

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT <i>ENGINEERING AND COMPLIANCE DIVISION</i> APPLICATION PROCESSING AND CALCULATIONS	PAGES 102 + appendices	PAGE 1
	APPL. NO. 542026- Master (See Table 1)	DATE July 23, 2013
	PROCESSED BY Connie Yee	CHECKED BY

PERMIT TO CONSTRUCT 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 H of Ultramar’s Facility Permit, ID# 800026

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 1: CRUDE DISTILLATION					P13.1
System 1: CRUDE DISTILLATION UNIT #10					S13.2, S15.12 , <u>S31.x, S56.1</u> ,
COLUMN, CRUDE DISTILLATION, 10-V-100A, HEIGHT: 67 FT; DIAMETER: 8 FT 6 IN A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D1	D1235			
ACCUMULATOR, CRUDE TOWER OVERHEAD, 10-V-101; LENGTH: 19 FT; DIAMETER: 5 FT A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D883				
TANK, SURGE, CRUDE TOWER, 10-V-102, HEIGHT: 10 FT; DIAMETER: 3 FT A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D884				

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
COLUMN, 10-V-103, LGO STRIPPER, HEIGHT: 24 FT; DIAMETER: 4 FT A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D885				
VESSEL, DESALTER, CRUDE, 10-DE-100; LENGTH: 28 FT; DIAMETER: 12 FT A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D886				
VESSEL, DESALTER, CRUDE, 10-DE-101; LENGTH: 28 FT; DIAMETER: 12 FT A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D887				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 244379 <u>542026</u> Permit to Construct Issued: <u>TBD</u>	D1310			HAP: (10) [40CFR 63 Subpart CC, #5A, 10-28-2009]	H23.17
System 3: CRUDE DISTILLATION UNIT #11					S13.2, S15.12, S31.x, S56.1
COLUMN, CRUDE DISTILLATION, 11-V-1000, HEIGHT: 67 FT; DIAMETER: 8 FT 6 IN A/N: 177987 <u>542027</u> Permit to Construct Issued: <u>TBD</u>	D888				
ACCUMULATOR, CRUDE TOWER OVERHEAD, 11-V-1001; LENGTH: 16 FT 6 IN; DIAMETER: 6 FT 6 IN A/N: 177987 <u>542027</u> Permit to Construct Issued: <u>TBD</u>	D4				

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
TANK, SURGE, HSRGO, 11-V-1002, HEIGHT: 10 FT; DIAMETER: 3 FT A/N: <u>477987 542027</u> Permit to Construct Issued: <u>TBD</u>	D889				
COLUMN, 11-V-1003, LGO STRIPPER, HEIGHT: 28 FT 9 IN; DIAMETER: 4 FT A/N: <u>477987 542027</u> Permit to Construct Issued: <u>TBD</u>	D890				
VESSEL, DESALTER, CRUDE, 11-DE-1000; LENGTH: 28 FT; DIAMETER: 12 FT A/N: <u>477987 542027</u> Permit to Construct Issued: <u>TBD</u>	D886				
VESSEL, DESALTER, CRUDE, 10-DE-101; LENGTH: 28 FT; DIAMETER: 12 FT A/N: <u>477987 542027</u> Permit to Construct Issued: <u>TBD</u>	D892				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: <u>477987 542027</u> Permit to Construct Issued: <u>TBD</u>	D1312			HAP: (10) [40CFR 63 Subpart CC, #5A, 10-28-2009]	H23.17

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 2: COKING AND RESIDUAL CONDITIONING					P13.1
System 1: DELAYED COKING UNIT #30					S7.1, S13.2, S15.3, S15.5 , S15.12 , <u>S31.x</u> , <u>S56.1</u>

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 2: COKING AND RESIDUAL CONDITIONING					P13.1
DRUM, 30-V-300A, HEIGHT: 83 FT 3 IN; DIAMETER: 23 FT A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>	D10			PM: (9) [RULE 405, 2-7-1986]	D323.2
DRUM, 30-V-300B, HEIGHT: 83 FT 3 IN; DIAMETER: 23 FT A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>	D11			PM: (9) [RULE 405, 2-7-1986]	D323.2
FRACTIONATOR, 30-V-3-1, HEIGHT: 52 FT; DIAMETER: 7 FT A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>					
ACCUMULATOR, FRACTIONAR OVERHEAD, 30-V-302, WITH WATER LEG VENTED TO LIGHT ENDS RECOVERY COMPRESSOR, LENGTH: 18 FT DIAMETER: 5 FT 6 IN A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>	D909				
TANK, COKE DRUM CONDENSATE, 30-V-303, LENGTH: 10 FT; DIAMETER: 4 FT 6 IN A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>	D910				
COLUMN, LIGHT GAS OIL STRIPPER, 30-V-307, HEIGHT: 22 FT; DIAMETER: 2 FT 6 IN A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>	D911				
FUGITIVE EMISSIONS, MISCELLANOUS A/N: 477993 542028 Permit to Construct Issued: <u>TBD</u>	D1317			[HAP]: (10) [40CFR 63 Subpart CC, #5A,10-28-2009]	H23.17
System 3: DELAYED COKING UNIT #31					S7.1, S13.2, S15.3, S15.5, S15.12, S31.x,

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PROCESS 2: COKING AND RESIDUAL CONDITIONING					P13.1
					<u>S56.1</u>
DRUM, 31-V-300C, HEIGHT: 58 FT; DIAMETER: 23 FT A/N: 289077 <u>542029</u> Permit to Construct Issued: <u>TBD</u>	D14			PM: (9) [RULE 405, 2-7-1986]	D323.2
DRUM, 31-V-300C, HEIGHT: 58 FT; DIAMETER: 23 FT A/N: 289077 <u>542029</u> Permit to Construct Issued: <u>TBD</u>	D15			PM: (9) [RULE 405, 2-7-1986]	D323.2
TOWER, 31-V-3001, HEIGHT: 62 FT; DIAMETER: 7 FT 6 IN A/N: 289077 <u>542029</u> Permit to Construct Issued: <u>TBD</u>	D16				
ACCUMULATOR, COKE TOWER, OVHD, 31-V-3002, HEIGHT: 18 FT DIAMETER: 5 FT 6 IN A/N: 289077 <u>542029</u> Permit to Construct Issued: <u>TBD</u>	D17				
COLUMN, COKE LIGHT GAS OIL STRIPPER, 31-V-3007, HEIGHT: 21 FT 7 IN; DIAMETER: 2 FT 6 IN A/N: 289077 <u>542029</u> Permit to Construct Issued: <u>TBD</u>	D18				
FUGITIVE EMISSIONS, MISCELLANOUS A/N: 289077 <u>542029</u> Permit to Construct Issued: <u>TBD</u>	D1318			[HAP]: (10) 40CFR 63 Subpart CC, #5A,10-28-2009	H23.17

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 4: HYDROTREATING					P13.1
System 1: GAS OIL UNIBON HYDROTREATING UNIT 80					<u>S4.9</u> , S13.2, S15.3, S15.5 , S15.12 , S31.1, <u>S56.1</u>

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PROCESS 4: HYDROTREATING					P13.1
TANK, SURGE, FEED, 80-V-1, HEIGHT: 38 FT ; DIAMETER: 12 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D43				
REACTOR, NO.1, 80-V-2, HEIGHT: 27 FT ; DIAMETER: 13 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D918				
REACTOR, 80-V-3, HDA, HEIGHT: 27 FT ; DIAMETER: 13 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D919				
COLUMN, 80-V-101, HDS STRIPPER, HEIGHT: 97 FT 4 IN; DIAMETER: 9 FT 6 IN A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1382				
VESSEL, SEPARATOR, PRODUCT, 80-V-4, HEIGHT: 30 FT ; DIAMETER: 12 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D44				
COMPRESSOR, RECYCLE GAS,80-C-1 A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D553				
REACTOR, 80-V-103, HDA, HEIGHT: 42 FT 3 IN; DIAMETER: 13 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1383				
DRUM, 80-V-102, HDS STRIPPER OVERHEAD, HEIGHT: 21 FT 4 IN; DIAMETER: 7 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1381				

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PROCESS 4: HYDROTREATING					P13.1
SCRUBBER, CHEMICAL, 80-V-6, RECYCLE GAS, HEIGHT: 43 FT ; DIAMETER: 4 FT 6 IN A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D51				
KNOCK OUT POT, 80-V-105, RECYCLE GAS SCRUBBER, HEIGHT: 11 FT 11 IN; DIAMETER: 4 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1385				
COLUMN, 80-V-10, HDA DISTILLATE SPLITTER, HEIGHT: 74 FT ; DIAMETER: 12 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D46				
ACCUMULATOR, 80-V-11, HDA SPLITTER, VENTED TO VAPOR RECOVERY SYSTEM, HEIGHT: 13 FT ; DIAMETER: 5 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D47				
FRACTIONATOR, PRODUCT, 80-V-13, LENGTH: 15 FT 6 IN; DIAMETER: 6 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D49				
ACCUMULATOR, FRACTIONATOR, 80-V-14, HEIGHT: 15 FT ; DIAMETER: 5 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D50				
COLUMN, DIESEL STRIPPER, 80-V-15, HEIGHT: 25 FT 6 IN; DIAMETER: 7 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D920				

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PROCESS 4: HYDROTREATING					P13.1
COLUMN, STRIPPER, 80-V-16, HEIGHT: 35 FT ; DIAMETER: 4 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D921				
DRUM, LOW PRESSURE FLASH, 80-V-9, LENGTH: 13 FT ; DIAMETER: 8 FT 6 IN A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D45				
VESSEL, 80-V-104, CARB DIESEL SALT DRIER, HEIGHT: 28 FT 4 IN; DIAMETER: 15 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1384				
KNOCK OUT POT, 80-V-19, FUEL GAS, HEIGHT: 5 FT ; DIAMETER: 2 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1057				
DRUM, 80-V-12, WASH WATER SUCTION, VENTED TO VAPOR RECOVERY SYSTEM, HEIGHT: 20 FT; DIAMETER: 5 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1058				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1323			HAP: (10) [RULE 63 SubpartCC, #5A, 010-28-2009]	H23.17
System 3: NAPHTHA HYDROTREATING UNIT #60					S13.2, S15.3, S15.5, S15.12, S31.x, S56.1
TANK, SURGE, FEED, 60-V-1, LENGTH: 25 FT ; DIAMETER: 8 FT A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D54				

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PROCESS 4: HYDROTREATING					P13.1
REACTOR, 60-V-2, HEIGHT: 23 FT ; DIAMETER: 6 FT 6 IN A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D922				
VESSEL, SEPARATOR, PRODUCT, 60-V-3, LENGTH: 20 FT 8 IN; DIAMETER: 7 FT A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D55				
COMPRESSOR, 60-C-1A/B, OLEFIN HYDROTREATER RECYCLE/UNIBON MAKEUP A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D57				
COMPRESSOR, 60-C-2A/B, OLEFIN HYDROTREATER RECYCLE/UNIBON MAKEUP A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D58				
COLUMN, STRIPPER, 60-V-5, WITH 20 TRAYS, HEIGHT: 58 FT 6 IN; DIAMETER: 7 FT A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D56				
ACCUMULATOR, STRIPPER, 60-V-6, LENGTH: 13 FT ; DIAMETER: 4 FT 6 IN A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D924				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 378969 542035 Permit to Construct Issued: <u>TBD</u>	D1325			HAP: (10) [RULE 63 SubpartCC, #5A, 010-28-2009]	H23.17
System 5: GAS OIL HYDRODESULFURIZATION UNIT					S4.6, <u>S4.9</u> , S13.2, S15.3, <u>S15.5</u> , <u>S15.12</u> , <u>S56.1</u>

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PROCESS 4: HYDROTREATING					P13.1
VESSEL,58-V-14, WARM FEED, COALESCER, DIAMETER 40 FT 6 IN, HEIGHT 24 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D687				
TANK,FEED, 58-V-1, SURGE, DIAMETER 12 FT, HEIGHT 60 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D688				
REACTOR, GUARD, 58-R-1, DIAMETER 14 FT, HEIGHT 16 FT 3 IN A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D689				
REACTOR, HYDROTREATING, 58-R-2, DIAMETER 140 FT 6 IN, HEIGHT 42.9167 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D690				
REACTOR, HYDROTREATING, 58-R-3, DIAMETER 140 FT 6 IN, HEIGHT 62.9167 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D691				
GAS SEPARATOR,HP HOT, 58-V-2, DIAMETER 100 FT 6 IN, HEIGHT 30 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D692				
GAS SEPARATOR,HP COLD, 58-V-3, DIAMETER 80 FT 6 IN, HEIGHT 31.1667 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D693				
GAS SEPARATOR,LP COLD, 58-V-8, DIAMETER 10 FT, HEIGHT 30 FT	D694				

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PROCESS 4: HYDROTREATING					P13.1
A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>					
COLUMN,STRIPPING, 58-V-9, DIAMETER 120 FT 6 IN, HEIGHT 930 FT 6 IN A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D695				
DRUM,STRIPPER OVERHEAD, 58-V-10, DIAMETER 70 FT 6 IN, HEIGHT 260 FT 6 IN A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D696				
COLUMN,DISTILLATE STRIPPING, 58-V-16, DIAMETER 5 FT, HEIGHT 370 FT 6 IN A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D697				
ABSORBER,HP H2S, 58-V-4, DIAMETER 60 FT 6 IN, HEIGHT 76 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D698				
TANK,58-V-6, SURGE, WASH WATER, DIAMETER 5 FT, HEIGHT 15 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D699				
GAS SEPARATOR,LP HOT, 58- V-7, DIAMETER 100 FT 6 IN, HEIGHT 44 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D700				
GAS SEPARATOR,58-V-12, DIAMETER 18 FT, HEIGHT 7.1667 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D701				

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PROCESS 4: HYDROTREATING					P13.1
TANK,58-V-13, FLASH, RICH AMINE, DIAMETER 110 FT 6 IN, HEIGHT 30 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D702				
TANK, FLASH, 58-V-12, RICH AMINE, DIAMETER: 11 FT 6 IN; HEIGHT: 30 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D703				
KNOCK OUT POT,58-V-15, FUEL GAS, DIAMETER 20 FT 6 IN, HEIGHT 70 FT 6 IN A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D704				
DRUM,89-V-9007, FLARE BLOWDOWN, DIAMETER 120 FT 6 IN, HEIGHT 38 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D705				
VESSEL, FLARE DRAIN POT, 89-V-9008, DIAMETER: 4 FT, HEIGHT: 4 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D1309				
DRUM,CONDENSATE COLLECTION, 58-V-18, DIAMETER 60 FT 6 IN, HEIGHT 12 FT A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D706				
DRUM,CONDENSATE BLOWDOWN, 58-V-21, DIAMETER 4 FT, HEIGHT 70 FT 6 IN A/N: 312555 542034 Permit to Construct Issued: <u>TBD</u>	D707				
COMPRESSOR,RECYCLE GAS, 58-C-1,6500 HP A/N: 312555 542034	D708				H23.16

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PROCESS 4: HYDROTREATING					P13.1
Permit to Construct Issued: <u>TBD</u>					
DRUM, SOUR WATER SURGE, 58-V-22, DIAMETER: 9 FT, HEIGHT: 28 FT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D1307				
DRUM, AMINE DRAIN COLLECTION, 58-V-23, DIAMETER: 4 FT, HEIGHT: 8 FT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D1308				
FILTER,58-F-1A/B, COLD FEED PREFILTER, DIAMETER 4 FT, HEIGHT 6 FT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D762				
FILTER,58-F-2A/B/C, WARM FEED, DIAMETER 4 FT, HEIGHT 6 FT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D764				
FILTER,58-F-3A/B, COMBINED FEED, DIAMETER 4 FT, HEIGHT 6 FT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D766				
VESSEL, GOH DISTILLATE, SALT FILTER DIAMETER: 12 FT, HEIGHT: 52 FT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D1306				
DRAIN SYSTEM COMPONENT A/N: <u>312555 542034</u> Permit to Construct Issued: <u>TBD</u>	D1469			HAP: (10) [RULE 63 SubpartCC, #4, 10-28-2009]	H23.4

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 4: HYDROTREATING					P13.1
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 312555 <u>542034</u> Permit to Construct Issued: <u>TBD</u>	D1327			HAP: (10) [RULE 63 SubpartCC, #5A, 10-28-2009]	H23.16
System 7: NAPHTHA HYDROTREATING/SPLITTER UNIT #56					S4.4, <u>S4.9</u> , S13.2, S15.5 , S15.12 , S31.5, <u>S56.1</u>
COLUMN,H2S STRIPPER, 56-V-5, DIAMETER 10 FT, HEIGHT 66 FT A/N: 416624 <u>542033</u> Permit to Construct Issued: <u>TBD</u>	D61				
TANK,56-V-1, SURGE, DIAMETER 10 FT, HEIGHT 32 FT A/N: 416624 <u>542033</u> Permit to Construct Issued: <u>TBD</u>	D423				
REACTOR, 56-R-2, DIAMETER: 9 FT 6 IN; HEIGHT: 29 FT A/N: 416624 <u>542033</u> Permit to Construct Issued: <u>TBD</u>	D1464				
VESSEL,PRODUCT, 56-V-3, SEPARATOR, DIAMETER 9.5 FT, HEIGHT 25 FT A/N: 416624 <u>542033</u> Permit to Construct Issued: <u>TBD</u>	D424				
ACCUMULATOR,STRIPPER OVERHEAD, 56-V-6, HEIGHT 20 FT, LENGTH 6.5 FT A/N: 416624 <u>542033</u> Permit to Construct Issued: <u>TBD</u>	D425				
ACCUMULATOR,SPLITTER OVERHEAD, 56-V-12, DIAMETER 8.5 FT, LENGTH 26 FT A/N: 416624 <u>542033</u>	D426				

