



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

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:

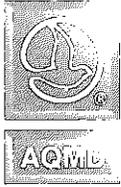
- a. The operator does not have to comply with NOx or SOx emission limits from rules identified in Table 1 or Table 2 of Rule 2001(j) which become effective after December 31, 1993.
- b. The operator does not have to comply with NOx or SOx emission limits from rules identified in Table 1 or Table 2 of 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
459316	463
476874	1105.1
487876	1178
494358	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

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DRAFT

February 3, 2010
Facility ID No. 131003
A/N 408099

Ms. Maxine Sauer
BP West Coast Products, Carson Refinery
2350 E 223rd Street
Carson, CA 90749

Subject: Refinery Process Turnaround Plan Approval

Dear Ms Sauer,

This letter is in regard to BP West Coast Product's process turnaround plan submitted under Application No. 408099 to comply with SCAQMD Rule 1123—Refinery Process Turnarounds. The plan was originally submitted on October 23, 2002, but was replaced with an updated version dated September 24, 2009. The South Coast Air Quality Management District (SCAQMD) has evaluated your September 2009 plan for compliance with the applicable requirements of Rule 1123. The plan (copy attached) is approved subject to the following conditions:

1. Refinery process turnarounds shall be conducted in accordance with the attached plan dated September 2009, unless otherwise specified below.
2. During refinery process turnaround, the vapors released from the vessel shall not vent to the atmosphere at any time unless the vessel has been depressurized to below 5 psig, or is within 10 percent above the minimum gauge pressure at which the vapors can be collected, whichever is lower, and has met all the requirements in Condition No. 3 and 4 below.
3. To depressurize vessels pursuant to Condition No. 2, the vapors released from the vessel shall be recovered by (i) the fuel gas system, (ii) the vapor recovery system (VR system), (iii) the flare gas recovery system (FGR system), or (iv) portable vapor recovery equipment with a valid permit to receive vent gases generated from process turnaround operation. The vapors released from the vessels may be directed to a flare provided that all flares have been operated in accordance with flaring minimization procedures pursuant to Rule 1118(c)(3) and (c)(4).
4. If inert gases are used for refinery process turnaround, the operator shall comply with all of the following requirements:

- (A) Prior to introducing inert gases into the vessel, the operator shall initially depressurize the vessel in accordance to Condition No. 2 and 3.
- (B) After introducing inert gases into the vessel, the vapors released from the vessel shall be recovered by the fuel gas, VR, or FGR systems.
- (C) Condition No. 4B above shall not apply if the facility operator can demonstrate that recovering the vapors would result in: (i) equipment damage due to incompatibility with recovery system equipment or with refinery fuel gas systems, (ii) malfunction of pollution control equipment or safety devices, or (iii) violations of safety regulations. The vapors are permitted to be routed directly to the flare if condition (i), (ii), or (iii) is met and provided that all flares have been operated in accordance with flaring minimization procedures pursuant to Rule 1118(c)(3) and (c)(4).

5. The operator shall keep records of each refinery process unit turnaround, in a manner approved by the AQMD, for the following items:

- The date the unit was shut down.
- The date, time, and hydrocarbon concentration measured when the vapors from the vessel were first discharged into the atmosphere.
- The approximate amount of hydrocarbons emitted into the atmosphere.
- Records to demonstrate that condition No. 4C is applicable

The records shall be kept for at least five years and made available for District inspection upon request.

If you have any further questions, please contact Meredith Hankins by phone at (909) 396-2493 or by email at mhankins@aqmd.gov.

Sincerely,

Jay Chen
Senior Manager
Refinery and Waste Management
Engineering and Compliance

Attachment: Compliance Plan submitted by BP

BP CARSON REFINERY

SCAQMD RULE 1123 – REFINERY PROCESS TURNAROUNDS

COMPLIANCE PLAN

INTRODUCTION

The BP Carson refinery must comply with South Coast Air Quality Management District (SCAQMD) rules and regulations at all times. This plan details the procedure to be followed to comply with SCAQMD Rule 1123. Rule 1123 specifically applies to vessels taken out of service during a process unit turnaround. A turnaround is defined as a planned maintenance activity in which equipment associated with major portions of a processing unit is removed from service (i.e., no feed to the equipment). Rule 1123 requires that during turnaround, vapors resulting from the depressurization of any vessel containing organic materials must be collected and contained for use as fuel or sent to a gas disposal system, until the pressure in the vessel is below five pounds per square inch gauge (psig) or is within ten percent above the minimum gauge pressure at which the vapors can be collected, whichever is lower.

In addition to the operational requirements, Rule 1123 requires that the refinery maintain records indicating:

- The date the vessel was shut down,
- The approximate vessel hydrocarbon concentration when hydrocarbons are first discharged to atmosphere, and
- The approximate amount of hydrocarbons discharged into the atmosphere.

All required records must be kept for at least five years.

