



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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE  
The operator shall comply with the terms and conditions set forth below:

PROCESS 6: CATALYTIC REFORMER UNIT				
SYSTEM 3: : NO. 3 CATALYTIC REFORMER UNIT				S4.3, S4.4, S13.2, <u>S31.4</u> , S56.1
DESCRIPTION	DEVICE ID NO.	CONNECTED TO	Emissions And Requirements	CONDITIONS
KNOCK OUT POT, RPV-2366, HYDROGEN RECYCLE, HEIGHT: 10 FT; DIAMETER: 7 FT A/N <b>395834 535604</b>	D487			
DRUM, RPV 2781, STABILIZER REBOILER CONDENSATE, HEIGHT: 2 FT 4 IN; DIAMETER: 1 FT 8 IN A/N <b>395834 535604</b>	D488			
ACCUMULATOR, RPV 2849, STABILIZER OVERHEAD, HEIGHT: 8 FT; DIAMETER: 4 FT A/N <b>395834 535604</b>	D489			
TOWER, REFORMATE STABILIZER, RPV-2850, HEIGHT: 77 FT; DIAMETER: 6 FT A/N <b>395834 535604</b>	D490			
COLUMN, WASH, RPV-2800, RAFFINATE WATER, HEIGHT: 24 FT; DIAMETER: 3 FT A/N <b>395834 535604</b>	D491			
COLUMN, WASH, RPV-2801, RAFFINATE WATER, HEIGHT: 24 FT; DIAMETER: 3 FT A/N <b>395834 535604</b>	D492			
VESSEL, EXTRACTOR, RPV 2806, HEIGHT: 77 FT; DIAMETER: 8 FT A/N <b>395834 535604</b>	D493			
COLUMN, STRIPPER, RPV-2807A, HEIGHT: 118 FT; DIAMETER: 7 FT A/N <b>395834 535604</b>	D494			
TANK, STRIPPER FLASH, RPV-2807B, HEIGHT: 9 FT 7 IN; DIAMETER: 7 FT A/N <b>395834 535604</b>	D495			
VESSEL, RECEIVER, EXTRACTOR, RPV 2810, LENGTH: 16 FT; DIAMETER: 4 FT A/N <b>395834 535604</b>	D496			



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<p>VESSEL, RECEIVER, RPV 2816, STRIPPER OVERHEAD, LENGTH: 16 FT; DIAMETER: 5 FT 6 IN A/N <b>395834 535604</b></p>	D497			
<p>VESSEL, RECEIVER, RPV 2819, WATER, LENGTH: 16 FT; DIAMETER: 3 FT A/N <b>395834 535604</b></p>	D498			
<p>REGENERATOR RPV-2822, SOLVENT, HEIGHT: 27 FT 6 IN; DIAMETER: 6 FT A/N <b>395834 535604</b></p>	D499			
<p>COLUMN, RPV-2823, WATER, HEIGHT: 32 FT; DIAMETER: 3 FT 6 IN A/N <b>395834 535604</b></p>	D500			
<p>DRUM, TRAP, RPV 2872, SULFUR, HEIGHT: 6 FT 9 IN; DIAMETER: 9 FT 10 IN A/N <b>395834 535604</b></p>	D501			
<p>KNOCK OUT POT, RPV-2896, FUEL GAS A/N <b>395834 535604</b></p>	D503			
<p>FLTER, RPV-2948, SOLVENT, W, HEIGHT: 2 FT 8 IN; DIAMETER: 10 FT A/N <b>395834 535604</b></p>	D504			
<p>FLTER, RPV-2949, SOLVENT, E, HEIGHT: 2 FT 8 IN; DIAMETER: 10 FT A/N <b>395834 535604</b></p>	D505			
<p>DRUM, CHLORIDE TRAP, RPV 4015, HEIGHT: 7 FT 10 IN; DIAMETER: 5 FT 10 IN A/N <b>395834 535604</b></p>	D506			
<p>TANK, SURGE, RPV 2836, FEED, LENGTH: 32 FT; DIAMETER: 9 FT A/N <b>395834 535604</b></p>	D507			
<p>ACCUMULATOR, RPV 2843, OVERHEAD, LENGTH: 20 FT; DIAMETER: 8 FT A/N <b>395834 535604</b></p>	D508	D1313 D1314 D1656 D2807		



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COLUMN, NO. 3 REFORMER FRACTIONATOR <b>DEISOPENTANIZER./DEHEXANIZER</b> , RPV 2845, HEIGHT: 93 FT 6 IN; DIAMETER: 8 FT A/N <b>395834 535604</b>	D509			
POT, INJECTION, RPV 4045, CHLORIDE, HEIGHT: 5 FT 8 IN; DIAMETER: 2 FT A/N <b>395834 535604</b>	D510			
VESSEL, RECEIVER, RPV 5109, WATER COLUMN, HEIGHT: 12 FT; DIAMETER: 2 FT A/N <b>395834 535604</b>	D511			
TANK, FLASH, RPV 2863, REFORMATE, HEIGHT: 15 FT; DIAMETER: 6 FT 6 IN A/N <b>395834 535604</b>	D512			
KNOCK OUT POT, RPV 2864, HYDROGEN GAS, HEIGHT: 6 FT; DIAMETER: 2 FT 6 IN A/N <b>395834 535604</b>	D513			
REACTOR, RPV 2871, NO. 1, HEIGHT: 11 FT 6 IN; DIAMETER: 6 FT 6 IN A/N <b>395834 535604</b>	D514		HAP: (10) [40CFR 63 Subpart UUU, #1, 4-20-2006]	
REACTOR, RPV 5115, NO. 4, HEIGHT: 12 FT 7 IN; DIAMETER: 15 FT 6 IN A/N <b>395834 535604</b>	D515		HAP: (10) [40CFR 63 Subpart UUU, #1, 4-20-2006]	
REACTOR, RPV 2873, NO. 2, HEIGHT: 11 FT 6 IN; DIAMETER: 5 FT 6 IN A/N <b>395834 535604</b>	D516		HAP: (10) [40CFR 63 Subpart UUU, #1, 4-20-2006]	
REACTOR, RPV 2874, NO. 3, HEIGHT: 11 FT 1 IN; DIAMETER: 7 FT A/N <b>395834 535604</b>	D517		HAP: (10) [40CFR 63 Subpart UUU, #1, 4-20-2006]	
KNOCK OUT POT, RPV 2876, HEIGHT: 8 FT; DIAMETER: 2 FT A/N <b>395834 535604</b>	D518			
POT, STRIPPER REBOILER CONDENSATE, RPV 5110, HEIGHT: 3 FT; DIAMETER: 1 FT 8 IN A/N <b>395834 535604</b>	D519			