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PROCESS 4: HYDROTREATING					P13.1
Permit to Construct Issued: <u>TBD</u>					
KNOCK OUT POT,56-V-17, FUEL GAS, DIAMETER 3.5 FT, LENGTH 8.5 FT A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D427				
ACCUMULATOR, RERUN OVERHEAD, 56-V-14, DIAMETER 8 FT, HEIGHT 25 FT A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D428				
DRUM,COMPRESSOR SUCTION, 56-V-4, DIAMETER 3.5 FT, HEIGHT 9 FT A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D593				
COMPRESSOR,RECYCLE, 56- C-1 A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D594				
DRUM,56-V-15, HOT OIL, DIAMETER 8 FT, HEIGHT 30 FT A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D595				
COLUMN,NAPHTHA SPLITTER, 56-V-11, DIAMETER 11 FT, HEIGHT 122 FT A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D596				
COLUMN,NAPHTHA RERUN, 56-V-13, DIAMETER 9.5 FT, HEIGHT 102 FT A/N: <u>416624 542033</u>	D598				

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PROCESS 4: HYDROTREATING					P13.1
Permit to Construct Issued: <u>TBD</u>					
COLUMN, DEBUTANIZER, 56-V-18, DIAMETER: 7 FT 6 IN; HEIGHT: 108 FT A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D1481				
ACCUMULATOR, DEBUTANIZER OVERHEAD, 56-V-19, DIAMETER: 6 FT 6 IN; HEIGHT: 19 FT 6 IN A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D1482				
BLOWER, VAPORIZER AIR, 56-MX-1-B1/A A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D1465				
EJECTOR, EVACUATION, 56-EJ-1 A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D1466				
VESSEL, SEAL GAS SEPARATOR, 56-CY-1 A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D1467				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: <u>416624 542033</u> Permit to Construct Issued: <u>TBD</u>	D1328			HAP: (10) [40CFR 63 SubpartCC #5A, 05-25-2001];	H23.16

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
System 1: PLATFORMER UNIT #70					<u>S4.9, S13.2, S13.13, S15.5, S15.12, S56.1</u>

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PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
VESEL,PRODUCT, 70-V-4, SEPARATOR, DIAMETER: 7 FT, HEIGHT: 20 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D62				
COLUMN,DEPROPANIZER, 70-V-7, DIAMETER: 7 FT, HEIGHT: 76 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D65				
VESEL,DEPROPANIZER, 70-V-8, RECEIVER, DIAMETER: 4 FT 6 IN; LENGTH: 15 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D66				
HOPPER,LOCK, #1, 70-V-23, DIAMETER: 2 FT; HEIGHT: 2 FT 6 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D68	D74		HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]; PM: (9) [RULE 405, 2-7-1986]	D323.1
HOPPER,LOCK, #2, 70-V-28, DIAMETER: 2 FT, HEIGHT: 2 FT 6 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D69	D74		HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]; PM: (9) [RULE 405, 2-7-1986]	D323.1
VESEL,BOOSTER PURGE GAS, 70-V-39, COALESCER A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D70				
VESEL,LIFT ENGAGER #2, 70-V-29, DIAMETER: 1 FT 8 IN; HEIGHT: 3 FT 6 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D71			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	
EJECTOR,STEAM JET, 70-EJ-1 A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D72				

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PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
COMPRESSOR,RECYCLE A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D554				
COMPRESSOR,NET GAS BOOSTER, 70-C-2A A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D555				
COMPRESSOR, NET GAS BOOSTER, 70-C-2B A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D556				
REACTOR,NO.1, 70-V-1, DIAMETER: 6 FT 6 IN; HEIGHT: 19 FT 11 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D925			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	
REACTOR,NO.2, 70-V-2, DIAMETER: 7 FT; HEIGHT: 21 FT 4 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D926			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	
REACTOR,NO.3, 70-V-3, DIAMETER: 8 FT 6 IN; HEIGHT: 21 FT 4 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D927			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	
DRUM,CONTINUOUS BLOWDOWN, 70-V-12, DIAMETER: 2 FT; HEIGHT: 5 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D930				
DRUM, STEAM BLOWDOWN, 70-V-13, DIAMETER: 5 FT; HEIGHT: 6 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D931				

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PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
TOWER, REGENERATION, 70-V-21, DIAMETER: 4 FT 6 IN; HEIGHT: 25 FT 7 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D932	D74 D935		HAP: (10) [40CFR63, SubpartUUU, #1, 4-20-2006]	A63.3
VESSEL, CATALYST, 70-V-22, RECEIVER, DIAMETER: 2 FT, HEIGHT: 1 FT 9 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D933	D946		PM: (9) [RULE 405, 2-7-1986]	D323.1
VESSEL, LIFT ENGAGER #1, 70-V-24, DIAMETER: 1 FT 8 IN; HEIGHT: 3 FT 6 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D934	D74		PM: (9) [RULE 405, 2-7-1986]	D323.1
HOPPER, DISENGAGING, 70-V-25, DIAMETER: 4 FT; HEIGHT: 13 FT 6 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u> COMPARTMENT, DISENGAGING AND PRE-HEAT ZONE, HEIGHT: 7 FT; COMPARTMENT, CHLORIDE ADSORPTION ZONE, HEIGHT: 6 FT 6 IN	D935	D74 D932		PM: (9) [RULE 405, 2-7-1986]	D323.1
HOPPER, FLOW CONTROL, 70-V-26, DIAMETER: 6 IN; HEIGHT: 1 FT 9 IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D936			PM: (9) [RULE 405, 2-7-1986]	D323.1
HOPPER, SURGE, 70-V-27, DIAMETER: 5 FT; HEIGHT: 9 FT A/N: 433983 542036	D937			PM: (9) [RULE 405, 2-7-1986]	D323.1

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PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
Permit to Construct Issued: <u>TBD</u>					
HOPPER,CATALYST ADDITION FUNNEL, 70-V-30, DIAMETER: 3 FT; HEIGHT: 6 IN A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D938			PM: (9) [RULE 405, 2-7-1986]	D323.1
HOPPER,CATALYST ADDITION LOCK, 70-V-31, DIAMETER:2 FT; HEIGHT: 2 FT A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D939			PM: (9) [RULE 405, 2-7-1986]	D323.1
DRUM,VENT NO.1, 70-V-32, DIAMETER: 1 FT 0.75 IN; HEIGHT: 2 FT 6 IN A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D940	D74			
DRUM,VENT NO.2, 70-V-33, DIAMETER: 1 FT 0.75 IN; HEIGHT: 2 FT 6 IN A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D941	D74			
DRUM,VENT NO.3, 70-V-34, DIAMETER: 1 FT 0.75 IN; HEIGHT: 2 FT 6 IN A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D942	D74			
DRUM,VENT NO.4, 70-V-35, DIAMETER: 1 FT 0.75 IN; HEIGHT: 2 FT 6 IN A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D943	D74			
VESSEL,RECYCLE PURGE GAS, 70-V-38, COALESCER A/N: 433983 <u>542036</u> Permit to Construct Issued: <u>TBD</u>	D944				

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PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
EJECTOR,BOOSTER COMPRESSOR, 70-EJ-2 A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D945				
FILTER,70-ME-22, HEPA A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D946	D933			D322.1, D381.1, K67.8
VESSEL, FUEL GAS CHLORIDE TREATER, 70-V-42, DIAMETER:5 FT; HEIGHT: 18 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1212			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	E166.1
VESSEL,NET GAS CHLORIDE TREATER, 70-V-43, DIAMETER: 5 FT; HEIGHT: 16 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1213			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	E166.1
VESSEL,LIQUID CHLORIDE TREATER, 70-V-44, DIAMETER: 7 FT, HEIGHT: 31 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1214			HAP: (10) [40CFR63, SubpartUUU,#1, 4-20-2006]	E166.1
DRUM, KNOCKOUT, 1 ST STAGE, 70-V-5, DIAMETER: 3 FT; HEIGHT: 8 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1590				
DRUM, KNOCKOUT, 2 ND STAGE, 70-V-6, DIAMETER: 6 FT; HEIGHEIGHT: 20 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1591				

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 5: CATALYTIC REFORMING AND ISOMERIZATION					P13.1
DRUM, BOOSTER COMPRESSOR SUCTION, 70-V-10, DIAMETERMETER: 4 FT; HEIGHEIGHT: 12 FT A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1593				
DRUM, STEAM, 70-V-14, DIAMETERMETER: 4 FT; HEIGHEIGHT: 14 FT 5IN A/N: 433983 542036 Permit to Construct Issued: <u>TBD</u>	D1594				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 433983 542036 Permit to Construct Issued: TBD	D1331			HAP: (10) [40CFR63 Subpart CC #5A, 10-28-2009]	H23.17

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 8: GAS PRODUCTION					P13.1
System 4: LIGHT ENDS VAPOR RECOVERY UNIT #43					S4.4, , S13.2, S15.5, S15.12, S31.5, <u>S31.x,</u> <u>S56.1</u>
ABSORBER, SPONGE, 43-V-402, DIAMETER: 6 FT, HEIGHT: 95 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D123				
COLUMN, DEPROPANIZER, 43-V-404, DIAMETER: 5 FT 6 IN, HEIGHT: 75 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D124				
ACCUMULATOR, DEPROPANIZER OVERHEAD, 43-V-405, DIAMETER 3 FT,	D965				

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PROCESS 8: GAS PRODUCTION					P13.1
LENGTH: 12 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>					
DRUM, DEPROPANIZER FEED, 43-V-423, DIAMETER 7 FT 6 INCHES, LENGTH: 21 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D1524				
COMPRESSOR, LIGHT ENDS FEED, 43-C-400A, 2 STAGE RECIPROCATING, WITH 350 HP MOTOR A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D125				
COMPRESSOR, LIGHT ENDS FEED, 43-C-400B A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D126				
SCRUBBER, BUTANE CAUSTIC, 43-V-4001, DIAMETER 1 FT 6 IN, HEIGHT 30 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D127				
VESSEL, 43-V-4002, COALESCER, DIAMETER 5 FT 8 IN, HEIGHT 28 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D128				
<u>KNOCK OUT POT, LIGHT ENDS COMPRESSOR, 43-V-309; HEIGHT: 9 FT; DIAMETER: 3 FT</u> <u>A/N: 304106 542030</u> <u>Permit to Construct Issued: TBD</u>	<u>D964</u>				
VESSEL, WATER TRAP, 43-V-411, DIAMETER 2 FT, HEIGHT 4 FT A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D966				

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PROCESS 8: GAS PRODUCTION					P13.1
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D1339			HAP: (10) [RULE 63 SubpartCC, #5A, 10-28-2009]	H23.16
System 5: LIGHT ENDS VAPOR RECOVERY UNIT #44					S13.2, S15.3, S15.5 , S18.3, S31.x , S56.1
ABSORBER, SPONGE, 44-V-4002, DIAMETER: 6 FT, HEIGHT: 95 FT A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D129				D323.2
COLUMN, DEPROPANIZER, 44-V-4004, DIAMETER: 7 FT, HEIGHT: 85 FT A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D130				
ACCUMULATOR, DEPROPANIZER OVERHEAD, 44-V-4005, DIAMETER 4 FT 6 IN, LENGTH: 15 FT A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D131				
COMPRESSOR, LIGHT ENDS, 44-C-4000 A/N: 416627 542030 Permit to Construct Issued: <u>TBD</u>	D558				
EJECTOR, 44-E-1010-EJ1, FIRST STAGE A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D1291				H23.1
EJECTOR, 44-E-1010-EJ2, SECOND STAGE A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D1292				H23.1
EJECTOR, 44-E-1010-EJ A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D1293				H23.1

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PROCESS 8: GAS PRODUCTION					P13.1
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 304107 542031 Permit to Construct Issued: <u>TBD</u>	D1340			HAP: (10) [RULE 63 SubpartCC, #5A, 10-28-2009]	H23.17

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PROCESS 10: TREATING/STRIPPING					P13.1
System 5: SOUR WATER STRIPPING UNIT #48					<u>S4.9, S13.2, S15.4, S15.5, S15.12, S56.1</u>
COLUMN, SOUR WATER STRIPPER, 48-V-1, HEIGHT: 88 FT; DIAMETER: 5 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D160			SOX: 500 PPMV (5) [RULE 407, 4-2-1982]	
ACCUMULATOR, SOUR WATER STRIPPER OVERHEAD, 48-V-2, LENGTH: 8 FT; DIAMETER: 3 FT A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D161				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 452244 542038 Permit to Construct Issued: <u>TBD</u>	D1346				H23.17

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PROCESS 17: AIR POLLUTION CONTROL					
System 1: VAPOR RECOVERY UNIT					<u>S4.8, S15.6, S18.2, S56.1, S58.1</u>

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PROCESS 17: AIR POLLUTION CONTROL					
KNOCK OUT POT, 93-V-9004, 1ST STAGE KNOCKOUT, SEPARATOR, DIAMETER 6 FT, LENGTH 14 FT A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	D398				
COMPRESSOR, VAPOR RECOVERY STANDBY, 93-C-400C, 2.366 MMSCFD, 400 HP, 1 STAGE A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	D548				
KNOCK OUT POT, STANDBY COMPRESSOR DISCHARGE, 93-V-9003, DIAMETER 2 FT, LENGTH 6 FT A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	<u>D397</u>				
KNOCK OUT POT, SUCTION, 93-V-9005, DIAMETER 6 FT, LENGTH 12 FT A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	<u>D394</u>				
KNOCK OUT POT, FIRST STAGE, 93-V-9006, DIAMETER 4.5 FT, LENGTH 10 FT A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	<u>D395</u>				
COMPRESSOR, 93-C-9001A/B, VAPOR RECOVERY, 233,000 SCFH, 1250 HP, 2-STAGE A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	D549				
VESSEL, 93-V-9007, COMPRESSOR DISCHARGE KNOCKOUT, DIAMETER 3 FT 6 IN, LENGTH 10 FT A/N: 421774 <u>530497</u> Permit to Construct Issued: <u>TBD</u>	D396				

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PROCESS 17: AIR POLLUTION CONTROL					
EJECTOR, 93-EJ-9001, COMPRESSOR PACKING VENT A/N: 421771 530497 Permit to Construct Issued: <u>TBD</u>	D1299				H23.1
FUGITIVE EMISSIONS, MISC A/N: 421771 530497 Permit to Construct Issued: <u>TBD</u>	D872				H23.17
System 3: REFINERY RELIEF AND PHASE 0 FLARE UNIT					<u>S48.8</u> <u>S58.2</u>
FLARE, ELEVATED WITH STEAM INJECTION, 89-FT-900, PHASE 0, CALLIDUS, MODEL BTZ-US-24, NATURAL GAS, WITH AIR INGRESS PREVENTION DEVICE, MODEL BTZ, VS-24, 18 STEAM JETS, DIAMETER: 2 FT A/N: 40477 530492 Permit to Construct Issued: <u>TBD</u>	C401			H2S: 162 PPMV (8) <u>[40CFR 60 Subpart Ja, 9-12-2012]</u>	C1.13, D12.8, D323.2, E193.2, H23.30, <u>H23.x</u> , <u>H116.x</u> , <u>H+4</u>
DRUM, 89-V-9006, PHASE 0 FLARE WATER SEAL, LENGTH: 12 FT; DIAMETER: 7 FT A/N: 40477 530492 Permit to Construct Issued: <u>TBD</u>	D405				
DRUM, LIQUID BLOWDOWN, 89-V-9004, LENGTH: 16 FT; DIAMETER: 8 FT A/N: 40477 530492 Permit to Construct Issued: <u>TBD</u>	D407				
DRUM, LIQUID BLOWDOWN, 75-V-3, LENGTH: 20 FT; DIAMETER: 10 FT A/N: 40477 530492 Permit to Construct Issued: <u>TBD</u>	D408	D42			
System 13: REFINERY RELIEF AND PHASE II FLARE UNIT					<u>S48.8</u> <u>S58.2</u>
FLARE, ELEVATED WITH STEAM INJECTION, PHASE II, 75-FT-1, , CALLIDUS, MODEL BTZ-US-30, NATURAL GAS, H2S: 160 PPMV (8) <u>[40CFR 60 Subpart J, 6-24-2008]</u>	C403				C1.13, D12.8, D323.2, E193.2, <u>H23.5</u> , H23.30, <u>H23.x</u> , <u>H116.x</u> ,

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 17: AIR POLLUTION CONTROL					
WITH AIR INGRESS PREVENTION DEVICE, MODEL BTZ, VS-30, 18 STEAM JETS, DIAMETER: 2 FT 6 IN A/N: 420477 530494 Permit to Construct Issued: <u>TBD</u>				<u>H2S: 162 PPMV (8)</u> <u>[40CFR 60 Subpart Ja, 9-12-2012]</u>	H-1
DRUM, 75-V-1, PHASE II FLARE WATER SEAL, LENGTH: 30 FT; DIAMETER: 12 FT A/N: 420477 530494 Permit to Construct Issued: <u>TBD</u>	D406				
System 14: REFINERY RELIEF AND PHASE I FLARE UNIT					S18.8 <u>S58.2</u>
FLARE, ELEVATED WITH STEAM INJECTION, PHASE I, 89-FT-9000, , CALLIDUS, MODEL BTZ-US-30, NATURAL GAS, WITH AIR INGRESS PREVENTION DEVICE, MODEL BTZ, VS-30, 18 STEAM JETS, DIAMETER: 2 FT 6 IN A/N: 420477 530493 Permit to Construct Issued: <u>TBD</u>	C402			H2S: 160 PPMV (8) [40CFR 60 Subpart J, 6-24-2008] <u>H2S: 162 PPMV (8)</u> <u>[40CFR 60 Subpart Ja, 9-12-2012]</u>	C1.13, D12.8, D323.2, E193.2, H23.5 , H23.30, H23.x , <u>H116.x</u> , H-1
DRUM, 89-V-9002, PHASE I FLARE WATER SEAL, LENGTH: 32 FT; DIAMETER: 11 FT A/N: 420477 530494 Permit to Construct Issued: <u>TBD</u>	D404	D1235 D1236 D1239			

For Reference Only:

