CHANGE OF CONDITION EVALUATION

COMPANY NAME, LOCATION ADDRESS:
Ultramar Inc, SCAQMD ID # 800026
2402 E. Anaheim Street
Wilmington CA 90744

EQUIPMENT DESCRIPTION:

Additions to the equipment description are underlined. New or modified conditions are underlined. Deletions to the equipment description and conditions are noted in strikeouts.

Section D of Ultramar's Facility Permit, ID# 800026

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 14 : STORAGE TANKS					P13.1
System 2: EXTERNAL FLOATING ROOF TANKS					S13.5
STORAGE TANK, EXTERNAL FLOATING ROOF, 94-TK-9006, 150,000 BBL, DIAMETER: 156 FT, HEIGHT: 48 FT WITH A/N: ~~190792~~ **451565**	D260			**HAP:** (10) [**40CFR 63 SUBPART CC, #3A, ~~5-25-2001~~ 10-28-2009]**	B22.4, C1.3, D90.10, H23.7
FLOATING ROOF, PONTOON	(B479)				
PRIMARY SEAL, CATEGORY A, MECHANICAL SHOE	(B480)				
SECONDARY SEAL, CATEGORY A, RIM-MOUNTED, WIPER TYPE	(B481)				
GUIDEPOLE, GASKETED COVER, WITH SLEEVE, UNSLOTTED	(B1613)				

CONDITIONS:

The following permit conditions shall apply to the storage tank in order to comply with all applicable District, State, and Federal standards. Additions and deletions to the conditions are noted in underlines and strikeouts, respectively.

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

[Processes tied to this condition: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14]

[40CFR 61 Subpart FF, 12-04-2003]

SYSTEM CONDITIONS

S13.5 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	463
VOC	District Rule	1149
VOC	District Rule	1178

[Systems tied to this condition: Process 14, Systems 1, 2,7]

[RULE 1149, 07-14-1995; RULE 1149, 05-2-2008; **RULE 463, 05-6-2005; RULE 1178, 4-7-2006]**

DEVICE CONDITIONS

B. Material/Fuel Type Limits

B22.4 The operator shall ~~not~~ only use this equipment with materials having a true vapor pressure of ~~0.4~~ 1.5 psia or less ~~greater~~ under actual operating conditions.

To demonstrate compliance with this condition, the operator shall monitor the vapor pressure in accordance with condition D90.10. If the operator chooses to sample and test the material stored, the operator shall comply with the test methods and procedures specified in Rule 1178.

[**RULE 1303(b)(2)-Offset, 05-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 1178, 4-7-2006; RULE 1313(g), 12-7-1995]**

[Devices tied to this condition: D260]

C. Throughput or Operating Parameter Limits

C1.3 The operator shall limit the turnovers to no more than ~~40 in any one year~~ 6 in any one month.

The operator shall comply with the following throughput measurement practices.

The operator shall calculate the throughput, in barrels, by the following equation: 0. 14 x D x D x L, where D is the diameter of the tank in feet based on the tank strapping chart and L is the total vertical one-way roof travel in feet per month. Then calculate the turnovers by dividing the throughput, in barrels per month, by 150,000 barrels.

The operator shall install and maintain an automatic tank level gauge (ATLG) and recorder to continuously record the vertical movement of the roof. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way roof movement, in feet, on a daily and monthly basis.

The ATLG installed shall be verified once per quarter by comparing against a manual tank level measurement. If the ATLG differs from the manual tank level measurement by more than 1.0 inch or 0. 8%, whichever is greater, the ATLG shall be repaired and put back into service within 10 days. While the ATLG is being repaired, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to the discovery of the discrepancy.

In the event of a failure or routine maintenance of the ATLG, the ATLG shall be repaired (if necessary) and put back into service within 10 days of the time that the ATLG failed or was removed from service for maintenance. While the ATLG is being repaired or maintained, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to time that the ATLG went out of service.

[**RULE 1303(b)(2)-Offset, 05-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices tied to this condition: D260]

D. Monitoring/Testing Requirements

D90.10 The operator shall periodically monitor the vapor pressure of the material stored in this storage tank according to the following specifications:

The operator shall determine the true vapor pressure by one of the following methods: 1) record the tank contents and temperature once per month and use the organic liquid storage tank figure 7.1 series in AP-42; 2) sample and test the material stored, 3) derive the vapor pressure using engineering calculations, or 4) maintain on file a copy of the Material Safety Data Sheet (MSDS) of the material stored.

Records of materials stored and vapor pressure of the material stored, and their MSDS if applicable, shall be retained for a period of five years and made available to the Executive Officer upon request.

