the top of column and used as a gasoline blending component. The heavy ends will be fed to the Reformer. Heater 56-H-1 provides preheat to the naphtha charge and is rated at 30 mmBtu/hr. Heater 56-H-2 is rated at 200 mmBtu and heats hot oil for use as transfer fluid in the Naphtha Hydrotreater/Splitter unit reboilers, stripper, and rerun and Debutanizer reboilers. The two units vent to a common SCR (A/N 281826) providing NOx control for the combined exhaust. During the Permit to Construct phase (A/N 277667) of Heater 56-H-2, Ultramar noted that approximately 86% of the heat provided by Heater 56-H-2 would be used in the Naphtha Hydrotreater/Splitter unit. The remaining 14% would be used for the Debutanizer reboilers, which is not part of the Clean Fuels Project.

In July 2003, Ultramar submitted A/N 419147 proposing to modify Heater 56-H-2 by increasing the rating from 200 mmBtu/hr to 260 mmBtu/hr. A/N 419147 was submitted as part of the Alkylation Improvement Project (a.k.a., Reduced Volatility Alkylation Process, ReVAP). The Permit to Construct to A/N 419147 was issued on December 16, 2004. However, during construction of the ReVAP project, Ultramar realized they would not be modifying Heater 56-H-2 and had no plans to upgrade the heater. As a result, A/N 419147 was subsequently cancelled. Permit # F62074 (A/N 277667) remains the latest active permit for Heater 56-H-2.

**CHANGE OF CONDITION EVALUATION:**

There will be no changes to the operation or physical design of the heater. Heater 56-H-2 is rated at 200 mmBtu and heats hot oil for use as transfer fluid in the Naphtha Hydrotreater/Splitter unit reboilers, stripper, and rerun and Debutanizer reboilers. The refinery is requesting a change to the CO emission factor and CO mass emission limits listed in the permit condition to better reflect the emissions.

Ultramar is requesting that the CO mass emission limit listed on Condition S2.1 to be changed from 26 to 76 lbs in any one day. The new emission limit is based on a 17.5 lbs/mmscf emission factor, which is a change from the 4.1 lbs/mmscf emission factor currently listed on their permit. Note that the emission limit in Condition S2.1 represents the combined emissions from Heaters 56-H-1 and 56-H-2.

*S2.1 THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS SYSTEM AS FOLLOWS*

<i>CONTAMINANT</i>	<i>EMISSIONS LIMIT</i>
<i>ROG</i>	<i>LESS THAN OR EQUAL TO 37 LBS IN ANY ONE DAY</i>
<i>CO</i>	<i>LESS THAN OR EQUAL TO <del>26</del>* 76 LBS IN ANY ONE DAY</i>
<i>PM</i>	<i>LESS THAN OR EQUAL TO 113 LBS IN ANY ONE DAY</i>

*The operator shall calculate the emission limit(s) using monthly fuel use data, and the following emission factors: ROG: 7.0 lbs/mmscf; CO: ~~4.1~~ 17.5 lbs/mmscf; and PM: 21 lbs/mmscf.*

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\* Of the 26 lbs/day for CO currently listed on Condition S2.1, Heater 56-H-1 accounted for 11 lbs/day, while the remaining 15 lbs was attributed to Heater 56-H-2.

This new CO emission limit is derived from a ratio of the previous emission factor used (4.1 lbs/mmscf) with the new emission factor (17.5 lbs/mmscf). This will ensure there is no actual increase of fuel usage with this change of condition.