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 1: CRUDE DISTILLATION					P13.1
System 5: VACUUM DISTILLATION UNIT					S13.2, S15.5 , S15.12 <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
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PROCESS 2: COKING AND RESIDUAL CONDITIONING	P13.1
System 5: DELAYED COKING BLOWDOWN UNIT	S13.2, S15.3, S15.5 , S15.12 <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 3: CATALYTIC CRACKING					P13.1
System 1: FCCU					S13.2, S15.5 , S15.12 S42.1, <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 8: GAS PRODUCTION					P13.1
System 1: FCCU GAS PLANT/FRACTIONATION SECTION UNIT 61					S4.7, S13.2, S15.5 , S15.12 <u>S56.1</u>
System 2: FCCU GAS PLANT/CONCENTRATION AND COMPRESSION UNIT 63					S4.7, S13.2, S15.5 , S15.12 <u>S56.1</u>
System 3: FCCU GAS PLANT/LPG PREFRACTIONATION DRYING SECTION					S4.3, S13.2, S15.5 , S15.12 S31.2, <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 9: BLENDING					P13.1
System 1: GASOLINE BLENDING UNIT					S13.2, S15.5 , S15.12 <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 10: TREATING/STRIPPING					P13.1
System 1: SOUR WATER STRIPPING					S4.6, S13.2, S15.4, S15.5 ,

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 10: TREATING/STRIPPING					P13.1
					S15.12 <u>S56.1</u>
System 2: LPG MEROX TREATING UNIT #64					S4.2, S4.3, S13.2, S15.5, S15.12 <u>S56.1</u>
System 3: LPG MEROX TREATING UNIT #65					S13.2, S15.5, S15.12 , <u>S56.1</u>
System 4: FCC GASOLINE MEROX TREATING UNIT # 66					S13.2, S15.5, S15.12 <u>S56.1</u>
System 7: SPENT CAUSTIC OXIDATION UNIT					S13.2, S15.5, S15.12 <u>S56.1</u>
System 8: FIELD BUTANE CAUSTIC TREATING					S4.1, S4.2, S13.2, S15.5, S15.12 <u>S56.1</u>
System 10: AMINE TREATING UNIT #51					S4.6, S13.2, S15.12 S18.5, <u>S56.1</u>
System 13: FUEL GAS TREATING UNIT #88					S4.6, S13.2, S15.12 S31.5, <u>S56.1</u>
System 39: AMINE TREATING UNIT 39					S13.2, S15.4, S15.5, S15.12 <u>S56.1</u>
System 45: AMINE TREATING UNIT 45					S13.2, S15.4, S15.5, S15.12, S18.4, <u>S56.1</u>
System 46: AMINE TREATING UNIT 46					S13.2, S15.4, S15.5, S15.12 <u>S56.1</u>
System 55: AMINE TREATING UNIT 55					S4.6, S13.2, S15.4, S15.5, S15.12 <u>S56.1</u>

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 11: SULFUR PRODUCITON					P13.1
System 1: SULFUR RECOVERY UNIT TRAIN #1					S13.2, S13.9, S13.10, S15.11, S15.12 , S18.6, <u>S56.1</u>
System 2: SULFUR RECOVERY UNIT TRAIN #2					S13.2, S13.9, S13.10, S15.11, S15.12 , S18.6, <u>S56.1</u>
System 41: TAIL GAS UNIT 41, REDUCTION CONTROL					S4.5, S13.9, S15.8, S15.12 , S18.10, <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 13: OIL/WATER SEPARATION					
System 1: WASTE WATER TREATMENT SYSTEM					S4.3, S13.7, S15.5, S15.12 , <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 14: STORAGE TANK					P13.1
System 5: PRESSURE TANKS, BUTANE STORAGE					S4.4, S13.4, S15.12 , S31.5, <u>S56.1</u>
System 6: PRESSURE TANKS, OTHER					S15.12 , <u>S56.1</u>

Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 17: AIR POLLUTION CONTROL					P13.1
System 50: PHASE II AMINE TREATING UNIT 50					S13.2, S15.5,

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Equipment	ID No.	Connect To	RECLAIM Source	Emissions and Requirements	Conditions
PROCESS 17: AIR POLLUTION CONTROL					P13.1
					S15.12 , <u>S56.1</u>
System 88: FUEL GAS MIXING (UNIT #88)					S15.12 , <u>S56.1</u>
System 97: AMINE TREATING UNIT 97					S13.2, S15.5, S15.12 , <u>S56.1</u>

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 subject to this condition: P1, P2, P3, P4, P5, P7, P8, P9, P10, P11, P12, P14]

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

SYSTEM CONDITIONS

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**]

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[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]

S4.6 The following condition(s) shall apply to all affected devices listed under Section D of this system for fugitive emissions of volatile organic compounds (VOC):

All components are subject to District Rule 1173 and 40CFR60, Subpart GGG.

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

All new components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection. Components shall be defined as any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

All new valves greater than 2-inch size and major components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173 shall be distinctly identified from other components through their tag numbers (e.g. numbers ending in the letter "N"), and shall be noted in the records

All new valves in VOC service except those specifically exempted by Rule 1173, shall be bellow-sealed valves for 2-inch and smaller size, except in the following applications: heavy liquid service, control valve, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g. drain valves with valve stems in horizontal position), and retrofits with space limitation.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator shall 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 1173, 5-13-1994; RULE 1173, 6-1-2007; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; 40CFR 60 Subpart GGG, 6-2-2008]

[Systems subject to this condition: Process 4, System 5; Process 10, System 1, 10, 13, 55]

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S4.8 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 District Rule 1173.

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

All new components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection. Components shall be defined as any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

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

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator shall 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.

The operator shall provide to the District, no later than 60 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; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Systems subject to this condition: Process 17, System 1]

S4.9 The following condition(s) shall apply to all affected devices listed under Section H of this system for fugitive emissions of volatile organic compounds (VOC):

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All components are subject to District Rule 1173.

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

All new components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 7 days of detection. Components shall be defined as any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

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

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator shall 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.

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

[Systems subject to this condition: Process 4, System 1, 5, 7; Process 5, System 1; Process 10, System 5]

S7.1 The following conditions shall apply to all refinery operation and related devices from this system:

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All effluent wastewater and sour water from this unit shall be routed to a wastewater treatment system and a sour water treating system, respectively, each of these units and their associated control equipment shall be in full operation whenever this system is in operation.

RULE 1123, 12-7-1990]

[Systems subject to this condition: Process 2, System 1,3]

S13.2 All devices under this system are subject to the applicable requirements of the following rules or regulations:

CONTAMINANT	RULE	RULE/SUBPART
VOC	DISTRICT RULE	1123

[RULE 1123, 12-7-1990]

[Systems subject to this condition: Process 1, System 1,3,5; Process 2, System 1,3,5; Process 3, System 1; Process 4, System 1,3,5,7; Process 5, System 1; Process 7, System 1,3; Process 8, System 1, 2, 3, 4, 5, 6; Process 9, System 1; Process 10, System 1,2,3,4,5,6,7,8,10, 13,39,45,46,55; Process 11, System 1,2; Process 17, System 50, 97]

S13.13 All devices under this system are subject to the applicable requirements of the following rules or regulations:

CONTAMINANT	RULE	RULE/SUBPART
VOC	40CFR63, SUBPART	UUU
HCl	40CFR63, SUBPART	UUU

Pursuant to 40 CFR63.7(e), emissions in excess level of the relevant standard during periods of startup, shutdown, and malfunction shall not be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under Section 63.6(e).

The operator shall keep records to demonstrate compliance or exemption from this condition.

[40CFR 63 Subpart UUU, 4-20-2006]

[Systems subject to this condition: Process 5, System 1]

S15.3 The vent gases from all affected devices of this process/system shall be vented as follows:

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This process/system shall not be operated unless the sour gas treating unit(s) is in full use and has a valid permit to receive vent gases from this system.

All sour gases under normal operating conditions shall be directed to the sour gas treating unit(s).

[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 2, System 3, 5; Process 4, System 1,3,4; Process 8, System 5

S15.4 The vent gases from all affected devices of this process/system shall be vented as follows:

This process/system shall not be operated unless the sulfur recovery unit(s) is in full use and has a valid permit to receive vent gases from this system.

All acid gases under normal operating conditions shall be directed to the sulfur recovery unit(s).

[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 10, System 1, 5,6,39, 45, 46, 55]

~~S15.5 The vent gases from all affected devices of this process/system shall be vented as follows:~~

~~This process/system shall not be operated unless the vapor recovery system(s) is in full use and has a valid permit to receive vent gases from this system.~~

~~All vent gases under normal operating conditions shall be directed to the vapor recovery system(s).~~

~~**[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 1, System 5; Process 2, System 1,3,5; Process 3, System 1; Process 4, System 1,3,5,7; Process 5, System 1; Process 7, System 1, 3; Process 8, System 1,2,3,4,5,6,7,8,39,45,46,55; Process 13, System 1; Process 17, System 50, 97]~~

Note: Condition S15.5 is being deleted and replaced by S56.1

~~S15.6 The vent gases from all affected devices of this process/system shall be vented as follows:~~

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This process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit to receive vent gases from this system.

All emergency vent gases shall be directed to a blowdown flare system.

~~**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 17, System 1]~~

Note: Condition S15.6 is being deleted and replaced by S56.1

S15.12—The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to a blowdown vapor recovery system and/or blowdown flare system.

When the emergency vent gases are being directed to the blowdown vapor recovery system, this process/system shall not be operated unless the blowdown vapor recovery system is in full use and has a valid permit to receive vent gases from this system.

When the emergency vent gases are being directed to the blowdown flare system, this process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit to receive vent gases from this system.

~~**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 1, System 1,3,5; Process 2, System 1,3,5; Process 3, System 1; Process 4, System 1,3,5,7; Process 5, System 1; Process 7, System 1, 3; Process 8, System 1,2,3,4; Process 9, System 1, Process 10, System 1,2,3,4,5,6,7,8,10,13,39,45,46,55; Process 11, System 1,2,41; Process 13, System 1; Process 14, System 5,6; Process 17, System 50, 88, 97]~~

Note: Condition S15.12 is being deleted and replaced by S56.1.

S18.2—All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Blending Unit (Process: 9, System: 1)

Hydrotreating Units (Process: 4, System: 1, 3, 5 & 7)

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~~Storage Tanks (Process: 14, System: 5 and 6)~~

~~Gas Production Units (Process: 8, System: 1, 2 & 3)~~

~~FCC Unit (Process: 3, System: 1)~~

~~Treating/Stripping Units (Process: 10, System: 1, 2, 3, 4, 5, 6, 7, 8, 39, 45, 46, and 55)~~

~~Tail Gas Unit (Process: 11, System: 41)~~

~~Delayed Coking Blowdown Unit (Process: 2, System: 5)~~

~~Oil/Water Separation Unit (Process: 13, System: 1)~~

~~Catalytic Reforming Unit (Process: 5, System: 1)~~

~~Air Pollution Control (Process: 17, System: 50, 88, and 97)~~

~~Crude Distillation Units (Process: 1, System: 1, 3, and 5)~~

~~Delayed Coking Units (Process: 2, System: 1 and 3)~~

~~Alkylation and Isomerization Units (Process: 7, System: 1 and 3)~~

~~Fuel Gas Treating Unit (Process: 10, System: 13)~~

~~**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 17, System 1]**~~

Note: Condition S18.2 is being deleted and replaced by S58.1.

S18.3 All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Delayed Coking Units (Process: 2, System: 1 and 3)

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[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 8, System 5]

~~S18.8—All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:~~

~~Sulfur Recovery Units (Process: 11, System: 1, 2, 6, and 41)~~

~~Blending Unit (Process: 9, System: 1)~~

~~Hydrotreating Units (Process: 4, System: 3, 5 & 7)~~

~~Storage Tanks (Process: 14, System: 1, 5, and 6)~~

~~Gas Production Units (Process: 8, System: 1, 2 & 3)~~

~~FCC Unit (Process: 3, System: 1)~~

~~Treating/Stripping Units (Process: 10, System: 1, 2, 3, 4, 5, 6, 7, 8, 39, 45, 46, and 55)~~

~~Delayed Coking Blowdown Unit (Process: 2, System: 5)~~

~~Oil/Water Separation Unit (Process: 13, System: 1)~~

~~Catalytic Reforming Unit (Process: 5, System: 1)~~

~~Air Pollution Control (Process: 17, System: 1, 50, 88, and 97)~~

~~Crude Distillation Units (Process: 1, System: 1, 3, and 5)~~

~~Delayed Coking Units (Process: 2, System: 1 and 3)~~

~~Alkylation and Isomerization Units (Process: 7, System: 1 and 3)~~

[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 17, System 3,13,14]

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Note: Condition S18.8 is being deleted and replaced by S58.2.

S31.1 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 344827 and 452241:

All valves shall be leakless valves except in the following applications: valves in heavy liquid service, control valves, instrument piping/tubing valves, valves requiring torsional stem motion, situations where valve failure could pose safety hazard (e.g., drain valves with stems in horizontal position), retrofit/special application valves with space limitation, and valves not commercially available at the time of permit to construct issuance. The District shall approve all exceptions to this requirement.

All valves and new major components shall be physically identified in the field with special marking that distinguish the components from non-BACT components. Additionally, all new components shall be identified as BACT components in the records.

The leak rate from non leakless valves and other non-valve fugitive components shall not exceed 500 ppmv. A leak rate greater than 500 ppmv, but less than or equal to 1,000 ppmv, shall be repaired within 7 calendar days after detection of the leak.

All non leakless valves, except those specifically exempted by Rule 1173, shall be inspected monthly using EPA Method 21. The operator may begin quarterly inspections, upon District approval, after two consecutive monthly inspections in which only two percent or less of non-bellows seal valves are found to be leaking above 500 ppmv.

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.

For application number 452241, the operator shall provide the following information to the District no later than 60 days after initial startup:

- (a) Process and instrumentation diagrams (or some other equivalent District-approved diagrams) that identify all valves. Along with the diagrams, the operator shall provide a listing of all valves categorized by location, type, size, accessibility and service; and
- (b) A recalculation of fugitive emissions based on actual fugitive components installed and removed from service. All valves shall be categorized by size and service. The operator shall submit a listing of all non-bellows seal valves categorized by tag number, type, size, body material, service, operating temperature, operating pressure and reason(s) why bellows seal valves were not used.

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[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 1]

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), 416628, 504767 (Unit 86-B-9002), 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.

[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]

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[Systems subject to this condition: Process 4, System 1; Process 7, System 1,3; Process 8, System 4; Process 10, System 13; Process 14, System 5; Process 15, System 4]]

S31.x The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 542026 (Unit 10), 542027 (Unit 11), 542028 (Unit 30), 542029 (Unit 31), 542035 (Unit 60), 542030 (Unit 43), 542031 (Unit 44):

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.

All new light liquid pumps shall utilize double seals.

All compressors shall be equipped with a seal system with a higher pressure barrier fluid.

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.

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 Reference 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. 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.

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 change to a quarterly inspection program with the approval of the District.

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The operator shall revert from a quarterly to monthly inspection program if less than 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.

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

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 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 1, System 1, 3; Process 2, System 1, 3; Process 4, System 3; Process 8, System 4, 5]

S56.1 Vent gases from all affected devices of this process/system shall be directed to a gas recovery system, except for venting from those equipment specifically indicated in a permit condition, and for the following vent gases which may be directed to a flare:

- 1) Vent gases during an emergency as defined in Rule 1118;
- 2) Vent gases resulting from planned shutdowns, startups and/or turnarounds as defined in Rule 1118, provided that the owner/operator follows the applicable options and any associated limitations to reduce flaring that were identified, evaluated and most recently submitted by the owner/operator to the executive officer pursuant to Rule 1118; and
- 3) Vent gases due to and resulting from an essential operating need, as defined in Rule 1118.

The evaluation of options to reduce flaring during planned shutdowns, startups and/or turnarounds shall be updated annually to reflect any revisions, and submitted to the Executive Officer in the first quarter of each year, but no later than March 31st of that year.

This process/system shall not be operated unless its designated flare(s) and vapor recovery system are in full use and have valid permits to receive vent gases from this process/system.

[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]

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[Systems subject to this condition : Process 1, System 1 , 3 , 5; Process 2, System 1 , 3 , 5; Process 3, System 1; Process 4, System 1 , 3 , 5 , 7; Process 5, System 1; Process 7, System 1 , 3; Process 8, System 1 , 2 , 3 , 4; Process 9, System 1; Process 10, System 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 10 , 13, 39, 45, 46, 55; **Process 11, System 1, 2, 41**; Process 13, System 1; Process 14, System 5 , 6; Process 17, System 1, 46 , 50 , 88 , 97]

S58.1 The vapor recovery system shall only be used to receive and handle vent gases from the following process(es) and system(s):

Crude Distillation Units (Process 1: System 1, 3, 5)

Delayed Coking Units (Process 2: System 1, 3)

Delayed Coking Blowdown Unit (Process 2: System 5)

FCC Unit (Process 3: System 1)

Hydrotreating Units (Process 4: System 1, 3, 5, 7)

Catalytic Reforming Unit (Process 5: System 1)

Alkylation and Isomerization Units (Process 7: System 1, 3)

Gas Production Units (Process 8: System 1, 2, 3, 4, 5)

Blending Unit (Process 9: System 1)

Treating/Stripping Units (Process 10: System 1, 2, 3, 4, 5, 6, 7, 8)

Amine Treating Units (Process 10: System 10, 39, 45, 46, 55)

Fuel Gas Treating Unit (Process 10: System 13)

Tail Gas Treating Unit (Process 11: System 41)

Oil/Water Separation Unit (Process 13: System 1)

Storage Tanks (Process 14: System 1, 5, 6)

Air Pollution Control (Process 17: System 50, 88, and 97)

The flare gas recovery system shall be operated in full use when any of the above process(es) and system(s) is in operation. Full use means the compressor train (either 1st stage and 2nd stage compressors, or spare compressor in Process 17, System 1) is online at any given time, except during planned startups or shutdowns.

