

# *South Coast Air Quality Management District*

## *Statement of Basis*

### *Proposed Title V Permit*

(Issued for Public Notice: 5/14/09)

<b>Facility Name:</b>	Lunday-Thagard Co.
<b>Facility ID:</b>	800080
<b>SIC Code:</b>	2911
<b>Facility Address:</b>	9301 Garfield Avenue South Gate, CA 90280
<b>Application Number:</b>	339693
<b>Application Submittal Date:</b>	03/24/1998
<b>AQMD Contact Person:</b>	Bhaskar Chandan, Senior Air Quality Engineer
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## **1. Introduction and Scope of Permit**

Title V is a national operating permit program for air pollution sources. Facilities subject to Title V must obtain a Title V permit and comply with specific Title V procedures to modify the permit. This Permit replaces the facility's other existing air pollution permits. Title V does not necessarily include any new requirements for reducing emissions. It does, however, include new permitting, noticing, recordkeeping, and reporting requirements.

The South Coast Air Quality Management District (AQMD) implements Title V through Regulation XXX – Title V Permits, adopted by the AQMD Governing Board in order to comply with EPA's requirement that local air permitting authorities develop a Title V program. Regulation XXX was developed with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings. AQMD also has published a draft of the Technical Guidance Document for Title V (March 2005, Version 4.0) available on the AQMD website at <http://www.aqmd.gov/titlev/TGD.html>.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant in the South Coast Air Basin. The Basin is in attainment with National Ambient Air Quality Standards (NAAQS) for NO<sub>2</sub>, SO<sub>2</sub>, CO, and lead. The status for CO was redesignated from nonattainment to attainment in June 2007 (72 FR 26718). The status for PM-2.5 and PM-10 is nonattainment and serious nonattainment, respectively. The status for ozone is extreme nonattainment.

The AQMD proposes to issue an initial Title V Permit for the refinery operations of Lunday-Thagard Co., located at 9301 Garfield Avenue, South Gate, CA 90280. It is subject to Title V requirements because the company's operations at this location in the aggregate are a major source of pollution as defined in Title V of the federal Clean Air Act and the facility is subject to certain NSPS (New Source Performance Standards).

## **2. Facility Description**

Lunday-Thagard operates as a "topping refinery". It receives crude oil from various sources and utilizes distillation to separate crude oil into asphalt, which is the primary product for the refinery, and intermediate distillates such as naphtha, petroleum distillate, and vacuum gas oil. The refinery does not produce any motor fuels and does not utilize cracking processes that change the structure of compounds that are contained in the crude oil. The asphalt is used primarily in the paving and construction industries. Intermediate distillates are sold to other refineries for additional processing.

Currently, the refinery has a capacity to process approximately 8,500 barrels of crude oil per day. Primary processing equipment at the refinery includes one atmospheric and one vacuum distillation column. These units separate the crude oil by distillation into fractions according to their respective boiling points. The fractions from these units include off-gases that are used as a source of energy for one of the plant's process heaters, naphtha, light distillate oil, asphalt, and fuel oil.

The refinery has a fuel gas treating system to remove the majority of the sulfur compounds from the distillation columns' off-gases before they are combusted in the refinery's incinerator. The refinery operates three heaters, two boilers, and two incinerators. The two incinerators have been permitted by AQMD to burn natural gas and refinery gases, while the three process heaters and two boilers have been permitted to burn only natural gas.

Asphalt processing facilities at the refinery include an asphalt blowing plant with four air blowing stills. On-site loading/unloading racks and fixed roof storage tanks are used in the transport and storage of the crude oil, asphalt, light distillate oil, fuel oil, and naphtha. All the crude oil is delivered by tanker truck to the facility. A small portion of the asphalt products are transported via pipeline to two neighboring facilities, but most is transported from the plant by tanker trucks. All other intermediate products (i.e. naphtha, fuel oil) are transported to customers by tanker trucks.

## **3. Construction and Permitting History**

The refinery has been in operation since 1937. Numerous Permits to Construct and Permits to Operate have been issued to the refinery since the formation of the Los Angeles County Air Pollution Control District in 1947. The current Permit to Operate and/or Permit to Construct for each permit unit located at the refinery is contained in the Title V Permit.

#### **4. Regulatory Applicability Determinations**

Applicability determinations (i.e., determinations made by the District with respect to what legal requirements apply to a specific piece of equipment, process, or operation) for this facility have been completed. Applicable legal requirements with which this refinery must comply have been identified in the Title V Permit (for example, Sections D, E, and H of the proposed Title V Permit). Federal NSPS requirements of 40 CFR Part 60 apply to certain units at the facility and the permit terms and conditions may be found in Sections D and H of the Title V Permit. NESHAP (National Emission Standards for Hazardous Air Pollutants) requirements of 40 CFR Part 61 and 40 CFR Part 63 apply to units at the facility and the permit terms and conditions may be found in Sections D and H of the Title V Permit.

