

Section I: AQMD BACT Determinations

Application No.: 388982

Equipment Category – Fugitive Emission Sources, Pressure Relief System

1. GENERAL INFORMATION		DATE: 9/16/2004
A. MANUFACTURER:		
B. TYPE: Process Valves and Pressure Relief Devices		C. MODEL:
D. STYLE:		
E. APPLICABLE AQMD RULES: 401, 402, 1118, 1173, 1401, RECLAIM		
F. COST: \$ (NA) SOURCE OF COST DATA:		
G. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WK 52 WKS/YR		

2. EQUIPMENT INFORMATION		APP. NO.: 388982
A. FUNCTION: This BACT determination relates to pressure relief systems on several processes within this refinery. Some of the valves in these processes are used to vent gases for regulation of pressure, and pressure relief devices vent gas from the processes when pressure unexpectedly becomes too high. Processes connected to this system include Naphtha Prefractionator, Naphtha Hydrotreater No. 1, Jet Hydrofiner CCRU, Steam Methane Reformer, Isomax Hydrocracking Unit, MTBE Plant LPG Odorant Injection System, No. 4 H2S Recovery Plant, Delayed Coking Unit, Pressurized Storage Tanks (Blending and Shipping), and Delayed Coking Emergency Relief and Blowdown System (Inter-Tied System).		
B. SIZE/DIMENSION/CAPACITY:		
C. BLOWERS:	D. TOTAL FLOW RATE: scfm	
E. MATERIAL STORED/PROCESSED/HANDLED: Petroleum derivatives		
F. THROUGHPUT/PROCESS RATE/USAGE RATE:		

3. COMPANY INFORMATION		APP. NO.: 388982
A. NAME: Chevron Products, El Segundo Refinery		B. SIC CODE: 2911
C. ADDRESS: 324 W. El Segundo Blvd. CITY: El Segundo STATE: CA ZIP: 90245		
D. CONTACT PERSON: Charles Aarni		E. PHONE NO.: 310-615-5758

4. PERMIT INFORMATION		APP. NO.: 388982
A. AGENCY: SCAQMD		B. APPLICATION TYPE: new construction
C. AGENCY CONTACT PERSON: Emmanuel Ruivivar		D. PHONE NO.: 909-396-2509
E. PERMIT TO CONSTRUCT/OPERATE INFORMATION: P/C NO.: ISSUANCE DATE: <input type="checkbox"/> CHECK IF NO P/C P/O NO.: ISSUANCE DATE:		

4. PERMIT INFORMATION	APP. NO.: 388982
F. START-UP DATE: This refinery has been in operation for many years.	

5. EMISSION INFORMATION	APP. NO.: 388982
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A. PERMIT
A1. PERMIT LIMIT: Vent gases from pressure relief systems on several refinery processes must vent to a gas recovery system. The gas recovery system must vent to a sulfur removal system and be connected to an emergency flare via a water seal.
A2. BACT/LAER DETERMINATION: Installed voluntarily by the refinery, this pressure relief gas recovery system has operated for nearly three years and is achieved in practice.
A3. BASIS OF THE BACT DETERMINATION: Achieved in Practice

B. CONTROL TECHNOLOGY

B1. MANUFACTURER/SUPPLIER:

B2. TYPE: Pressure Relief Gas Recovery System

B3. DESCRIPTION: Pressure relief systems on several processes (process valves and pressure relief devices) vent to a gas recovery system, which routes the gas to sulfur treatment and then to the refinery fuel system. When pressure in the gas recovery system becomes too high, part of the gas vents to an emergency flare. The gas recovery system consists of three parallel trains and a water seal drum, which vents to the flare. Each train consists of an eductor (Hijet, 2 MMSCFD capacity) and separator vessel (6' Diam. x 24' L) to provide suction on the relief gas system and boost pressure to route the relief gas to the sulfur removal system. The three-train system is designed for one train to normally operate and a second and third train to operate as needed to accommodate the amount of relief gas being produced. All three trains are connected to the water seal drum, which prevents the gas from reaching the flare unless pressure becomes too high. A temporary version of the system, in which a single compressor provided the suction and pressure boost, operated from approximately June 2000 until startup of the three-train system in approximately December 2001. The flare is John Zink STF-348-60, an elevated flare with steam injection.
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B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA:	P/C NO.: 388982	ISSUANCE DATE: 9/25/2001
	P/O NO.:	ISSUANCE DATE:

B5. WASTE AIR FLOW TO CONTROL EQUIPMENT:	FLOW RATE:
ACTUAL CONTAMINANT LOADING:	BLOWER HP:

B6. WARRANTY:

B7. PRIMARY POLLUTANTS: VOC, SO _x
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B8. SECONDARY POLLUTANTS: NO _x , CO, PM ₁₀
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B9. SPACE REQUIREMENT:

B10. LIMITATIONS:	B11. UNUSED
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B12. OPERATING HISTORY: Estimated startup date was 12/15/2001

B13. UNUSED	B14. UNUSED
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5. EMISSION INFORMATION

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C. CONTROL EQUIPMENT COSTS

C1. CAPITAL COST:	<input type="checkbox"/>	CHECK IF INSTALLATION COST IS INCLUDED IN CAPITAL COST
EQUIPMENT: \$	INSTALLATION: \$	(NA) SOURCE OF COST DATA:
C2. ANNUAL OPERATING COST:	\$	(NA) SOURCE OF COST DATA:

D. DEMONSTRATION OF COMPLIANCE

D1. STAFF PERFORMING FIELD EVALUATION:		
ENGINEER'S NAME:	INSPECTOR'S NAME:	DATE:
D2. COMPLIANCE DEMONSTRATION:		
D3. VARIANCE:	NO. OF VARIANCES: None	DATES:
CAUSES:		
D4. VIOLATION:	NO. OF VIOLATIONS: None	DATES:
CAUSES:		
D5. MAINTENANCE REQUIREMENTS:	D6. UNUSED	
D7. SOURCE TEST/PERFORMANCE DATA RESULTS AND ANALYSIS:		
DATE OF SOURCE TEST:	10/1/1999-12/31/2003	CAPTURE EFFICIENCY:
DESTRUCTION EFFICIENCY:		OVERALL EFFICIENCY:
SOURCE TEST/PERFORMANCE DATA:		
<p>The new gas recovery system has recovered more than 1.8 MMSCF of gas per day and reduce the amount flared by more than 98%.</p>		
OPERATING CONDITIONS: Normal		
TEST METHODS: The amount of gas flared is measured per Rule 1118 requirement.		

6. COMMENTS

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