



**FACILITY PERMIT TO OPERATE
BP WEST COAST PROD. LLC BP CARSON REF.**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
The operator shall comply with the terms and conditions set forth below:

PROCESS 13		SYSTEM 1		
SULFUR RECOVERY		CLAUS SULFUR RECOVERY UNIT "A"		
[EXISTING EQUIPMENT]		System Conditions: S13.10, S15.30, S18.5, S53.X		
Equipment	ID No.	Connected To	Emissions and Requirements	Conditions
FURNACE, MUFFLE, RPV-4146, ACID GAS, NATURAL GAS, PROCESS GAS, WITH WASTE HEAT BOILER, 22.165 MMBTU/HR A/N 397368	D2654	C896 C2406	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]	
REACTOR, CLAUS A, RPV-4128, HYDROGEN SULFIDE, THREE STAGES, LENGTH: 44 FT 6 IN; DIAMETER: 13 FT A/N 397368	D879			
CONDENSER, SULFUR, RPV-4143, THREE STAGES, SHELL AND TUBE TYPE, LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 397368	D2602			
CONDENSER, FINAL SULFUR, RPV-4149, SHELL AND TUBE TYPE, LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 397368	D881		H2S: 10 PPMV (5) [RULE 468, 10-8-1976]; HAP: (10) [40CFR63 Subpart UUU, #4, 4-20-2006]; SOX: 250 PPMV (8) [40CFR60 Subpart J, 6-24-2008]; SOX: 500 PPMV (5)[RULE 407, 4-2-1982]	E193.6



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TANK, SULFUR DEGASSING, RW-6844 PRESSURIZED WITH TWO SULFUR CIRCULATION PUMPS; VENTED TO TAIL GAS UNIT, LENGTH: 13 FT 6 IN; DIAMETER: 6 FT 6 IN A/N 397368	D2645	C896 C2406	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]	D182.5
KNOCK OUT POT, RPV 4125, <u>SOUTH AREA</u> , ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D877			
KNOCK OUT POT, RPV 4126, <u>NORTH AREA</u> , ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D878			
VESSEL, COS/CS2 CONVERTER, "A", RPV-4134, LENGTH: 19 FT; DIAMETER: 10 FT A/N 397368	D880			
VESSEL, RPV 5497, FUEL GAS, HEIGHT: 18 FT; DIAMETER: 4 FT A/N 397368	D882			
FUGITIVE EMISSIONS, MISCELLANEOUS A/N 397368	D2613		HAP: (10) [40CFR63 Subpart CC, #5A, 6-23- 2003]	H23.3
PROCESS 13			SYSTEM 2	
SULFUR RECOVERY			CLAUS SULFUR RECOVERY UNIT "B"	
[EXISTING EQUIPMENT]			System Conditions: S13.10, S15.30, S18.5, S53.X	



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FURNACE, MUFFLE, RPV-4147, ACID GAS, NATURAL GAS, PROCESS GAS, WITH WASTE HEAT BOILER, 22.165 MMBTU/HR A/N 397363	D2655	C896 C2406	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]	
REACTOR, CLAUS B, RPV-4130, HYDROGEN SULFIDE, THREE STAGES, LENGTH: 44 FT 6 IN; DIAMETER: 13 FT A/N 397363	D883			
CONDENSER, SULFUR, RPV- 4144, SHELL AND TUBE TYPE, LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 397363	D2604			
CONDENSER, FINAL SULFUR, RPV-4150, SHELL AND TUBE TYPE, LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 397363	D885		H2S: 10 PPMV (5) [RULE 468, 10-8-1976]; HAP: (10) [40CFR63 Subpart UUU, #4, 4-20-2006]; SOX: 250 PPMV (8) [40CFR60 Subpart J, 6-24-2008]; SOX: 500 PPMV (5)[RULE 407, 4- 2-1982]	E193.6
TANK, SULFUR DEGASSING, RW-6842, PRESSURIZED WITH TWO SULFUR CIRCULATION PUMPS; VENTED TO TAIL GAS UNIT, LENGTH: 13 FT 6 IN; DIAMETER: 6 FT 6 IN A/N 397363	D2646	C896 C2406	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]	D182.5