##### Standards of Performance for New Stationary Sources (NSPS) (40 CFR 60)

###### Applicability Determinations

All pieces of equipment listed in the Title V Permit have been reviewed to determine whether they are subject to any of the NSPSs. With the exception of the equipment specified in Tables 4.1 to 4.3 below, the refinery is generally subject to the following NSPSs:

- 40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units;
- 40 CFR 60 Subpart J – Standards of Performance for Petroleum Refineries;
- 40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978;
- 40 CFR 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984;
- 40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Storage Vessels (Including Petroleum Liquids Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced July 23, 1984;
- 40 CFR 60 Subpart UU – Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture;
- 40 CFR 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries;
- 40 CFR 60 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006; and
- 40 CFR 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.

The above regulations specify standards for applicable equipment within the refinery based on construction date or subsequent modifications that resulted in an emission increase as defined by 40 CFR 60.14(a) or reconstruction with a capital cost of the new components exceeding 50 percent of the fixed capital cost that would be required to construct a comparable entirely new

facility as defined in 40 CFR 60.15(a) and (b). The applicability of the above rules is based on information contained in the permit application files or through refinery responses to information requests.

Alternative Monitoring Plans (AMPs)

EPA allows facilities to apply for an alternative monitoring plan (AMP) in lieu of meeting the monitoring requirements specified under an individual NSPS. NSPS Subpart A, section 60.13(i) states that “After receipt and consideration of written application, the administrator may approve alternative procedures to any monitoring procedures or requirements of [Part 60] ...”. EPA, which retains delegation of the authority to approve these AMPs, approves AMPs that include adequate monitoring to verify compliance with the emission standard(s) of an NSPS.

Lunday-Thagard has applied for, but not yet received EPA approval of two AMPs for its fuel gas combustion devices (FGCDs). These AMPs are for the monitoring requirements of the H<sub>2</sub>S contained in the fuel gas, as specified at §60.104(a)(1) and 60.105(a)(3)(i-iv) of NSPS Subpart J. Specifically, the following FGCDs AMP applications are pending EPA approval:

- Nao-Vapor Disposal Incinerator (C105)
- Incinerator I-301 vents from asphalt loading ( C97)

Non-Applicability Determinations

All the equipment in the Title V Permit has been reviewed to determine whether it is subject to any of the NSPS. Tables 4.1 to 4.3 below contain tabulated summaries of selected negative determinations regarding NSPS applicability.

**Table 4.1 Combustion Sources and Process Units Not Subject to NSPS Requirements**

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D19, D20, D84	Heaters	40CFR60, Subpart J	Permitted to combust only commercial natural gas, not fuel gas.
D214, D231	Boilers	40CFR60, Subpart J	Permitted to combust only commercial natural gas, not fuel gas.

**Table 4.2 Storage Tanks, Loading Racks and Wastewater Systems Not Subject to NSPS Requirements**

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D37, D38, D39, D40, D41, D42, D46, D48,	Fixed Roof Storage Tanks	40CFR60, Subpart K/Ka/Kb	Tanks were constructed prior to June 11, 1973, and have not been modified or reconstructed since then.

D49, D50, D51, D52, D68, D69, D70, D74			
D35, D58, D60, D62, D64, D66, D71, D72, D73, D75, D76, D123, D125, D127, D129, D159, D163	Fixed Roof Storage Tanks	40CFR60, Subpart K/Ka/Kb	Vapor pressure of permitted commodities is below the vapor pressure threshold of the subject NSPSs.
D69, D71, D72, D73, D75, D76	Fixed Roof Storage Tanks	40CFR60, Subpart UU	Tanks were constructed prior to November 18, 1980, and have not been modified or reconstructed since then.
D80, D81, D82, D83	Asphalt Blowing Stills	40CFR60, Subpart UU	Stills were constructed prior to November 18, 1980, and have not been modified or reconstructed since then.

**Table 4.3 Fugitive Components Not Subject to NSPS Requirements**

<b>Device ID</b>	<b>Equipment</b>	<b>Regulation</b>	<b>Summary of Non-Applicability Determination</b>
D165, D166, D167, D168, D169, D170, D171, D172, D173, D174, D178, D179, D180, D181, D182, D183, D184, D225,	Fug. Components	40 CFR 60, Subpart GGGa	Process units or compressors were installed/constructed prior to November 7, 2006, and have not been modified or reconstructed since then

This refinery is not subject to the NSPSs listed below:

- 40 CFR 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971. This refinery does not operate any steam generators that have a permitted heat capacity greater than 250 MMBtu/hr.
- 40 CFR 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This refinery does not meet the definition of an electric utility.