[**RULE 1303(b)(2)-Offset, 05-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices tied to this condition: D217, D218, D221, D252, D259, D260, D262, D264, D272, D273, D274, D307, D309]

H. Applicable Rules

H23.7 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	40CFR60, SUBPART	K

[40CFR 60 Subpart K, 05-05-1989]

[Devices tied to this condition: D255, D256, D257, D258, D259, D260, D261, D262, D263, D264, D265, D266]

PERMIT HISTORY:

A/N	Permit #	Application Description
190792	D39505	Comply with Rule 463
C26730	M57656	Phase I of Champlin's Refinery Modernization Project

COMPLIANCE RECORD REVIEW:

A check of the AQMD Compliance Database shows that the facility has received two (2) Notices to Comply and 14 Notices of Violation since January 1, 2011. None of the NCs or NOVs applies to the tank submitted for modification.

BACKGROUND:

Ultramar, Inc. is a refinery in the city of Wilmington. The facility is a NOx and SOx RECLAIM facility. The refinery submitted the following modification application to include increase the throughput limit and modify the guidepole on an existing external floating roof tank:

Table 1 – AQMD Applications Submitted

A/N	Date Submitted	Equipment	Device ID	Requested Action	Previous A/N
451565	Dec. 23, 2005	Storage Tank # 94-TK-9006 with External Floating Roof Tank	D260	Increase throughput*	190792/ D39505
549216	April 2, 2013	Title V Minor Revision	n/a	n/a	n/a

A/N 451565 was also submitted to modify guidepole from unslotted to slotted. However, in an e-mail from Matt Smith of Ultramar on March 21, 2013, Ultramar no longer needs to change out the guidepole into a slotted one.

FEE EVALUTION:

The fees paid for the applications submitted are as follows:

Table 2 – Application Fees Submitted

A/N	Equipment	BCAT	Type	Status	Fee Schedule	Fees Required, $	Fees Paid, $
451565	Storage Tank # 94-TK-9006 with External Floating Roof Tank	350904	50	20	C	$2,437.95	$3,656.93
549216	Title V Minor Revision	555009	85	20	n/a	$1,789.12	$1,789.12
Total						$4,227.07	$5,446.05

The application was submitted as a modification since the facility originally planned to change the guidepole from an unslotted guidepole to slotted one. The facility also paid an additional $1,218.98 (for expedited processing). The expedited fees will be refunded.

PROCESS DESCRIPTION:

Ultramar submitted the A/N 451565 to increase the throughput limit. They had originally also wanted to modify the guidepole from unslotted to slotted one. However, Ultramar no longer needs to change out the guidepole into a slotted one. Ultramar proposes to increase the throughput limit on storage tank 94-TK-9006 (D260) as follows:

Table 3 - Tank Throughput Limits

Storage Tank #	Device ID #	Current Limit		Proposed Limit	
		Turnovers	Throughput, gal/year	Turnovers	Throughput, gal/year

94-TK-9006	D260	40 [a]	252,000,000	72	453,600,000

a. Permit Condition C1.3 limits the number of turnovers to no more than 40 in any one year.

Table 4 lists the current (pre-modification) and proposed (post-modification) storage tank specifications:

Table 4 – Storage Tank # 94-TK-9006 (D260) Specifications

	External Floating Roof Tank Pre-Modification	**External Floating Roof Tank Post-Modification**
Tank Dimensions		
Diameter, feet	156	156
Volume, gallons	6,300,000	6,300,000
Throughput, gallons per year	252,000,000*	453,600,000
Turnovers	40	72
Paint Characteristics		
Internal Shell Condition	Light Rust	Light Rust
Shell Color/Shade	White/White	Gray/Light
Shell Condition	Good	Good
Tank Construction and Rim-Seal System		
Construction:	Welded	Welded
Primary Seal:	Mechanical Shoe	Mechanical Shoe
Secondary Seal:	Rim-mounted	Rim-mounted
Liquid Contents		
Mixture/Component	Petroleum Products, <0.4 psia Mostly diesel and gas oil petroleum products	Petroleum Products, <1.5 psia Mostly diesel and gas oil petroleum products
Roof Characteristics		
Type	Pontoon	Pontoon
Deck Fittings/Status	• 1-Access Hatch (24-in Dia.)/Bolted Cover, Gasketed	• 1-Access Hatch (24-in Dia.)/Bolted Cover, Gasketed
	• 1-Automatic Gauge Float Well/Unbolted cover, Ungasketed	• 1-Automatic Gauge Float Well/Unbolted cover, Ungasketed
	• 1-Gauge-Hatch/Sample Well (8-in Dia.)/Weighted Mech. Actuation, Ungasketed	• 1-Gauge-Hatch/Sample Well (8-in Dia.)/Weighted Mech. Actuation, Ungasketed
	• 2-Roof Drain (3-in Dia)/90% Closed	• 1-Roof Drain (3-in Dia)/90% Closed
	• 26-Roof Leg (3-in Dia.)/Adjustable, Pontoon Area, Ungasketed	• 26-Roof Leg (3-in Dia.)/Adjustable, Pontoon Area, Ungasketed
	• 50-Roof Leg (3-in Dia.)/Adjustable, Center Area, Ungasketed	• 50-Roof Leg (3-in Dia.)/Adjustable, Center Area, Ungasketed
	• 1-Unslotted Guidepole Well/Gasketed Sliding Cover with Wiper	• 1-Unslotted Guidepole Well/Gasketed Sliding Cover with Sleeve
	• 2-Vacuum Breaker (10 in Dia.)/ Weighted Mech. Actuation, Gasketed	• 2-Vacuum Breaker (10 in Dia.)/ Weighted Mech. Actuation, Gasketed