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KNOCK OUT POT, RPV 4125, <u>SOUTH AREA</u> , ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D877			
KNOCK OUT POT, RPV 4126, <u>NORTH AREA</u> , ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D878			
VESSEL, COS/CS2 CONVERTER, RPV-4135, LENGTH: 19 FT; DIAMETER: 10 FT A/N 397363	D884			
FUGITIVE EMISSIONS, MISCELLANEOUS A/N 397363	D2614		HAP: (10) [40CFR63 Subpart CC, #5A, 6-23- 2003]	H23.3
PROCESS 13		SYSTEM 3		
SULFUR RECOVERY		CLAUS SULFUR RECOVERY UNIT "C"		
<i>[EXISTING EQUIPMENT]</i>		System Conditions: S13.10, S15.30, S18.5, S53.X		
FURNACE, MUFFLE, RPV-4148, ACID GAS, NATURAL GAS, PROCESS GAS, OXYGEN ENRICHMENT, WITH WASTE HEAT BOILER, 29 MMBTU/HR A/N 461441	D2656	C896 C2406	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]	
REACTOR, CLAUS C, RPV-4132, HYDROGEN SULFIDE, THREE STAGES, LENGTH: 44 FT 6 IN; DIAMETER: 13 FT A/N 461441	D886			



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BP WEST COAST PROD. LLC BP CARSON REF.**

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CONDENSER, SULFUR, RW-6687, SHELL AND TUBE TYPE, LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 461441	D2605			
CONDENSER, FINAL SULFUR, RW-6688, SHELL AND TUBE TYPE, LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 461441	D889		H2S: 10 PPMV (5) [RULE 468, 10-8-1976]; HAP: (10) [40CFR63 Subpart UUU, #4, 4-20-2006]; SOX: 250 PPMV (8) [40CFR60 Subpart J, 6-24-2008]; SOX: 500 PPMV (5) [RULE 407, 4-2-1982]	E193.6
TANK, SULFUR DEGASSING, RW-6845, PRESSURIZED WITH TWO SULFUR CIRCULATION PUMPS; VENTED TO TAIL GAS UNITS, LENGTH: 13 FT 6 IN; DIAMETER: 6 FT 6 IN A/N 461441	D888	C896 C2406	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]	D182.5
KNOCK OUT POT, RPV 4125, SOUTH AREA, ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D877			
KNOCK OUT POT, RPV 4126, NORTH AREA, ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D878			



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FUGITIVE EMISSIONS, MISCELLANEOUS A/N 461441	D2675		HAP: (10) [40CFR63 Subpart CC, #5A, 6-23- 2003]	H23.3
PROCESS 13		SYSTEM 4		
SULFUR RECOVERY		CLAUS SULFUR RECOVERY UNIT "D"		
<i>[EXISTING EQUIPMENT]</i>		System Conditions: S13.10, S15.30, S18.5, S53.X		
KNOCK OUT POT, RPV 5438, AMINE ACID, HEIGHT: 16 FT 6 IN; DIAMETER: 5 FT A/N 461442	D890			
VESSEL, CATALYTIC CONVERTER, RPV 5439, HEIGHT: 44 FT; DIAMETER: 12 FT A/N 461442	D891			
REACTOR, RW-0005440.01, REACTION FURNACE, HYDROGEN SULFIDE, OXYGEN INJECTION, WITH ONE BABCOCK DUKER SIZE 300 BURNER A/N 461442	D892			
PIT, ACCUMULATOR, SULFUR, 130 LONG TONS CAPACITY, WIDTH: 8 FT; DEPTH: 14 FT 8 IN; LENGTH: 38 FT A/N 461442	D893	C910 C2413	H2S: 10 PPMV (5) [RULE 468, 10-8-1976]; HAP: (10) [40CFR63 Subpart UUU, #4, 4-20-2006]; SOX: 500 PPMV (5)[RULE 407, 4- 2-1982]	



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
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CONDENSER, SHELL AND TUBE, RPV-5448, NO. 4 SULFUR FINAL, LENGTH: 15 FT; DIAMETER: 2 FT 8 IN A/N 461442	D894		H2S: 10 PPMV (5) [RULE 468, 10-8-1976]; HAP: (10) [40CFR63 Subpart UUU, #4, 4-20-2006]; SOX: 250 PPMV (8) [40CFR60 Subpart J, 6-24-2008]; SOX: 500 PPMV (5) [RULE 407, 4-2-1982]	
CONDENSER, SHELL AND TUBE TYPE, RPV-5442, NO. 1, SULFUR, "D", LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 461442	D2606			
CONDENSER, SHELL AND TUBE TYPE, RPV-5444, NO. 2, SULFUR, "D", LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 461442	D2607			
CONDENSER, SHELL AND TUBE TYPE, RPV-5446, NO. 3, SULFUR, "D", LENGTH: 18 FT; DIAMETER: 2 FT 6 IN A/N 461442	D2608			
FUGITIVE EMISSIONS, MISCELLANEOUS A/N 461442	D2615		HAP: (10) [40CFR63 Subpart CC, #5A, 6-23-2003]	H23.3