- 40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. This refinery does not operate any steam generating units that have a permitted heat capacity greater than 100 MMBtu/hr.
- 40 CFR 60 Subpart XX – Standards of Performance for Bulk Gasoline Terminals. This refinery does not meet the definition of a bulk gasoline refinery.
- 40 CFR 60 Subpart III- Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. This refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart NNN - Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. This refinery does not conduct any SOCMI operations.

National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 61 and 63)

Applicability Determinations

As shown in Section 8 of this Statement of Basis (SOB), the Hazardous Air Pollutant (HAP) emissions from this facility are well below the NESHAP applicability thresholds of 25 TPY for total HAPs and 10 TPY for individual HAP. Thus, this refinery is not subject to any NESHAP requirements except for reporting and recordkeeping requirements of 40 CFR 61 Subpart FF - National Emission Standard for Benzene Waste Operation (Benzene Waste NESHAP). These standards have been incorporated into the Title V Permit.

***40 CFR 61 Subpart FF***

The Benzene Waste NESHAP defines a major source as any chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery with 10 megagram per year (Mg/yr) (11 tons/yr) or more of benzene in the waste streams. The Lunday-Thagard refinery is not a major source under this regulation since its total annual benzene (TAB) waste production is less than 10 Mg/yr, which means the refinery is not subject to the control standards of the Subpart.

While the refinery is not subject to the control standards of the Subpart per se, it is nonetheless subject to certain recordkeeping and reporting requirements. Facility Condition F52.1 has been tagged to the facility to indicate that the refinery is subject to the recordkeeping and reporting requirements of 40 CFR Sections 61.356 and 61.357, respectively.

40 CFR Part 63 - NESHAPs for Source Categories

A "major" source is defined as a stationary source that emits or has the potential to emit (PTE) 10 tons per year of any of the 188 listed HAPs or 25 tons per year of a combination of these HAPs. Area sources are defined as those sources that emit less than 10 tons annually of a single HAP or less than 25 tons or more annually of a combination of HAPs. Lunday-Thagard has determined that this facility is not a major source of HAPs and has provided an inventory of

HAP emissions, including HAP PTE, to support this determination. This emissions inventory is summarized in Table 8.2 of Section 8 in the SOB.

As an area source, the refinery is not subject to any of the major source Maximum Achievable Control Technology (MACT) Standards, including the following:

- 40 CFR 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.
- 40 CFR 63 Subpart EEE - National Emission Standards for Hazardous Air Pollutants for Hazardous Waste Combustors.
- 40 CFR 63 Subpart EEEE - National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline).
- 40 CFR 63 Subpart F - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry.
- 40 CFR 63 Subpart G - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.
- 40 CFR 63 Subpart GGGGG – National Emission Standards for Hazardous Air Pollutants for Site Remediation.
- 40 CFR 63 Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.
- 40 CFR 63 Subpart LLLLL – National Emission Standards for Hazardous Air Pollutants for Asphalt Processing and Asphalt Roofing Manufacturing.
- 40 CFR 63 Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers.
- 40 CFR 63 Subpart R - National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)..
- 40 CFR 63 Subpart UUU - National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units.
- 40 CFR 63 Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators.

Some NESHAPs for source categories have been developed for area sources. The following is a discussion of the applicability of area source NESHAPs.

*40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine* - For area sources, this Subpart contains requirements for new or reconstructed stationary reciprocating internal combustion engines (ICEs) at area sources. There are no ICEs greater than 50 bhp located at Lunday-Thagard.

*40 CFR 63 Subpart BBBBBB – National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities* – The refinery is not considered a “bulk gasoline terminal” or “bulk gasoline plant” since it does not receive gasoline via pipeline, ship or barge, or cargo tank.

### ***Compliance Assurance Monitoring (CAM) (40 CFR 64)***

This regulation requires facilities of major sources to submit CAM plans to accompany the application for renewal of their respective Title V Permits or for initial Title V applications submitted after April 20, 1998. Since this initial Title V application was deemed complete on March 24, 1998 by the AQMD, no CAM plans are required at this time.

### **5. Periodic Monitoring Requirements**

Applicable monitoring and operational requirements for which the facility is required to comply are identified in the Title V Permit (for example, Section D, F, and J and Appendix B of the proposed Title V Permit).

This refinery is subject to RECLAIM monitoring, source test requirements, and other monitoring provisions that are required by federal, state or AQMD laws and regulations. Section F of the Permit contains the monitoring and source test permit conditions imposed by Regulation XX. More specifically, it summarizes the monitoring and testing requirements for major, large and process units at NO<sub>x</sub> and SO<sub>x</sub> RECLAIM facilities. Finally, Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 do not currently apply to any of the permitted emission sources at this facility.