Heater 56-H-2 rating = 200 mmBtu/hr  
 Refinery gas higher heating value = 1,300 Btu/scf  
 Old CO emission factor = 4.1 lbs/mmscf

$$\begin{aligned} \text{Previous CO emissions from 56-H-2} &= \frac{200 \text{ mmBtu}}{\text{hr}} * \frac{4.1 \text{ lbs}}{\text{mmscf}} * \frac{\text{scf}}{1,300 \text{ Btu}} * \frac{24 \text{ hrs}}{\text{day}} \\ &= 15.14 \text{ lbs/day} \end{aligned}$$

$$\text{New CO emissions from 56-H-2} = \frac{15.14 \text{ lbs/day}}{4.1 \text{ lbs/mmscf}} * 17.5 \text{ lbs/mmscf} = 64.62 \text{ lbs/day}$$

$$\text{Additional CO emissions} = 64.62 \text{ lbs/day} - 15.14 \text{ lbs/day} = 49.5 \text{ lbs/day}$$

$$\text{Revised CO emission limit for Condition S2.1: } 26 \text{ lbs/day} + 49.5 \text{ lbs/day} = \underline{75.5 \text{ lbs/day}}$$

The 4.1 lb/mmscf CO emission factor was a default District factor used by Ultramar and many other refineries since the 1980s. However, recent source tests conducted by Ultramar has shown that the CO emission factor are higher than 4.1 lb/mmscf. Therefore, Ultramar would exceed the CO mass emission limit found in conditions S2.1 if emission factor were to remain at 4.1 lb/mmscf.

In submitting the change of condition applications, Ultramar has requested that the emission factor be changed to 17.5 lb/mmscf. Ultramar chose the 17.5 lb/mmscf CO emission factor since it is half of the District's Annual Emissions Reporting (AER) Program CO default emission factor for natural gas (35 lb/mmscf). Ultramar has committed to using this emission factor in calculating the CO emissions for all their process heaters. Beginning in the year 2004-2005 AER Program, they have used the 17.5 lbs/mmscf emission factor for calculating the CO in Form R2 (Permitted Annual Emissions from Fuel Combustion – Refinery). In reviewing the most recent CO emission factors for process heater reported on Form R2 of the Annual Emissions Reporting (AER) Program for each refinery, the CO emission factors are as follows:

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**Table 3. AER CO Emission Factors Reported on Form R2**

AER Year	CO Emission Factor, lb/mmcf							
	BP/ARCO ID. 131003	Ultramar ID. 800026	Chevron ID. 800030	ExxonMobil ID. 800089	Paramount ID. 800183	ConocoPhillips ID. 800362	ConocoPhillips ID. 800363	Tesoro ID. 800436 Equilon ID. 800370
2003-2004	1.88	4.1	*	37.18	*	*	84	4.1
2004-2005	3.75	17.5	35	34.57	*	84	84	4.1
2005-2006	4.32	17.5	35	34.57	35	84	84	4.1
2006-2007	4.31	17.5	35	30.51	35	84	84	4.1
7/1/2007- 12/31/2007	7.55	17.5	*	28.88	85	35	35	35
2008	10.31	17.5	35	20.46	35	35	35	35

\* Could not find

As shown in Table 3, Chevron, Paramount, ConocoPhillips (Carson and Wilmington), and Tesoro currently report annual emissions using the District's AER CO default emission factor for natural gas of 35 lb/mmcf. Both ConocoPhillips refineries used EPA's AP42 CO emission factor for natural gas of 84 lbs/mmcf from 2004-2007. Beginning 7/1/2007-12/31/2007, they used the District's AER CO default emission factor for natural gas of 35 lb/mmcf. BP ARCO and ExxonMobil use source test data to derive their CO emission factors. Only Tesoro (previously, Equilon) used the 4.1 lb/mmcf emission factor between 2003-2007. Beginning 7/1/2007-12/31/2007, Tesoro used the District's AER CO default emission factor for natural gas of 35 lb/mmcf. Ultramar was using the 4.1 lb/mmcf emission factor up until Year 2003-2004. For the year 2004-2005 AER, they have been using the higher 17.5 lbs/mmcf CO emission factor. Recent source tests conducted on various heaters (not necessarily the heater in which a change of CO emission factor is requested) at Ultramar show the CO emissions from as low as 1.87 lbs/mmscf to as high as 21.59 lb/mmscf. Ultramar chose the 17.5 lb/mmcf CO emission factor since it is half of the District's AER CO default emission factor for natural gas (35 lb/mmcf). Since the AER program allows a facility to use the emission factor which most accurately reflects the emissions from the equipment, it is recommended that Ultramar be allowed to use 17.5 lbs/mmcf as the CO emission factor for their heaters.