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BP WEST COAST PROD. LLC BP CARSON REF.**

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The operator shall comply with the terms and conditions set forth below:

KNOCK OUT POT, RPV 4125, <u>SOUTH AREA</u> , ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D877			
KNOCK OUT POT, RPV 4126, <u>NORTH AREA</u> , ACID GAS COMMON TO CLAUS PLANTS A, B, C, & D, HEIGHT: 12 FT; DIAMETER: 4 FT 6 IN A/N 397368	D878			

S13.10 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
SOX	40CFR60, SUBPART	J

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

[Systems subject to this condition: Process 13, System 1, 2, 3, 4]

S15.30 The vent gases from all affected devices of this process/system shall be vented as follows:

All tail gas from the sulfur recovery unit(s) shall be vented to the tail gas unit No. 1 or No. 2 followed by incinerator No. 1 or No. 2 ~~at all times except during emergency.~~ during normal operation. The sulfur recovery unit(s) may bypass tail gas unit No. 1 or No. 2 and vent directly to incinerator No. 1 or No. 2, only during startup/shutdown or emergency. Sour gas or tail gas shall be vented to the flare only during emergency.

All vent gases from the sulfur degassing tank shall be directed to the tail gas unit No. 1 or No. 2.



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The operator shall comply with the terms and conditions set forth below:

This process/system shall not be operated unless the tail gas unit No. 1 or No. 2 and the incinerator No. 1 or No. 2 are in full use and have a valid permit to receive vent gases from this system.

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

[Systems subject to this condition: Process 13, System 1, 2, 3, 4]

S18.5 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:

Methyldiethanolamine Regeneration System No. 1 (Process: 12, System: 9)

Methyldiethanolamine Regeneration System No. 2 (Process: 12, System: 10)

Methyldiethanolamine Regeneration System No. 3 (Process: 12, System: 11)

Methyldiethanolamine Regeneration System No. 4 (Process: 12, System: 12)

Methyldiethanolamine Regeneration System No. 5 (Process: 12, System: 13)

North & South Sour Water Treatment Systems (Process: 12, System: 14 & 15)

Claus Tail Gas Treating Unit No. 2 (Process: 13, System: 5)

Claus Tail Gas Treating Unit No. 1 (Process: 13, System 7)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition: Process 13, System 1, 2, 3, 4]

S53.X The following conditions shall apply to the equipment in this system:

1. During startup or shutdown of the sulfur recovery unit(s), when tail gas units are bypassed, sour gas shall not be processed by the sulfur recovery unit(s). Sour gas shall



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be introduced to sulfur recovery unit(s) only when they are lined up to tail gas unit No. 1 or 2.

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

[Systems subject to this condition: Process 13, System 1, 2, 3, 4]

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

~~The test shall be conducted to determine the concentrations of all sulfur compounds and sulfur vapor in the tail gas into and out of the sulfur degassing tank.~~

~~The test shall be conducted to determine the effectiveness of sweeping sulfur compounds from the liquid sulfur in the degassing tank.~~

~~The operator shall submit a detail description of the test methods/procedures to the District at least 90 days prior to the test. The tests shall be conducted according to the approved test plan or any subsequently approved revisions.~~

~~The District shall be notified of the date and time of the test at least 15 days prior to the test. A report of the test and operating conditions of the sulfur plant during the test shall be submitted to the District within 60 days of the test.~~

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

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

[Devices subject to this condition: D888, D2645, D2646]

~~E193.6— The operator shall construct, operate and maintain this equipment according to the following requirements:~~

~~Tail gas from this equipment to the degassing tank or tail gas unit shall not contain more than 1.69 percent H₂S or 0.81 percent SO₂ by volume (as is basis) averaged over 60 consecutive minutes. The operator shall install and maintain a continuous monitoring and~~