As specified in AQMD Rule 3004(a)(4), the proposed Permit includes periodic monitoring conditions for equipment that is subject to State Implementation Plan (SIP)-approved, federally enforceable rules that do not require sufficient monitoring to ensure compliance with emission limitations or other requirements of the rules. Permit conditions in Section D and H of the permit that fulfill Title V periodic monitoring requirements are tagged with the following: *Rule 3004(a)(4)-Periodic Monitoring, 12-12-1997*. These periodic monitoring conditions are also tagged with the underlying rule(s) for which the condition is fulfilling the monitoring requirement. In some cases, existing monitoring conditions that were installed under NSR fulfill the periodic monitoring requirements for other rules or regulations. For these cases, the monitoring condition was tagged with Rule 3004(a)(4) and the underlying rule(s) for which the condition is fulfilling the monitoring requirement.

A draft Periodic Monitoring Guidance document was published by the AQMD in August 1997. A public consultation was held to solicit public input. The final Periodic Monitoring Guideline Document was published by the AQMD in November 1997. This guideline was used to establish the periodic monitoring requirements in the Title V Permit. In addition, the AQMD used the CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Requirements in the SIP (June 24, 1999) for applicable opacity limits, grain loading limits for material handling equipment, and for sulfur content of fuels. Furthermore, the AQMD used the CAPCOA/ARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP for combustion sources (July 2001). These documents are included in Appendix II.

## 6. Title V Permit Format

The Title V Permit consists of eleven Sections and two Appendices. Each Section is devoted to a particular function as summarized below:

### **Section A Facility Information**

This Section contains operator name, facility location and mailing address. It also lists the name of the responsible official and contact person for the facility. Lastly, this Section indicates whether Regulation XXX and RECLAIM apply to the facility.

### **Section B RECLAIM Annual Emission Allocation**

This Section applies to RECLAIM facilities only and lists NO<sub>x</sub> and SO<sub>x</sub> allocations for the facility. This facility is subject to both the NO<sub>x</sub> and SO<sub>x</sub> requirements of RECLAIM.

### **Section C Facility Plot Plan**

This Section is reserved for the development of the facility plot plan in the future.

### **Section D Facility Description and Equipment Specific Conditions**

This Section describes equipment at the refinery that has been issued Permits to Operate. It also includes facility-wide operating conditions, emission limitations, the rules for which the emission limits and permit conditions are derived, and the periodic monitoring requirements as appropriate. The description of the process and equipment is structured in the following manner:

#### Process

A process is the largest grouping of equipment under the Title V permit, which includes all equipment involved in the making of final product from raw feed. A process can end at an intermediate product if the succeeding process is significantly different.

#### System

A system is the combination of equipment into a unit which is a logical subsystem of a process. A system can be used to identify individual process lines, or it can separate a long process line into separate functions. The main use of this grouping will be to separate a large process into manageable groups.

#### Equipment

This Column describes equipment contained within a system or a process. It contains information necessary to identify equipment and ensure compliance with rules and regulations such as dimensions of a tank, heat input of a heater, horsepower of an engine, etc.. This Section also lists the equipment application number (A/N). The A/N is an identification number issued by the AQMD to the application submitted by the applicant for a Permit to Construct or Permit to Operate for a piece of equipment. A facility is required to submit a permit application when it plans to install a new piece of equipment, alter an existing

piece of equipment, or modify a permit condition. An A/N in the Title V permit changes each time the AQMD approves a new application.

#### Device Identification (I.D.) Number

Each piece of equipment is assigned a unique I.D. number. When a piece of equipment is modified it retains its existing I.D. number. However, when it is removed from service, the I.D. number is retired and will not be used to identify another piece of equipment at this facility.

#### Connected to

This Column is used to identify air pollution control equipment that is connected to a specific piece of equipment at the refinery. This column is not intended to show process connections in the refinery.

#### RECLAIM Source Type/Monitoring Unit

This Column is used to identify equipment classification pursuant to the RECLAIM program. The classification of major source, large source and process units is defined in Rule 2012. The equipment classification is assigned to NO<sub>x</sub> and SO<sub>x</sub> emission sources subject to RECLAIM. Each classification of equipment is subject to a specific monitoring requirement under RECLAIM.

#### Emissions and Requirements

This Column lists emission limits applicable to each piece of equipment. It also lists the rules for which the limits were derived. If AQMD adopted a rule that has not yet been approved into the State Implementation Plan (SIP), emission limits established by both the SIP-approved and non-SIP-approved versions of the rule are included in the Permit.

