

draft

Mr. Alok Das
DeMenno/Kerdoon
2000 N. Alameda Street
Compton, CA 90222

Re: Rule 1173 Compliance Plan
Application Number: 560779
Plan Owner/Operator: DeMenno/Kerdoon
Facility ID: 800037
Site Address: 2000 N. Alameda Street
Compton, CA 90222

Dear Mr. Das:

Please refer to the submitted application (Application #560779) for the evaluation of your facility's Rule 1173 compliance plan dated February 13, 2014, to comply with the South Coast Air Quality Management District's (AQMD) Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants. The Rule 1173 compliance plan has been reviewed and approved, subject to the conditions listed below.

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.
2. The operator shall install electronic monitoring devices on all nine atmospheric PRDs identified in Attachment A that are subject to Rule 1173(h)(3).

3. The operator shall use a continuous pressure monitoring system (CPMS) to continuously monitor and record the process pressure that is used as an indicator of release for the PRD identified in the plan.
4. CPMS shall be defined to include the pressure sensors or transmitters, receivers, and the data acquisition or recording systems. Continuous recording shall be defined as the recorded pressure readings at a minimum of one minute intervals. The data recording systems shall be accurately synchronized with the time and date of the measurement.
5. The operator shall ensure that the CPMS 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 CPMS shall not exceed 7 days in a calendar year unless the operator has notified the District by telephone at 1-800-CUT-SMOG detailing the specific reason for the maintenance within 24 hours of taking the CPMS from service.
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 an alternative VOC emission estimation methodology.

PRD Equation for Vapor or Gas Service

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

$$W_{\text{voc}} = W_s * \text{VOC} * t$$

$$W_{\text{TVOC}} = \sum W_{\text{voc}}$$

Where:

A = Relief Valve Orifice Size

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

$k = C_p/C_v =$ Specific Heat Ratio for the released gas

$K_d =$ Effective Coefficient of Discharge (use $K_d = 0.975$ in absence of manufacturer's PRD specific data)

$K_b =$ Capacity Correction Factor

$K_c =$ Combination Correction Factor. ($K_c = 1$ if no rupture disk; $K_c = 0.9$ if rupture disk)

$M =$ Molecular Weight of the released gas

$P =$ Pressure (psig), as measured with Continuous Process Monitoring System

$T =$ Temperature ($^{\circ}\text{F}$)

$t =$ Recorded Duration of Release in Seconds by Electronic Monitoring Device

$\text{VOC} =$ weight percent VOC in the released gas

$W_s =$ Flow through the PRD, lb/sec

$W_{\text{voc}} =$ Flow of VOCs through the PRD

$W_{\text{TVOC}} =$ 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)

$K_d =$ Rated Coefficient of Discharge (use $K_d = 0.65$ in absence of manufacturer's PRD specific data)

$K_w =$ Capacity Correction Factor ($K_w = 1$ for atmospheric back pressure)

$K_v =$ Correction Factor due to Viscosity (assume = 1)

$P =$ Pressure (psig), as measured with Continuous Process 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

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.

7. The operator shall calibrate and maintain each pressure sensor in accordance with manufacturer's specifications.
8. All components of the CPMS shall be made available to District personnel for inspection upon request.
9. 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.
10. The provisions of this plan shall not apply to any PRDs that are determined to be no longer subject to Rule 1173(h)(3), including PRDs that have been removed, tied into a closed system, 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. Jonathan Uhl at (909) 396-2725.

Sincerely yours,

Andrew Lee, P.E.
Sr. Air Quality Engineering Manager
Energy/Public Services/Waste Mgmt/
Terminals

Attachment A-List of Atmospheric PRDs

cc: Compliance
A/N 560779

ATTACHMENT A

PRESSURE RELIEF DEVICE INVENTORY

SCAQMD Device No.	D/K Equipment No.	Location	Inlet Size (in.)	Outlet Size (in.)	Set Pressure (psig)
D125	C201	Atmospheric Dehydration Tower	4	6	60
D126	C202	Atmospheric Dehydration Tower	4	6	60
D127	C203	Vacuum Dehydration Tower	4	6	60
D188	C207	Vacuum Unit #1	3	4	40
D236	C205	Vacuum Unit #2	3	4	40
D178	C206	Vacuum Dehydration Vessel	3	4	60
D128	D-204	Phase Separator Accumulator	4	6	15
C281	Dowtherm Return Line	New Afterburner	6	8	175
C281	Expansion Drum	New Afterburner	1.5	3	175

1173 Pressure Relief Valves Compliance Plan

DeMenno/Kerdoon
2000 N. Alameda Street
Compton, CA 90222

February 13, 2014

FACILITY INFORMATION:

Name: DeMenno/Kerdoon
SCAQMD Facility ID: 800037
Facility Address: 2000 N. Alameda Street
Compton, CA 90222
Mailing Address: 2000 N. Alameda Street
Compton, CA 90222
Phone No.: (310) 537-7100
Contact Person: Alok Das, Environmental Engineering Manager
Jay Demel, Vice President of Operations

FACILITY DESCRIPTION:

DeMenno/Kerdoon's (DK) is a used storage, treatment, recycling, and transfer facility for waste oil, waste ethylene glycol, oily water, and other hazardous waste.

PRESSURE RELIEF VALVES INVENTORY:

The current relief valve inventory at DK is listed below:

SCAQMD Device No.	D/K Equipment No.	Location	Outlet Size (in)	Outlet Size (in)	Set Pressure (psig)
D125	C201	Atmospheric Dehydration Tower	4	6	60
D126	C202	Atmospheric Dehydration Tower	4	6	60
D127	C203	Vacuum Dehydration Vessel	4	6	60
D188	C207	Vacuum Unit # 1	3	4	40
D236	C205	Vacuum Unit # 2	3	4	40
D178	C206	Vacuum Dehydration Vessel	3	4	60
D128	D204	D-204	4	6	15
C281	Dowtherm Return Line	New Afterburner	6	8	175
C281	Expansion drum	New Afterburner	1.5	3	175

COMPLIANCE PLAN

DK has installed a continuous pressure monitoring device for each atmospheric relief valve that is listed above. DK will replace the existing D-204(D128) PRV with the new PRV and the continuous pressure monitoring device as soon as the plan is approved.