[**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]**

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[Systems subject to this condition: Process 17, System 1]

S58.2 The Phase 0, I, and II flares shall only be used to receive and handle vent gases from the following process(es) and system(s):

Crude Distillation Units (Process 1: System 1, 3, 5)

Delayed Coking Units (Process 2: System 1, 3)

Delayed Coking Blowdown Unit (Process 2: System 5)

FCC Unit (Process 3: System 1)

Hydrotreating Units (Process 4: System 1, 3, 5, 7)

Catalytic Reforming Unit (Process 5: System 1)

Alkylation and Isomerization Units (Process 7: System 1, 3)

Gas Production Units (Process 8: System 1, 2, 3, 4, 5)

Blending Unit (Process 9: System 1)

Treating/Stripping Units (Process 10: System 1, 2, 3, 4, 5, 6, 7, 8)

Amine Treating Units (Process 10: System 10, 39, 45, 46, 55)

Fuel Gas Treating Unit (Process 10: System 13)

Sulfur Recovery Units (Process 11: System 1, 2)

Tail Gas Treating Unit (Process 11: System 41)

Oil/Water Separation Unit (Process 13: System 1)

Storage Tanks (Process 14: System 1, 5, 6)

Vapor Recovery System (Process 17: System 1)

Air Pollution Control (Process 17: System 50, 88, and 97)

The flare gas recovery system shall be operated in full use when any of the above process(es) and system(s) is in operation. Full use means the compressor train (either 1st stage and 2nd stage compressors, or spare compressor in Process 17, System 1) is online at any given time, except during planned startups or shutdowns.

[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]

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[Systems subject to this condition: Process 17, System 3, 13, 14]

DEVICE CONDITIONS:

A. Emission Limits

A 63.3 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM	Less than or equal to 2 LBS IN ANY ONE DAY
CO	Less than or equal to 1 LBS IN ANY ONE DAY

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

[Devices subject to this condition: D932]

C. Throughput or Operating Parameter Limits

C1.13 The operator shall limit the fuel usage to no more than 207200 cubic feet per day.

For the purpose of this condition, fuel usage shall be defined as the sum of instantaneous flow rates in cubic feet per hour of purge gases used in device numbers C401, C402, and C403 times 24 hours per day as read from each flow meter.

[**RULE 1301, 12-7-1995**]

[Devices subject to this condition: C400, C401, C402, C403]

D. Monitoring/Testing Requirements

D12.8 The operator shall install and maintain a(n) thermocouple or any other equivalent device to accurately indicate the presence of a flame at the pilot light.

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

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[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; 40CFR 60 Subpart A, 5-16-2007]

[Devices subject to this condition: C400, C401, C402, C403]

D322.1 The operator shall perform annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

[RULE 1140, 2-1-1980; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 404, 2-7-1986; RULE 405, 2-7-1986]

[Devices subject to this condition: D946, E1391]

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "visible emission evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

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[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984]

[Devices subject to this condition: D23, D24, D25, D26, D27, D28, D29, D30, D31, D40, D41, D68, D69, D933, D934, D935, D936, D937, D938, D939, D1231, D1232, D1233]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "visible emission evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in section k of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984]

[Devices subject to this condition: D10, D11, D14, D15, C400, C401, C402, C403]

D381.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever

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visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emissions (not including condensed water vapor) are detected, the operator shall take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions; and
- 3). Date and time visible emission was abated.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984]

[Devices subject to this condition: D946, E1391, D1477]

E. Equipment Operation/Construction Requirements

E166.1 The operator shall keep all openings from this equipment closed when in use except during absorbent change out. No detectable VOC emissions shall be released to the atmosphere from any opening or spent absorbent from this equipment as indicated by an instrument reading of less than 500 ppm measured in accordance with EPA reference Method 21.

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

[Devices subject to this condition: D1212, D1213, D1214]

E193.2 The operator shall operate and maintain this equipment according to the following specifications:

The operator shall comply with all applicable requirements specified in Section 60.18 of the 40CFR60 Subpart A

[40CFR 60 Subpart A, 5-16-2007]

[Devices subject to this condition: C400, C401, C402, C403]

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H. Applicable Rules

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
H2S	District Rule	465
VOC	District Rule	465

[RULE 465, 8-13-1999]

[Devices subject to this condition: D849, D850, D894, D907, D1262, D1263, D1290, D1291, D1292, D1293, D1294, D1299, D1576]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1176
VOC	40CFR60,SUBPART	QQQ

[RULE 1176, 9-13-1996; 40CFR 60 Subpart QQQ, 10-17-2000]

[Devices subject to this condition: D1468, D1469, D1470, D1471, D1472]

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~~, C429, D430, D768]

H23.16 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

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VOC | 40CFR60,SUBPART | GGG

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

[Devices subject to this condition: D594, D708, D1327, D1328, D1342, D1348, D1363, D1364, D1649]

H23.17 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

[RULE 1173, 5-13-1994; RULE 1173, 6-1-2007]

[Devices subject to this condition:D872, D1310, D1312, D1314, D1317, D1318, D1319, D1321, D1323, D1325, D1331, D1333, D1334, D1336, D1337, D1338, D1339, D1340, D1341, D1343, D1344, D1345, D1346, D1347, D1349, D1350, D1351, D1352, D1354, D1355, D1357, D1358, D1365, D1366, D1367, D1368, D1369, D1370, D1418, D1442, D1623, D1624, D1625, D1626]

H23.30 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
SOX	District Rule	1118

[RULE 1118, 11-4-2005]

[Devices subject to this condition: C400, C401, C402, C403]

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

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
<u>H2S</u>	<u>40CFR60, SUBPART</u>	<u>Ja</u>

[40CFR 60 Subpart Ja, 9-12-2012]

The operator shall comply with Rule 1118 as its elected means to comply with the requirements of Subpart Ja pursuant to the alternative compliance options in 40CFR 60.103a(g).

[Devices subject to this condition: C401, C402, C403]

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I. Administrative

~~II.1 The operator shall comply with all the requirements of the compliance schedule specified in Variance Case No. 3845-69, dated May 8, 2007 in accordance with the findings and decisions of the hearing board or as subsequently modified by the hearing board. The operator shall submit progress reports at least semi-annually, or more frequently if specified in the findings and decisions. The progress reports shall contain dates for achieving activities, milestones or compliance required in the schedule of compliance and dates when such activities, milestones or compliance were achieved; and an explanation of why any dates in the schedule of compliance were not, or will not be met, and any preventative or corrective measures adopted.~~

~~The variance (or Order for Abatement) referenced in this condition does not affect federal or citizen enforceability of the underlying SIP approved rules for which the applicant is receiving the variance (or Order for Abatement).~~

~~[RULE 3004(a)(10)(C), 12-12-1997]~~

~~[Devices subject to this condition: C401, C402, C403]~~

Note: Ultramar notified the District they achieved final compliance for Variance Case No. 3845-69 on July 22, 2009. Written test results were provided in accordance with the increments of the progress contained in the Minute Order signed by the Board on July 1, 2009. Therefore, this condition is no longer needed.

K. Recordkeeping/Reporting

K67.8 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

The name of the person performing the inspection and/or maintenance of the filter media

The date, time, and results of the inspection

The date, time, and description of any maintenance or repairs resulting from the inspection

[RULE 1140, 2-1-1980; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 404, 2-7-1986; RULE 405, 2-7-1986]

[Devices subject to this condition: D946, E1391, D1477]

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BACKGROUND:

Ultramar, Inc. is a refinery in the city of Wilmington. The facility is a NOx and SOx RECLAIM, Title V facility. The refinery submitted applications for their Refinery Relief Protection Project, wherein the refinery plans to modify the piping and/or pressure relief valve(s) (PRVs) connected to certain equipment in various process units to the flare header. This refinery-wide process safety improvement project is to ensure that individual pieces of equipment have adequate relief protection in the event of an emergency overpressure scenario. The work is also being done to comply with California Code Title 8 “Clear Path Regulation”, Subchapter 15, Article 18, §6858 (Pressure-Relieving Devices) to create a clear relief path in case of an emergency, breakdown, or overpressuring. In addition, Ultramar submitted applications for a change of permit conditions to clarify the operation of the flare and flare vapor recovery system during shutdowns, startups, and turnarounds (SD/SU/TA).

Ultramar submitted the applications listed in Table 1:

Table 1 – AQMD Applications Submitted

A/N	Date Submitted	Equipment	Device ID	Requested Action	Previous A/N Permit #
542026	8/15/2012	Crude Unit 10	Various	Modify piping and/or pressure relief valve(s) (PRVs)	244379 D38231
542027	8/15/2012	Crude Unit 11	Various	Modify piping and/or pressure relief valve(s) (PRVs)	177987 D07041
542028	8/15/2012	Coker Unit 30	Various	Modify piping and/or pressure relief valve(s) (PRVs)	177993 D07103
542029	8/15/2012	Coker Unit 31	Various	Modify piping and/or pressure relief valve(s) (PRVs)	289077 D082482
542030	8/15/2012	Light Ends Recovery Unit 43	Various	Modify piping and/or pressure relief valve(s) (PRVs)	416627 (Status 26)
542031	8/15/2012	Light Ends Recovery Unit 44	Various	Modify piping and/or pressure relief valve(s) (PRVs)	304107 D99448
542032	8/15/2012	Sour Water Stripping Unit 48	Various	Modify piping and/or pressure relief valve(s) (PRVs)	178088 D07281
542033	8/15/2012	Naphtha Hydrotreating/Splitter Unit 56	Various	Modify piping and/or pressure relief valve(s) (PRVs)	542033 (Status 26)

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A/N	Date Submitted	Equipment	Device ID	Requested Action	Previous A/N Permit #
542034	8/15/2012	Gas Oil Hydrodesulfurization Unit 58	Various	Modify piping and/or pressure relief valve(s) (PRVs)	542033 F61556
542035	8/15/2012	Naphtha Hydrotreating Unit 60	Various	Modify piping and/or pressure relief valve(s) (PRVs)	378969 F61397
542036	8/15/2012	Platformer Unit 70	Various	Modify piping and/or pressure relief valve(s) (PRVs)	433983 G14559
542038	8/15/2012	Gas Oil Unibon Hydrotreating Unit 80	Various	Modify piping and/or pressure relief valve(s) (PRVs)	452241 (Status 26)
542039+	8/15/2012	Flare, Phase 0	C401 D405 D407 D408	Change of Condition	530494 (Status 21)
542040++	8/15/2012	Flare, Phase I	C402 D404	Change of Condition	530493 (Status 21)
542041+++	8/15/2012	Flare, Phase II	C403 D406	Change of Condition	530492 (Status 21)
530492	12/16/2011	Flare, Phase 0	C401 D405 D407 D408	Change of Condition	420477 F91925
530493	12/16/2011	Flare, Phase I	C402 D404	Change of Condition	420477 F91925
530494	12/16/2011	Flare, Phase II	C403 D406	Change of Condition	420477 F91925
530497	12/16/2011	Vapor Recovery System	Various	Change of Condition	421771 (Status 26)
530491	12/16/2011	Title V Minor Permit Revision	n/a	Title V Revision	n/a
542042	8/15/2012	Title V Significant Permit Revision	n/a	Title V Revision	n/a

+ Rejected, use A/N 530494

++ Rejected, use A/N 530493

+++ Rejected, use A/N 530492

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FEE EVALUATION:

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, \$
542026	Crude Unit 10	231300	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing	--	--	--	--	\$ 2,729.30	\$ 2,729.30
542027	Crude Unit 11	231300	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing	--	--	--	--	\$ 2,729.30	\$ 2,729.30
542028	Coker Unit 30	351245	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing	--	--	--	--	\$ 2,729.30	\$ 2,729.30
542029	Coker Unit 31	351245	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing	--	--	--	--	\$ 2,729.30	\$ 2,729.30
542030	Light Ends Recovery Unit 43	312950 *	50	20		\$ 4,747.86	\$ 4,747.86
	Expedited Permit Processing	--	--	--	--	\$ 2,373.93	\$ 2,373.93
542031	Light Ends Recovery Unit 44	312950	50	20		\$ 4,747.86	\$ 4,747.86
	Expedited Permit Processing	--	--	--	--	\$ 2,373.93	\$ 2,373.93
542032	Sour Water Stripping Unit 48	95	50	20		\$ 4,747.86	\$ 4,747.86
	Expedited Permit Processing		--	--	--	\$ 2,373.93	\$ 2,373.93
542033	Naphtha Hydrotreating/Splitter Unit 56	252950	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing		--	--	--	\$ 2,729.30	\$ 2,729.30
542034	Gas Oil Hydrodesulfurization Unit 58	000503	50	20	D	\$ 5,458.60	\$ 5,458.60

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A/N	Equipment	BCAT	Type	Status	Fee Schedule	Fees Required, \$	Fees Paid, \$
	Expedited Permit Processing		--	--	--	\$ 2,729.30	\$ 2,729.30
542035	Naphtha Hydrotreating Unit 60	333950	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing		--	--	--	\$ 2,729.30	\$ 2,729.30
542036	Platformer Unit 70	329708	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing		--	--	--	\$ 2,729.30	\$ 2,729.30
542038	Gas Oil Unibon Hydrotreating Unit 80	252950	50	20	D	\$ 5,458.60	\$ 5,458.60
	Expedited Permit Processing	--	--	--	--	\$ 2,729.30	\$ 2,729.30
530494	Flare, Phase 0	92	60	20	F	\$ 6,675.72	\$ 6,675.72
	Expedited Permit Processing	--	--	--	--	\$ 3,337.86	\$ 3,337.86
530493	Flare, Phase 1	92	60	20	F	\$ 6,675.72	\$ 6,675.72
	Expedited Permit Processing	--	--	--	--	\$ 3,337.86	\$ 3,337.86
530492	Flare, Phase 2	92	60	20	F	\$ 3,337.86	\$ 3,337.86
	Expedited Permit Processing	--	--	--	--	\$ 1,668.93	\$ 1,668.93
530491	Title V Minor Permit Revision	555009	n/a	n/a	n/a	\$ 1,747.19	\$ 1,747.19
542042	Title V Significant Permit Revision	555009	n/a	n/a	n/a	\$ 1,789.12	\$ 1,789.12
Total						\$123,626.73	\$123,626.73

PERMIT HISTORY:

All the units in this Refinery Relief Protection Projects as well as the vapor recovery system and flares are existing units. The permit history for these units is as follows:

A/N 542026 - Crude Unit 10

A/N	Application Type	Permit #	Permit Status	Application Description
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A/N	Application Type	Permit #	Permit Status	Application Description
244379	50	D38231	Active	Modification to add 2-400 hp crude unit distillation feed pumps serving the sweet crude delivery line
177988	40	D07042	Inactive	Change of ownership
C26730	20	M57656	Inactive	Install second crude distillation tower to double capacity
C05581	0	M01366	Inactive	Install new crude unit
C02372		P65861	Inactive	Add second desalter and pump P109 and P110
A79352				
A70568				
A54379		P43568	Inactive	

A/N 542027 - Crude Unit 11

A/N	Application Type	Permit #	Permit Status	Application Description
177987	40	D07041	Active	Change of ownership
126524	30	M57659	Inactive	Install second crude distillation tower to double capacity

A/N 542028 –Coker Unit 30

A/N	Application Type	Permit #	Permit Status	Application Description
485018	50	--	--	Add knockout pot. Knockout pot to be added to Light Ends Recovery Unit 43 (A/N 416627/542030); Canceled
483151	50	--	--	Replace coke drum; Application was cancelled due to fiscal uncertainty.
483149	50	--	--	Replace coke drum; Application was cancelled due to fiscal uncertainty.
177993	40	D07103	Active	Change of ownership
126525	30	M45657	Inactive	Separate out existing coker unit into 2 separate units
C0521	0	P69245	Inactive	Add fractionators, overhead condenser in parallel to existing condenser
A70567		P49253	Inactive	Add spare pump P-306B
A54381		P39335	Inactive	Install new coker unit

A/N 542029 – Coker Unit 31

A/N	Application Type	Permit #	Permit Status	Application Description
483154	50	--	--	Replace coke drum; Application was cancelled due to fiscal uncertainty.