#### Conditions

This Column lists specific permit conditions applicable to the facility, process, system or equipment. A facility level condition applies to the whole facility and is designated by the letter F. The process conditions apply to the entire process and are designated by the letter P. The system conditions apply to the entire system and are designated by the letter S. The equipment (device) level conditions are designated by other letters depending on the category of conditions such as monitoring, recordkeeping, etc. Each permit condition references the law or rule for which the requirements in the condition were derived. If AQMD adopted a rule that has not yet been approved into the SIP, requirements established by both the SIP-approved and non-SIP-approved versions of the rule are included in the permit. One category of the device level condition is the periodic monitoring condition.

### **Section E      Administrative Conditions**

This Section contains general administrative permit conditions that apply to all facilities. The conditions listed in this Section apply to all permitted equipment at the facility unless superseded by other conditions listed elsewhere in the facility Permit.

- Section F RECLAIM Monitoring & Source Testing Requirements**  
This Section contains monitoring and source testing permit conditions imposed by Regulation XX. It summarizes the monitoring and testing requirements for major, large and process units at RECLAIM facilities.
- Section G RECLAIM Recordkeeping & Reporting Requirements**  
This Section contains recordkeeping and reporting requirements specified in Regulation XX. It summarizes the recordkeeping and reporting requirements for RECLAIM sources.
- Section H Permit to Construct and Temporary Permit to Operate**  
The permit format in this Section is the same as described for Section D above. However, equipment listed in this Section has not been issued Permits to Operate, but were issued a Permit to Construct and/or a temporary Permit to Operate.
- Section I Compliance Plans & Schedules**  
This Section lists active compliance plans specified in the SIP-approved rules.
- Section J Air Toxics**  
This Section lists permit conditions pertaining to federal NESHAP/MACT requirements.
- Section K Title V Administration**  
This Section lists the Title V administrative conditions. They are the same for all Title V facilities, except for the list of applicable rules Table at the end of the Section. The Table at the end of the Section lists all applicable rules referenced in Sections D and H (emission limit and conditions) and any rules that are referenced to the facility. This Table also indicates which rules are federally enforceable and which are only enforceable by AQMD.
- Appendix A NO<sub>x</sub> and SO<sub>x</sub> Emitting Equipment Exempt from Written Permit Pursuant to Rule 219**  
This Section lists classes of NO<sub>x</sub>- and SO<sub>x</sub>-emitting Rule 219 exempt equipment present at the facilities that are subject to RECLAIM.
- Appendix B Rule Emission Limits**  
Some emission limits that are too complex to be listed in the Emissions and Requirements Column of Sections D and H are listed in Appendix B of the Title V Permit. Emission limits in this Appendix are referenced by an emission type “(9)” in the “Emissions and Requirements” Column of the permit.

## **7. Permit Features**

### Permit Shield

A permit shield is an optional part of a Title V permit that gives the facility an explicit protection from requirements that do not apply to the facility. A permit shield is a provision in a permit that states that compliance with the conditions of the permit shall be deemed compliance with all identified regulatory requirements. Incorporation of a permit shield into the Title V permit involves submission of applications for change of conditions for each piece of equipment affected by the permit shield. Permit shields are addressed in AQMD Rule 3004 (c). This facility has not applied for a permit shield for any of the equipment at the refinery.

### Alternate Operating Scenarios

An alternative operating scenario (AOS) is a set of provisions and conditions in a permit that allow the operator to switch back and forth between alternative modes of operation without submitting an application for a permit revision before each switch. However, each AOS must be evaluated for compliance with AQMD rules and regulations and applicable state and federal requirements. AOS is addressed in AQMD Rule 3005 (j). This facility has not applied for an AOS for any of the equipment at the refinery.

### Emissions Trading

This facility is subject to the NO<sub>x</sub> and SO<sub>x</sub> emissions trading requirements under Regulation XX.

### Prevention of Significant Deteriorations (PSD) Permits

PSD is a federal program for permitting new and modified sources that emit air pollutants for which the AQMD is classified as being in attainment with the National Ambient Air Quality Standards (NAAQS). This facility has not been issued a PSD permit by either the EPA or the AQMD.

### EPA New Source Review (NSR) Permits

NSR is a federal program for permitting new and modified sources that emit air pollutants for which the AQMD is classified as in nonattainment with the NAAQS. Before SIP-approval of the AQMD's NSR Rule in 1978, EPA issued NSR permits for new construction and/or equipment modifications in the AQMD. A check of the records indicates that there are no NSR permits issued by the EPA for Lunday-Thagard refinery.

