FACILITY PERMIT TO OPERATE

BP WEST COAST PROD.LLC BP CARSON REF.
2350 E 223RD ST
CARSON, CA 90749

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

By _____
for Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

FACILITY PERMIT TO OPERATE
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SECTION I: PLANS AND SCHEDULES

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules specified below. The operator shall comply with all conditions specified in the approval of these plans, with the following exceptions:

a. The operator does not have to comply with NOx or SOx emission limits from rules identified in Table 1 or Table 2 of Rule 2001(j) which become effective after December 31, 1993.

b. The operator does not have to comply with NOx or SOx emission limits from rules identified in Table 1 or Table 2 of Rule 2001(j) after the facility has received final certification of all monitoring and reporting requirements specified in Section F and Section G.

Documents pertaining to the plan applications listed below are available for public review at AQMD Headquarters. Any changes to plan applications will require permit modification in accordance with Title V permit revision procedures.

List of approved plans:

Application	Rule
395243	2002
395244	1176
395245	1404
408099	1123
476874	1105.1
487876	1178
495549	463
510012	1173

NOTE: This section does not list compliance schedules pursuant to the requirements of Regulation XXX - Title V Permits; Rule 3004(a)(10)(C). For equipment subject to a variance, order for abatement, or alternative operating condition granted pursuant to Rule 518.2, equipment specific conditions are added to the equipment in Section D or H of the permit.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 · www.aqmd.gov

June 24, 2010

Mr. John Shao
BP West Coast Products LLC
2350 E. 223rd Street
Carson, CA 90749

Re: Rule 1173 Compliance Plan

Application Number:	510012
Plan Owner/Operator:	BP Company
Facility ID:	131003
Site Address:	2350 E. 223rd Street Carson, CA 907459

Dear Mr. Shao:

Please refer to the above application for the revisions of your facility's Rule 1173 compliance plan, Application No. 510012 to comply with Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants. This revised Rule 1173 compliance plan has been reviewed and approved subject to the conditions listed below. This approved plan supersedes the plan that was approved under Application No. 494358 dated August 13, 2009.

CONDITIONS

1. The operator shall install and operate its atmospheric PRD monitoring systems in accordance with all data and specifications submitted with this application under which this plan is approved unless otherwise specified below. A list of the current PRDs is provided in the Attachment tables.

2. The operator shall install electronic monitoring devices as proposed in the PRD inventory and compliance plan (Attachment-Table IV) on all 413 atmospheric PRDs in its inventory that are subject to Rule 1173 (h)(1)(B) by July 1, 2010.

3. Upon completion of installation of the electronic monitoring device for a PRD, the operator shall use the continuous valve monitoring system (CVMS), which shall include

the process pressure monitoring and recording system and electronic monitoring device for the PRD, to document and determine the release durations and quantities.

4. CVMS shall be defined to include the electronic monitoring devices, pressure sensors or transmitters, receivers, and the data acquisitions or recording systems. Continuous recording shall be defined as the recorded pressure readings and electronic valve monitoring readings at a minimum of one minute intervals (more often if there is a release detected). The data recording systems shall be accurately synchronized with the time and date of the measurement.

5. The operator shall ensure that the CVMS for each of the subject atmospheric PRDs is properly maintained and kept in good operating condition at all times when the process equipment that it serves is in operation, except when it is taken out of service due to the following reasons:

   a. Failure, breakdown, or unplanned maintenance of the data acquisition or recording system, which shall not exceed 48 hours cumulatively in any given calendar quarter. The operator shall also report the time period that the data recording system is out of service in the quarterly report.

   b. Planned maintenance of the CVMS shall not exceed 7 days in a calendar year unless the operator has notified the District by e-mail detailing the specific reason for the maintenance within 24 hours of taking the CPMS out of service. All notifications shall be forwarded to refinery.compliance@aqmd.gov.

6. The operator shall use following equation(s) or other alternative District-approved methodology to determine the volatile organic compound (VOC) emissions from a PRD release. The operator shall submit a plan application in order for the District to evaluate any alternative VOC emission estimation methodology.

PRD Equation for Vapor or Gas Service

$$W_s = \frac{(ACK_d K_b K_c)(P+14.7)}{3600\sqrt{\frac{(T+460)Z}{M}}}$$

Wvoc = Ws * VOC * t

$W_{TVOC} = \sum$ Wvoc

Where:

A = Relief Valve Orifice Size

$$C = Sizing\ Coefficient = 520\sqrt{k\left(\frac{2}{k+1}\right)^{\frac{k+1}{k-1}}}$$

k = Cp/Cv = Specific Heat Ratio for the released gas
Kd = Effective Coefficient of Discharge (use Kd = 0.975 in absence of manufacturer's PRD specific data)
Kb = Capacity Correction Factor
Kc = Combination Correction Factor. (Kc =1 if no rupture disk; Kc = 0.9 if rupture disk)
M = Molecular Weight of the released gas
P = Pressure (psig), as measured with Process Pressure Monitoring System
T = Temperature (°F)
t = Recorded Duration of Release in Seconds by Electronic Monitoring Device
VOC = weight percent VOC in the released gas
Ws = Flow through the PRD, lb/sec
Wvoc = Flow of VOCs through the PRD
W_{TVOC} = Total VOC Released during the Event, lbs
Z = Compressibility Factor