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A/N	Application Type	Permit #	Permit Status	Application Description
483159	50	--	--	Replace coke drum; Application was cancelled due to fiscal uncertainty.
289077	50	D82482	Active	Add new coker feed pump
177996	40	D07106	Inactive	Change of ownership
C27290	50	M45668	Inactive	Add new coke drums, fractionators, heat exchangers, and pumps
C15023				
C05021	0	P69245	Inactive	

A/N 542030- Light Ends Recovery Unit 43

A/N	Application Type	Permit #	Permit Status	Application Description
416627	50	--	--	Modification to add equipment due to Alkylation Improvement Project (Implement ReVAP); Increase butane recovery for Butamer unit feed
304106	50	D99447	Active	Modify existing field butane lean oil exchanger 81-E-1A/B to serve as a cooler for naphtha feed to bottom section of the sponge absorber 43-V-402
178044	40	D07196	Inactive	Change of ownership
126526	30	M43978	Inactive	
A72869	0	P51996	Inactive	Add new condensate knockout pot
A54383	0	P44483	Inactive	

A/N 542031 - Light Ends Recovery Unit 44

A/N	Application Type	Permit #	Permit Status	Application Description
304107		D99448	Active	Add naphtha feed cooler heat exchanger 44-E-4011
178045	40	D07197	Inactive	Change of ownership
C27279	50	M44109	Inactive	
C17132				
A72869	0	P51996	Inactive	Add new condensate knockout pot
A54383	0	P44483	Inactive	

A/N 542032 – Sour Water Stripping Unit 48

A/N	Application Type	Permit #	Permit Status	Application Description
178088	40	D07281	Active	Change of ownership
C41276	10	M40037	Inactive	Increase capacity of sour water stripping unit

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A/N 542033 - Naphtha Hydrotreating/Splitter Unit 56

A/N	Application Type	Permit #	Permit Status	Application Description
416624	50	--	--	Modification to add equipment due to Alkylation Improvement Project (Implement ReVAP); Enhance unit to separate the butane and light straight runs (hydrocarbons)
285344	50	F61585	Active	Modify unit for Reformulated Fuels Program
275756	10	--	--	Install new Naphtha Hydrotreating/Splitter Unit 56

A/N 542034 - Gas Oil Hydrodesulfurization Unit 58

A/N	Application Type	Permit #	Permit Status	Application Description
312555	50	F61556	Active	Modify unit for Reformulated Fuels Program
	10	--	--	Install new Gas Oil Hydrodesulfurization Unit 58

A/N 542035 - Naphtha Hydrotreating Unit 60

A/N	Application Type	Permit #	Permit Status	Application Description
378969	50	F61397	Active	Convert existing olefin treater to Naphtha Hydrotreating Unit 60 due to CARB Reformulated Fuels Program Phase 3
291945	50	--	--	Modify Unit 60 olefin treater; Cancelled due to subsequent A/N 378969
176871	40	D58063	Inactive	Change of ownership
170125	50			Modify unit to increase capacity by increasing hp of compressors
C27288	20	M27288	Inactive	Phase I refinery expansion
C15026				Construct Naphtha Hydrodesulfurization Unit

A/N 542036 - Platformer Unit 70

A/N	Application Type	Permit #	Permit Status	Application Description
433983	50	G14559	Active	Installation of UOP's Chlorosorb system to comply with 40 CFR 63 Subpart UUU
178090	40	D07283	Inactive	Change of ownership
C27285	20	M40032	Inactive	New construction of Reforming Unit
C15029				

A/N 542038 - Gas Oil Unibon Hydrotreating Unit 80

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A/N	Application Type	Permit #	Permit Status	Application Description
452241	50	--	--	Change the service on an existing service (80-V-9):
344827	50	F63690	Active	Modify unit due to CARB Reformulated Fuels Program Phase 2
301268	50	--	--	Upgrade unit for CARB new diesel requirements; PC issued; Extension denied; Refinery appealed but then decided to cancel application
257792	50	D60407	Active	Addition of pump
177988	40	D07108	Inactive	Change of ownership
C27286		M40031		
C15033				PC issued

A/N 530492 – Flare, Phase 0

A/N	Application Type	Permit #	Permit Status	Application Description
542039	60	--	--	Application Rejected; No Fees Paid
420477	50	F91925	Active	Replace flare tips and air ingress prevention devices
307710	60	F13573	Inactive	Change of condition; Revised limit on purge/pilot gas to purge gas only
181488	50	D39343	Inactive	Modification to convert Phase 0 to acid gas flare (with Phase I as backup)
178093	40	D07286	Inactive	Change of ownership
159691	60	M60644	Inactive	Modified purge and pilot gas rates (increased to prevent oxygen migration causing detonations at the flare tip); changed limit on H2S content in refinery gas
A54389	0	P44737	Inactive	Original Construction of Phase 0 Flare

A/N 530493 – Flare, Phase I

A/N	Application Type	Permit #	Permit Status	Application Description
542040	60			Application Rejected; No Fees Paid
420477	50	F91925	Active	Replace flare tips and air ingress prevention devices
380710	50	--	--	Modify flare by installing new tie-ins for new Unit 56 debutanizer and Overhead accumulator, and new Unit 43 feed drum, and new fuel gas mercaptan Unit 88. Application was cancelled.
307710	60	F13573	Inactive	Change of condition; Revised limit on

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A/N	Application Type	Permit #	Permit Status	Application Description
				purge/pilot gas to purge gas only
181488	50	D39343	Inactive	Modification to convert Phase 0 to acid gas flare (with Phase I as backup)
178093	40	D07286	Inactive	Change of ownership
159691	60	M60644	Inactive	Modified purge and pilot gas rates (increased to prevent oxygen migration causing detonations at the flare tip); changed limit on H2S content in refinery gas
C27273	50			
A54389		P44737	Inactive	Original construction of Phase I flare

A/N 530494 – Flare, Phase II

A/N	Application Type	Permit #	Permit Status	Application Description
542041	60			Application Rejected; No Fees Paid
420477	50	F91925	Active	
380718	50	--	--	Modify flare by installing new tie-ins for new Unit 56 debutanizer and Overhead accumulator, and new Unit 43 feed drum, and new fuel gas mercaptan Unit 88. Application was cancelled.
307710	60	F13573	Inactive	Change of condition; Revised limit on purge/pilot gas to purge gas only
181488	50	D39343	Inactive	Modification to convert Phase 0 to acid gas flare (with Phase I as backup)
178093	40	D07286	Inactive	Change of ownership
159691	60	M60644	Inactive	Modified purge and pilot gas rates (increased to prevent oxygen migration causing detonations at the flare tip); changed limit on H2S content in refinery gas
C37958	50	M57576	Inactive	Original construction of Phase II flare (Part of Phase II expansion)

A/N 530497 Vapor Recovery System Unit 93

A/N	Application Type	Permit #	Permit Status	Application Description
421771	50	--	--	Modify unit to accommodate additional vapors from Alkylation Improvement Project (Implement ReVAP)
421771	50	D86567	Active	Replace pump 93-P-9008A/B with pump 93-P-9013

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A/N	Application Type	Permit #	Permit Status	Application Description
256882	50	D71146	Inactive	Replace compressors 93-C-9000A/B with larger 93-C-9001 and add other equipment
178026	40	D07161	Inactive	Change of ownership; Modify unit to serve crude unit overhead and quench tower
C39183	50	M57744	Inactive	Modify unit to serve crude unit overhead and quench tower to add additional compressor
C27274				Construct vapor recovery system (associated with original construction of Phase I flare C27273)

PROCESS DESCRIPTION:

As a refinery, Ultramar operates many process units in the production of gasoline, jet fuel, ultra-low-sulfur diesel, CARB diesel, propane, coke, asphalt, light cycle oil, fluidized catalytic cracker slurry oil, and liquefied petroleum gases. Some of the process units the refinery operates to produce the above for mentioned products include, but not limited to:

- **Crude Unit 10 & Crude Unit 11:** atmospheric distillation units that separates the incoming crude oil into various fractions of different boiling ranges, each of which are then processed further in the other refinery processing units. The products are naphtha, gas oil, and reduced crude. Crude Unit 10 and 11 are identical.
- **Coker Unit 30 & Coker Unit 31:** processing units that convert the residual oil from the vacuum distillation column into low molecular weight hydrocarbon gases, naphtha, light and heavy gas oils, sour gas, and petroleum coke. Coker Unit 30 and 31 are identical.
- **Light Ends Recovery Unit 43 & Light Ends Recovery Unit 44:** units that process naphtha and byproduct gases (e.g., unstabilized LPG) from the Naphtha Hydrotreating/Splitter Unit 56, Naphtha Hydrotreating Unit 60, and Platformer Unit 70. The Light Ends Recovery Unit serves to recover butanes and other hydrocarbons, thus producing a stabilized Naphtha product.
- **Sour Water Stripping Unit 48:** system that removes ammonia and hydrogen sulfide from the refinery sour water. Once the water is stripped of ammonia and hydrogen sulfide, it is used in the desalters in Crude Unit 10 & Crude Unit 11; any surplus is sent to the effluent water .
- **Naphtha Hydrotreating/Splitter Unit 56:** unit that basically pretreats the straight run, coker, and purchased naphtha by removing sulfur, oxygen, nitrogen, metals and other impurities before it

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can be further processed in the Platformer Unit 70. Any unstabilized LPG (butane) from this unit will be sent to the Light Ends Recovery Units 43 and 44 for further processing.

- **Gas Oil Hydrodesulfurization Unit 58:** a.k.a., GOH hydrotreater uses hydrogen to treat raw gas oil to reduce the sulfur, nitrogen, and metal contents of the raw gas oil feed to produce a high quality feed for the FCC feed (hydrotreated gas oil or HTGO), distillate, sour naphtha, and sour gas.
- **Naphtha Hydrotreating Unit 60:** process unit that uses hydrogen to reduce the olefin and sulfur content in the FCC gasoline, allowing the refinery to produce reformulated (CARB) gasoline.
- **Platformer Unit 70:** a reformer that takes the sweetened naphtha and transform it through reactions into reformat, which is a high octane product used for gasoline blending. The process also produces some hydrogen, which is used in the Naphtha Hydrotreating/Splitter Unit 56 and the Gas Oil Hydrodesulfurization Unit 58.
- **Gas Oil Unibon Hydrotreating Unit 80:** a.k.a., Gas Oil Unibon Hydrotreating Unit 80 (Unibon is the name given by UOP to this hydroprocessing methodology) removes contaminants such as organic sulfur, oxygen, nitrogen, and organo-metallic compounds and saturates olefinic and aromatic compounds in the distillate feed. Unit 80 produces low sulfur and low aromatic diesel and jet fuel meeting CARB product specifications.

All of these units above are vented to a **flare vapor recovery system (Unit 93- Process 17, System 1)**. The vapor recovery system consists of two trains: primary and back-up. The primary train consists of two stages: first and second. Vent gases from the various processes listed above are initially collected in the flare header. The total vapor recovery capacity is 290 mscfh. In the primary train, the hydrocarbon gas is compressed by the main compressor (93-C-9001). If the primary vapor recovery compressor is out of service, the spare compressor (93-C-400C) in the back-up train is utilized. It operates in a similar manner to the main 93-C-9001 compressor but with a slight reduction in capacity. Under normal operating conditions, all flow is drawn into the vapor recovery compressor and routed to the gas treating units for sulfur removal and subsequent re-use as fuel gas. However, under process upset conditions, the flare header flow may exceed the capacity of vapor recovery compressor. In this case, the pressure in the flare header will increase until it exceeds the back-pressure exerted on the header by a water seal. When this occurs, emergency vent gases are routed for safe destruction to an integrated flare system consisting of three general service flares:

- **Phase 0 Flare, 89-FT-900 (C401),**

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- **Phase I Flare, 89-FT-9000 (C402), and/or**
- **Phase II Flare, 75-FT-1 (C403).**

The Phase 0, Phase I, and Phase II flares are permitted to process emergency vent gases and other limited gases as allowed by Rule 1118. The vent gases from each of the process units is dedicated to one of the three flares but the piping and header systems are interconnected such that vent gas can be diverted to any of these three flares. The Phase 0 flare, however, is unique from the Phase I and Phase II flares. The Phase 0 Flare header vents high amine gas (from amine treating units), high ammonia gas (from sour water strippers), and hydrogen rich gas (from Unit 70 Platformer). In addition, Ultramar operates a fourth flare, LPG flare, 82-FT-1 (C400). This flare is dedicated to the LPG storage and loading unit and not equipped with a flare gas recovery system. The LPG flare is not within the scope of this project.

PROJECT DESCRIPTION:

Refinery Relief Flare Units and Vapor Recovery Unit Change of Conditions

This evaluation will seek to clarify the operation of the vapor recovery system and the flares during planned shutdown, startups, and turnarounds (SD/SU/TA).

Refinery equipment undergoes turnaround or other maintenance activities periodically for system performance and safety reasons, during which time flaring has been an essential part of completing these activities. The existing permits issued to refineries have not been clear in determining if flaring during planned SD/SU/TA is a permitted activity. In November 2005, the District amended Rule 1118 that allows flaring during SD/SU/TA, along with a few other activities, but requires a change of permit conditions to reflect what is allowed in Rule 1118. According to Mr. Mohsen Nazemi’s email dated April 2, 2011, a new set of standard conditions was prepared and evaluated by the SCAQMD and WSPA member refineries to replace existing conditions which basically requires that all vent gases are to be recovered except during emergencies and SD/SU/TA, which may be flared. The SCAQMD and WSPA agreed on the following final conditions (November 14, 2011):

- S56.1 Vent gases from all affected devices of this process/system shall be directed to a gas recovery system, except for venting from those equipment specifically indicated in a permit condition, and for the following vent gases which may be directed to a flare:
- 1) Vent gases during an emergency as defined in Rule 1118;
 - 2) Vent gases resulting from planned shutdowns, startups and/or turnarounds as defined in Rule

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1118, provided that the owner/operator follows the applicable options and any associated limitations to reduce flaring that were identified, evaluated and most recently submitted by the owner/operator to the executive officer pursuant to Rule 1118; and

3) Vent gases due to and resulting from an essential operating need, as defined in Rule 1118.

The evaluation of options to reduce flaring during planned shutdowns, startups and/or turnarounds shall be updated annually to reflect any revisions, and submitted to the Executive Officer in the first quarter of each year, but no later than March 31st of that year.

This process/system shall not be operated unless its designated flare(s) are in full use and have valid permits to receive vent gases from this process/system.

S58.1 <Flare gas recovery system, Flare> shall only be used to receive and handle vent gases from the following process(es) and system(s):

<List of processes vented to the flare gas recovery system, flare>

The flare gas recovery system shall be operated in full use when any of the above process(es) and system(s) is in operation. Full use means <identify specific gas recovery system set up for full use operation>.

Currently, the following system conditions are tagged to various process units, flare vapor recovery unit, and flare system:

- S15.5, S15.6, and S15.12 are tagged to processes vented to the refinery’s flare vapor recovery system and/or flare system;
- S18.2 is tagged to the flare vapor recovery system (Process 17, System 1) to indicate which process and systems are vented to the flare vapor recovery system; and
- S18.8 is tagged to the Phase 0, I, and II Flares (Process 17, System 3, 13, 14) to indicate which process and systems can be vented to the flares:

Therefore, with the new set of standard conditions prepared and evaluated by the SCAQMD and WSPA member refineries, the following change of conditions will be incorporated into Ultramar’s facility permit:

1. Existing system conditions S15.5, S15.6, and S15.12 will be replaced with new system condition S56.1. System condition S56.1 will be added to the appropriate process units vented to vapor recovery system. In accordance with Jay Chen’s e-mail dated June 14, 2011, while an application is required for each flare and flare vapor recovery system, no application is needed for each process unit.

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2. Existing system condition S18.2 tagged to the vapor recovery system will be replaced by new system condition S58.1.

3. Existing system condition S18.8 tagged to the Phase 0, I, and II flares will be replaced by new system condition S58.2.

There will be no modification or operational changes to their operation.

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Table 3. Change of Conditions

Old Condition	Old Condition Text	New Condition	New Condition Text
S15.5	<p>The vent gases from all affected devices of this process/system shall be vented as follows:</p> <p>This process/system shall not be operated unless the vapor recovery system(s) is in full use and has a valid permit to receive vent gases from this system.</p> <p>All vent gases under normal operating conditions shall be directed to the vapor recovery system(s).</p> <p>[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]</p> <p>[Systems subject to this condition: Process 1, System 5; Process 2, System 1,3,5; Process 3, System 1; Process 4, System 1,3,5,7; Process 5, System 1; Process 7, System 1, 3; Process 8, System 1,2,3,4,5,6,7,8,39,45,46,55; Process 13, System 1; Process 17, System 50, 97]</p>	S56.1	<p>Vent gases from all affected devices of this process/system shall be directed to a gas recovery system, except for venting from those equipment specifically indicated in a permit condition, and for the following vent gases which may be directed to a flare:</p> <p>1) Vent gases during an emergency as defined in Rule 1118;</p> <p>2) Vent gases resulting from planned shutdowns, startups and/or turnarounds as defined in Rule 1118, provided that the owner/operator follows the applicable options and any associated limitations to reduce flaring that were identified, evaluated and most recently submitted by the owner/operator to the executive officer pursuant to Rule 1118; and</p> <p>3) Vent gases due to and resulting from an essential operating need, as defined in Rule 1118.</p> <p>The evaluation of options to reduce flaring during planned shutdowns, startups and/or turnarounds shall be updated annually to reflect any revisions, and submitted to the Executive Officer in the first quarter of each year, but no later than March 31st of that year.</p> <p>This process/system shall not be operated unless its designated flare(s) and vapor recovery system are in full use and have valid permits to receive vent gases from this process/system.</p>
S15.6	<p>The vent gases from all affected devices of this process/system shall be vented as follows:</p> <p>This process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit</p>		

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Old Condition	Old Condition Text	New Condition	New Condition Text
S15.12	<p>to receive vent gases from this system.</p> <p>All emergency vent gases shall be directed to a blowdown flare system.</p> <p>[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]</p> <p>[Systems subject to this condition: Process 17, System 1]</p> <p>The vent gases from all affected devices of this process/system shall be vented as follows:</p> <p>All emergency vent gases shall be directed to a blowdown vapor recovery system and/or blowdown flare system.</p> <p>When the emergency vent gases are being directed to the blowdown vapor recovery system, this process/system shall not be operated unless the blowdown vapor recovery system is in full use and has a valid permit to receive vent gases from this system.</p> <p>When the emergency vent gases are being directed to the blowdown flare system, this process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit to receive vent gases from this system.</p>		<p>[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]</p> <p>[Systems subject to this condition : Process 1, System 1 , 3 , 5; Process 2, System 1 , 3 , 5; Process 3, System 1; Process 4, System 1 , 3 , 5 , 7; Process 5, System 1; Process 7, System 1 , 3; Process 8, System 1 , 2 , 3 , 4; Process 9, System 1; Process 10, System 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 10 , 13, 39, 45, 46, 55; Process 13, System 1; Process 14, System 5 , 6; Process 17, System 1, 46 , 50 , 88 , 97]</p>

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Old Condition	Old Condition Text	New Condition	New Condition Text
	<p>[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]</p> <p>[Systems subject to this condition: Process 1, System 1,3,5; Process 2, System 1,3,5; Process 3, System 1; Process 4, System 1,3,5,7; Process 5, System 1; Process 7, System 1, 3; Process 8, System 1,2,3,4; Process 9, System 1, Process 10, System 1,2,3,4,5,6,7,8,10,13,39,45,46,55; Process 11, System 1,2,41; Process 13, System 1; Process 14, System 5,6;Process 17, System 50, 88, 97]</p>		
S18.2	<p>All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:</p> <p>Blending Unit (Process: 9, System: 1) Hydrotreating Units (Process: 4, System: 1, 3, 5 & 7) Storage Tanks (Process: 14, System: 5 and 6) Gas Production Units (Process: 8, System: 1, 2 & 3) FCC Unit (Process: 3, System: 1) Treating/Stripping Units (Process: 10, System: 1, 2, 3, 4, 5, 6, 7, 8, 39, 45, 46, and 55) Tail Gas Unit (Process: 11, System: 41) Delayed Coking Blowdown Unit (Process: 2, System: 5)</p>	S58.1	<p>The vapor recovery system shall only be used to receive and handle vent gases from the following process(es) and system(s):</p> <p>Crude Distillation Units (Process 1: System 1, 3, 5) Delayed Coking Units (Process 2: System 1, 3) Delayed Coking Blowdown Unit (Process 2: System 5) FCC Unit (Process 3: System 1) Hydrotreating Units (Process 4: System 1, 3, 5, 7) Catalytic Reforming Unit (Process 5: System 1) Alkylation and Isomerization Units (Process 7: System 1, 3) Gas Production Units (Process 8: System 1, 2, 3, 4, 5) Blending Unit (Process 9: System 1) Treating/Stripping Units (Process 10: System 1, 2, 3, 4, 5, 6, 7, 8) Amine Treating Units (Process 10: System 10, 39, 45, 46, 55) Fuel Gas Treating Unit (Process 10: System 13)</p>