## **8. Summary of Emissions and Health Risks**

### Summary of Refinery Criteria Air Pollutant, Toxic Air Contaminant and HAP Emissions

This Section contains a summary of the Criteria Air Pollutant (CAP), Toxic Air Contaminant (TAC) and Hazardous Air Pollutant (HAP) emissions for the refinery as reported in the refinery's Annual Emission Report (AER) for fiscal year 2006-2007. A summary of PTEs for HAPs is also included in this Section to support the determination that this facility is not a major source of HAPs as discussed in Section 4 of the SOB.

**Table 8.1 Criteria Pollutant Emissions (tons/year)  
from Annual Reported Emissions for Reporting Fiscal Year 2006 – 2007**

<b>Pollutant</b>	<b>Emissions (tons/year)</b>
NOx	23
CO	12
VOC	13
PM	4
SOx	18

**Table 8.2 Emissions of TACs and HAPs**

<b>The Following TACs Were Reported</b>	<b>Actual Emissions Reporting Year 06-07 (lbs/yr)</b>	<b>PTE for HAPs (lbs/yr)</b>
1,1,2,2-Tetrachloroethane*	0.007	0.02
1,1,2-Trichloroethane*	0.004	0.01
1,2,4-Trimethylbenzene	0.085	-
1,2-Dichloropropane* (Propylene dichloride)	0.004	0.01
1,3-Butadiene*	1.417	1.64
1,3-Dichloropropene*	0.004	0.01
Acetaldehyde*	7.225	10.24
Acrolein*	2.612	5.45
Ammonia	1986.721	-
Arsenic*	0.009	0.01
Asbestos	0.001	-
Benzene*	47	2839
Cadmium*	0.008	0.01
Carbon tetrachloride*	0.005	0.01
Chloroform*	0.004	0.01
Chromium (VI)*	<0.001	0.00
Copper	25.223	-
Diesel engine exhaust, particulate matter	188.940	-
Ethylbenzene*	88.581	614
Ethylene dibromide*	0.006	0.02
Ethylene dichloride*	0.003	0.01
Formaldehyde*	23.611	40.10
Hexane*	27.997	4663
Hydrochloric acid*	1.050	0.99
Lead (inorganic)*	0.047	0.05
M-Xylene*	-	1314
Manganese*	0.017	0.02
Mercury*	0.011	0.01
Methanol*	0.883	1.81

Methylene Chloride*	0.012	0.03
Naphthalene*	0.232	0.55
Nickel*	0.022	0.02
PAHs, total, with components not reported*	0.589	1.286**
Selenium*	0.012	0.01
Styrene*	0.003	0.01
Sulfuric Acid	1.913	-
Toluene*	2180.38	2763
Trichloroethylene*	46.500	***
Vinyl Chloride*	0.002	0.01
Xylenes*	231.70	26.13***
Total TACs (lbs/yr)		4,845
Total HAPs (lbs/yr)		2,644
Total HAPs PTE		6.13 TPY
Maximum Individual HAP PTE (Hexane)		2.33 TPY

\*TACs that are also identified as HAPs.

\*\*Facility did not report PTE for PAHs; the number in the table is based on extrapolated naphthalene fraction from the reported 2006-07 AER emissions.

\*\*\*Reported AER emissions are greater than PTEs for these HAPs because the AER numbers include emissions (completely or partially) from unpermitted equipment, which the PTEs don't.

### Health Risk from TACs

Lunday-Thagard refinery is subject to review by the Air Toxics Information and Assessment Act (AB2588). Per the requirements of AB2588, Lunday-Thagard has been designated as an "Intermediate Priority" facility. As an Intermediate Priority facility, Lunday-Thagard has not been required to prepare a Health Risk Assessment, but is considered a District tracking facility and is required to submit a complete toxic inventory every 4 years (the last reporting period being 2006).

## **9. Compliance History**

The Lunday-Thagard Co. refinery is subject to the terms of Hearing Board Orders entered for the following cases for which there were no Notices of Violation (NOV) issued or no NOV(s) outstanding:

### Variance(s)

**Hearing Board Case No. 2033-17:** Lunday-Thagard Co. filed an appeal of a Permit to Construct issued on December 19, 2006 (Case No. 2033-16) on January 3, 2007, and at the same time filed a Petition for Variance of permit conditions on Appeal (Case No. 2033-17), which was granted on January 17, 2007, and modified/extended on March 1, 2007; March 21, 2007; January 9, 2008; February 28, 2008; April 17, 2008; August 12, 2008; November 25, 2008; and March 3, 2009. Initially there were a significant number of items under the Variance, however, currently nearly all of those items have been resolved and either dismissed or incorporated into the facility's Permit.