* Permit condition C1.3 limits the turnovers to no more than 40 in any one year.

EMISSIONS:

Emissions from an external floating roof tank consists of evaporative losses from the rim-seal and deck-fitting (a.k.a. standing storage loss), and any exposed liquid on the tank walls (withdrawal losses). The pre-modification were accounted for in previous A/Ns C26730 (permitted in 1980) and 190792 (permitted in 1991). The emissions for the tank calculated in previous A/Ns C26730 and 190792 were 6.3 and 6.2 lbs/day, respectively. When A/N 190792 was processed in 1991, Form B-6A2 was used to calculate the external floating roof tank emissions.

Since 1991, the formulas and factors used to determine the tank emissions have changed since the emissions were first calculated in 1980 and 1991. Today the District uses EPA's Tanks 4.0.9d program to calculate the tank emissions. The Tanks 4.0.9d program produces smaller emissions and there would be a corresponding reduction in the estimate of the emissions if the tank was permitted for actual permitted conditions. Therefore, a vapor pressure was back calculated which would result in the original emissions estimate of 6 lbs/day. Note that this same procedure was done in 1991 when A/N 190792 was processed. The tank remains in the same type of service (storing gas oil petroleum products).

The pre-modification and post-modification emissions are summarized in Table 5. The detailed Tanks 4.0.9d output for the post-modification is provided in Appendix A. The tank is already equipped with primary and secondary seals.

Table 5 - Storage Tank # 94-TK-9006 (D260) ROG Emission Comparison

Pre-Modification A/N 190792/D39505				Post-Modification A/N 451565				Emission Change		
Limit	ROG Emissions			Limit	ROG Emissions			ROG Emissions		
	lbs/year	lbs/day	lbs/hr		lbs/year	lbs/day	lbs/hr	lbs/year	lbs/day	lbs/hr
40 turnovers	2,259.2	6.20	0.26	72 turnovers	2,007.69	5.6	0.23	- 251.51	- 0.60	- 0.03

RULES EVALUATION:

PART 1 SCAQMD REGULATIONS

Rule 212	**Standards for Approving Permits** **November 14, 1997**
	This proposed modification meets all criteria in Rule 212 for permit approval. The modifications are designed so it can be expected to operate without emitting air

	contaminants in violation of Division 26 of the State Health and Safety Code or in violation of AQMD's rules and regulations. The modifications to the storage tank does not constitute a significant project because (1) the modified permit unit is not located within 1000 feet of a school; (2) the emissions increase does not exceed the daily maximum specified in subdivision (g) of this rule (30 lbs/day); and (3) the modified permit unit do not have 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.

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

Rule 463	**Organic Liquid Storage** **May 6, 2005**
	This rule applies to any above-ground tank with capacity 19,815 gallons or greater for storing organic liquids.
463(c)	Tank Roof Requirements. Tank 94-TK-9006 is a 150,000 bbl tank storing petroleum products less than 1.5 psia, mostly diesel and gas oil. Therefore, this tank is subject to Rule 463
463(c)(1)	External Floating Roof. External floating roof tank 94-TK-9006 meets the requirements of this paragraph. The tank is equipped with a pontoon type cover that rests on the surface of the organic liquid stored and are equipped with both a primary and secondary seal between the tank shell and roof edge. Compliance is expected with proper inspection and maintenance practices.
463(d)	Other Performance Requirements.
463(d)(1)	The tank is greater than 19,815 gallons and does not store gasoline. Therefore, this paragraph does not apply.
463(d)(2)	The external floating roof tank shall float on the organic liquid at all times (i.e., free of the roof leg supports) except when the tank is being completely emptied for cleaning, or repair.
463(d)(3)	The external floating roof tank does not store gasoline. Therefore, this paragraph does not apply.
463(d)(4)	The tank will not store organic liquids having a true vapor pressure of 11 psia (569 mm Hg) or greater under actual storage conditions. Tank 94-TK-9006 stores petroleum products less than 1.5 psia (mostly diesel and gas oil petroleum products). For the past 12 months, the tank has only stored commodities with less than 0.06 psia.
463(d)(5)	Replacement seals on the tank will only be chosen from the current list of seals approved by District.