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Old Condition	Old Condition Text	New Condition	New Condition Text
	<p>Oil/Water Separation Unit (Process: 13, System: 1) Catalytic Reforming Unit (Process: 5, System: 1) Air Pollution Control (Process: 17, System: 50, 88, and 97) Crude Distillation Units (Process: 1, System: 1, 3, and 5) Delayed Coking Units (Process: 2, System: 1 and 3) Alkylation and Isomerization Units (Process: 7, System: 1 and 3) Fuel Gas Treating Unit (Process: 10, System: 13)</p> <p><u>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]</u></p> <p><u>[Systems subject to this condition: Process 17, System 1]</u></p>		<p>Tail Gas Treating Unit (Process 11: System 41) Oil/Water Separation Unit (Process 13: System 1) Storage Tanks (Process 14: System 1, 5, 6) Air Pollution Control (Process 17: System 50, 88, and 97)</p> <p>The flare gas recovery system shall be operated in full use when any of the above process(es) and system(s) is in operation. Full use means the compressor train (either 1st stage and 2nd stage compressors, or spare compressor in Process 17, System 1) is online at any given time, except during planned startups or shutdowns.</p> <p><u>[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]</u></p> <p>[Systems subject to this condition: Process 17, System 1]</p>
S18.8	<p>All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:</p> <p>Sulfur Recovery Units (Process: 11, System: 1, 2, 6, and 41) Blending Unit (Process: 9, System: 1) Hydrotreating Units (Process: 4, System: 3, 5 & 7)</p>	S58.2	<p>The Phase 0, I, and II flares shall only be used to receive and handle vent gases from the following process(es) and system(s):</p> <p>Crude Distillation Units (Process 1: System 1, 3, 5) Delayed Coking Units (Process 2: System 1, 3) Delayed Coking Blowdown Unit (Process 2: System 5) FCC Unit (Process 3: System 1) Hydrotreating Units (Process 4: System 1, 3, 5, 7) Catalytic Reforming Unit (Process 5: System 1) Alkylation and Isomerization Units (Process 7: System 1, 3)</p>

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Old Condition	Old Condition Text	New Condition	New Condition Text
	<p>Storage Tanks (Process: 14, System: 1, 5, and 6) Gas Production Units (Process: 8, System: 1, 2 & 3) FCC Unit (Process: 3, System: 1) Treating/Stripping Units (Process: 10, System: 1, 2, 3, 4, 5, 6, 7, 8, 39, 45, 46, and 55) Delayed Coking Blowdown Unit (Process: 2, System: 5) Oil/Water Separation Unit (Process: 13, System: 1) Catalytic Reforming Unit (Process: 5, System: 1) Air Pollution Control (Process: 17, System: 1, 50, 88, and 97) Crude Distillation Units (Process: 1, System: 1, 3, and 5) Delayed Coking Units (Process: 2, System: 1 and 3) Alkylation and Isomerization Units (Process: 7, System: 1 and 3)</p> <p><u>[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]</u></p> <p><u>[Systems subject to this condition: Process 17, System 3,13,14]</u></p>		<p>Gas Production Units (Process 8: System 1, 2, 3, 4, 5) Blending Unit (Process 9: System 1) Treating/Stripping Units (Process 10: System 1, 2, 3, 4, 5, 6, 7, 8) Amine Treating Units (Process 10: System 10, 39, 45, 46, 55) Fuel Gas Treating Unit (Process 10: System 13) Sulfur Recovery Units (Process 11: System 1, 2) Tail Gas Treating Unit (Process 11: System 41) Oil/Water Separation Unit (Process 13: System 1) Storage Tanks (Process 14: System 1, 5, 6) Vapor Recovery System (Process 17: System 1) Air Pollution Control (Process 17: System 50, 88, and 97)</p> <p>The flare gas recovery system shall be operated in full use when any of the above process(es) and system(s) is in operation. Full use means the compressor train (either 1st stage and 2nd stage compressors, or spare compressor in Process 17, System 1) is online at any given time, except during planned startups or shutdowns.</p> <p>[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]</p> <p>[Systems subject to this condition: Process 17, System 3, 13, 14]</p>

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Refinery Relief Protection Project

Ultramar is proposing to modify the piping and/or pressure relief valve(s) (PRV) connecting certain equipment in process units listed in the Process Description to the flare gas header system to ensure adequate relief protection in the event of an emergency overpressure scenario. These modifications, in general terms, consist of:

1. Adding a new PRV and piping connecting to the flare gas header system ;
2. Changing the size of an existing PRV connected to the flare gas header system; and/or
3. Changing the size of the inlet and/or discharge piping, or segment thereof, for an existing PRV connected to the flare gas header system

The PRVs added and replaced and piping changes are due in part to §6858(a) of the California Code of Regulations whereby:

“All pressure vessels shall be protected by a pressure relief device. Such relief devices shall be set to prevent the pressure in the vessel from exceeding limits established by the ASTM Code, or, where permitted, the Unfired Pressure Vessel Safety Orders.”

Normally, vent gasses into the flare headers are captured by the gas recovery system and not usually flared unless there is an emergency, shutdown, startup, turnaround or essential operational need. The proposed new PRVs will allow certain equipment to relieve directly, instead of indirectly, to the flare gas header system during an emergency. These pieces of equipment currently overpressure to other process equipment which, in turn, relieve to the flare header. All new connections to the flare header are planned on existing equipment in existing process units which already contain other equipment equipped with PRVs connected to the flare header. Therefore, the overall objective of this project is to create a “clear path” for all process vessels to vent to the flare header in case of an emergency. None of the PRVs to be installed will be atmospheric PRVs.

The proposed modifications to existing PRVs and associated piping will ensure relief systems on certain equipment are adequately sized and configured to handle several different emergency overpressure scenarios. These modifications may involve changing the PRV size, PRV inlet or discharge piping size, and/or PRV inlet or discharge piping configuration.

The proposed project will not increase the flow capacity of the flare system under normal operation. Ultramar is not introducing any new vessel volumes that can add relief capacity to the

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flare header. That is, Ultramar is not installing any new vessels connected to the flare header or re-routing any atmospheric relief valves to the flare header. Instead of venting to other process equipment initially, the new PRVs allow the process units to vent directly or have a “clear path” to the flare header in case of an emergency. The actual flow to the flares will only increase only during an emergency overpressure scenario, shutdown, startup, turnaround or essential operational need as allowed in Rule 1118.

The specific scope of work for the equipment connections to the flare header is summarized in Table 4.

Table 4. PRV and Flare Sub Header Piping Changes

PRV ID	Protected Equipment	Device ID	PRV and Flare Sub Header Piping Change(s) ¹
Process 1, System 1: Crude Unit 10			
155	Naphtha Coolers Shell Inlet 10-E-106A/B	N/A	Install new PRV and piping to flare system.
158A	Crude Tower Overhead Accumulator 10-V-101	D883	Replace existing PRV with PRV of same size (size 6Q8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
158B			Replace existing PRV with larger PRV (size 4P6 to size 6Q8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
158C			Replace existing PRV with smaller PRV (size 6R8 to size 6Q8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
158D			Install new PRV and piping to flare system.
158E			Install new PRV and piping to flare system.
159	Exchanger 10-E-1010	N/A	Install new PRV and piping to flare system.
Process 1, System 3: Crude Unit 11			
167	Naphtha Cooler Shell Inlet 11-E-1006	N/A	Install new PRV and piping to flare system.
172A	Crude Tower Overhead Accumulator 11-V-1001	D4	Replace existing PRV with smaller PRV (size 6R8 to size 6Q8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
172B			Install new PRV and piping to flare system.

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PRV ID	Protected Equipment	Device ID	PRV and Flare Sub Header Piping Change(s) ¹
172C			Replace existing PRV with PRV of same size (size 6R8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
172D			Install new PRV and piping to flare system.
172E			Install new PRV and piping to flare system.
172F			Install new PRV and piping to flare system.
Process 2, System 1: Coker Unit 30			
530A	Fractionator 30-V-301	D908	Install new PRV and piping to flare system.
530B			Replace existing PRV with PRV of same size (size 6R8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
537	Compressor Light Ends KO Pot 30-V-309 (also listed as 43-V-309)	D964	Replace existing PRV with PRV of same size (size 1.5F2). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
Process 2, System 3: Coker Unit 31			
416A	Coke Tower 31-V-3001	D16	Replace existing PRV with smaller PRV (size 6R8 to size 6Q8). Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
416B			Install new PRV and piping to flare system.
Process 4, System 1: Gas Oil Unibon HDT Unit 80			
195A	Jet Fuel Product Air Cooler 80-E-13	N/A	Install new PRV and piping to connect to flare header system.
260	Gas Oil Product Air Cooler 80-E-16	N/A	Install new PRV and piping to connect to flare header system.
Process 4, System 3: Naphtha HDT Unit 60			
630	Stripper Feed/Bottoms Exchanger 60-E-04A/B	N/A	Install new PRV and piping to connect to flare header system.
Process 4, System 5: Gas Oil HDS Unit 58			
315A	Gas Oil Product Air Cooler 58-E-13A/B/C/D	N/A	Install new PRV and piping to connect to flare header system.
Process 4, System 7: Naphtha HDT / Splitter Unit 56			
222	Stripper Reboiler 56-E-5A/B, 7A/B, 11	N/A	Install new PRV and piping to connect to flare header system.

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PRV ID	Protected Equipment	Device ID	PRV and Flare Sub Header Piping Change(s) ¹
Process 5, System 1: Platformer Unit 70			
759	Booster Gas Coalescer 70-V-39	D70	Install new PRV and piping to connect to flare header system.
760	Recycle Gas Coalescer 70-V-38, Recycle Gas Cooler 70-E-26	D944, N/A	Install new PRV and piping to connect to flare header system.
Process 8, System 4: Light Ends Vapor Recovery Unit 43			
507	Depropanizer Column 43-V-404	D124	Replace existing PRV with larger PRV (size 2H3 to size 3J4).
402	Gas Dampeners 43-PD-401A/B	N/A	Re-locate existing PRV. Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
510	Gas Dampeners 43-PD-400A/B	N/A	Install new PRV and piping to flare system.
403	Gas Dampeners 43-PD-401C/D	N/A	Re-locate existing PRV. Connect PRV to new common header. Common header line size will be larger than previous dedicated line.
511	Gas Dampeners 43-PD-400C/D	N/A	Install new PRV and piping to flare system.
Process 8, System 5: Light Ends Vapor Recovery Unit 44			
505	Light Ends Compressor Discharge Coolers Shell Inlet 44-E-400 3A/B	N/A	Install new PRV and piping to flare system.
Process 10, System 5: Sour Water Stripping Unit 48			
484	Feed/Bottoms Exchanger 48-E-1A/B/C	N/A	Install new PRV and piping to connect to flare header system.

EMISSIONS

Refinery Flare Units and Vapor Recovery Unit Change of Conditions

There is no change in emissions with the proposed Change of Conditions. There will be no modification or operational changes to their operation.

Refinery Relief Protection Project

The proposed project will not impact the existing operation of the vapor recovery system or flare system. The new and modified PRV connections will only relieve to the flare header during an

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emergency overpressure of the protected equipment. Emergency vent gases will be routed to the Phase 0, Phase I, and/or Phase II flare for safe destruction only if the vapor recovery system is overwhelmed. As noted in the Project Description above, the main objective of this project is to create a “clear path” for all process vessels to vent directly to the flare header in case of an emergency rather than vent to another process equipment, which, in turn, relieves to the flare header.

The proposed new PRVs will allow certain equipment to relieve directly, instead of indirectly, to the flare header. These pieces of equipment currently overpressure to other process equipment which, in turn, relieve to the flare header. None of the PRVs to be installed will be atmospheric PRVs.

In addition, the proposed project will not increase the flow capacity of the Phase 0, Phase I, and Phase II flare system. Ultramar is not introducing any new vessel volumes that can add relief capacity to the flare header; that is, Ultramar is not installing any new vessels connected to the flare header or re-routing any atmospheric relief valves to the flare header.

For the reasons above, potential criteria pollutant emissions from flaring will not increase as a result of this project.

The proposed project, however, will change the potential VOC emissions from fugitive component leaks since additional fugitive components are being added to the processes. Ultramar expects a change in the number of fugitive components in each process unit. Fugitive ROG emissions are the only sources of air pollutants associated with the project. The emission increase due to the installation of the fugitive components is shown below in Table 5. The Fugitive Component Count is found in Appendix A. The tables in Appendix A include the calculated fugitive emissions using the emission factors from the “CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals”.

Table 5: Emissions

A/N	Unit	VOC Emissions		
		Pre-lbs/day	Post-lbs/day	Increase lbs/day
542026	Crude Unit 10	89.00	91.07	2.07
542027	Crude Unit 11	44.97	47.97	3.00
542028	Delayed Coking Unit 30	91.13	92.60	1.45
542029	Delayed Coking Unit 31	49.26	49.91	0.62
542030	Light Ends Vapor Recovery Unit 43	32.65	32.89	0.19

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A/N	Unit	VOC Emissions		
		Pre-lbs/day	Post-lbs/day	Increase lbs/day
542031	Light Ends Vapor Recovery Unit 44	63.15	63.83	0.66
542032	Sour Water Stripping Unit# 48	0.08	0.19	0.12
542033	Naphtha Hydrotreater/ Splitter Unit 56	210.92	211.51	0.60
542034	Gas Oil Hydrodesulfurization Unit 58	155.60	156.17	0.56
542035	Naphtha Hydrotreating Unit 60	125.33	125.64	0.32
542036	Platformer Unit 70	141.70	142.30	0.60
542038	Gas Oil Unibon Hydrotreating Unit 80	252.00	252.58	0.58
	Total	1,255.90	1,266.66	10.77

RULES EVALUATION:

PART 1 SCAQMD REGULATIONS

Rule 212	Standards for Approving Permits	November 14, 1997
	<p>In accordance with Rule 212(c), a significant project is a new or modified facility in which:</p> <ul style="list-style-type: none"> (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 (1×10^{-6}) during a lifetime of 70 years or pose a risk of nuisance. <p>The project is not within 1/4-mile of a school. The modified permit units do not have emission increases exceeding the daily maximum specified in subdivision (g). The total emission increase from all the permit units aggregated together is 16 lbs VOC/day, which is less than the Rule 212(g) Daily Maximum Threshold of 30 lbs VOC/day. In addition, the modified permit units do not have an increased cancer risk greater than, or equal to, one in a million (1×10^{-6}) during a lifetime of 70 years or pose a risk of nuisance. See Rule 1401 rule evaluation for details. Therefore, a</p>	

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	public notice is not required.
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Rule 401	Visible Emissions	November 9, 2001
	<p>This rule specifies that a person shall not discharge emissions from a source for a period or periods aggregating more than three minutes in any one hour which are as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or emissions of such opacity that it obscures an observers view to an equal or greater level. This is equivalent to opacity of 20%.</p> <p>Visible emissions are not expected.</p>	

Rule 402	Nuisance	May 7, 1976
	<p>This rule requires that a person not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause injury or damage to business or property.</p> <p>Compliance with this regulation is expected.</p>	

Rule 1118	Control of Emissions from Refinery Flares	November 4, 2005
	<p>This rule has requirements for flares used at petroleum refineries to monitor and record data on flaring operations and to control and minimize flaring and flare related emissions. The refinery flare is subject to the requirements of this regulation as imposed by device conditions D12.8 and H23.30.</p>	

Rule 1173	Control of Volatile Organic Compound Leaks and Releases from Components of Petroleum Facilities and Chemical Plants	December 6, 2002
	<p>Fugitive VOC emissions are expected from the proposed modifications. The</p>	

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modification will introduce additional fugitive components. The new components are required to comply with the Rule 1173 requirements and will be included in the refinery's Inspection & Maintenance (I&M) program.
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REG XIII	New Source Review	December 6, 2002 Application Deem Complete Date: 2012
	<p>This rule allows the Executive Officer to deny a Permit to Construct for any new, modified or relocated source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless BACT is used. This rule also requires modeling and offset (among other requirements) if there is a net increase in any nonattainment air contaminants for any new or modified source. The definition of "Source" in Rule 1302(ao) is "any permitted individual unit, piece of equipment, article, machine, process, contrivance, or combination thereof, which may emit or control an air contaminant."</p> <p>There is no change in the emission with the proposed change of conditions with the refinery flare units and vapor recovery unit. The proposed modifications for this Protection Relief Project will cause an emission increase of VOC. The emission increase due to this project is shown in Table 5. The following is a discussion of each requirement in NSR.</p>	
BACT: 1303(a)	<p>Any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, must employ BACT for the actual modification to an existing source. Per District policy, BACT is required for any increase in emissions that exceeds 1.0 lb per day on a maximum daily basis.</p> <p>BACT has been included in the design of the proposed project. BACT means the most stringent emission limitation or control technique which:</p> <ol style="list-style-type: none"> (1) has been achieved in practice for such category or class of source; or (2) is contained in any State Implementation Plan (SIP) approved by the US EPA for such category or class of source. A specific limitation or control technique shall not apply if the owner or operator of the proposed source demonstrates to the satisfaction of the Executive Officer or designee that such limitations or control technique is not presently achievable; or (3) is any other emission limitation or control technique, found by the Executive Officer or designee to be technologically feasible for such class 	

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	<p>or category of sources or for a specific source, and cost effective as compared to measures as listed in the Air Quality Management Plan (AQMP) or rules adopted by the District Governing Board.</p> <p>Fugitive emissions. The fugitive components being installed are in VOC service. BACT for fugitive emission control is summarized below:</p> <ul style="list-style-type: none"> • Valves: Bellow-sealed valves are required with the following exemptions which must included in the approved I&M program, <ol style="list-style-type: none"> 1. Heavy liquid service (i.e., streams with a vapor pressure <0.1 psia @ 100 °F (kerosene) based on the most volatile class present > 20% by volume) 2. Control valve 3. Instrument tubing application 4. Applications requiring torsional valve stem motion 5. Applications where valve failure could pose safety hazard (e.g., valves with valve stem in horizontal position) 6. Retrofit/special applications with space limitation (special applications such as skid mounted standard packaged systems) 7. Valves not commercially available <p>Ultramar cited the following reasons for not proposing to install Bellow-sealed valves on the affected units:</p> <ul style="list-style-type: none"> • Heavy liquid service • Valve must be installed in horizontal position. According to the refinery, the valves must be installed in horizontal position to prevent potential failure of the valve gate (separation from the stem). The refinery noted industry experience found horizontal installation is not recommended for bellow sealed valves due to potential of particulates or other contaminants in the bellows leading to potential failure. The process services associated with this project are not finished product quality or hydrotreated; thus, possibly leading to potential further concern of deposition of material in Bellow-sealed valves in horizontal service. • Non-VOC service: control valve service <p>The refinery provided an itemized listing of all the valves to be installed and</p>	

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the reasons for not installing Bellow-sealed valves. This listing is included in the application folder. Valves installed where Bellow-sealed valves are not available will be subject to a leak rate of less than 500 ppmv by EPA Method 21 and an approved I&M program.