Currently, this Variance is for AQMD Rules 202(b), 203(b), and 2004(f)(1) – specifically the throughput Condition Nos. C1.19 – C1.24 on tanks D45-D52, D68, and D74. The throughput condition changes results in increases in emissions, and AQMD and Lunday-Thagard have resolved disputes regarding these conditions. However, the Variance is needed until the Facility Permit can be amended to include the changes to the throughput conditions. At this time, however, because of pending Case No. 2033-10A regarding facility's compliance with NSPS Subpart J and AQMD regulations, an amended Facility Permit cannot be issued. The facility is currently in compliance with all terms of the Variance. The Variance has an ending date of August 30, 2009.

As required by Rule 3004(a)(10)(C), Condition I1.2 has been added to the affected equipment in Sections D and H of the Permit requiring the operator to comply with all the conditions of the Variance. A copy of the documents related to this regular Variance is available on the Internet under the AQMD's "Facility Information Detail" database (FIND, at [http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac\\_id=800080](http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800080)).

#### Order(s) for Abatement

**Hearing Board Case No. 2033-10A (Previously Case No. 2033-10):** In 2004, it was determined during permitting actions that several of Lunday-Thagard's heaters/incinerators were subject to 40CFR Part 60, Subpart J. AQMD determined that Lunday-Thagard was violating District Regulation IX, which incorporates by reference the NSPS set forth in 40CFR Part 60, Subpart J. In September 2004, the AQMD filed a petition for a Stipulated Order of Abatement (SOA) alleging that Lunday-Thagard has been operating in violation of District Regulation IX, Rule 203, and Rule 2004. This SOA was granted on October 21, 2004, and modified/extended on November 18, 2004; September 15, 2005; January 31, 2006; June 8, 2006; December 20, 2006; January 9, 2007; February 7, 2007; October 3, 2007; and November 7, 2007.

Case No. 2033-10A was opened on May 28, 2008, because of problems with noticing the hearing for Case No. 2033-10, and was modified/extended on September 11, 2008. Another modification hearing is planned for May 13, 2009, to update compliance dates and phrasing. This SOA is substantially similar to Case No. 2033-10.

Lunday-Thagard Co. operates an incinerator (C97) to control emissions from the crude distillation units, asphalt blowing stills, loading/unloading arms, wastewater system, and several storage tanks. Lunday-Thagard Co. also operates a smaller incinerator (C105) that controls emissions from the east area loading arms. Both of these incinerators are fuel gas combustion devices, and subject to 40CFR Part 60, Subpart J. At this time, both incinerators are out of compliance with the monitoring requirements of 40CFR Part 60, Subpart J, while C97 has been having occasional compliance issues with the emissions requirements of 40CFR Part 60, Subpart J.

Additionally, incinerator C97 is out of compliance with AQMD Rule 431.1, which requires a sulfur content of refinery gas less than 40 ppm; and one of the loading arms venting to incinerator C105 is out of compliance with AQMD Rule 462 Class B facility loading limits, thus requiring it to be a Class A loading facility per Rule 462. Lunday-Thagard is also out of

compliance with District Rules 203 and 2004, which in part require compliance with District Regulations IX and 40CFR Part 60, Subpart J.

The remaining unresolved items under this SOA require Lunday-Thagard to complete all testing and certification for a RECLAIM compliant SOx monitor at the outlet of C97 by June 30, 2009, which addresses the non-compliance with Rule 431.1, since SOx RECLAIM facilities are exempt from Rule 431.1 once required monitoring, recordkeeping, and reporting are implemented. Lunday-Thagard shall also configure, install and certify all Subpart J compliance monitors by December 31, 2008, this date is being updated by with a modification to the SOA scheduled May 13, 2009, since although Lunday-Thagard has completed the configuration and installation (by that date, certification has been delayed because of problems with testing and AQMD workload). Lunday-Thagard shall not load more than 60,000 gallons per day maximum of organic liquids at loading rack D136. Additionally, if AMP approval from the EPA is received, Lunday-Thagard must immediately comply with AMP requirements. If the AMP is denied, Lunday-Thagard shall install monitoring to bring C105 in compliance with Subpart J monitoring requirements within 180 days.

As required by Rule 3004(a)(10)(C), Condition II.1 has been added to all the affected equipment in Sections D and H of the Permit requiring the operator to comply with all the conditions of the SOA. A copy of the documents related to this SOA is available on the Internet under the AQMD's "Facility Information Detail" database (FIND, at [http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac\\_id=800080](http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800080)).