**EMISSIONS:**

With the greater CO emission factor of 17.5 lbs/mmcf, the daily emission will undoubtedly increase from what was previously calculated. Table 4 is summary of the emission increase.

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Table 4. CO Emission Comparison

A/N	Heater Rating, mmBtu/hr	CO Emission Factor, lb/mmcf	CO Emission, lb/day	Increase, lbs/day
277667 (previous application)	200	4.1	15.14*	
447455		17.5	<b>64.62</b>	<b>+50</b>

\* In NSR, the CO emissions are listed as 17 lbs/day. These emissions were based on the lower heating value (LHV) of 1,150 Btu/scf. The higher heating value (HHV) should have been used. Based on the HHV of 1,300 Btu/scf, the CO emissions are 15.14 Btu/scf

Table 5. Total Emissions for Heater 56-H-2

Pollutant	lbs/hr	lbs/day
CO	2.69	64.62
NO <sub>x</sub>	3	72
SO <sub>x</sub>	2.94	70.6
ROG	1.22	29.3
PM10	3.65	87.6

The emissions for NO<sub>x</sub>, SO<sub>x</sub>, ROG, and PM10 are unchanged.

**RULE EVALUATION:**

**PART 1      SCAQMD REGULATIONS**

Rule 212	Standards for Approving Permits	November 14, 1997
	<p>In accordance with Rule 219(c), a significant project is a new or modified facility in which:</p> <ul style="list-style-type: none"> <li>(1) the new or modified permit unit is located within 1000 feet of a school;</li> <li>(2) the new or modified facility has on-site emission increases exceeding the daily maximum specified in subdivision (g); or</li> <li>(3) the new or modified permit unit has an increased cancer risk greater than, or equal to, one in a million (<math>1 \times 10^{-6}</math>) during a lifetime of 70 years or pose a risk of nuisance.</li> </ul> <p>This change of condition is not considered a significant project under this rule since the permit unit is not being modified and is:</p>	

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<b>Rule 212</b>	<b>Standards for Approving Permits</b>	<b>November 14, 1997</b>
	(1) are not located within 1,000 feet of a school; (2) do not exceed the daily maximum specified in subdivision (g); or (3) do not increase the cancer risk greater than, or equal to, one in a million ( $1 \times 10^{-6}$ ).  Therefore, a public notice is not required.	

<b>Rule 401</b>	<b>Visible Emissions</b>	<b>November 9, 2001</b>
	Visible emissions are not expected under normal operating conditions.	

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

<b>Rule 404</b>	<b>Particulate Matter-Concentration</b>	<b>February 7, 1986</b>
	This rule sets forth particulate mater emission standards based on the gas discharge rate. Normally, equipment which fires on gaseous fuel can be meet these standards. This heater is fired on refinery gas only, therefore compliance is expected.	

<b>Rule 409</b>	<b>Liquid and Gaseous Air Contaminants</b>	<b>August 7, 1981</b>
	This rule limits CO emissions to 2,000 ppm. A source test performed in June 2005 showed the actual measured CO concentration to be 2.05 ppmv corrected to 3% oxygen, which is well below 2,000 ppm. Therefore, compliance is expected.	

<b>Rule 431.1</b>	<b>Sulfur Content Of Gaseous Fuels</b>	<b>June 12, 1998</b>
	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.	

<b>Rule 1123</b>	<b>Refinery Process Turnarounds</b>	<b>December 7, 1990</b>
	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.	