- **Relief Valves:** All relief valves will be connected to a closed vent system.
- **Process Drain:** Ultramar does not expect to install any new process drains in any of the permit units for this project.
- **Pumps:** Ultramar does not expect to install any new pumps in any of the permit units for this project.
- **Flanges:** All flanges must meet ANSI/API standards and included in an approved I&M program. The flanges installed are designed in accordance with ASME/ANSI 16.5 to comply with the 500 ppm leak threshold in Rule 1173 for flanges in light liquid and gas vapor VOC service.
- **Compressors:** Ultramar does not expect to install any new compressors in any of the permit units for this project.

System Condition S31.x will be included in permit to require all new fugitives to be subject to BACT.

1303(b)(1) Modeling: The applicant must substantiate with modeling that the modification will not cause a violation, or make significantly worse an existing violation of any state or national ambient air quality standards at any receptor location in the District. The modeling procedures are discussed in Appendix A of this rule. Appendix A of this rule specifies modeling is not required for VOC. Therefore, modeling is not required.

1303(b)(2) Emission Offsets: The emission increase and offsets required due to this project are shown in Table 6.

Table 6. Project Emissions and Offsets

A/N	Unit	VOC Emissions, lbs/day				
		Pre-Modification	Post-Modification	Increase	Increase * 1.2	ERCs Required

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	542026	Crude Unit 10	89.00	91.07	2.07	2.48	2
	542027	Crude Unit 11	44.97	47.97	3.00	3.6	4
	542028	Delayed Coking Unit 30	91.15	92.60	1.45	1.74	2
	542029	Delayed Coking Unit 31	49.28	49.91	0.62	0.75	1
	542030	Light Ends Vapor Recovery Unit 43	32.70	32.89	0.19	0.23	
	542031	Light Ends Vapor Recovery Unit 44	63.17	63.83	0.66	0.79	1
	542032	Sour Water Stripping Unit 48	0.08	0.19	0.12	0.14	
	542033	Naphtha Hydro-treater/Splitter Unit 56	210.92	211.51	0.60	0.72	1
	542034	Gas Oil Hydrodesulfurization Unit 58	155.60	156.17	0.56	0.67	1
	542035	Naphtha Hydrotreating Unit 60	125.33	125.64	0.32	0.38	
	542036	Platformer Unit 70	141.70	142.30	0.60	0.72	1
	542038	Gas Oil Hydrotreating Unit 80	252.00	252.58	0.58	0.69	1
		Total	1,255.90	1,266.66	10.77	12.91	14
	<p>The total emission increase from this project is 10.77 lbs/day VOC. Therefore, offsets are required. With the 1.2 offset ratio, 14 lbs/day VOC ERCs will be required. Ultramar will surrender ERC Certificate # AQ004394 (21 lb/day).</p>						
1303(b)(3)	<p>Sensitive Zone Requirements. A facility in zone 1 such as Ultramar may obtain ERCs originated in zone 1 only. ERC Certificate # AQ004394 originated in zone 1 (Coastal).</p>						
1303(b)(4)	<p>Facility Compliance. This facility complies with all applicable District rules and regulations.</p>						
1303(b)(5)	<p>Major Polluting Facilities. This project is a major modification at a major polluting facility. Therefore, the facility shall comply with the following requirements.</p>						
	<p>(A) <i>Alternative Analysis. Submit an analysis of alternative sites, sizes, production</i></p>						

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	<p><i>processes, and environmental control techniques for the proposed source.</i></p> <p>In lieu of conducting an alternative analysis, Ultramar will meet the requirements of this subparagraph with compliance with the California Environmental Quality Act (CEQA) in accordance with Rule 1303(b)(5)(D). See discussion under 1303(b)(5)(D).</p>																									
	<p>(B) Statewide Compliance. Demonstrate that all major sources in the state under control of the applicant are in compliance or on a schedule for compliance with all applicable federal emissions standards.</p> <p>Ultramar has certified that all major sources in the state under control of the applicant are in compliance with all applicable federal emissions standards. Ultramar (Valero, Inc.) currently operates 7 major facilities in the state. The status of these facilities relative to Clean Air Act requirements is summarized in the following table:</p> <p style="text-align: center;">Table 7. Compliance Status of Valero Facilities Located in California</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Valero California Facilities</th> <th style="text-align: center;">Facility Location</th> <th style="text-align: center;">Compliance Status</th> </tr> </thead> <tbody> <tr> <td>Benicia Refinery</td> <td>Benicia</td> <td>Currently in compliance</td> </tr> <tr> <td>Benicia Asphalt Plant</td> <td>Benicia</td> <td>Currently in compliance</td> </tr> <tr> <td>Wilmington Refinery</td> <td>Wilmington</td> <td>Currently in compliance</td> </tr> <tr> <td>Wilmington Asphalt Plant</td> <td>Wilmington</td> <td>Currently in compliance</td> </tr> <tr> <td>Marine Terminal</td> <td>Wilmington</td> <td>Currently in compliance</td> </tr> <tr> <td>Wilmington Marine Tank Farm</td> <td>Wilmington</td> <td>Currently in compliance</td> </tr> <tr> <td>Olympic Tank Farm</td> <td>Wilmington</td> <td>Currently in compliance</td> </tr> </tbody> </table>		Valero California Facilities	Facility Location	Compliance Status	Benicia Refinery	Benicia	Currently in compliance	Benicia Asphalt Plant	Benicia	Currently in compliance	Wilmington Refinery	Wilmington	Currently in compliance	Wilmington Asphalt Plant	Wilmington	Currently in compliance	Marine Terminal	Wilmington	Currently in compliance	Wilmington Marine Tank Farm	Wilmington	Currently in compliance	Olympic Tank Farm	Wilmington	Currently in compliance
Valero California Facilities	Facility Location	Compliance Status																								
Benicia Refinery	Benicia	Currently in compliance																								
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Wilmington Refinery	Wilmington	Currently in compliance																								
Wilmington Asphalt Plant	Wilmington	Currently in compliance																								
Marine Terminal	Wilmington	Currently in compliance																								
Wilmington Marine Tank Farm	Wilmington	Currently in compliance																								
Olympic Tank Farm	Wilmington	Currently in compliance																								
	<p>(C) Protection of Visibility. Conduct a modeling analysis for plume visibility if the net emission increase from the new or modified source exceeds 15 tons/year of PM or 40 tons/year of NO_x; <u>and</u> the location of the source is within specified distance from a Class I area.</p> <p>There is no increase in PM or NO_x emissions. Therefore, a modeling analysis</p>																									

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	for plume visibility is not required for this project.
	(D) <i>Compliance Through California Environmental Quality Act.</i> The proposed project is exempt from California Environmental Quality Act analysis pursuant to a statutory or categorical exemption pursuant to Title 14, California Code of Regulations Sections 15260 to 15329. Therefore, the requirements of subparagraph (b)(5)(A) shall not apply to this project
	Therefore, compliance of Rule 1303(b)(5) is expected.

Rule 1401	New Source Review of Toxic Air Contaminants September 10, 2010 Deem Complete Year: 2013
	<p>In accordance with Rule 1401(f)(3), to determine the maximum individual cancer risk (MICR), cancer burden and <i>chronic</i> health index (HIC) due to a modified permit unit, the <u>increase</u> in emissions from the modified permit unit shall be calculated based on the difference between the total permitted emissions after the modification, calculated pursuant to the criteria established in subparagraphs:</p> <p>(f)(1)(A), the maximum rated capacity; (f)(1)(B), the maximum possible annual hours of operation; (f)(1)(C), the maximum annual emissions; and (f)(1)(D), the physical characteristics of the materials processed,</p> <p>and the total permitted emissions prior to the modification as stated in the permit condition [Subparagraph (f)(3)(A)].</p> <p>In accordance with Rule 1401(f)(4), to determine the <i>acute</i> health index (HIA) due to a modified permit unit, the <u>total</u> emissions from the permit unit shall be calculated on a based on permit conditions which directly limit the emissions.</p> <p>As a result, the Tier 2 risk assessment calculations was conducted to estimate the health risks based on the fugitive emissions from the permit units to be modified. The toxic risk assessment was conducted on the following TACs listed in Table 8. The speciation and weight fractions were determined from tests conducted for purposes of AB2588.</p>

Rule 1401 **New Source Review of Toxic Air Contaminants** **September 10, 2010**
Deem Complete Year: 2013

Table 8: TAC Speciation

Stream Name		Vapor Recovery Gas	Naphtha	Diesel
		GV	LL	HL
Chemical	CAS	Wt Frac	Wt Frac	Wt Frac
1,2,4-Trimethylbenzene	95-63-6			0.000837
1,3-Butadiene	106-99-0	0.00052		
Acetone	67-64-1	0.0000345		
Anthracene	120-12-7	0		
Benzene	71-43-2	0.00252	0.0193	
Cumene	98-82-8	0.00000504		0.0000677
Cyclohexane	110-82-7	0.000897		0.00025
Ethylbenzene	100-41-4	0.0000957		0.000143
Ethylene	74-85-1	0.013		0.000005
Fluorene	86-73-7			0.000112
Hydrogen sulfide	7783-06-4	0.0155		
Methyl ethyl ketone	78-93-3	0.000018		
Naphthalene	91-20-3	0		0.000337
n-Hexane	110-54-3	0.0189	0.00387	0.000048
Phenanthrene	85-01-8			0.000203
Pyrene	129-00-0			0.00000967
Propylene (Propene)	115-07-1	0.0125		
Toluene	108-88-3	0.00322	0.00122	0.000173
Xylene (mixed isomers)	1330-20-7	0.000312	0.001	0.000693

The MICR and HIA and HIC for both off-site worker and residential receptors are shown below in Table 8. The Air Toxic Emissions for each unit to be modified and Tier 2 Screening Risk Assessments are shown in Appendix B. All the calculated MICR and HIs were below the Rule 1401 risk thresholds. Therefore, the modified units due to the Protection Relief Project comply with Rule 1401.

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Rule 1401	New Source Review of Toxic Air Contaminants	September 10, 2010 Deem Complete Year: 2013																																																																																																																										
	Table 9 - Rule 1401 Risk Summary																																																																																																																											
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	<p>Federal NSR for toxics does not apply since the refinery is subject to NESHAPs. Also, this project is not considered a reconstruction per 40CFR63, Subpart A, §63.2.</p>																																																																																																																											

Regulation XXX	Title V	November 5, 2010
	<p>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 revision will be considered a Significant Permit Revision as defined in Rule 3000 and subject to 45 day review by EPA.</p> <p>A Significant Permit Revision [Rule 3000(b)(31)] means any facility permit revision that is not eligible for administrative permit revision, minor permit revision, or de minimis significant permit revision procedures. Such revisions include any of the following:</p>	

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Regulation XXX	Title V	November 5, 2010
	<ul style="list-style-type: none"> (A) relaxation of any monitoring, recordkeeping, or reporting requirement, term, or condition in the Title V permit; (B) the addition of equipment or modification to existing equipment or processes that result in an emission increase of non-RECLAIM pollutants or hazardous air pollutants (HAP) in excess of any of the emission threshold levels in Table 1 of paragraph (b)(7) of this rule; (C) cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants from de minimis significant permit revisions during the term of the permit, in excess of any of the emission threshold levels in Table 1 of paragraph (b)(7) of this rule. (D) any modification at a RECLAIM facility that results in an emission increase of RECLAIM pollutants over the facility's starting Allocation plus the nontradeable Allocations; (E) requests for a permit shield when such requests are made outside applications for initial permit or permit renewal issuance; (F) any revision that requires or changes a case-by-case evaluation of: reasonably available control technology (RACT) pursuant to Title I of the federal Clean Air Act; or maximum achievable control technology (MACT) pursuant to 40 CFR Part 63, Subpart B; (G) any revision that results in a violation of regulatory requirements; (H) any revision that establishes or changes a permit condition that the facility assumes to avoid an applicable requirement; (I) installation of new equipment subject to a New Source Performance Standard (NSPS) pursuant to 40 CFR Part 60, or a National Emission Standard for Hazardous Air Pollutants (NESHAP) pursuant to 40 CFR Part 61 or 40 CFR Part 63; or, (J) modification or reconstruction of existing equipment, resulting in an emission increase subject to new or additional NSPS requirements pursuant to 40 CFR Part 60, or to new or additional NESHAP requirements pursuant to 40 CFR Part 61 or 40 CFR Part 63. 	
	<p>EPA's final amendments to NSPS Subpart Ja issued on June 1, 2012 contains a "modification" definition unique to flares that is, by EPA design, easy to trigger. Due to the Subpart Ja amendments, the Phase 0, Phase I, and Phase II flares are</p>	

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Regulation XXX	Title V November 5, 2010
	<p>now subject to NSPS Subpart Ja as a result of this proposed project. See the discussion under Subpart Ja for details. However, since there is no emission increase from the flares themselves, this project is not considered a Significant Permit Revision per 3000(b)(31)(J). In addition the emission increases from the modified units does not result in a cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants in excess of any of the De Minimis Emission Threshold Levels 3000(b)(31)(C). Nevertheless, Ultramar has elected to have this project be a Significant Revision so as not to exceed the De Minimis Emission Threshold Levels during the term of their Title V permit.</p> <p>Therefore, this permit revision will be subject to a 45-day EPA review and 30-day public notice.</p>
A Significant Permit Revision is subject to a 45-day EPA review under Rule 3003(j) and public participation requirements under Rule 3006.	

PART 2 STATE REGULATIONS

California Environmental Quality Act (CEQA)											
	<p>According to the District's CEQA guidelines, the thresholds for significant effect are:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>NOx</td> <td>55 pounds per day</td> </tr> <tr> <td>ROG</td> <td>55 pounds per day</td> </tr> <tr> <td>PM10</td> <td>150 pounds per day</td> </tr> <tr> <td>CO</td> <td>550 pounds per day</td> </tr> <tr> <td>SOx</td> <td>150 lbs per day</td> </tr> </table> <p>All the proposed modification will not make this a significant project. Therefore, preparation of a CEQA document is not required.</p>	NOx	55 pounds per day	ROG	55 pounds per day	PM10	150 pounds per day	CO	550 pounds per day	SOx	150 lbs per day
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PART 3 FEDERAL REGULATIONS

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Subpart J	Standards of Performance for Petroleum Refineries
§60.100	<p><i>Applicability, designation of affected facility, and reconstruction.</i> The provisions of this subpart are applicable to fuel gas combustion device which commences construction or modification after June 11, 1973. Fuel gas combustion device is defined as “any equipment, such as process heaters, boilers and flares used to combust fuel gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid”. Fuel gas is defined as any gas which is generated at a petroleum refinery and which is combusted (e.g., refinery gas).</p> <p>This subpart applies to the following equipment since they are fuel combustion devices constructed after 1973:</p> <ul style="list-style-type: none"> • Phase I Flare • Phase II Flare
§63.104	<p><i>Standards for sulfur oxides.</i> This paragraph requires any fuel gas combustion device shall not burn fuel gas containing H₂S in excess of 230 mg/dscm (0.10 gr/dscf). In accordance to 60.105(a)(4), Ultramar is required to install, calibrate, maintain, and operate a continuous monitoring system (CMS) to monitor and record the concentration of H₂S in the fuel gas before being burned in any fuel gas combustion device.</p> <p>Ultramar operates two H₂S CMS on their fuel gas system. The 88AI942 CMS analyzes all treated fuel gas that is normally used within the refinery for heater and boiler fuel gas combustion and other process purposes. The 88AI945 CMS analyzes all treated fuel gas that is normally sent directly to the flares for combustion purposes. In the Periodic Monitoring & Exception Reports submitted by Ultramar to EPA for 88AI945 CMS for the year 2012, Ultramar reported 0 hours (out of 8,760 hours) in which the H₂S exceeded 230 mg/dscm in the fuel gas burned.</p>
§60.105(a)(4)	<p><i>Monitoring of emissions and operations.</i> The 88AI945 CMS analyzes all treated fuel gas that is normally sent directly to the flare for combustion purposes. This analyzer was installed to demonstrate compliance with 40CFR 60.104(a)(1) and 60.105(a)(4)-Monitoring of emissions and operations. In the Periodic Monitoring & Exception Reports submitted by Ultramar to EPA for 88AI945 CMS for the year 2012, Ultramar reported 105 hours (out of 8,760 hours) in which CMS was down due to either monitor equipment malfunction (1 hours), quality assurance</p>

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Subpart J	Standards of Performance for Petroleum Refineries
	calibration (92 hours), or other known causes (12 hours). This downtime represents 1.2% of the total source operating time.
	EPA’s final amendments to NSPS Subpart Ja issued in September 2012 contained a “modification” definition unique to flares. The Phase 0, Phase I, and Phase II flares are expected to become subject to NSPS Subpart Ja as a result of this proposed project. See discussion under Subpart Ja for details.

