

FACILITY PERMIT TO OPERATE LUNDAY-THAGARD COMPANY

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 NO_x or SO_x 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 NO_x or SO_x 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
213596	1404
483832	462
503963	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.

March 12, 2010

Mr. Marcus Ruscio
Lunday-Thagard Company
9301 Garfield Ave.
South Gate, 90280

Re: Rule 1173 Compliance Plan
Application Number: 503963
Plan Owner/Operator: Lunday-Thagard Company
Facility ID: 800080
Site Address: 9301 Garfield Ave.
South Gate, CA 90280

Dear Mr. Marcus Ruscio:

Please refer to the above application for the evaluation of your facility's Rule 1173 compliance plan dated November 16, 2009 and revised on March 8, 2010 (attached) 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. This plan supersedes a previous plan under Application No.423768. 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 atmospheric PRDs identified in Attachment A that are subject to Rule 1173 (h)(1)(A).
3. The operator shall use a continuous pressure monitoring system (CPMS) to continuously monitor and record the process pressure and the electronic monitoring device that are used as indicators of release for the PRD identified in the plan.
4. CPMS 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. 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 e-mail detailing the specific reason for the maintenance within 24 hours of taking the CPMS from 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 an alternative VOC emission estimation methodology.

PRD Equation for Vapor or Gas Service

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

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

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

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 = Cp/Cv = 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 (°F)

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

VOC = weight percent VOC in the released gas

W_s = Flow through the PRD, lb/sec

W_{voc} = 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)

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 and electronic monitoring device 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.

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

Sincerely yours,

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

Attachment A-List of Atmospheric PRDs

cc: Compliance
A/N 503963

Attachment

Lunday-Thagard Company
 9301 Garfield Avenue, South Gate, CA 90280
 SCAQMD Facility ID # 800080
 Application Number: 423768

PRD Location and ID						PRD Type and Specifications					Electronic Monitoring Device		
PRD Tag ID No. (2)	Process Unit	Equipment ID No.	FP Process ID	FP System ID	FP Device No.	Type	Set Press. (psig)	Size (InxOut) (Inches)	Orifice Area (in ²) (1)	Monitor Type	Type	Range (counts)	Monitor Type
2463-000	Atm. Crude	Crude Tower C-101 (C-2) Top Pressure	1	1	D6	PRV (Spring)	55	6x6	4M6	Pressure	Accutech	0 to 255	Acoustic
2485-000	Atm. Crude	Crude Tower C-101 (C-2) Flash Zone	1	1	D6	PRV (Spring)	50	6x6	4M6	Pressure	Accutech	0 to 255	Acoustic
3719-000	Vac. Crude	Crude Tower C-104 (C-1A)	1	2	D7	PRV (Spring)	25	3x4		Pressure	Accutech	0 to 255	Acoustic
3718-000	Vac. Crude	Crude Tower C-105 (C-1B)	1	2	D8	PRV (Spring)	25	3x4		Pressure	Accutech	0 to 255	Acoustic
2609-000	Asphalt Processing	Air Blowing Still V-1	7	1	D80	PRV (Spring)	30	6x8	6Q8	Pressure	Accutech	0 to 255	Acoustic
2644-000	Asphalt Processing	Air Blowing Still V-2	7	2	D81	PRV (Spring)	30	6x8	6Q8	Pressure	Accutech	0 to 255	Acoustic
2617-000	Asphalt Processing	Air Blowing Still V-3	7	3	D82	PRV (Spring)	30	6x8	6Q8	Pressure	Accutech	0 to 255	Acoustic
2626-000	Asphalt Processing	Air Blowing Still V-4	7	4	D83	PRV (Spring)	20	6x8	6Q8	Pressure	Accutech	0 to 255	Acoustic
01387-000	Asphalt Processing	Air Blowing Vapor Line	7	na	na	PRV (Spring)	14	6x8	C	Pressure	Accutech	0 to 255	Acoustic
3347-000	SulfaTreat Absorber, Top of V-401 in Area 10	Vessel-401 SulfaTreat Absorber	2	1	C217	PRV	15	2x3	2J3	Pressure	Accutech	0 to 255	Acoustic
3339-000	SulfaTreat Absorber, Top of V-402 in Area 10	Vessel-402 SulfaTreat Absorber	2	1	C218	PRV	15	2x3	2J3	Pressure	Accutech	0 to 255	Acoustic
3336-000	SulfaTreat Absorber, Top of V-403 in Area 10	Vessel-403 SulfaTreat Absorber	2	1	C219	PRV	15	2x3	2J3	Pressure	Accutech	0 to 255	Acoustic

FP - Facility Permit; PRD - Pressure Relief Device; PRV - Pressure Relief Valve

(1) Orifice designation provided by facility

(2) Rule 1173 Tag No.