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<b>Rule 1146</b>	<b>Emissions of Oxides of Nitrogen From Industrial, Institutional, And Commercial Boilers, Steam Generators, And Process Heaters</b>	<b>September 5, 2008</b>
	<p>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:</p> <ol style="list-style-type: none"> <li>(1) Boilers used by electric utilities to generate electricity; and</li> <li>(2) Boilers and process heaters with a rated heat input capacity greater than 40 million Btu per hour that are used in petroleum refineries; and</li> <li>(3) Sulfur plant reaction boilers.</li> </ol>	
	<p>Heater 56-H-2 is rated at 200 mmBtu/hr and is therefore not subject to this rule.</p>	

<b>REG XIII</b>	<b>New Source Review</b>	<b>December 6, 2002</b> <b>(Application deem complete date: 2006)</b>																			
	<p>NSR does not apply to this heater for CO. On June 11, 2007, EPA re-designated the South Coast Air Basin (SCAB) as attainment with respect to CO National Ambient Air Quality Standards (NAAQS). Since AQMD was already attainment with State standards and NAAQS for the rest of basin, and CO is not identified as a precursor to any non-attainment pollutants in Regulation XIII, the requirements of Regulation XIII (Rule 1303) do not apply to any new or modified source with a net emission increase in CO. In accordance with Mohsen Nazemi's August 14, 2007 memo regarding PSD Delegation, no CO offsets will be required in the form of ERCs and no NSR codes from the Priority Reserve or Rule 1304 exemptions to offset emission increases for CO should be used for all new permits issued for equipment with CO emission increases. Since the NSR system requires any CO emission increases to be offset prior to granting approval to a permit, the exemption code "1301(b)(1)-12/07/95-General [NSR] – attainment air contaminant" will be used to account for any emission increases of CO.</p> <p>Although the heater is not subject to NSR for CO, below is a summary of the emissions entered in NSR for the previous and current application:</p>																				
	<p>Table 6. Heater 56-H-2 NSR CO Emissions</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 15%;">A/N</th> <th colspan="4" style="text-align: center;">CO Emissions</th> </tr> <tr> <th style="text-align: center;">Hourly, lbs/hr</th> <th style="text-align: center;">30-avg, lbs/day</th> <th style="text-align: center;">Exempt, lbs/day</th> <th style="text-align: center;">Non-Exempt, lbs/day</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">277667 (previous application)</td> <td style="text-align: center;">0.71</td> <td style="text-align: center;">17</td> <td style="text-align: center;">15</td> <td style="text-align: center;">2*</td> </tr> <tr> <td style="text-align: center;">447455</td> <td style="text-align: center;">2.71</td> <td style="text-align: center;">65</td> <td style="text-align: center;">65</td> <td style="text-align: center;">---</td> </tr> </tbody> </table>		A/N	CO Emissions				Hourly, lbs/hr	30-avg, lbs/day	Exempt, lbs/day	Non-Exempt, lbs/day	277667 (previous application)	0.71	17	15	2*	447455	2.71	65	65	---
A/N	CO Emissions																				
	Hourly, lbs/hr	30-avg, lbs/day	Exempt, lbs/day	Non-Exempt, lbs/day																	
277667 (previous application)	0.71	17	15	2*																	
447455	2.71	65	65	---																	
	<p>* Ultramar provided 2 lbs/day CO ERCs in 1993.</p>																				

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<b>Rule 1401</b>	<b>New Source Review of Toxic Air Contaminants</b>	<b>June 5, 2009</b>  <b>Application Deem Complete Date: 2006</b>
	<p>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 <i>modification</i> 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.</p> <p>There is no change in NOx and SOx emissions due to the change of condition. This change of condition is to reflect actual operating conditions. The current CO emission limits are based on an emission factor of 4.1 lb/mmcf, which was found to be extremely low. Source tests have shown that the CO emission factor to be as high as 21.59 lb/mmcf. The 17.5 lb/mmcf emission factor is a better representation of the CO emissions than the 4.1 lb/mmcf factor currently being used.</p>	