**Hearing Board Case No. 3845-1, DOES #135:** State of California law requires that all gasoline dispensing facilities (GDFs) with underground storage tanks be equipped with a certified Phase II Enhanced Vapor Recovery (P-II EVR) system no later than April 1, 2009. The EVR program was adopted by the California Air Resources Board (CARB) in March 2000 to improve the collection of gasoline vapor that would otherwise be released to the atmosphere as a result of gasoline dispensing operations. The EVR regulations became state law on April 1, 2001. The state law requirements are mandatory and no variance from these requirements is available. This program is being implemented in phases. The latest phase is directed to Phase II operations at GDFs which include dispensing fuel into vehicle and control of evaporative loss from underground storage tanks.

Lunday-Thagard Co. operates such GDF (Process 11, System 1: Devices D212, D213). Along with hundreds of other GDFs, Lunday-Thagard Co. has experienced delays in upgrading this Phase II EVR system. As the regional air pollution control agency responsible for permitting and enforcement activities related to GDFs, AQMD staff has worked with the CARB and other air pollution control districts to formulate a legally viable approach to provide additional time for compliance. Beginning April 1, 2009, AQMD has sought a group stipulated order for abatement (SOA) from the District's Hearing Board against those operators such as Lunday-Thagard Co. who are not be in full compliance with the April 1, 2009 Phase II EVR deadline. The District has received hundreds of these requests from GDFs for this SOA. The order prohibits the GDF's operations after December 31, 2009 unless the GDF has been upgraded and successfully tested to comply with Phase II EVR requirements. Lunday-Thagard Co. accordingly submitted this request for the SOA on March 30, 2009.

As required by Rule 3004(a)(10)(C), Condition II.3 has been added to all the affected equipment in Section D of the Permit requiring the operator to comply with all the conditions of the SOA. A copy of each of the documents related to this regular variance is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at [http://www.aqmd.gov/webappl/fim/prog/hbhome.aspx?fac\\_id=800080](http://www.aqmd.gov/webappl/fim/prog/hbhome.aspx?fac_id=800080)).

The Findings and Decisions of the AQMD Hearing Board pursuant to the aforementioned Variances and SOAs contain specific target dates for achieving activities, milestones, or compliance. II.x Conditions establish a schedule for submission of semi-annual progress reports to document progress toward achieving compliance. The requirement for a compliance schedule pursuant to 40CFR 70.6(c)(3) and District Rule 3004(a)(10)(C) is fulfilled by II.x Permit Condition.

However, the issuance of a regular Variance and/or SOA by the AQMD Hearing Board does not affect federal or citizen enforceability of the subject requirements.

#### Notices to Comply and Notices of Violation

As noted, the refinery has been in continuous operation since 1937. Since the inception of the Los Angeles County Air Pollution Control District in 1947, the refinery has been subject to both self-reporting requirements and AQMD inspections. Two (2) Notices to Comply and sixteen (16) NOV's have been issued to Lunday-Thagard refinery since January 1, 2006. As of April 27, 2009, the refinery is either in compliance with these Notices or, as discussed above, is on schedule to comply with the Variances/SOAs. Further information regarding the facility's compliance status is available on the Internet under the AQMD's "Facility Information Detail" database (FIND, at [http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=800080](http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800080)). Some of the final compliance information is not listed in the FIND database, but compliance was confirmed with the facility inspector.

## **10. Compliance Certification**

By virtue of the Title V permit application and issuance of this Permit, the reporting frequency for compliance certification for the refinery shall be annual.

## **11. Appendices**

In order to minimize printing, all of the following Appendices are available on the AQMD Website as shown below. In addition, they will be made available on CDs upon request. Please contact the AQMD contact person identified on the public notice for this facility or call Jessica Nielsen at (909) 396-3627 for assistance in finding the information on the website or to obtain a copy of the CD.

- I. Technical Guidance Document For the Title V Permit Program (March 2005, Version 4.0) (<http://www.aqmd.gov/titlev/TGD.html>)
- II. Periodic Monitoring Guidance Documents

- A. AQMD Periodic Monitoring Guidelines for Title V Facilities (November 1997) (<http://www.aqmd.gov/titlev/pdf/PeriodicMonitoringGuidelines-97.pdf>)
- B. CAPCOA/CARB/EPA Region IX Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP (June 1999) (<http://www.arb.ca.gov/fcaa/tv/tvinfo/pmrec624.pdf>)
- C. CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources (July 2001) (<http://www.arb.ca.gov/fcaa/tv/tvinfo/pmrecoms.pdf>)
- III. Summary Report of Notice of Violations. Further information regarding the facility's compliance status is available on the Internet under the AQMD's "Facility Information Detail" database (FIND, at [http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=800080](http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800080)).
- IV. Variances and Abatement Orders. Further information regarding the facility's compliance status is available on the Internet under the AQMD's "Facility Information Detail" database (FIND, at [http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac\\_id=800080](http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800080)).