PRD Equation for Liquid Service

$$Q = 0.63 A K_d K_w K_v \sqrt{\frac{P}{G}}$$

M = Q*8.34*G*t

Q = flow rate, (U.S. gallon per second)
Kd = Rated Coefficient of Discharge (use Kd = 0.65 in absence of manufacturer's PRD specific data)
Kw = Capacity Correction Factor (Kw = 1 for atmospheric back pressure)
Kv = Correction Factor due to Viscosity (assume = 1)
P = Pressure (psig), as measured with Process Pressure Monitoring System
G = Specific Gravity of the liquid at flowing temperature
M = Release per Event in lbs
t = Recorded Duration of Release in Seconds by Electronic Monitoring Device

Mair = M – Md - Mr

Where

Mair = lb of emissions released into the air from liquid PRDs

Md = lb of liquid recovered from drain. The operator may use the volume and the density of the liquid to determine the mass of the liquid recovered, or direct

weight scale measurement. The amount of liquid recovered shall not include cleanup material, absorbent, and cleaning solution, or any material other than the liquid released by the liquid PRD.

M_r = lb of liquid recovered by cleanup crew. The operator may use the volume and the density of the liquid to determine the mass of the liquid recovered, or direct weight scale measurement. The amount of liquid recovered shall not include cleanup material, absorbent, and cleaning solution, or any material other than the liquid released by the liquid PRD.

For each PRD release event, it shall be assumed that the PRD is fully open for the duration of the release recorded by the monitoring device. Any alternative in determining the release duration or quantity shall be evaluated and approved in writing by the District.

If the operator wants to determine the amount of emissions for a release from a PRD event by excluding the amount of liquid recovered, the operator shall maintain records of the weight of the excluded materials as defined by M_d and M_r.

7. The operator shall calibrate and maintain each pressure sensor and electronic monitoring device in accordance with manufacturer's specifications.

8. All components of the CVMS shall be made available to District personnel for inspection upon request.

9. The operator shall keep the "Pipe End Cover" such as a piper cover or drain cap on each PRD identified under this current approved plan as the monitoring devices for releases until the PRD is equipped with the electronic monitoring device and the CVMS or other approved monitoring devices. Until such time, the operator shall comply with the following conditions for each PRD:

A. The operator shall visually inspect each "Pipe End Cover" at least once during each eight-hour operating period to confirm that the pipe end cover is properly secured in place at the outlet of the PRD vent gas piping.

B. The operator shall ensure that each "Pipe End Cover" is properly maintained and free of holes, tears, and openings at all times. For "accessible" PRDs, the operator shall inspect each "Pipe End Cover" at least once every calendar quarter to confirm that the pipe end cover is in good working order. For "inaccessible" PRDs, the operator shall inspect each "Pipe End Cover" at least once every calendar year to confirm that the pipe end cover is in good working order. The operator shall generate a written record of the inspection.

C. The operator shall notify the District within one hour of the time that it is identified by the operator that the "Pipe End Cover" has been blown off of the PRD vent gas piping outlet. The notification shall be made by calling 1-800-CUT-SMOG.

D. The equation in Condition no. 6 shall be utilized to calculate the volatile organic compound (VOC) emissions from a PRD release. For each PRD release event, it shall be assumed that the PRD is fully open from the time that the "Pipe End Cover" was last identified to be in position at the PRD vent gas piping outlet until the time that it is identified that the "Pipe End Cover" has been blown off of the PRD vent gas piping outlet unless the operator can provide physical evidence or process data that supports, to the satisfaction of the District, a different time period for the release. This different time period may be established based on the process pressure records, PRD pressure setpoint and physical observation of the Pipe End Cover.

10. The operator shall keep adequate records to show compliance with all plan conditions. Such records shall be made available to District personnel upon request. The operator shall maintain records for at least five years.

11. As specified under Rule 1173 (h)(F), until the time the PRDs identified in Table II in the Attachment are connected to the vapor recovery or control system, the operator shall monitor these PRDs by using electronic process control instruments that allow for real time continuous parameter monitoring or telltale indicator.

12. The provisions of this plan will not apply to any PRDs that are determined to be no longer subject to Rule 1173(h), including PRDs that have been removed, tied into a closed system, been modified so that they fall under the provisions of Rule 1173(h)(1)(G), or are located on equipment that is out of service and hydrocarbon free. If the operator makes any changes allowed under this condition, the operator shall submit an updated inventory to the District within 12 months identifying changes to the inventory.

If you have any question, please contact Mr. Johnny Pan at (909) 396-3602.

Sincerely,

Jay Chen, P.E.
Senior AQ Engineering Manager
Refinery & Waste Management Permitting

CC: Compliance
A/N 510012

ATTACHMENT

Table I-RULE 1173 PRDS REMOVED

Table II-PRDS SCHEDULED TO BE CONNECTED TO CONTROL SYSTEM

TABLE III-PRDS EXEMPT FROM REQUIREMENTS OF (h)(1)(A)-(h)(1)(F) by (h)(1)(G)

TABLE IV-PRDS SUBJECT TO RULE 1173 (h)(1)