<b>REG XVII</b>	<b>Prevention of Significant Deterioration (PSD)</b>	<b>October 7, 1988</b>
1701(b)- Applicability	<p>Upon delegation by EPA, 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 CO National Ambient Air Quality Standards (NAAQS). Since the heater emits CO (an attainment air contaminant) and is located in the South Coast Basin, it is subject to PSD review.</p>	
1701(b)(1)	<p>BACT. As noted in the Emissions section, there is no net emission increase in potential to emit (PTE) emissions. Had the higher CO emission factor been used to calculate the emissions from the previous application, the PTE would remain the same. This change of condition does not result in a change in the method of operation. This change of condition is to update the CO emission factor to better reflect emissions from the heater. The current CO emission limits are based on an emission factor of 4.1 lb/mmcf, which was found to be extremely low. The 17.5 lb/mmcf emission factor is a better representation of the CO emissions than the 4.1 lb/mmcf factor currently being used. Therefore, BACT does not apply to this change of condition since there no increase in PTE emissions.</p>	
1701(b)(2)	<p>The requirements of this regulation apply to the following stationary sources:</p> <p>(A) Increase in Potential to Emit. The modification proposed at this existing source will not increase the potential to emit greater than 100 tons of CO per year.</p> <p>(B) Significant Emission Increase. Rule 1702(s) defines a significant emission increase of CO as an increase greater than 100 tons per year. Although the potential emissions does not change, the change in emission factor will increase the permitted CO emissions from 2.76 tons per year to 11 tons per year. Therefore, the emission factor change is not</p>	

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<b>REG XVII</b>	<b>Prevention of Significant Deterioration (PSD)</b>	<b>October 7, 1988</b>
	<p>considered a significant increase for CO.</p> <p>(C) Class I Area. The refinery is not located within 10 km of a Class I area.</p> <p>Therefore, the requirements of this regulation do not apply to this heater change of condition.</p>	
1701(b)(3)	Major Stationary Source. Since the source does not meet any of the conditions of subparagraph (b)(2), it is not considered a major stationary source with a significant increase.	

<b>Rule 2005</b>	<b>New Source Review for RECLAIM</b>	<b>April 20, 2001</b>
		<b>Application Deem Complete Date: 2006</b>
	Since no increase in NO <sub>x</sub> and SO <sub>x</sub> emission is expected, these applications are not subject to NSR.	

<b>Regulation XXX</b>	<b>Title V</b>	<b>March 16, 2001</b>
	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 DeMinimis Significant Revision.	

## PART 2 STATE REGULATIONS

<b>California Environmental Quality Act (CEQA)</b>	
According to the District's CEQA guidelines, the thresholds for significant effect are:	
NO <sub>x</sub>	55 pounds per day
ROG	55 pounds per day
PM10	150 pounds per day
CO	550 pounds per day
SO <sub>x</sub>	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.	

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**PART 3 FEDERAL REGULATIONS**

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

<b>Subpart J</b>	<b>Standards of Performance for Petroleum Refineries</b>
§60.100	<i>Applicability, designation of affected facility, and reconstruction.</i> Since the heater is a fuel combustion device, the heater is subject to this subpart.
§60.104(a)(1)	<i>Standards for sulfur oxides.</i> The operator shall not burn in the heater any fuel gas that contains hydrogen sulfide (H <sub>2</sub> S) in excess of 230 mg/dscm (0.10 gr/dscf)*. Ultramar operates two H <sub>2</sub> S CEMS on their fuel gas system. A check of the H <sub>2</sub> S CEMS data recorded shows the daily average H <sub>2</sub> S was well below 160 ppm. Therefore, the refinery complies with this subpart.
§60.105(a)(4)	<i>Monitoring of emissions and operations.</i> Ultramar operates two H <sub>2</sub> S 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)**

<b>Subpart DDDDD</b>	<b>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters</b>
§63.7485	<i>Am I subject to this subpart?</i> 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 <i>Large gaseous fuel subcategory</i> 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”. Therefore, the heater operated at Ultramar is subject to this subpart.
§63.7490	<i>What is the affected source of this subpart?</i> The heater is considered an existing source since it is not new or reconstructed.
§63.7595(b)	<i>When do I have to comply with this subpart?</i> Existing heater must comply with this subpart no later than September 13, 2007.

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**RECOMMENDATION:**

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