



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

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

PROCESS 8		SYSTEM 1		
HYDROCRACKING		HYDROCRACKER UNIT (REACTION SECTION)		
<i>[EXISTING EQUIPMENT]</i>		System Conditions: S13.2, S31.9, S46.1, S46.2, S56.1		
Equipment	ID No.	Connected To	Emissions and Requirements	Conditions
REACTOR, FIRST STAGE, RPV 3500, R-1 <u>A/N 450840 501042</u>	D576			E193.18
REACTOR, FIRST STAGE, RPV 3501, R-2 <u>A/N 450840 501042</u>	D577			E193.18
REACTOR, FIRST STAGE, RPV 3502, R-3 <u>A/N 450840 501042</u>	D578			
REACTOR, SECOND STAGE, RPV 3503, R-4 <u>A/N 450840 501042</u>	D579			
VESSEL, SEPARATOR, HIGH PRESSURE, RPV 3511 <u>A/N 450840 501042</u>	D581			
VESSEL, COALESCER, RPV 3512, HPS WATER COALESCER, <u>INTERNAL REPLACEMENT</u> <u>A/N450840 501042</u>	D582			
VESSEL, SEPARATOR, LOW PRESSURE, RPV 3513, HEIGHT: 44 FT; DIAMETER: 10 FT <u>A/N 450840 501042</u>	D583			
TANK, SURGE, RPV-5631, FEED; HEIGHT: 40 FT; DIAMETER: 10 FT <u>A/N 450840 501042</u>	D584			
SCRUBBER, CAUSTIC, RPV 0765, DISTILLATE HYDROCRACKER, HEIGHT: 20 FT; DIAMETER: 6 FT <u>A/N 450840 501042</u>	D592			
KNOCK OUT POT, EAST FUEL GAS, RPV 3211, HEIGHT: 7 FT 9 IN; DIAMETER: 5 FT <u>A/N 450840 501042</u>	D593			



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

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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KNOCK OUT POT, SEPARATOR, EAST, INSTRUMENT AIR, RPV 3636, HEIGHT: 1 FT 8 IN; DIAMETER: 1 FT 2 IN <u>A/N 450840 501042</u>	D594			
TANK, FLASH, RPV 5649, SOUR WATER, HEIGHT: 5 FT 9 IN; DIAMETER: 2 FT 6 IN <u>A/N 450840 501042</u>	D595			
FILTER, RPV 5752. FRACTIONATOR/JET FUEL, HEIGHT: 12 FT; DIAMETER: 24 FT <u>A/N 450840 501042</u>	D596			
FILTER, REACTOR HEATER FUEL GAS, RPV-5753, HEIGHT: 10 FT; DIAMETER: 2 FT <u>A/N 450840 501042</u>	D597			
DRUM, KNOCK OUT, MAKE UP COMPRESSOR, WITH NITROGEN BLANKET, HEIGHT: 6 FT; DIAMETER: 1 FT <u>A/N 450840 501042</u>	D598			
TANK, SURGE, NO. 913, RECYCLE SURGE, 3750 BBL; DIAMETER: 30 FT; HEIGHT: 30 FT <u>A/N 450840 501042</u>	D599		HAP: (10)[40 CFR 63 Subpart CC, #2, 6-23-2003]	
TANK, NORTH MAKE UP COMPRESSOR OIL RESERVOIR, WITH NITROGEN BLANKET, 60 GALS; DIAMETER: 1 FT 8 IN; HEIGHT: 4 FT <u>A/N 450840 501042</u>	D600			
TANK, SOUTH MAKE UP COMPRESSOR RESERVOIR, WITH NITROGEN BLANKET, 600 GALS; DIAMETER: 2 FT 6 IN; HEIGHT: 16 FT <u>A/N 450840 501042</u>	D601			
COMPRESSOR, RW 10 087.6 RECYCLE GAS, CENTRIFUGAL, CLARK MODEL 2 BA, <u>HIGH EFFICIENCY ROTOR</u> <u>A/N 450840 501042</u>	D602			
COMPRESSOR, RW 20 087.32, NO. 1, MAKE-UP GAS, RECIPROCATING TYPE, WORTHINGTON 4 STAGE NO. L-81794 B, MODEL BDO-4 <u>A/N 450840 501042</u>	D603			



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

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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COMPRESSOR, RW 21 087.32, NO. 2, MAKE-UP GAS, RECIPROCATING TYPE, WORTHINGTON 4 STAGE NO. L-81794 B, MODEL BDO-4 A/N 450840 501042	D604			
VESSEL, COALESCER, RPV 5525, SOUTH FEED COALESCER, HEIGHT: 9 FT 6 IN; DIAMETER: 3 FT 6 IN A/N 450840 501042	D1470			
VESSEL, COALESCER, RPV 5526, NORTH FEED COALESCER, HEIGHT: 9 FT 6 IN; DIAMETER: 3 FT 6 IN A/N 450840 501042	D1471			
FILTER, RPV 5527, NORTH FEED, HEIGHT: 6 FT 6 IN; DIAMETER: 3 FT A/N 450840	D1472			
FILTER, RPV 5528, SOUTH FEED, HEIGHT: 6 FT 6 IN; DIAMETER: 3 FT A/N 450840	D1473			
FILTER, RPV 5527, NORTH FEED, HEIGHT: 5 FT 11 IN; DIAMETER: 4 FT 6 IN A/N 501042	DX1			
FILTER, RPV 5528, SOUTH FEED, HEIGHT: 5 FT 11 IN; DIAMETER: 4 FT 6 IN A/N 501042	DX2			
FUGITIVE EMISSIONS, MISCELLANEOUS A/N 450840 501042	D2494		HAP: (10)[40 CFR 63 Subpart CC, #5A, 6-23-2003]	H23.3