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FLTER, RPV 5754, FUEL GAS, HEIGHT: 10 FT; DIAMETER: 1 FT 5 IN A/N <b>395834 535604</b>	D520			
KNOCK OUT POT, VAPOR RECOVERY, RPV 2891, HEIGHT: 12 FT; DIAMETER: 6 FT A/N <b>395834 535604</b>	D521			
DRUM, RPV 5108, FRACTIONATOR REBOILER CONDENSATE, HEIGHT: 2 FT 2 IN; DIAMETER: 1 FT 10 IN A/N <b>395834 535604</b>	D522			
COMPRESSOR, RW 0005 087.06, RECYCLE GAS, CENTRIFUGAL A/N <b>395834 535604</b>	D523			
TANK, HOLDING, NO. 930, SODA ASH, 300 BBL, DIAMETER: 13 FT 6 IN; HEIGHT: 12 FT A/N <b>395834 535604</b>	D525	D1313 D1314 D1656 D2807		
TANK, HOLDING, NO. 931, UDEX FEED, 1570 BBL, DIAMETER: 25 FT; HEIGHT: 18 FT A/N <b>395834 535604</b>	D526	D1313 D1314 D1656 D2807		
TANK, HOLDING, NO. 932, PLANT SOLVENT, 1000 BBL, DIAMETER: 20 FT; HEIGHT: 18 FT A/N <b>395834 535604</b>	D527	D1313 D1314 D1656 D2807		
TANK, HOLDING, NO. 934, WET SOLVENT, 300 BBL, DIAMETER: 12 FT 3 IN; HEIGHT: 12 FT A/N <b>395834 535604</b>	D528	D1313 D1314 D1656 D2807		
SUMP, CONCRETE, SOLVENT, WITH METAL COVER, WIDTH: 6 FT; DEPTH: 8 FT; LENGTH: 6 FT A/N <b>395834 535604</b>	D529			
ADSORBER, DRIER, SECONDARY EAST, RPV 2981, HEIGHT: 10 FT 6 IN; DIAMETER: 3 FT 6 IN A/N <b>395834 535604</b>	D530			
ADSORBER, DRIER, SECONDARY WEST, RPV 2982, HEIGHT: 10 FT 6 IN; DIAMETER: 3 FT 6 IN A/N <b>395834 535604</b>	D531			



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FUGITIVE MISCELLANEOUS A/N <b>395834 535604</b>	EMISSIONS, D2491		HAP: (10) [40CFR 63 Subpart CC, #5A-5-25-2001]	<b>H23.3</b>
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### CONDITIONS

~~S4.3 — The following condition(s) shall apply to affected devices listed under Section H of this system for fugitive emissions of volatile organic compounds (VOC):~~

~~All open-ended valves shall be equipped with cap, blind flange, plug, or a secondary valve.~~

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

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

~~All process drains 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.~~

~~[RULE 1173, 5-13-1994; RULE 1173, 2-6-2009; 40 CFR 60 Subpart QQQ, 10-17-2000]~~

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]~~

~~S4.4 — 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):~~

~~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 valves in VOC service shall be of leakless type, except those specifically exempted by Rule 1173 or approved by the District in writing 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 stem 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.~~



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

~~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 day 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.~~

~~The operator shall keep records of 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 sheet for all non-leakless type valves with a listing of tag numbers and reasons why leakless valves were not used.~~

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

S31.4 THE FOLLOWING BACT REQUIREMENTS SHALL APPLY TO VOC SERVICE FUGITIVE COMPONENTS ASSOCIATED WITH THE DEVICES THAT ARE COVERED BY APPLICATION NUMBER(S) 427414, [376189](#):

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.

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

All process drains 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 components in VOC service, except 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.

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



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

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

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.

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.

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

All 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. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

All components are subject to 40CFR60, Subpart GGG

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

- 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 resulting from planned Shutdowns, Startups and/or Turnarounds as defined in Rule 1118(b)(21) and (b)(19), respectively, 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(c)(3); and
  - 3) Vent gases due to and resulting from from an Essential Operating Need, as defined in Rule 1118(b)(4)(A).



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

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.

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
- 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, 435, to 437, 440, 444, 445, 451, 454, 455 to 456, 458, 460
- Process 6, System 2: 462, 469, 474 to 475, 477 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



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- 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
- Process 12, System 10: 806
- Process 12, System 12: 815, 818
- Process 12, System 13: 823, 826, 828
- Process 12, System 16: 830
- 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 21, System 1: 1304
- Process 21, System 2: 1307
- Process 21, 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]**

**H23.3** This equipment is subject to the applicable requirements of the following rules and 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]**