Rule 463	**Organic Liquid Storage** **May 6, 2005**
463(d)(6)	The organic liquids stored in this tank should be in compliance with the appropriate vapor pressure limits provided the actual storage temperature does not exceed the corresponding maximum temperature listed in the Addendum of this rule.
	Compliance with Rule 463 is expected with proper recordkeeping and inspections. The Rule 463 inspection and maintenance plan will be updated to reflect installation of the dome roofs.

Rule 1149	**Storage Tank Cleaning and Degassing** **July 14, 1995**
	The tank being modified will continue to be subject to the tank cleaning and degassing requirements of this rule. Compliance is expected.

Rule 1178	**Further Reduction of VOC Emissions from Storage Tanks at Petroleum Facilities** **April 7, 2006**	
1178(b)	Applicability. This rule applies to all aboveground storage tanks with capacity greater than 19,818 gallons and used to store organic liquids with true vapor pressure greater than 0.1 psi and located at any petroleum facility emitting more than 20 tons per year of VOC in any emission inventory year starting with emission inventory year 2000. Tank 94-TK-9006 is a 150,000 bbl tank storing petroleum products less than 1.5 psia. Therefore, this tank is subject to Rule 1178.	
1178(d)	Requirements:	
1178(d)(1)(A)	(i) Equip each access hatch and gauge float well with a cover that is gasketed and bolted. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.	Yes
	(ii) Equip each gauge hatch/sample well with a cover that is gasketed. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.	Yes
	(iii) Gasket or cover each adjustable roof leg with a VOC impervious sock at all times when the roof is floating.	Yes
	(iv) Gasket each rim vent. Rim vents shall be closed at all times, with no visible gaps, when the roof is floating; and shall be set to open only when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting	N/A

Rule 1178	**Further Reduction of VOC Emissions from Storage Tanks at Petroleum Facilities**	**April 7, 2006**
	(v) Gasket each vacuum breaker. Vacuum breakers shall be closed at all times, with no visible gaps, when the roof is floating; and shall be set to open only when the roof is being floated off or is being landed on the roof leg supports.	Yes
	(vi) Equip each open floating roof drain with a slotted membrane fabric cover or other device with an equivalent control efficiency that covers at least 90 percent of the area of the opening.	Yes
	(vii) Equip each unslotted guidepole well with a gasketed sliding cover and a flexible fabric sleeve or wiper	Yes, sleeve
	(viii) Equip each unslotted guidepole with a gasketed cover at the end of the pole. The cover shall be closed at all times, with no visible gaps, except when gauging or sampling.	Yes
	(ix) Equip each slotted guidepole with a gasketed cover, a pole wiper and a pole sleeve. The pole sleeve shall be extended into the stored liquid	N/A
	(x) Equip each slotted guidepole having a pole float with a gasketed cover, a pole wiper, and a pole float wiper. The wiper or seal of the pole float shall be at or above the height of the pole wiper.	N/A
	(xi) Cover each slotted guidepole opening with a gasketed cover at all times, with no visible gaps, except when the cover must be opened for access.	N/A
	(xii) Maintain the pole float in a condition such that it floats within the guidepole at all times except when it must be removed for sampling or when the tank is empty.	N/A
	(xiii) Except for vacuum breakers and rim vents, ensure that each opening in the external floating roof shall provide a projection below the liquid surface.	N/A
	(xiv) Except for vacuum breakers, rim vents, roof drains, and leg sleeves, equip all other openings in the roof with a gasketed cover or seal which is closed at all times, with no visible gaps, except when the cover or seal must be opened for access.	N/A
	Subparagraph (d)(1)(B) Specifications:	
	(i) The primary seal shall be a mechanical shoe or liquid	Yes

Rule 1178	**Further Reduction of VOC Emissions from Storage Tanks at Petroleum Facilities**	**April 7, 2006**
	mounted.	
	(ii) The secondary seal shall be rim mounted and shall not be attached to the primary seal.	Yes
1178(d)(2)	Domed External Floating Roof Tanks. For tanks containing organic liquids greater than 3 psia for emission inventory year 2000, a dome roof is required to be installed. Tank 95-TK-9006 will only store commodities less than 1.5 psia. For the past 12 months, the tank has only stored commodities with less than 0.06 psia. Rule 1178(j)(5) exempts tanks from the doming requirements of paragraph (d)(2) if the tank has a permit condition that limits the true vapor pressure of the organic liquids stored in the tank lower than 3 psia. Tank 95-TK-9006 will have a condition that limits the vapor pressure to 1.5 psia or lower. Therefore, the tank is exempt from the doming requirements of (d)(2).	