DESCRIPTION OF PROCEDURES

Process Unit (Pressure Vessel) Turnaround and General Maintenance

Paragraph (b)(1) of Rule 1123 sets forth requirements for venting or depressurization of process vessels containing organic materials. The following procedures are followed for all types of process vessels at the refinery that contain organic materials, including but not limited to, towers, heat exchangers, knockout pots, accumulators, surge drums, reactors, and the like.

In general, Operations personnel are responsible for depressurizing vessels. An approved monitoring contractor is responsible for measuring and recording hydrocarbon concentrations released to the atmosphere, and maintains a trained staff for that purpose. Turnaround planners inform the approved monitoring contractor when vessels are scheduled to be opened and a measurement is needed.

Once a process unit is shut down for turnaround, the hydrocarbon liquid in the vessels and piping is pumped out to either slop, product tanks, or frac tanks or vacuum trucks with permitted air pollution control (APC). The lighter end units partially depressurize the vessels to storage or a refinery gas stream.

Process units may be further depressurized by venting to either the vapor recovery system, the flare, or flare gas recovery system, or approved permitted portable APC.. The vapor recovery system operates under negative pressure and is capable of reducing the pressure in any vessel to below 5 psig. Vapors released to this system are compressed, treated in the caustic treatment system, and either sent to the No. 1 Crude Unit heater or refinery fuel gas system. The flare operates at about 2 psig and therefore can also be used to reduce the pressure in any vessel to below 5 psig. Vapors sent to the flare are destroyed via combustion. The flare gas recovery system, which operates at approximately 2 psig, receives vent gases from the flare headers. The gases are compressed, treated at the Coker Unit amine contactors, and then sent to the fuel gas system.

During depressurization, operations personnel visually monitor the external gauge pressure until the pressure is below 5 psig. Since the vessel must be monitored immediately upon opening, the approved monitoring contractor should be notified using the approved Planning Form as soon as possible prior to the turnaround to ensure their availability to perform required monitoring.

The approved monitoring contractor will perform all required monitoring with a calibrated portable Organic Vapor Analyzer (OVA). The OVA must be calibrated each day it is used. For any vessel opening, two readings are taken: (1) a background hydrocarbon level at the vapor exit point before the vessel is opened, and (2) the maximum hydrocarbon level immediately upon opening. The OVA probe is placed directly in line with the vapor exit point making sure there is no liquid in the vapor stream. Readings are taken at a vent, bleed, or any location that is safely accessible. Readings are typically not taken from the vessel top vent as these openings are usually not safely accessible. The background and maximum hydrocarbon readings are recorded. In addition to the hydrocarbon readings, the vessel pressure gauge reading is also recorded. The approved monitoring contractor should also record that the vessel opening was associated with a process unit turnaround.

All vessel readings are entered into a database maintained by an approved environmental contractor. In this database, the maximum hydrocarbon concentration is combined with known vessel volumes to estimate the amount of hydrocarbons released to atmosphere. This data is maintained by the BP Environmental Department and retained for the required five year period. They are also used by Environmental for annual reporting purposes.

Separator Turnaround

For separator turnarounds associated with the wastewater system, the separators and forebays are taken out of service by shutting off the flow and proceeding quickly to skim the oil, minimizing emissions from floating oil. The oil and water is pumped out of the separator using diaphragm pumps and vacuum trucks. Temporary storage containers and vacuum trucks

must use SCAQMD permitted APC for all emissions. All vacuum truck hoses in use are wrapped with plastic where they extend through the hatch or openings and sandbagged around the hole. All vacuum truck hoses should be removed or capped off when not in use. Roof segments and/or covers are removed only when skimming and/or pumping becomes difficult because of space limitations or to provide safe access to the separator or forebay.

The approved monitoring contractor will perform all required monitoring for separator turnarounds with a calibrated portable OVA. The OVA must be calibrated each day it is used. An OVA background reading will be taken prior to opening of the separator roof segments or hatches. An OVA reading will be taken immediately following the opening of the separator roof segments or hatches. Both readings will be recorded and sent to the Environmental Department.

The list of devices associated with the wastewater system that are subject to these requirements (as referenced under Title V permit conditions H23.21 or H23.26) are as follows:

Device	Process	System	Condition
D992	15	2	H23.21
D997	15	4	H23.21
D1004	15	5	H23.21
D1005	15	5	H23.21
D1006	15	5	H23.21
D1008	15	6	H23.21
D1009	15	6	H23.21
D1010	15	6	H23.21
D1627	15	1	H23.21
D1637	15	6	H23.21
D2008	15	6	H23.21
D2009	15	6	H23.21
D2010	15	6	H23.21
D2011	15	6	H23.21
D2012	15	6	H23.21
D2013	15	6	H23.21
D2747	15	9	H23.26
D2752	15	9	H23.21
D2754	15	9	H23.21
D2755	15	9	H23.21
D2757	15	9	H23.21
D2759	15	9	H23.21
D2761	15	9	H23.21
D2787	15	9	H23.21
D2811	15	9	H23.26