40CFR60 Subpart Ja	Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007
§60.100a	<p>This NSPS is applicable to the following affected facilities in petroleum refineries which were constructed, reconstructed, or modified after May 14, 2007 (unless specified):</p> <ul style="list-style-type: none"> • Fluid Catalytic Cracking Unit Catalyst Regenerators, • Fluid Coking Units, • Delayed Coking Units, • Fuel Gas Combustion Devices (except flares), • Flares (after June 24, 2008), and • Claus Sulfur Recovery Plants (SRPs) <p>On June 24, 2008, EPA issued a new and more stringent NSPS standard for petroleum refineries. Subpart Ja, as published on June 24, 2008, contained new flare provisions. A "flare" is defined to mean not just the flare itself, but also the associated “piping and header systems.” Additionally, a "modification" to a flare is defined to occur when “any new piping from a refinery process unit or fuel gas system is physically connected to the flare” or when the flare is physically altered to increase its “flow capacity.” Together, these new definitions comprised EPA’s “quick” trigger for a flare modification leading to Subpart Ja applicability.</p> <p>Immediately after Subpart Ja was promulgated, industry petitioned EPA for a targeted stay of the flare provisions and other provisions that were adopted without appearance in the proposed rule.</p>

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40CFR60 Subpart Ja	<p>Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007</p> <p>On September 26, 2008, EPA granted reconsideration and initiated a stay for all the flare and other affected provisions.</p> <p>On December 22, 2008, EPA proposed revisions to the flare and other provisions in response to industry’s comments. EPA also extended the stay indefinitely until final action was taken. EPA’s re-proposed Subpart Ja contained some compromises, but no significant changes to the definition of a flare or the “quick” trigger for a flare modification leading to Subpart Ja applicability.</p> <p>On June 1, 2012, EPA issued final amendments to Subpart Ja lifting the stay on the flare and other requirements. The amended Subpart Ja, as it relates to flares, retains the “quick” trigger modification concept. The following flare applicability provisions appear in the final amended rule:</p> <p>§ 60.101a Definitions defines the following terms:</p> <p><i>Flare</i> means a combustion device that uses an uncontrolled volume of air to burn gases. The <i>flare</i> includes the foundation, flare tip, structural support, burner, igniter, flare controls, including air injection or steam injection systems, flame arrestors and the flare gas header system. In the case of an interconnected flare gas header system, the <i>flare</i> includes each individual flare serviced by the interconnected flare gas header system and the interconnected flare gas header system.</p> <p><i>Flare gas header system</i> means all piping and knockout pots, including those in a subheader system, used to collect and transport gas to a flare either from a process unit or a pressure relief valve from the fuel gas system, regardless of whether or not a flare gas recovery system draws gas from the flare gas header system. The flare gas header system includes piping inside the battery limit of a process unit if the purpose of the piping is to transport gas to a flare or knockout pot that is part of the flare.</p> <p><i>Flare gas recovery system</i> means a system of one or more compressors, piping and the associated water seal, rupture disk or similar device used to divert gas from the flare and direct the gas to the fuel gas system or to a fuel gas combustion device.</p>
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40CFR60 Subpart Ja	<p>Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007</p> <p>§ 60.100a Applicability, designation of affected facility, and reconstruction specifies:</p> <p>(b) This subpart applies to flares which commence construction, modification or reconstruction after June 24, 2008. For the purposes of this subpart, a modification to a flare commences when a project that includes any of the activities in paragraphs (c)(1) or (2) commences.</p> <p>(c) For all affected facilities <u>other than flares</u>, the provisions in §60.14 regarding modification apply. As provided in §60.14(f), the special provisions set forth under this subpart shall supersede the provisions in §60.14 with respect to flares. <u>For the purposes of this subpart, a modification to a flare occurs as provided in paragraphs (c)(1) or (2) of this section. (emphasis added)</u></p> <p>(1) <u>Any new piping from a refinery process unit, including ancillary equipment, or a fuel gas system is physically connected to the flare (e.g., for direct emergency relief or some form of continuous or intermittent venting).</u> However, the connections described in paragraphs (c)(1)(i) through (vi) of this section are not considered modifications of a flare. <i>(emphasis added)</i></p> <ul style="list-style-type: none"> (i) Connections made to install monitoring systems to the flare. (ii) Connections made to install a flare gas recovery system or connections made to upgrade or enhance components of a flare gas recovery system (e.g., addition of compressors or recycle lines). (iii) Connections made to replace or upgrade existing pressure relief or safety valves, provided the new pressure relief or safety valve has a set point opening pressure no lower and an internal diameter no greater than the existing equipment being replaced or upgraded. (iv) Connections made for flare gas sulfur removal. (v) Connections made to install back-up (redundant) equipment associated with the flare (such as a back-up compressor) that does not increase the capacity of the flare
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40CFR60 Subpart Ja	Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007
	<p>(vi) Replacing piping or moving an existing connection from a refinery process unit to a new location in the same flare, provided the new pipe diameter is less than or equal to the diameter of the pipe/connection being replaced/moved.</p> <p>(vii) Connections that interconnect two or more flares.</p> <p>(2) A flare is physically altered to increase the flow capacity of the flare.</p> <p>This change in definition of flare suggests that any change that a refiner makes to a flare system (flare and piping and header system) will cause the flare to become subject to Subpart Ja. The special flare modification provisions of Subpart Ja supersedes the General Provisions (Subpart A) rules for modifications found in §60.14, meaning the NSPS emission increase criteria under §60.14(a) and the capital expenditure criteria under §60.14(e)(2) both become irrelevant when it comes to modification of a flare system. Therefore, between June 24, 2008 and today, if a refinery added any flare piping connections outside of the limited list of allowed exceptions, then the flare is considered “modified” and is subject to Subpart Ja requirements.</p> <p>Based on the above applicability requirements, the proposed refinery relief protection project is a “modification” of the Phase 0, Phase I, and Phase II flares under Subpart Ja because it connects “new piping from a refinery process unit...to the flare,” which includes the upstream “flare gas header system.” This project triggers Subpart Ja applicability for the Phase 0, Phase I, and Phase II flares.</p>
§60.103a	<p><i>Design, equipment, work practice or operational standards.</i> This paragraph specifies the design, equipment, work practice, or operational standards of the flares.</p> <p>§60.103a(a) requires the development and implementation of a flare management plan.</p> <p>§60.103a(b) requires the submittal of the plan to the Administrator.</p> <p>§60.103a(c) requires the refinery to conduct a root cause analysis and a corrective</p>

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40CFR60 Subpart Ja	<p>Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007</p> <p>action analysis for:</p> <ul style="list-style-type: none"> (i) Any time the SO₂ emissions exceed 500 lbs in any 24-hour period; or (ii) Any discharge to the flare in excess of 500,000 standard cubic feet above the baseline, in any 24-hour period; or (iii) If the monitoring alternative in § 60.107a(g) is elected, any period when the flare gas line pressure exceeds the water seal liquid depth, except for periods attributable to compressor staging that do not exceed the staging time specified in paragraph (a)(3)(vii)(C) of this section. <p>§60.103a(d) requires a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting one of the conditions specified in paragraphs (c)(1) through (3) of this section.</p> <p>§60.103a(e) specifies the operator implement the corrective action(s) identified in the corrective action analysis conducted pursuant to paragraph (d) of this section in accordance with the applicable requirements in paragraphs (e)(1) through (3) of this section.</p> <p>§60.103a (f) requires modified flares shall comply with the requirements of paragraphs (c) through (e) of this section by November 11, 2015 or at startup of the modified flare, whichever is later.</p> <p>§60.103a (g) allows an affected flare located in the South Coast Air Quality Management District (SCAQMD) to comply with Rule 1118 as an alternative to complying with the requirements of Subpart Ja requirements of paragraphs (a) through (e) of §60.103a. Therefore, in lieu of complying with the requirements of paragraphs (a) through (e) of §60.103a, Ultramar has elected to comply with Rule 1118 as an alternative. Condition H23.x will be placed on Ultramar's facility permit specifying the flares are subject to Subpart Ja and that the facility will comply with Rule 1118 as an alternative compliance option.</p>
§ 60.103a(h)	<p>The fuel gas burned in each affected flare shall not contain H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The Phase I and II flares are currently subject to Subpart J H₂S limit and meet this limit. The refinery's 88AI945 CMS analyzes all treated fuel gas that is normally sent directly to the flares for combustion purposes. In the Periodic Monitoring & Exception Reports submitted by Ultramar to EPA for 88AI945 CMS for the year 2012,</p>

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40CFR60 Subpart Ja	Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007
	Ultramar reported 0 hours (out of 8,760 hours) in which the H ₂ S exceeded 230 mg/dscm (160 ppm) in the fuel gas burned. A copy of the report is included in Appendix C. Therefore, compliance is expected.
§ 60.104a	<i>Performance tests.</i> The facility shall conduct a performance test for each flare to demonstrate initial compliance with each applicable emissions limit in §60.102a. The original June 2008 Subpart Ja rule specified an emission limit (60 ppmv H ₂ S, annual rolling average). However, the final September 2012 version of Subpart Ja no longer specified the long term H ₂ S limit for flares. Therefore, a performance test is not required at this time since there is no limit for flares in §60.102a.
§60.107a	<i>Monitoring of emissions and operations for fuel gas combustion devices and flares.</i> Flares subject to the H ₂ S concentration requirement in §60.103a(h) shall comply with paragraph (a)(2) of this section. Paragraph (a)(2) of this section specifies the refinery shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H ₂ S in the fuel gases before being burned in any flare. The refinery currently operates a H ₂ S CMS (88AI945) to analyze all treated fuel gas that is normally sent directly to the flare for combustion purposes to comply with Subpart J. Ultramar shall operate and maintain the H ₂ S monitor according to Performance Specification 7 of Appendix B to Part 60. The span value for this instrument is 300 ppmv H ₂ S.

40 CFR Part 60 Subpart GGG	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries						
§60.590	<i>Applicability and designation of affected facility.</i> In accordance with §60.590(b), any affected facility (petroleum refinery) that commences construction or modification after January 4, 1983 is subject to the requirements of this subpart. Only the following process units are currently subject to this subpart: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">A/N</th> <th style="text-align: center;">Unit</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">542030</td> <td style="text-align: center;">Light Ends Vapor Recovery Unit 43</td> </tr> <tr> <td style="text-align: center;">542033</td> <td style="text-align: center;">Naphtha Hydrotreater/Splitter Unit 56</td> </tr> </tbody> </table>	A/N	Unit	542030	Light Ends Vapor Recovery Unit 43	542033	Naphtha Hydrotreater/Splitter Unit 56
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542033	Naphtha Hydrotreater/Splitter Unit 56						

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40 CFR Part 60 Subpart GGG	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries																					
	542034	Gas Oil Hydrodesulfurization Unit 58																				
	<p>All the other units were installed before 1983. Although all the units in the project are being modified and there will be an emission increase, §60.590(a)(c) states an “Addition or replacement of equipment (defined in § 60.591) for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.” § 60.591-Definitions defines <i>Equipment</i> as “each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service.” §60.2-Definitions defines <i>Capital expenditure</i> as “an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable “annual asset guideline repair allowance percentage” specified in the latest edition of Internal Revenue Service (IRS) Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code.” The addition or replacement of the pressure relief devices in the various process units should not amount to a capital expenditure as defined in §60.2. Therefore, Subpart GGG will continue to not apply to the following permit units as per §60.590(a)(c):</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">A/N</th> <th style="text-align: center;">Unit</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">542026</td><td>Crude Unit 10</td></tr> <tr><td style="text-align: center;">542027</td><td>Crude Unit 11</td></tr> <tr><td style="text-align: center;">542028</td><td>Delayed Coking Unit 30</td></tr> <tr><td style="text-align: center;">542029</td><td>Delayed Coking Unit 31</td></tr> <tr><td style="text-align: center;">542031</td><td>Light Ends Vapor Recovery Unit 44</td></tr> <tr><td style="text-align: center;">542032</td><td>Sour Water Stripping Unit 48</td></tr> <tr><td style="text-align: center;">542035</td><td>Naphtha Hydrotreating Unit 60</td></tr> <tr><td style="text-align: center;">542036</td><td>Platformer Unit 70</td></tr> <tr><td style="text-align: center;">542038</td><td>Gas Oil Hydrotreating Unit 80</td></tr> </tbody> </table>		A/N	Unit	542026	Crude Unit 10	542027	Crude Unit 11	542028	Delayed Coking Unit 30	542029	Delayed Coking Unit 31	542031	Light Ends Vapor Recovery Unit 44	542032	Sour Water Stripping Unit 48	542035	Naphtha Hydrotreating Unit 60	542036	Platformer Unit 70	542038	Gas Oil Hydrotreating Unit 80
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542038	Gas Oil Hydrotreating Unit 80																					
§60.592	<p>Standards.</p> <p>(a) The facility shall comply with the requirements of §§60.482-1 to 60.482-10. §§60.482-1 to 60.482-10 refers to Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry and sets standards for the following:</p>																					

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40 CFR Part 60 Subpart GGG	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries
	<ul style="list-style-type: none"> ▪ §60.482-1 Standards: General ▪ §60.482-2 Standards: Pumps in light liquid service. ▪ §60.482-3 Standards: Compressors ▪ §60.482-4 Standards: Pressure relief devices in gas/vapor service ▪ §60.482-5 Standards: Sampling connection systems. ▪ §60.482-6 Standards: Open-ended valves or lines. ▪ §60.482-7 Standards: Valves in gas/vapor service and in light liquid service. ▪ §60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors. ▪ §60.482-9 Standards: Delay of repair. ▪ §60.482-10 Standards: Closed vent systems and control devices. <p>All new fugitive components in VOC service meet and are expected to continue to meet the equipment standards and monitoring requirements in §§60.482-1 to 60.482.10. All new piping components associated with the equipment is monitored on a monthly and quarterly basis by refinery personnel. Therefore, Ultramar complies with the standards and leak detection and repair requirements in Subpart VV.</p>
	<p>(b) The facility may elect to comply with the requirements of §§60.483-1 and 60.483-2.</p> <ul style="list-style-type: none"> ▪ §60.483-1 Alternative standards for valves--allowable percentage of valves leaking. ▪ §60.483-2 Alternative standards for valves--skip period leak detection and repair. <p>Therefore, Ultramar may choose between two alternative monitoring plans for valves: allowable percentage of valves leaking or skip period leak detection and repair. Ultramar shall notify EPA before implementing one of these alternative work practices.</p>
	<p>(c) The facility may apply to EPA for a determination of equivalency for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. If the refinery chooses to do so, Ultramar shall comply with requirements of § 60.484 (Equivalence of means of emission limitation).</p>

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40 CFR Part 60 Subpart GGG	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries
	(d) The facility shall comply with the provisions of §60.485 (Test methods and procedures) except as provided in §60.593 (Exemptions found in Subpart GGG). Ultramar shall conduct all monitoring using EPA Reference Method 21 as stated in §60.485(b)(1).
	(e) The facility is required to comply with the provisions of §60.486 (Recordkeeping requirements) and §60.487 (Reporting Requirements). The refinery is required to submit semiannual reports to EPA beginning six months from initial startup with the information identified in §60.487(b) for the initial report and §60.487(c) for the subsequent semiannual reports. Ultramar submitted their semi-annual report for July 1, 2012 to December 31, 2012 to EPA on January 30, 2013.
	A system condition (S4.x1) or device condition (H23.17) will be tagged to these permit unit noting that all affected fugitive components are subject to 40CFR60, Subpart GGG.

40CFR60 Subpart GGGa	Standards of Performance for Equipment Leaks of VOCs in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after November 7, 2006
§60.590a	<p>This NSPS is applicable to affected facilities in refineries that begin construction after November 7, 2006. The following are affected facilities under this subpart:</p> <ul style="list-style-type: none"> ▪ Compressors ▪ The group of all the equipment within a process unit. <p>Although all the units in the project are being modified and there will be an emission increase, §60.590a(c) states an “Addition or replacement of equipment (defined in § 60.591a) for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.” § 60.591a-Definitions defines <i>Equipment</i> as “each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service.” §60.2-</p>

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40CFR60 Subpart GGGa	Standards of Performance for Equipment Leaks of VOCs in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after November 7, 2006
	Definitions defines <i>Capital expenditure</i> as “an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable “annual asset guideline repair allowance percentage” specified in the latest edition of Internal Revenue Service (IRS) Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code.” The addition or replacement of the pressure relief devices in the various process units should not amount to a capital expenditure as defined in §60.2. Therefore, Subpart GGGa does not apply to the following permit units as per §60.590a(c).

40CFR Part 63 Subpart CC	National Emission Standard for Hazardous Air Pollutants from Petroleum Refineries
§63.648	These process units are subject to the equipment leak standards, detection, and repair requirements of 40.CFR63 Subpart CC, Section 63.648. The equipment leak inspection and monitoring requirements of Rule 1173 are in general more stringent than that specified in Section 63.648. Therefore, compliance with the inspection, maintenance, and recordkeeping requirements of this rule are expected.

CONCLUSION / RECOMMENDATION:

Based on the foregoing evaluation, it is expected that the subject applications will comply with all applicable SCAQMD Rules and Regulations.

It is recommended that Permits to Construct be issued for the equipment in this Refinery Relief Protection Project and Refinery Flare Units and Vapor Recovery Unit Permit Condition Changes. The Title V permit should be revised to add the equipment description and conditions to the permits to construct (Section H).

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A/N	Equipment	Recommendation
542026	Crude Unit 10	Issue Permit to Construct with conditions listed in the Conditions Section
542027	Crude Unit 11	
542028	Coker Unit 30	
542029	Coker Unit 31	
542030	Light Ends Recovery Unit 43	
542031	Light Ends Recovery Unit 44	
542032	Sour Water Stripping Unit 48	
542033	Naphtha Hydrotreating/Splitter Unit 56	
542034	Gas Oil Hydrodesulfurization Unit 58	
542035	Naphtha Hydrotreating Unit 60	
542036	Platformer Unit 70	
542038	Gas Oil Unibon Hydrotreating Unit 80	
530492	Flare, Phase 0	
530493	Flare, Phase I	
530494	Flare, Phase II	
530497	Vapor Recovery System	
530491	Title V Minor Permit Revision	
542042	Title V Significant Permit Revision	

Appendices

- A. Fugitive Component Count and Emissions
- B. Rule 1401 Tier 2 Screening Risk Assessments
- C. Subpart J H2S Periodic Monitoring & Exception Report for 2012