REG XIII	**New Source Review (NSR)**	**December 6, 2002** **Application Deem Complete Year: 2006**
	This tank was subject to New Source Review since it was constructed in February 1978. As noted in Table 5, there is no emission increase.	
1303(a)	Best Available Control Technology (BACT). BACT is required when there is an emission increase of 1 lb/day. BACT is not required for this application since there is no emission increase from tank 94-TK-9006 (D260). Note the tank is equipped with primary and secondary seals. Therefore, although this change of condition does not trigger BACT, BACT is already employed in this tank.	
1303(b)	Modified source which results in a net emission increase. There is no increase in emissions; therefore, no modeling, emission offset, sensitive zone, facility compliance, or major polluting facilities requirements apply.	

Rule 1401	**New Source Review of Toxic Air Contaminants**	**March 4, 2005**
	Since there is no increase in emissions, this change of condition is exempt from the requirements of subdivision (d)-Maximum Individual Cancer Risk, Cancer Burden, chronic hazard index, and acute hazard index due to the exemption found in (g)(1)(B). Federal NSR for toxics does not apply since this is not considered a reconstruction per 40CFR63, Subpart A, §63.2.	

Regulation XX	**RECLAIM** **May 6, 2005**
	Ultramar has been designated as a RECLAIM facility. The storage tank does not emit NO_x or SO_x; therefore, RECLAIM requirements do not apply to this application.

Regulation XXX	**Title V** **March 16, 2001**
	Ultramar is a designated as a Title V facility. Ultramar's Title V permit became effective on May 29, 2009. Therefore, the facility is now subject to the requirements of Regulation XXX. This application is considered a Minor Permit Revision as defined in Rule 3000 and subject to 45 day review by EPA.

PART 2 STATE REGULATIONS

California Environmental Quality Act (CEQA)	
	This proposed change of condition is not a significant project.

PART 3 FEDERAL REGULATIONS

40CFR Part 60 Subpart K	**Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978**
	This tank is currently subject to 40 CFR 60 Subpart K. This tank currently complies with tank design/control requirements of Subpart K. 40CFR Part 60 Subpart Kb applies to storage vessels for which construction, reconstruction, or modification commenced after July 23, 1984. In order for a modification to occur under NSPS, there must be a pound per hour (lb/hr) increase in emissions to the atmosphere as a result of physical or operational changes. There is no increase in emissions; this tank is not subject to Subpart Kb.

40CFR Part 63 Subpart CC	**National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries**
	In accordance with §63.641 Definitions. of 40CFR Part 63 Subpart CC, a *Group 1 storage vessel* means a storage vessel at an existing source that has a design capacity ≥ 46,758 gallons (1,113 barrels) and stored-liquid maximum true vapor pressure ≥ 1.5 psia and stored-liquid annual average true vapor ≥ 1.2 psia and annual average HAP liquid concentration > 4 percent by weight total organic HAP. A *Group 2 storage vessel* means a storage vessel that does not meet the definition of a Group 1 storage vessel. The refinery does not stores commodities with annual average HAP liquid concentration > 4 percent by weight total organic HAP in this tank. Therefore, it is classified as a Group 2 storage vessel. This tank will continue to be subject to the Subpart CC as a Group 2 tank. Continued compliance with the requirements of Subpart CC for Group 2 storage vessels is expected. The refinery shall keep records to demonstrate that it is indeed a Group 2 tank. If this tank stores liquid maximum true vapor pressure ≥ 1.5 psia and stored-liquid annual average true vapor ≥ 1.2 psia and annual average HAP liquid concentration > 4 percent by weight total organic HAP, then the operator shall submit an application to redesignate the storage tank as a Group 1 tank.

CONCLUSION:

Based on the above evaluation, it recommended that the following be issued:

A/N	Recommendation
451565	Issue Permit to Construct - Permit to Operate (PC-PO) with conditions listed in the Conditions Section

Appendix

A Tank 4.0 Output

- 94-TK-9006 (D260) Post-Modification