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 8, System 1]

S31.9 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 450816, 450822, 450823, 450824, 450840, 450841:



FACILITY PERMIT TO CONSTRUCT BP WEST COAST PROD. LLC BP CARSON REF.

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

All open-ended valves 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 new process drains installed as a result of this project shall be equipped with a water seal

All sampling connections shall be closed-purge, closed-loop, or closed-vent system

All new valves in VOC service installed as a result of this project 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

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, and meter, which are not exempted by Rule 1173

All accessible pumps, compressors, and atmospheric PRDs shall be audio-visually inspected once per 8 hr shift. All accessible components in light liquid/gas/vapor and pumps in heavy liquid service shall be inspected quarterly, except for pumps in light liquid service and valves in gas/vapor or light liquid service which shall be inspected monthly when required per CFR60 Subpart GGG. All inaccessible or difficult to monitor components in light liquid/gas/vapor service shall be inspected annually

The following leaks shall be repaired within 7 calendar days - All light liquid/gas/vapor components leaking at a rate of 500 to 10,000 ppm, heavy liquid components leaking at a rate of 100 to 500 ppm or greater than 3 drops/minute, unless otherwise extended as allowed under Rule 1173. The following leaks shall be repaired within 2 calendar days - any leak between 10,000 to 25,000 ppm, any atmospheric PRD leaking at a rate of 200 to 25,000 ppm, unless otherwise extended as allowed under Rule 1173

The following leaks shall be repaired within 1 calendar day - any leak greater than 25,000 ppm, heavy liquid leak greater than 500 ppm, or light liquid leak greater than 3 drops per minute



FACILITY PERMIT TO CONSTRUCT BP WEST COAST PROD. LLC BP CARSON REF.

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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, the operator may revert to a quarterly inspection program with the approval of the executive officer. This condition does not apply to leakless valves

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 complete, as built, piping and instrumentation diagram(s) and copies of requisition data sheets for all non-leakless type valves with a listing of tag numbers 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 8, System 1]

S46.1 The following conditions shall apply to VOC service fugitive components in this system:

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, and meter, which are not exempted by Rule 1173.

For the purpose of this condition, existing component shall be defined as any component that was installed under a permit to construct/operate that was issued prior to June 1, 1993. New component shall be defined as any component that was installed or modified under a permit to construct that was issued between June 1, 1993 and December 27, 2001.

All new 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.

All new valves and new major components, as defined in Rule 1173, shall be physically identified in the field with special marking that distinguishes the components from existing. Additionally all new components shall be distinctly identified from existing components



FACILITY PERMIT TO CONSTRUCT BP WEST COAST PROD. LLC BP CARSON REF.

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

through their tag numbers (e.g. numbers ending in the letter "N"), and shall be noted in the records.

All new components in VOC service with a leak greater than 500 ppm but less than 1,000 ppm, as methane, measured 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.

All new pressure relief valves shall be connected to closed vent system or equipped with rupture disc.

All new sampling connections shall be closed-purge, closed-loop, or closed-vent system.

All components are subject to 40CFR60, Subpart GGG.

[RULE 1173, 5-13-1994; RULE 1173, 2-6-2009; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; 40 CFR 60 Subpart GGG, 6-2-2008]

[Systems subject to this condition: Process 8, System 1]

S46.2 The following conditions shall apply to VOC service fugitive components in this system:

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, and meter, which are not exempted by Rule 1173.

For the purpose of this condition, existing component shall be defined as any component that was installed under a permit to construct/operate that was issued prior to June 1, 1993. New component shall be defined as any component that was installed or modified under a permit to construct that was issued between June 1, 1993 and December 27, 2001.

The operator shall provide to the District, no later than August 29, 2003, a complete, as built, process instrumentation diagram(s) with a listing showing by functional grouping, location, type, accessibility, and application of each new valve in VOC service. The operator shall provide copies of requisition data sheets for all non-leakless type valves with a listing of tag numbers and reasons why leakless valves were not used.

The operator shall provide to the District, no later than August 29, 2003, a list of the following components broken down into the categories contained in District Form E-18A entitled "Fugitive Component Count": existing components, new components proposed to be



FACILITY PERMIT TO CONSTRUCT BP WEST COAST PROD. LLC BP CARSON REF.

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

installed under applicable permit(s) to construct, and new components that were actually installed under applicable permit(s) to construct.

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

[Systems subject to this condition: Process 8, System 1]

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(b)(2) ;
- 2) Vent gases during startups or shutdowns as defined in Rule 1118(b)(21) and (b)(19), respectively, provided that all flares have been operated in accordance with flaring minimization procedures as described in Rule 1118(c)(4); and
- 3) Vent gas due to essential operating need, as defined in Rule 1118(b)(4)(a) that would result in a temporary fuel gas system imbalance, or as defined in Rule 1118(b)(4)(c) that would result in streams that cannot be recovered due to incompatibility with recovery system equipment or with refinery fuel gas systems, provided that all flares have been operated in accordance with flaring minimization procedures as described in Rule 1118(c)(4).

The flaring minimization procedures and any subsequent changes shall be submitted to the district as described in Rule 1118(c)(3).

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

Vent gases shall not be released to the atmosphere except from the existing safety devices or relief valves on the following equipment:

Process 1, System 2: 10, 12, 14
Process 1, System 3: 19, 20, 24 to 26
Process 1, System 5: 35, 39, 41, 42, 2726
Process 1, System 6: 43, 49, 57, 58
Process 1, System 7: 59, 60, 61, 62
Process 2, System 1: 74, 77, 2388
Process 2, System 2: 82, 89, 90, 92, 2389
Process 2, System 3: 94, 95
Process 2, System 5: 98, 101, 102



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

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

- Process 2, System 6: 111, 112, 113
- Process 2, System 11: 159, 160
- Process 3, System 1: 164 to 167, 170, 172 to 181, 184, 1336 to 1349, 2382, 2387
- Process 3, System 2: 186, 188, 189, 191, 196, 199, 201, 204, 1352 to 1355
- Process 3, System 4: 241
- Process 3, System 6: 242, 245 to 247, 249
- Process 3, System 7: 1363
- Process 4, System 1: 253 to 256, 258, 262, 265, 268, 270, 272, 277, 278, 282, 283, 287, 1364, 1366, 1367, 1372, 1374 to 1376, 1378 to 1381
- Process 4, System 2: 291, 1400 to 1403
- Process 4, System 3: 292, 293, 297, 299
- Process 4, System 4: 302, 304
- Process 4, System 5: 308, 310, 311
- Process 4, System 7: 1975 to 1977, 1980, 1981, 1986
- Process 5, System 1: 314 to 317, 319, 320, 323 to 332
- Process 5, System 2: 335 to 338, 340, 343, 348 to 353
- Process 5, System 3: 356, 360, 1413
- Process 5, System 4: 401, 406, 407, 412, 414
- Process 6, System 1: 426, 427, 429, 431, 434 to 437, 440, 444, 445, 451, 454 to 456, 458, 460
- Process 6, System 2: 462, 469, 474 to 481, 483, 486
- Process 6, System 3: 490, 494, 495, 498, 501, 503, 506, 507, 509, 510, 512, 513, 518, 520, 521, 525 to 528
- Process 7, System 1: 542 to 548, 550, 552 to 558, 560, 562 to 569
- Process 7, System 2: 2892, 2893
- Process 8, System 1: 583, 584, 593 to 597
- Process 8, System 2: 608, 610, 612 to 614, 622, 624
- Process 9, System 1: 631, 632, 638 to 652, 659 to 663, 666 to 668, 1482, 1483, 1486 to 1488, 1491, 1493 to 1495, 1497 to 1502, 1528, 1533 to 1536, 2019
- Process 9, System 2: 672 to 681, 685
- Process 9, System 9: 637, 653, 656, 658, 664
- Process 10, System 1: 706
- Process 10, System 2: 709, 711 to 715, 720, 721
- Process 10, System 3: 725
- Process 11, System 1: 730
- Process 12, System 1: 756, 759
- Process 12, System 2: 760 to 762, 764
- Process 12, System 3: 765 to 770
- Process 12, System 4: 771, 772, 774
- Process 12, System 8: 785, 790, 2365, 2366
- Process 12, System 9: 794, 797 to 799



**FACILITY PERMIT TO CONSTRUCT
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SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

- Process 12, System 10: 806
- Process 12, System 12: 815, 818
- Process 12, System 13: 823, 826, 828
- Process 12, System 22: 853, 854
- Process 12, System 24: 860, 861, 863, 864, 865
- Process 12, System 25: 866, 867, 869, 870, 871, 2003
- Process 12, System 27: 873 to 875
- Process 15, System 7: 1644 to 1646, 1648, 1649
- Process 16, System 3: 2115 to 2120, 2353, 2394
- Process 24, System 1: 1304
- Process 24, System 2: 1307
- Process 24, System 4: 1315, 1316, 1319, 1323 to 1325, 1659

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

[Systems subject to this condition: Process 8, System 1]

E193.18 The operator shall construct, operate, and maintain this equipment according to the following specifications:

The operator shall comply with all mitigation measures stipulated by the AQMD Certified EIR SCH # 2005111057 dated 9/15/06

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition: D576, D577]

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173
VOC	40CFR60, SUBPART	GGG

[RULE 1173, 5-13-1994; RULE 1173, 2-6-2009; 40CFR 60 Subpart GGG, 6-2-2008]

[Devices subject to this condition: D2494]